

Weaving Industries: Conservation of SoDo's Urban
Fabric Through Creative Manufacturing

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Abstract

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In a changing urban landscape such as SoDo, Seattle, existing built fabric representing the area's rich industrial history is often eliminated to make room for new development. When these remnants of the past are lost, a part of the neighborhood's sense of place and identity is lost as well. This thesis proposes that the conservation of these built remnants will not only maintain this identity, but weave together the disparate uses and industries present in SoDo. Over the past decades, the area has transformed from Seattle's manufacturing hub to the city's stadium district, resulting in a variety of production industries that remain separated from the neighboring entertainment industry. The intervention proposed by this thesis is intended to mediate this separation, joining the industries by expanding an existing network of manufacturing and exposing the public to SoDo's industrial activity, both past and present. Modern preservation is applied as an urban strategy in both site exploration and design, focusing on layers of history and context while looking towards the future as opposed to freezing the neighborhood in time. Conservation of SoDo's urban fabric preserves its unique identity and ensures that the neighborhood maintains its industrial spirit in the decades to come.

This thesis builds upon the area's industrial spirit and proposes a building reuse project, inserting an artistic textile lab into an existing warehouse in the heart of SoDo. The facility fosters a relationship between old and new in its design and its updated program of manufacturing. The introduction of the textile lab aims to not only extend the lifespan of an existing structure, as preservation does, but to put the process of making on display to the public in order to weave the presence of the entertainment industry with the production industries of SoDo.

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Chapter 1 | Introduction

SoDo is a compelling part of Seattle as it has undergone change throughout its history. Its transformation from tideflats to the city's manufacturing hub resulted in a rich landscape of industrial activity and utilitarian structures. Recent history has introduced sports stadiums and entertainment venues, altering SoDo's use, economy, and physical scale. Within its current landscape, blocks of existing urban fabric stand among the massive developments, housing several small- to medium-scale manufacturing businesses. These built remnants of SoDo's varied past offer an opportunity for the area to retain its industrial identity and spirit – a spirit that never completely left the neighborhood.

This thesis proposes that conservation of these built remnants can weave together the disparate uses and industries found in SoDo. Here a modern preservation ethic is applied as an urban strategy, focusing on layers of history and context and looking towards the future as opposed to freezing the neighborhood in time. The reuse of an existing warehouse coupled with an updated industrial program simultaneously reflects SoDo's past identity and addresses its future context.

A Modern Preservation Ethic in SoDo

Seattle's SoDo neighborhood, short for South of Downtown,¹ is a district that has experienced considerable fluctuation since its origins in the early 20th century. The past four decades have brought drastic changes to SoDo with the introduction of major league sports and entertainment venues. While these massive structures mirror the scale of the orange shipping cranes that line the edge of the Duwamish Waterway,

1. Originally short for "South of the Dome," referencing the now demolished Kingdome (figure 8). Source: SoDo District 2014 Neighborhood Profile.

they dominate the small-scale commercial fabric that reflects SoDo's past. These venues² have come to represent the district architecturally, as well as define its social and economic identity. With plans in place to continue large-scale development of this kind in the future, the question is raised as to what becomes of the small-scale fabric of SoDo's past and how the production industries of the neighborhood can integrate with the growing entertainment industry in their midst.

Widespread change and development in cities often corresponds with a loss of existing built fabric – fabric that represents the history, context, and identity of the affected neighborhood. While new urban development can be a social and economic stimulus, it can also result in the loss of a sense of place. The maintenance of a diverse built environment in light of change needs to be a priority for designers, citizens, and policy makers. Using preservation as an urban strategy in renewal efforts is an effective way to conserve the existing character and history of a place while allowing socioeconomic growth. Historic preservation is often perceived as a focused effort to protect the architectural integrity of individual buildings and freeze their aesthetic in the past. The current practice of historic preservation is far broader and extends to larger contexts in the urban realm. So-called modern preservation considers the social fabric and culture of a neighborhood as it relates to its physical fabric. As Mike Jackson argues, preservationists are skilled in “understanding the value and durability of the built environment and [have the ability to] extend a building's future,” (2). Conserving existing urban fabric similarly extends a neighborhood's future, keeping its structures in use and ensuring its success through future transformations.

The value of a city's built fabric lies in its diversity. A variety of scales, eras, and physical details is what gives a neighborhood its character. While not always overt, these are the elements that contribute to its atmosphere and its sense of place. To



Figure 1. SoDo tidelfats - 1880s to today



Figure 2. SoDo's recent layers

2. Namely the Kingdome (1976-2000), Safeco Field (1999), WaMu Theater or CenturyLink Field Event Center (1999), CenturyLink Field (2002), and the proposed Seattle Arena (figures 8-11).

conserve the existing fabric is to conserve this sense of place and keep an area's identity intact. In SoDo, distinct blocks of small-scale, granular fabric exist among the stadiums, forming the street facade of First Avenue South. While the presence of the stadiums has undoubtedly increased the neighborhood's use and they have become inseparable pieces of its identity, the industrial and commercial fabric that remains represents a truer image of the district – an image rooted in history and place.

With its more holistic and less historicist approach, modern preservation has taken its place as an “urban profession” as it has shifted from a sole focus on architectural style to the importance of healthy and functional neighborhoods (Ryberg-Webster and Kinahan 119). This shift is evident on a national and local scale. The Preservation Green Lab, part of the National Trust for Historic Preservation, “explores the value that older buildings bring to their communities,” (Preservation Green Lab, National Trust for Historic Preservation). Locally, Historic Seattle expresses their efforts to create “a more livable environment in Seattle” in their mission statement. Donovan Rypkema explains that “securing quality of life is at the heart of what historic preservation is all about” (Rypkema). In its aim to encourage urban growth and sustainability physically, socially, and economically, modern preservation strategies are key to determining the future of SoDo's changing built fabric. In this thesis, urban preservation plays a part on multiple scales; at an urban scale it offers the framework of analysis and understanding of the site, while at a finer scale it informs the design of a reuse project intended to maintain the industrial identity of SoDo as it continues to change and develop in the future.

SoDo's use patterns present an opportunity to bring elements of its industrial past to the public, while its existing fabric offers a physical representation of its history. The sports and entertainment venues in the district are supported by pedestrian-scale



Figure 3. SoDo's fluctuating urban form

amenities, including retail and dining establishments, while the industrial processes located in the area are largely closed off from pedestrians. There are some exceptions to this pattern, and those exceptions begin to form a network of businesses that give the public a glimpse of the productive spirit of SoDo. These businesses represent a creative side of manufacturing, producing apparel, accessories, and other goods, as well as putting the public in touch with digital fabrication equipment. The insertion of an artistic textile lab into SoDo's existing network of manufacturing will build upon the neighborhood's long standing industrial spirit and put the process of making on display to the public. Occupying an existing warehouse in the center of SoDo, the textile lab will be a place for artists to research, design, and create their pieces, as well as a public venue for viewing the process of production. The intent of the intervention is twofold – first to conserve a built remnant of the neighborhood's industrial past and ensure its relevance in the future, and second to expand the existing network of creative manufacturing in order to weave the presence of the entertainment industry with the production industries of SoDo.



Figure 4. West facing elevation of First Avenue South; an example of SoDo's urban fabric

Chapter 2 | Theorizing Urban Preservation as a Design Strategy

Two interrelated yet distinct concepts have emerged in the formation of this thesis topic: one, modern preservation as an urban strategy, and two, the conservation of existing granular urban fabric. Both topics deal with issues that are uniquely urban and that affect the function and health of neighborhoods, particularly in regards to new development occurring in existing contexts. Facets of each concept influence those of the other, creating a framework for research, site analysis, and ultimately a design approach.

Modern Preservation as an Urban Strategy

Modern preservation is the result of new approaches and attitudes in the field of preservation practice. In the past few decades, strategies have emerged that aim to serve a broader population through preservation efforts. These ideals are based on concern for the economic, social, and environmental health of neighborhoods as part of the larger built environment. New areas of research have included economic development, a heightened sensitivity to cultural diversity, and the quantitative study of embodied energy in existing buildings. The overall scope of preservation has broadened as its techniques have become tools for revitalization efforts beyond singular structures. An isolated, stylistic focus has long been a critique of historic preservation, both by the public as well as practitioners. In 2004 Ned Kaufman urged fellow preservationists to widen their focus and align their concerns more closely with those of the citizens, which include “the loss of character, pleasure, or usefulness in the places they inhabit and love, of the ability to recall the past in them,” (Kaufman 393). This was part of Kaufman’s call to reboot the profession and recapture the passion that drove

preservation movements of decades past. While its scope and techniques may have recently evolved, the underlying concepts of so-called “modern” preservation are not entirely new. For instance, Jane Jacobs’ polemic writing in the 1960s is a preeminent example of an early understanding of urban issues and their implications for the preservation community.³

The recent shift in preservation practice has encouraged practitioners to embrace their ability to become more influential on an urban scale. Again, this influence is not entirely new. Journalist and author Roberta Brandes Gratz is a proponent of the modern preservation movement, although her terminology differs slightly. Her 1994 book *The Living City* provides accounts of preservation planning successes and failures and offers ways to learn from both. She uses these urban case studies to explain how modern preservation can rise to the challenge. Gratz writes, “historic preservation is being redefined. Its relevance is unmistakable,” (i). Her arguments establish two critical elements in theorizing preservation as an urban strategy: an overall stewardship for the urban built environment, and the inherent connection of preservation and urbanism.

Preservation and Urbanism

Preservation, with its focus on the conservation of built fabric, and urbanism, which deals with the larger physical and social aspects of the city, are both disciplines within the design field that have been constantly fluid throughout time. Although they share commonalities, the two fields are typically separated in practice and study. Gratz writes, “‘preservation’ is a limiting term that could easily be replaced by the broader term of urbanism of which preservation is only a part,” (ii). Urbanism is a field of study that attempts to understand the function of cities, reveal their issues, and subsequently



Figure 5. Larimer Square in LoDo, Denver



Figure 6. LoDo in Denver, Colorado; an urban preservation success story according to Gratz

3. Particularly Jacobs’ book *The Death and Life of Great American Cities*, published in 1961.

work to improve the urban environment. Contemporary preservation shares many of the same goals and, as Gratz argues, offers an intrinsic understanding of place. Historic preservation efforts have often been led by grassroots organizations that rallied around a treasured resource due to its perceived importance in relation to its place and to its community. This kind of understanding of the experience of place can also be a great asset to successful community development in cities. Gratz describes preservationists and urbanists as actors with similar intentions, but different enough approaches to be mutually beneficial: preservationists having a sense of “optimism, not doom-and-gloom defeatism” and urbanists whose “practicality leaves little room for the top-down vision,” (viii). The implementation of urbanist approaches in preservation and preservation approaches in urbanism establishes a clear method for understanding an individual building in the larger context in which it exists.

Roberta Brandes Gratz stresses the importance of stewardship of the urban built environment in her discussion of “Urban Husbandry,” a term she appropriated to represent “the care, management or conservation of the built environment,” (147). She argues one of the main benefits of urban husbandry is the ability to realize significant results with an insignificant action (Gratz 156). Making an impact in small ways requires less drastic funding efforts and planning. This allows, and to an extent necessitates, urban policies to build upon existing movements in community-based development, historic preservation, and environmental protection. Gratz identifies urban husbandry primarily as a planning and public policy approach, again hearkening back to the mid-century work of Jane Jacobs (Gratz 168). However, its implications are much broader and applicable to this thesis in the way it stitches together the residents, structures, and environments of the city.

Although its objectives differ slightly from those of modern preservation, the concept of urban husbandry is essentially rooted in the same ideals – community growth, preservation, and the health and sustainability of neighborhoods. In a later writing, Gratz illustrates the differences between “rebuilt and reborn” cities, equating urban husbandry with the latter (Gratz and Mintz 2). She explains that a city reborn is not a product of master planning but rather the result of small-scale actions and community initiative (Gratz and Mintz 2). The revitalization of urban neighborhoods can similarly benefit from this kind of integrated approach that emphasizes the care and cultivation of its human and built resources.

Conservation of Existing Urban Fabric

Modern preservation practices play a critical role in the conservation of existing urban fabric. As Gratz recognizes, “too much has been lost that is genuine and urban,” (viii). Conserving not just the physical fabric, but its physical, social, and economic diversity is crucial to the promotion of vital cities and neighborhoods. This heterogeneity in form and use contributes to the fine grained texture of a place. While adaptive reuse and street character improvements are ways of maintaining the visual appearance of granularity in a neighborhood, maintaining cultural diversity is a growing area of interest among preservation professionals. Numerous quantitative research efforts have been executed in order to gain an understanding of granularity and it how impacts the dynamics of a place. The two reports examined here display their relevance to the conservation of existing urban fabric in different ways.

In his 1999 article, Albert Levy expresses goals for the larger study of urban fabric by surveying past methodologies used by researchers in urban studies. He defines the elements of urban form, “the plot, the street, the constructed space, and the open



Anywhere



Somewhere

Figure 7. Fine grained urban fabric cultivates a sense of place



Figure 8. SoDo's megastructures - the Kingdome (1976-2000)



Figure 9. SoDo's megastructures - Safeco Field (1999)

space” (Levy 79), graphically illustrating how they have been used in multiple and varied studies of urban morphology. He observes that morphological studies help “us to understand not only historical urban fabrics...but also the analysis of modern urban fabrics, an issue that has rarely been addressed,” (Levy 80). Levy goes on to explain the problems surrounding the analysis of modern urban fabric, beginning with the lack of research conducted on its morphology. He also cites the side effects of urban renewal as problematic, namely the increase in physical scale of urban centers and their increased privatization. He references a shift from “a closed fabric” to an open one, “fragmented, with autonomous and atomized elements which do not relate to each other,” (Levy 81). The lack of relationship between elements of urban infrastructure serves to undermine the established elements of urban form. Levy continues; “This shift has been accompanied by a significant change in scale, with the appearance of imposing megastructures and relationships between buildings that are now only functional,” (81). It is the contrasting small-scale urban fabric between these elements that weaves the city together and becomes the critical element in their relationship.

Levy exhibits optimism in the face of metropolitan change, suggesting the creation of a new set of urban elements (83). These new elements have changed relationships and require different morphological analysis. He makes a final recommendation, writing that the “aim should be to determine...from the knowledge we have of the general rules of the formation of urban fabric, some criteria of quality for the creation of new urban fabrics” (Levy 83). In this statement Levy is referencing both a morphological approach and an urbanist one in the desire to create new, functional environments informed by an understanding of existing conditions. Previous historical forms cannot be ignored when distilling the principles that will guide the design of new urban conditions.

Although not rooted specifically in urban morphology, the report “Older, Smaller, Better” examines many of the same urban elements in relation to healthy and successful neighborhoods. This lengthy study conducted by the Preservation Green Lab, part of the National Trust for Historic Preservation, was published in 2014. The report presents research on the social implications of small-scale urban fabric through statistical analysis of three major US cities: San Francisco, Seattle, and Washington DC. The techniques used are largely quantitative. Research was conducted by first establishing a grid overlaid on the city plan. The grid quadrants were then classified by use to ensure similar quadrants were being compared in each city. The quantitative data was taken from governmental sources such as the US Census Bureau, but also publicly accessible sources like cell phone usage data and websites such as Yelp, Craigslist, and WalkScore (Preservation Green Lab 20). This data was transferred into a ‘character score’ and compared against 40 economic, social, cultural, and environmental performance metrics through statistical modeling methods. (Preservation Green Lab 2).

This study is an example of a quantitative research approach to not only the preservation of individual buildings but of the entire urban fabric. The results of the study showed that areas with primarily small, older building types exemplified the positive characteristics of a vital neighborhood, including healthy small businesses, a wide age range among residents, and mixed median rent prices (Preservation Green Lab 33). This study takes on the challenge of quantifying the social life of a city through data on its economic and social use. While economic and demographic factors can be communicated through relatively defined and legible statistics, social life and cultural value are more difficult to quantify. It could be argued that the study’s reliance on cell phone usage as a proxy for human location (Preservation Green Lab 29) falls short in terms of reliability. The ethnographic details of an area are difficult to quantify as well, at least in terms of how they relate to small-scale urban fabric.



Figure 10. SoDo's megastructures - CenturyLink Field (2000)



Figure 11. SoDo's megastructures - Seattle Arena (proposed)

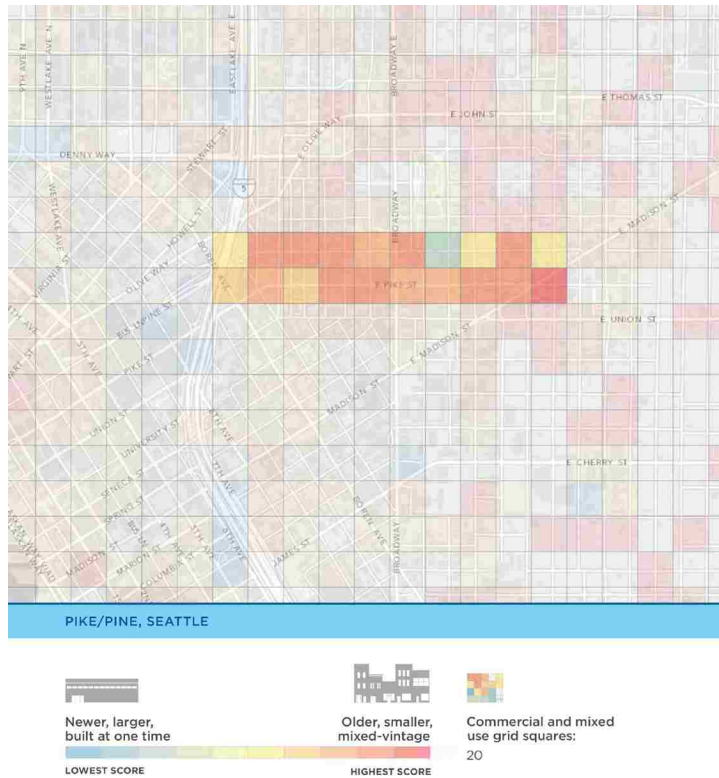


Figure 12. Metrics of granularity; exploration of the Pike Pine Corridor in “Older, Smaller, Better”

Although the report emphasizes the importance of small-scale urban fabric, a major benefit of “Older, Smaller, Better” is actually its broad approach and attempt to quantify these characteristics at a neighborhood level. While their methodology may have some limitations, the Preservation Green Lab has taken an important step in identifying this as a critical area of study. This report has the potential to inform the design community in a crucial way, especially since the urban scale of this study, with its focus on particular neighborhoods, is uncommon.

Although published fifteen years apart, these studies by Albert Levy and the Preservation Green Lab explore similar concerns and reach similar findings. Arguably the Preservation Green Lab has gone further in addressing the problem of the preservation of built fabric in contemporary cities. Where Levy sees a need for further study and encourages the development of criteria for new urban fabrics, the Preservation Green Lab distills key features of the urban environment into performance metrics. While perhaps limited by the nature of the data collected, this study provides a model for further investigation into the conservation of urban neighborhoods.

Streetscape as Urban Fabric

The urban streetscape is a crucial environment in the discussion of conservation of urban fabric. The street is a widely studied part of the city, both for its physical characteristics and its role in the larger urban realm. In addition to her writing on urban preservation, Roberta Brandes Gratz provides an analysis of streetscapes in *The Living City*. She writes, “The street, in fact, is the most important thread in a city’s fabric. It knits the city together as a city,” (Gratz 296). Consistent with her larger argument, she stresses the importance of streets in relation to the widespread failure of public squares and urban malls that eliminated city streets as part of their planning.

She identifies the ignorance of existing city spaces as the foremost failure of this type of development. Gratz instead suggests that designers need to “acknowledge the value of what exists and weave into it the desired new,” (294). She goes on to suggest that pedestrians, the “users” of the street are the most qualified to determine a street’s quality (294). The role of the pedestrian is a critical one in understanding streetscapes and it has inspired much research devoted solely to the pedestrian experience. From William Whyte’s influential studies in the 1980s⁴ to recent endeavors like the Project for Public Spaces in 2015, the pedestrian experience of the urban streetscape has been the focus of much attention.

A 2006 publication by the Centre for Public Space Research at the Royal Danish Academy in Copenhagen parallels the conceptual ideas proposed by Gratz and provides quantitative methodology for analyzing streetscapes. In “Close Encounters with Buildings,” Jan Gehl, Lotte Johansen Kaefer, and Solvejg Reigstad state that “buildings must learn to make meaningful conversation with city spaces and the people in them,” (47). The primary focus of their study is the latter, as the actions of pedestrians at various street facades at different times of day are observed and analyzed. The results reiterate the importance of diversity and scale of the built fabric; “Along the facades of the city, it is best if pedestrians meet interesting and varied experiences as they pass by,” (Gehl, Kaefer, and Reigstad 30). Based on their own research and case studies, the authors identify similar characteristics of granularity in the street fabric as the Preservation Green Lab does, such as smaller buildings with noticeable transitions. They also express the benefit of niches, frequent entrances, and transparent facades, preferably with vertical delineation as opposed to horizontal banding (Gehl, Kaefer, and Reigstad 39).

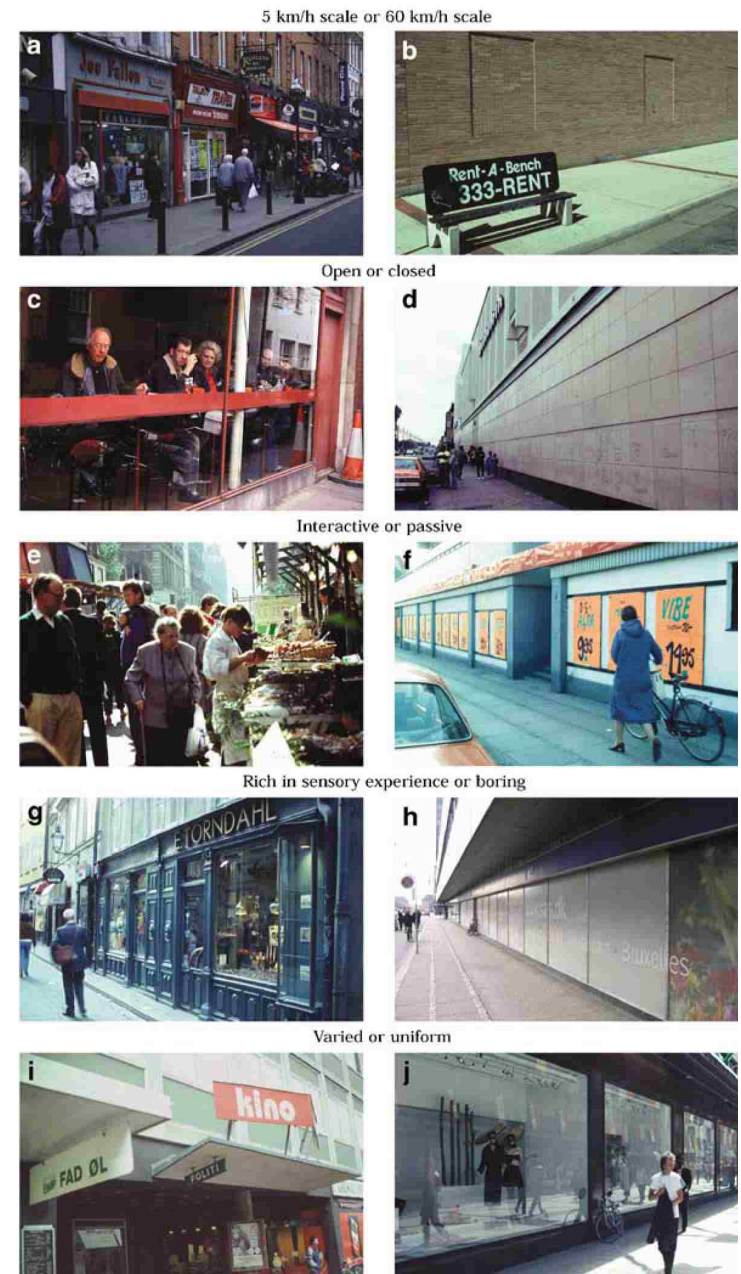


Figure 13. “Urban scenes at eye level” from Gehl et al; examples of granular urban fabric on the left, missed opportunities on the right

4. As chronicled in *The Social Life of Small Urban Spaces*, published in 1980.

This study of the streetscape of Copenhagen speaks to the significance not only of physical granularity, but fine-grained textures of use as well. The authors write, “it is...important to look at quality content, wealth of experiences, and...the simple delight of being in cities,” (Gehl, Kaefer, and Reigstad 39). Similar to Levy’s theory on urban form, Gehl, Kaefer, and Reigstad attribute the success of the street to the relationships between its built fabric, activities, and users, all of which are integral to the street’s function as a public space. In an act of inverting city space, the authors state that “urban structures...form the walls of public space,” (Gehl, Kaefer, and Reigstad 29). Viewing the street as public space enforces its role in the larger urban environment. Studies of granularity and scale reveal the importance of relationships between these “walls” of public space and the users, reinforcing the idea that a rich user experience is as crucial in an exterior urban environment as it is within a built form.



Figure 14. The streetscape of First Avenue South in SoDo; small-scale fabric mediating the commercial industries and entertainment industry

Summary of Urban Preservation Techniques

Two primary concepts of urban preservation will be applied in the site selection, analysis, and design of this thesis – context and layers. These key elements have been distilled from the preceding research on urban fabric and its conservation in order to define urban preservation as it is used in this thesis. Context refers to the expanded focus of urban preservation, emphasizing that, particularly in an urban scenario, the approach should reach beyond a single structure and take surroundings into consideration. The importance of layers is reinforced through the understanding of a site throughout time and the crucial element of the future. The relationship between old and new is at the center of an urban preservation project.

History is an undeniably important part of the urban environment, particularly in SoDo where there has been a series of transformations of use and built form over time. The exploration of history in this thesis will utilize a preservation ethic cognizant of layers of time, one that “respects the tradition and evolutionary growth of a place,” (Gratz ii). Based on the work of Albert Levy, a developmental approach to history will be employed, meaning the analysis of progressive time periods and their respective architectural remnants. The goal of this analysis is to express the creation of SoDo’s modern urban fabric. Levy would call this a “diachronic approach,” or one that “focuses on the role of *constants*, or historically persistent elements, in the fabric as the city evolves from one stage to the next,” (81, emphasis in the original). The relationships between these “constants” and their changing urban surroundings become clear through this study.

This methodology will also reveal information valuable in analyzing the textures of the site. The placement of individual existing structures in history offers an understanding of their original context and documents the development of their physical and social granularity. Particularly in urban projects, the context of a site extends beyond its physical surroundings. In addition to the historic context, building use, materiality, and the structure's larger relationship to the neighborhood all contribute to an understanding of the site.

Site Selection

As an urban neighborhood in Seattle with a rich yet varied past stitched into its built fabric, SoDo provides a particularly appropriate site for this investigation. It is a part of the city that has been in near constant change since the turn of the 20th century. In its early history, SoDo was transformed from swampy tideflats to a hub of industry, manufacturing, and commercial shipping (Raley 4). The neighborhood still features a wide variety of structures that record its commercial and industrial past. Major events in SoDo's recent history have included the construction of the Kingdome in the mid-1970s and the subsequent introduction of other major league sports stadiums and entertainment venues (figures 8-11). These mammoth structures have changed the atmosphere of the neighborhood, increasing its physical scale and transforming its use and economy. The past four decades of development in SoDo have left the neighborhood with an unclear sense of place. The stadiums are an integral part of the area and its current identity, but at the same time they do not represent the character of the neighborhood as a whole. This presents an opportunity to further explore how the preservation of the existing urban fabric can help to foster a sense of place for its users.



Figure 15. Creative character of SoDo, Seattle



Figure 16. SoDo's creative remnants

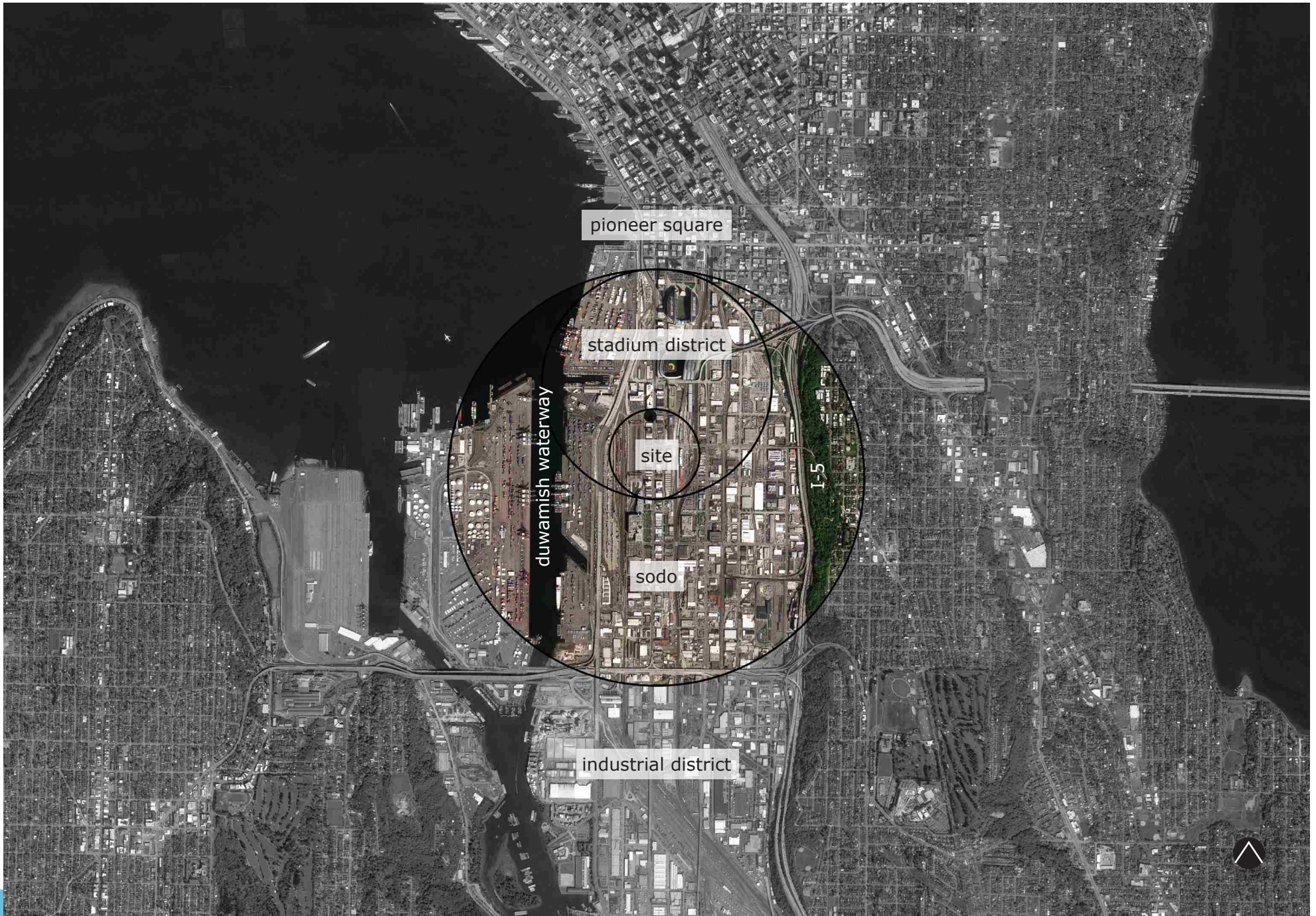


Figure 17. SoDo location and scales of analysis

The distribution of uses and users in SoDo has been as fluid through time as its physical form. The depression era saw a massive shantytown upon the area's former tideflats, (Raley 37) a population that is starkly contrasted with today's influx of sports fans. The neighborhood now features a spectrum of varied uses, from nightlife and dining to heavy commercial distribution. An analysis of the current uses in SoDo and the consideration of usage networks at variable scales indicates a segregation of uses in the district as a whole and informed the selection of the project site.

Site Analysis

This thesis analyzes SoDo at multiple scales: the larger SoDo Neighborhood, the six-block inset of the Stadium District, and finally the centrally located project site.

The Neighborhood of SoDo

SoDo is part of the Greater Duwamish area of Seattle, but its borders as a neighborhood are somewhat indeterminate. For the purposes of this study, the district is bound by Pioneer Square to the north, the I-5 corridor to the east, the Spokane Street Viaduct and West Seattle Bridge to the south, and the Duwamish Waterway to the west. Analysis of SoDo on the district scale reveals a clear separation of uses, with pedestrian and entertainment venues clustered at the north of the site and commercial and industrial uses pushed southward (figure 18). This is a natural progression as development radiates south from downtown. However, the center of SoDo experiences a distinct separation of uses. This area, explored as the median scale of study, presents an opportunity to weave together the entertainment industry and production industries of SoDo as a means of maintaining the historic identity of the neighborhood as it continues to develop and change.

- dining, retail
- entertainment
- community, transit
- commercial
- industrial

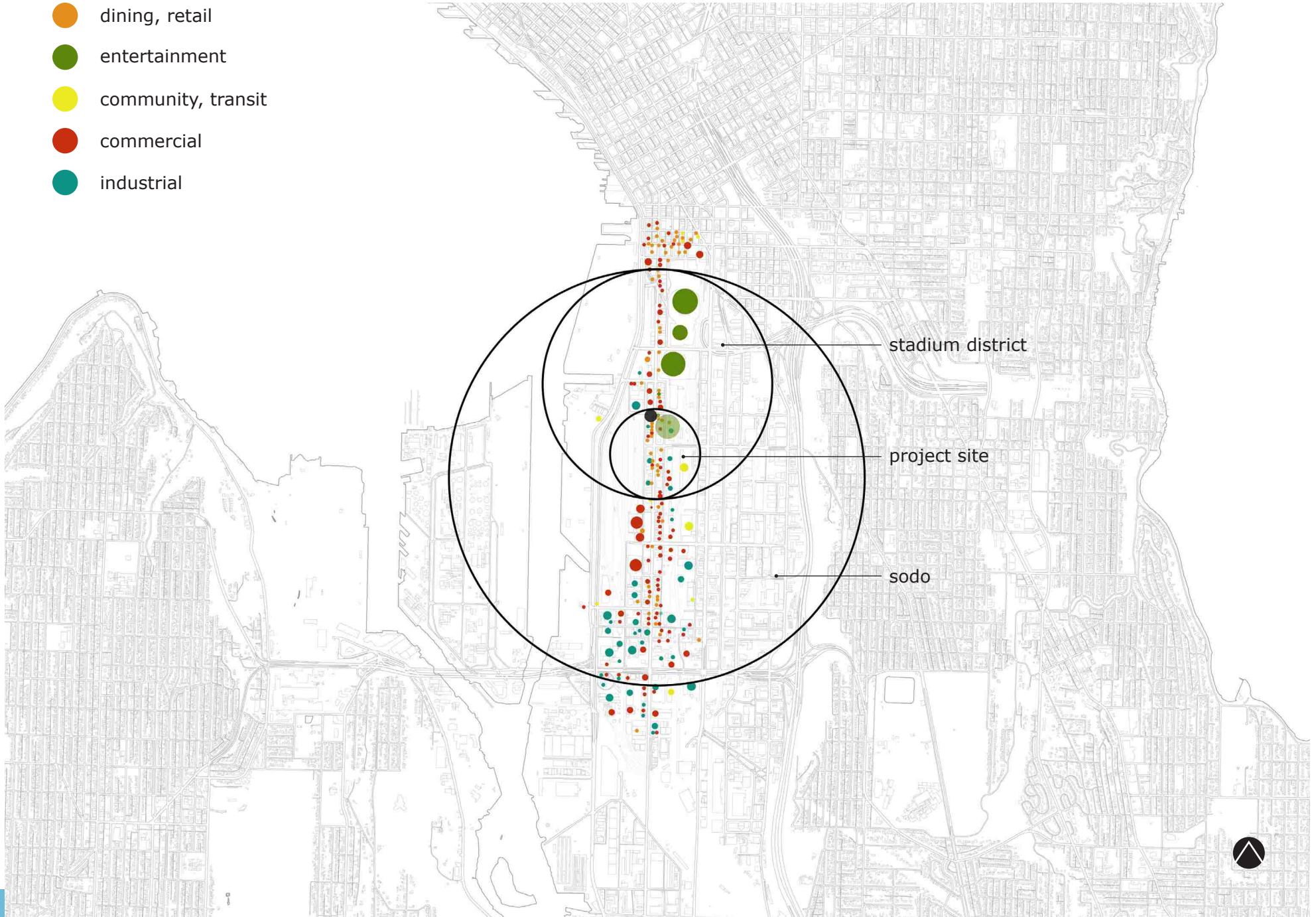


Figure 18. Diagram of usage networks at the neighborhood scale

The Stadium District

The median-scale of study encompasses a six-block site located at the base of Century Link Field along First Avenue South. The site is defined by Railroad Way South to the north and South Stacy Street to the south. This particular segment of SoDo was chosen for further study as it provides a strong contrast in the physical conditions of the urban fabric. The existing stadiums and the proposed Seattle Arena are massive dominating elements in the site while small-scale remnants of SoDo's commercial and industrial past stand among them. In addition to the segregation of uses, this physical dichotomy presents an opportunity to explore the correlations between these opposing scales of the urban fabric and between preservation and new development. The presence of the stadiums creates a uniquely cyclical economic and social climate, where SoDo is flooded with users during an event but is largely vacant at other times. This pedestrian traffic flow suggests that a public experience on the site needs to be functional for multiple types of users and have a strong visual appeal.



Figure 19. Diagram of usage networks at the stadium district scale





The Project Site

The central project site acts as a microcosm of SoDo's industrial divide. The site is representative of the social granularity and the variety of use present in the neighborhood while it marks the point where production industries shift southward. The site of the future Seattle Arena falls within this network, indicating a need to accommodate change and development into the future. Within the project site is an existing warehouse structure that will be the site of this thesis intervention. The intent of the building reuse project is to extend the lifespan of SoDo's existing fabric while extending the manufacturing industry towards the north in a way that engages the public.

Figure 20. Diagram of usage networks at the project site scale



The Reuse Site

The structure chosen for reuse is the Kellogg's Warehouse at the northeast corner of First Avenue South and South Massachusetts Street. The three-story brick and heavy timber warehouse structure was constructed in 1910 and has served many functions throughout its lifespan, reminiscent of SoDo as a whole. Its historic name comes from a mid-1930's tenant, the Kellogg's Cereal company, but the building was originally built and occupied by the Chicago, Milwaukee & Puget Sound Railway Company (Historic Resources Survey). This site was chosen for reuse due to its place in the larger site context and for its rich layers of texture that reveal change through time. Its context is representative of multiple phases of SoDo's development; new commercial development stands empty at its north side, heavy commercial infrastructure stands to its west, and small-scale, mid-century commercial units thrive to its south.

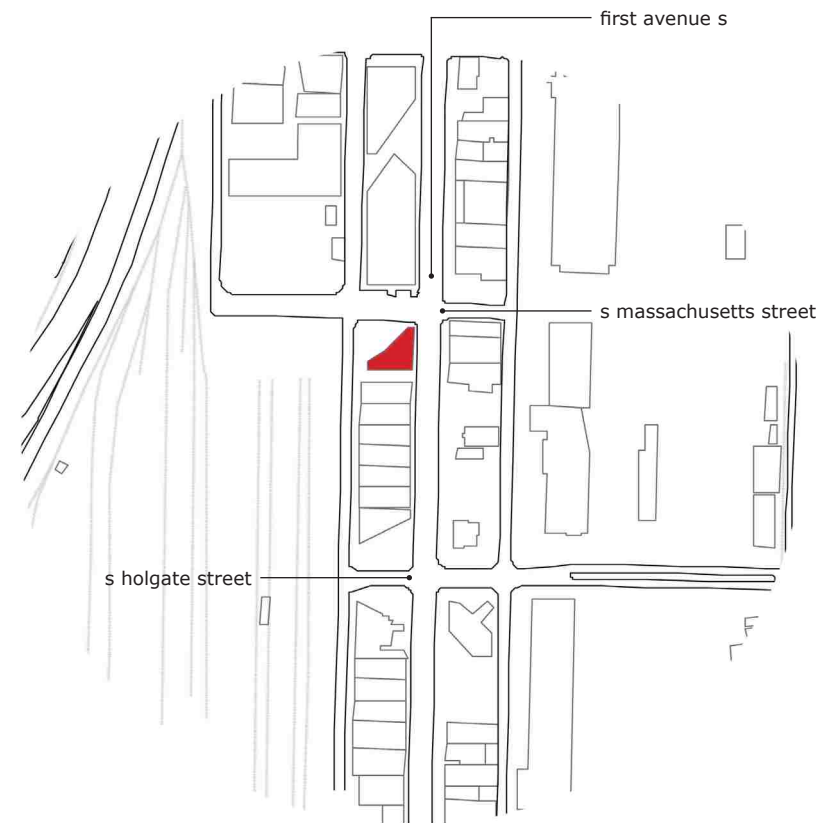


Figure 21. Building reuse site plan; Kellogg's Warehouse shown in red



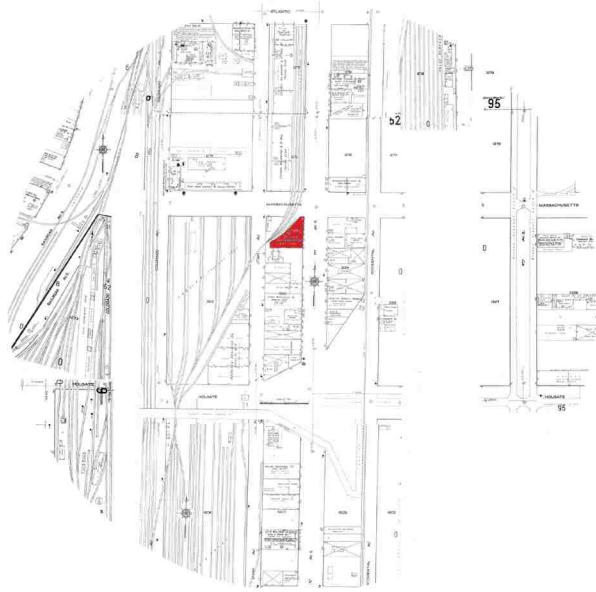


Figure 22. Building reuse site circa 1916

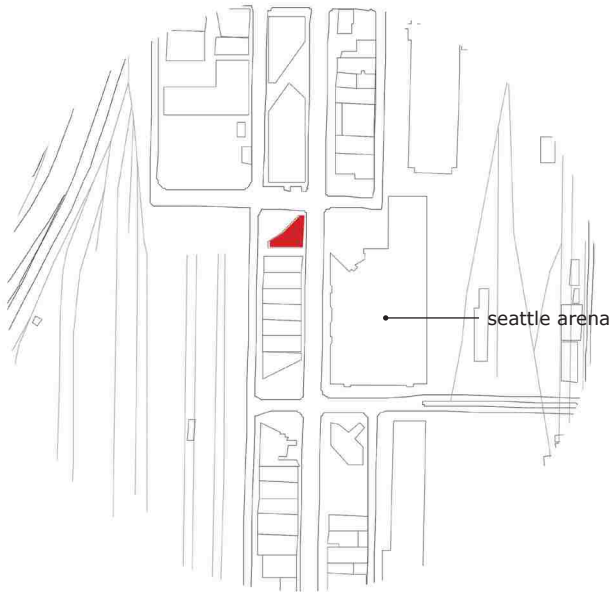


Figure 23. Building reuse site, future projection

The wedge shaped footprint of the warehouse originally accommodated rail lines serving multiple industrial facilities circa 1916 (figure 22). Although the railway connections are no longer functional and terminate west of the structure, the unique form of the warehouse creates an open space shielded from the busy First Avenue South but largely open to pedestrian traffic and in full view of the heavy commercial shipping operations west toward the Duwamish Waterway.

The warehouse is sited directly across First Avenue South from the proposed Seattle Arena site (figure 23). The construction of the arena will further draw the sports and entertainment industry southward, making the site a prime location for a representation of SoDo's production industry.

Creative Manufacturing

Analysis of the project site's uses exposed a trend of manufacturing enterprises that embrace a creative spirit of production. This network of creative manufacturing extends beyond the project site and includes breweries, wineries, graphic design and printing businesses, apparel and accessory production companies, and a maker space in the center of SoDo. These venues of creative manufacturing reflect both the industrial past and present of the neighborhood. They offer a scale of manufacturing that is accessible and often create products that are well understood and consumed by the public. Expanding this network of creative manufacturing is explored in this thesis as a method of conserving the existing fabric of the area and as a way to take advantage of the rich history and context of SoDo. This thesis inserts an artistic textile lab into SoDo's existing network of manufacturing building upon the area's industrial spirit and its unique pedestrian presence in order to put the process of making on display to the public. The project utilizes urban preservation strategies in its consideration of the both the structure and the program.



Figure 24. SoDo's creative manufacturing network; textile lab location shown in red

Design Goals and Methods

The goals of this thesis are to understand and integrate with existing networks of creative manufacturing in SoDo and implement the concepts of modern preservation in order to conserve the existing urban fabric of the neighborhood, weaving its industrial past with its present as the stadium district. These massive venues have become the foremost structures in the neighborhood, both physically and socially dominating SoDo's identity. However, the small-scale granular fabric of the past that remains among the stadiums provides a site for research, exploration, and design.

This design proposition inserts an artistic textile lab into the heart of SoDo, integrating with the neighborhood's existing network of creative manufacturing and extending the life of an existing warehouse. The textile lab will not only be a center for design and creation, but will put the processes of weaving and tufting on display to the public. The public use patterns of SoDo are largely influenced by the stadiums as the area experiences wide fluctuations in pedestrian use. The textile lab will take advantage



Figure 25. West facing elevation of First Avenue South at the project site; the massing of the proposed Seattle Arena shown outlined

of the influx of foot traffic, exposing the manufacturing process and allowing visitors to gain an understanding of SoDo's productivity. The reuse of an existing warehouse conserves a vernacular piece of SoDo's urban fabric and therefore its industrial identity. The intent of the textile lab is to amplify the commercial and industrial spirit still present in the neighborhood. To borrow from Gratz and Mintz, this project "is not an exercise in nostalgia" (3) but rather an "innovative use of existing resources, whether an old building or open space," (4). The planning and design will employ the techniques of modern preservation through an understanding of the granular texture of the streetscape of First Avenue South.

The research paradigm for the design proposition is largely based around the role of the streetscape in the urban realm and in urban preservation; "Understanding how...a street works, how a neighborhood works...is at the core of the preservation ethic," (Gratz viii). Urbanist strategies of placemaking and elements of urban form, which define the street physically and conceptually, are all major contributors to this approach. The design concept emerges from the undeniable correlation between granular urban fabric and sense of place. The project will attempt to maximize this connection in SoDo by responding to its granularity in physical form and in use in order to reaffirm the neighborhood's identity.



Figure 26. East facing elevation of First Avenue South at the project site

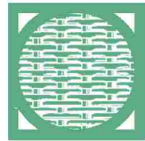
Chapter 4 | SoDo Textile Lab



raw materials



tufting



weaving



finishing



exhibition

This project intends to reflect the relationship between old and new not only through building reuse, but in updating the program of the manufacturing facility as well. The textile lab represents a new interpretation of the production industry, one where the public is a welcome participant in the process of making. The interior landscape of the lab is generated by this updated program, which includes spaces for creation organized around spaces for the visiting public. The vertical circulation paths intended for public use are visually exposed to reveal the movement of the building's users, emphasizing the presence of people as well as products within the lab. The existing structure provides the basic framework for the production spaces, as the reuse project works within the existing footprint of the warehouse and largely maintains the original layout of the structural grid. The progression from thread and yarn to completed artwork mimics the flow insinuated by the rail lines of the past century.

Planning

The basic layout of the textile lab consists of four spaces (figure 28): the public circulation areas and production spaces, which lay within the original footprint of the warehouse, the new exhibition enclosure on the northwest corner of the site, and the outdoor public market space framed by the addition of the enclosure.

Figure 27. Program icons; these icons indicate the layout of interior spaces on the following plans and sections

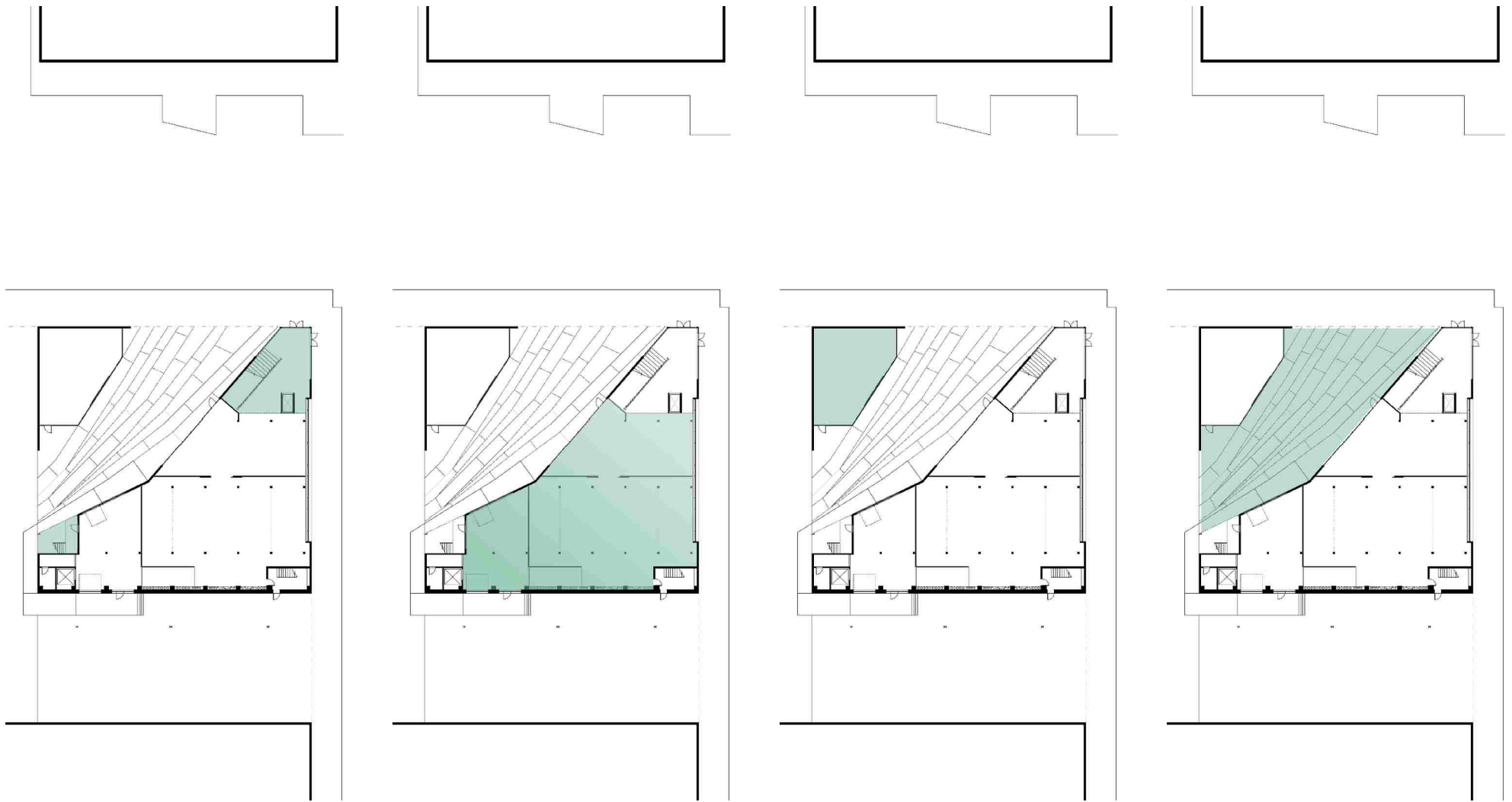


Figure 28. Site planning diagrams; from left to right, public circulation, production space, exhibition enclosure, and outdoor public market

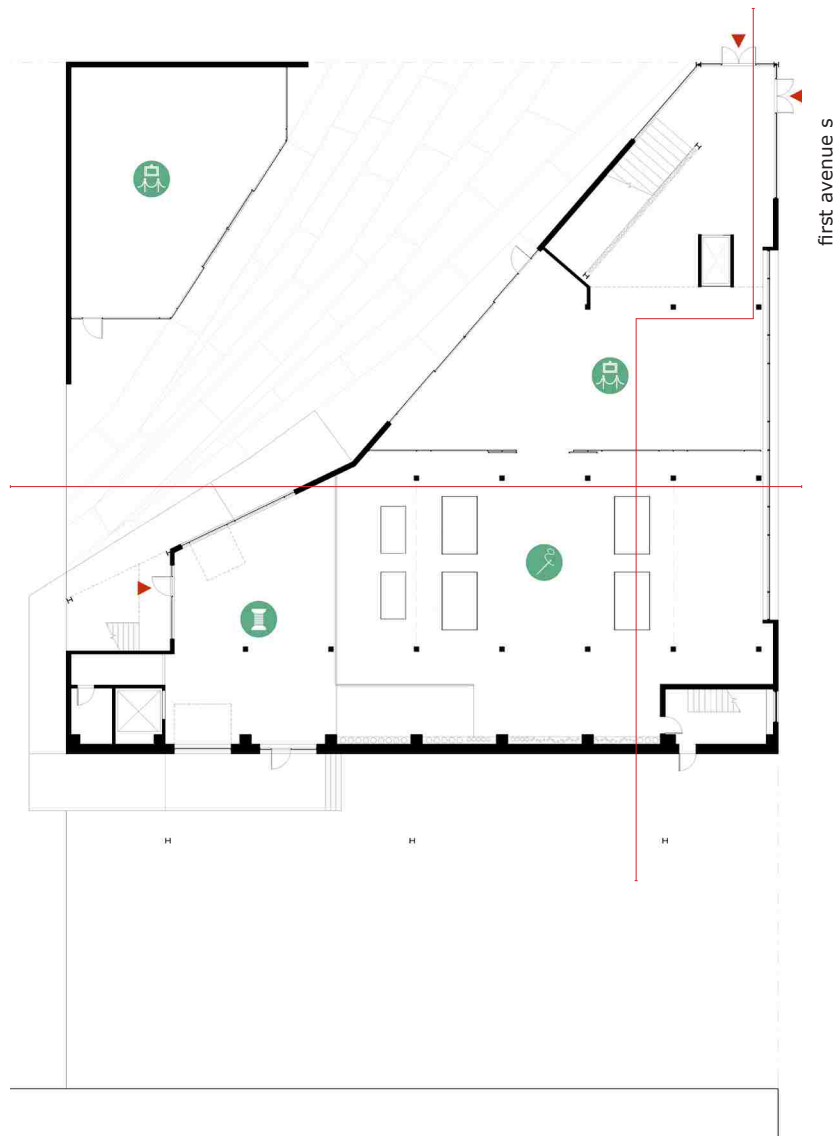


Figure 29. First floor plan

Interior Landscape

The first floor of the textile lab is the main entrance for the artists, public, and raw materials. The primary entrance is located at the northeast corner, a prominent viewpoint along the main pedestrian circulation path of First Avenue South. The entry breaks the original vertical layout of the warehouse, capturing a higher space for circulation and display of completed artwork. The raw materials enter the facility at the southwest corner, and artworks are completed and moved to display from the central finishing area.





Figure 30. Textile lab northeast entry

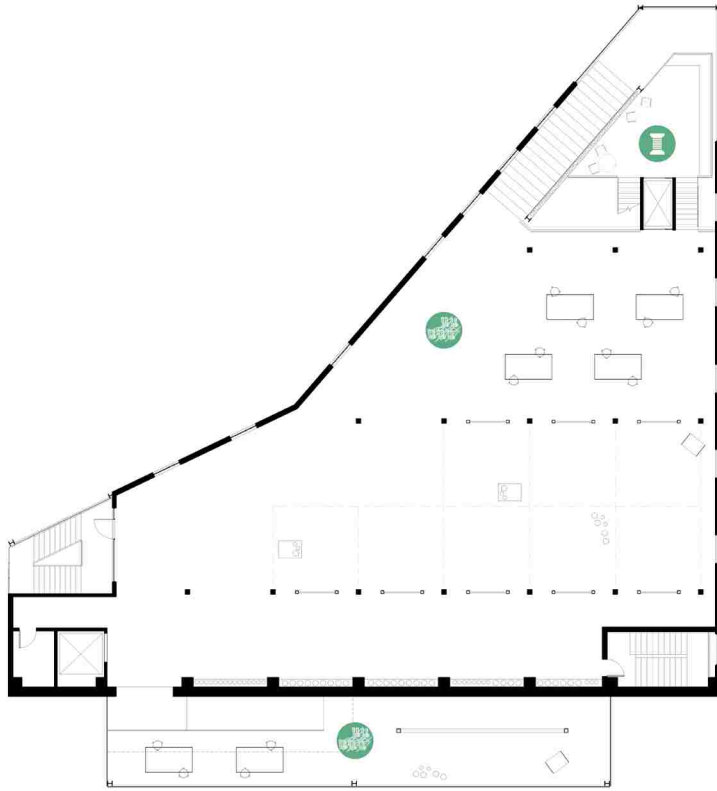


Figure 31. Second floor plan



The primary production areas are located on the second and third levels, with tufting equipment on the second. A large scale tufting frame becomes a focal point of the exterior as it is pulled into a highly-glazed new addition on the south facade. The addition takes advantage of the existing brick wall as backdrop for the artwork. The process of creation in this space will be highly visible from First Avenue South, particularly as tufting is a time consuming art form and a large scale piece can take shape over a six month period. This addition to the south balances the openness of the northeast entry as both become visual beacons for the textile lab, one exhibiting the process of creation and the other the movement of the building's users.



Figure 32. Second floor tufting studio



Figure 33. Third floor plan



The third floor is another production floor, housing modern weaving equipment. This level is accessed from the mezzanine level library, which offers resources on raw materials and techniques for both public and artist exploration. Spools of yarn and thread are used not only to exhibit the raw material being transformed within the lab, but represent the color and variety of textile production. They add an additional layer to the existing textures of the warehouse, partially enclosing the mezzanine library and lining the interior of the existing south brick wall.



Figure 34. Mezzanine level resource library and viewpoint



Figure 35. Third floor weaving studio

The reuse of this existing warehouse provided some square footage limitations and therefore the activities programmed for the textile lab were chosen from a myriad of textile techniques. The techniques of tufting and weaving were chosen because they represent the modern possibilities of ancient fabric manipulation methods. In this way they parallel the concept of updating the industrial program of the warehouse. The two art forms, tufting in particular, put a distinct process on display and allow the public to watch the finished product take shape over the course of time. Tufting is the process used to create rugs and artworks consisting of multiple loops of yarn. These pieces are created using pneumatic tools that secure the loops to backer fabric suspended in stationary frames of various sizes (figure 32). In addition to these frames, workstations are provided on the second level for patterning and design. The art of weaving in the digital age is a highly automated process, carried out by computerized looms reproducing digital files. To accommodate the design process, digital and analog workstations are provided on the third floor for the design and conception of patterns.

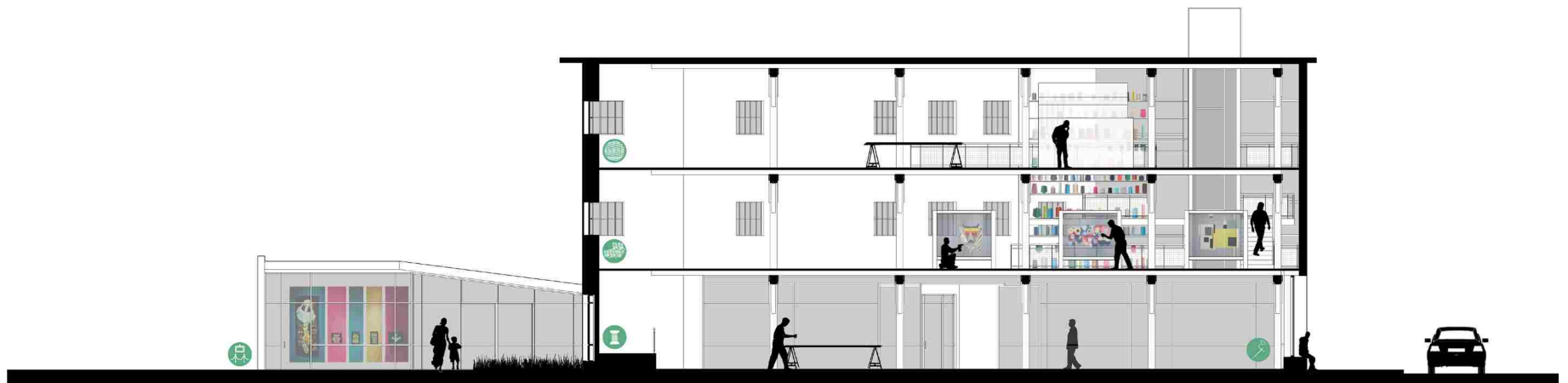


Figure 36. Section looking north

Urban Intentions

Reuse of the Kellogg Warehouse responds to its urban environment by respecting the layers of the past but integrating them with contemporary needs and uses. The relationship between old and new extends beyond the site itself as the lab is surrounded by development indicative of multiple eras. The building is not precious in material or history, but rather a vernacular representation of SoDo's industrial roots. The program is intended to mirror these roots, while responding to the current trends of production in the area. The facade of the original warehouse is largely maintained on the upper levels, with the exception of the open vertical circulation paths. These corrugated steel facades retain painted signage reflecting the building's former use. At the ground floor, the facade is opened up to First Avenue South, giving pedestrians a view in to the finishing and exhibition area. Opening the first floor to the street exposes the original interior textures of the warehouse and provides a connection between the exterior and the historic inner spaces that was not present before.

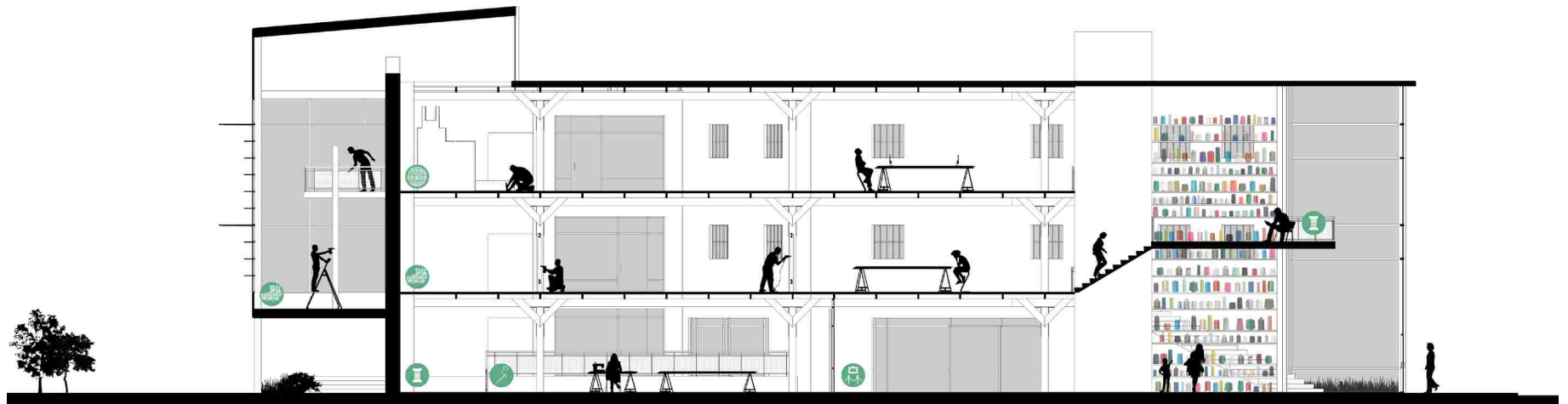


Figure 37. Section looking west

At an urban scale, the site of the warehouse presents an opportunity to create a space that truly weaves the entertainment industry of SoDo with its commercial industries, particularly as each expands and shifts with future development. The introduction of the textile lab aims to not only extend the lifespan of an existing structure, as preservation does, but extend the productivity of SoDo and continue to contribute to the area's creative manufacturing network.



Figure 38. Southeast corner

The design of the SoDo textile lab as a vehicle for applying preservation strategies in an urban context presented challenges and realizations about the process of preservation itself. The conservation of existing fabric in the face of development, particularly small-scale building stock, is a challenge because it is met with issues of impending growth for the neighborhood. At the Kellogg's Warehouse site in SoDo, these issues are especially relevant due to the kind of development in the area, namely the major sports stadiums. Preserving a three-story warehouse adjacent to a massive arena complex may not result in a project matching in scale, but it does achieve a preservation of identity and history. It also follows a precedent in the area, where businesses in small, existing structures thrive while new mid-rise commercial spaces remain vacant.

The program of the textile lab is intended to be open and inviting to the public as a means of weaving together SoDo's variety of uses. However, there are additional programmatic opportunities not explored in this thesis. Given the type of users who flock to the stadiums on game days and their patterns of circulation and activity, the space at the northwest corner of the warehouse site could support a use other than product exhibition. Including a social space on the site, such as a cafe or lounge, has the potential to activate the courtyard from within and draw its users to the lab. This is not to say the entire pedestrian population of SoDo are disinterested sports fans; the area attracts a wide variety of people due to its multiple uses. While design elements are used to attract the public, further consideration of the program could accommodate the workers and permanent population of the neighborhood as well.

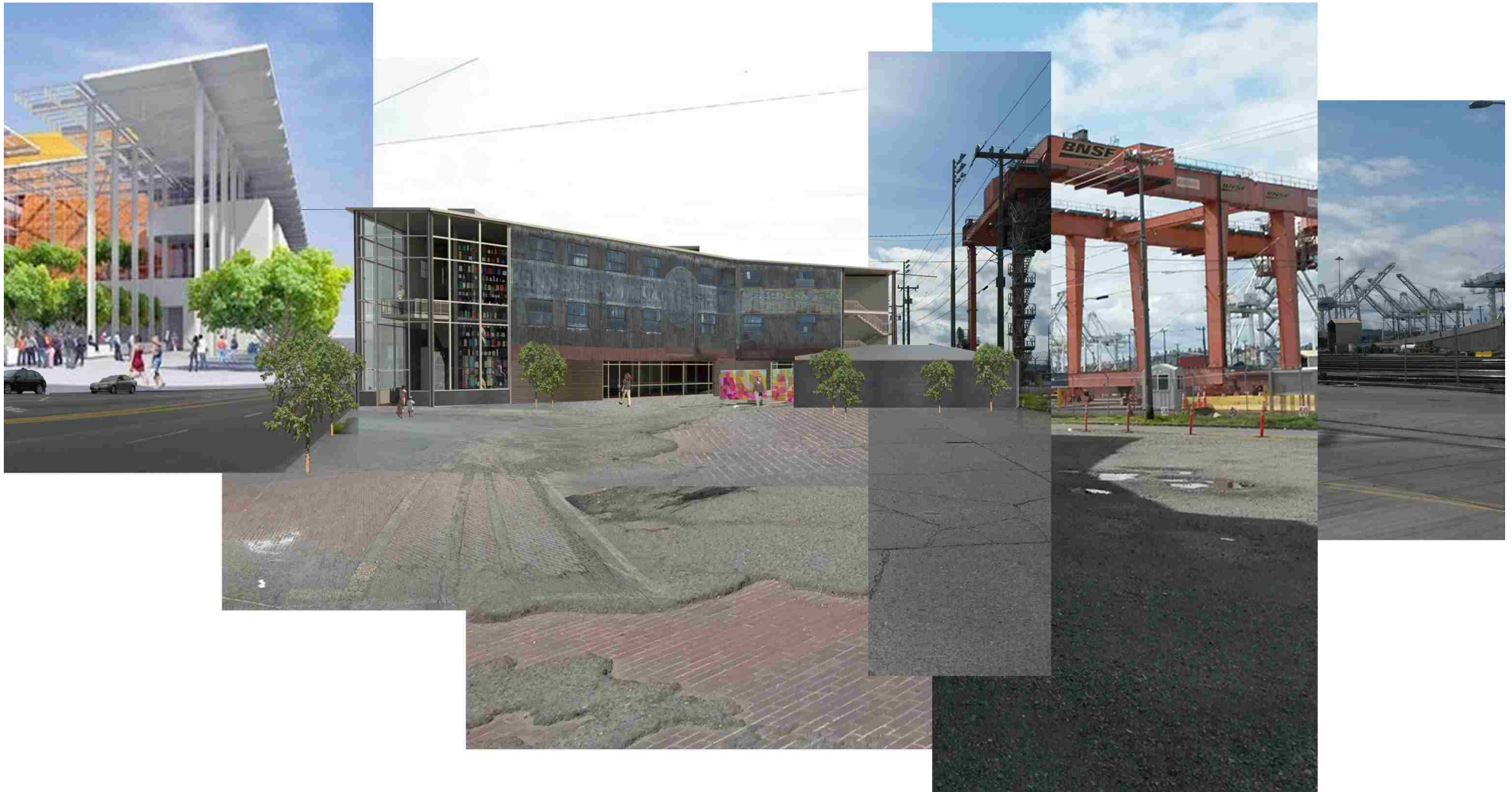


Figure 39. Contextual north facing elevation

Another programmatic opportunity not explored here is the possibility of incorporating an existing manufacturing business into the space, giving them additional production area and the chance to increase their collaboration with local artists. This would result in a close-knit relationship with SoDo's existing creative manufacturing enterprises and bring a level of economy to the textile lab.

The exploration of preservation as an urban strategy was the most valuable piece of this thesis project. Using a preservation ethic from the start as a way to understand the site and its layers allows the designer to project into the future in a way that respects and represents the past. The reuse project itself then reflects a similar relationship between old and new in its design, programming, and its relationship to its urban context. The placement of the textile lab into SoDo's network of creative manufacturing suggests opportunities for the network to continue its expansion and conserve urban fabric by occupying existing structures. Growth of the creative manufacturing network in SoDo would only continue to weave together the area's production industries and the entertainment industry.

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