Strange Bedfellows: A marriage of housing and industry on the Duwamish Waterway, or a sordid tale of domestic bliss

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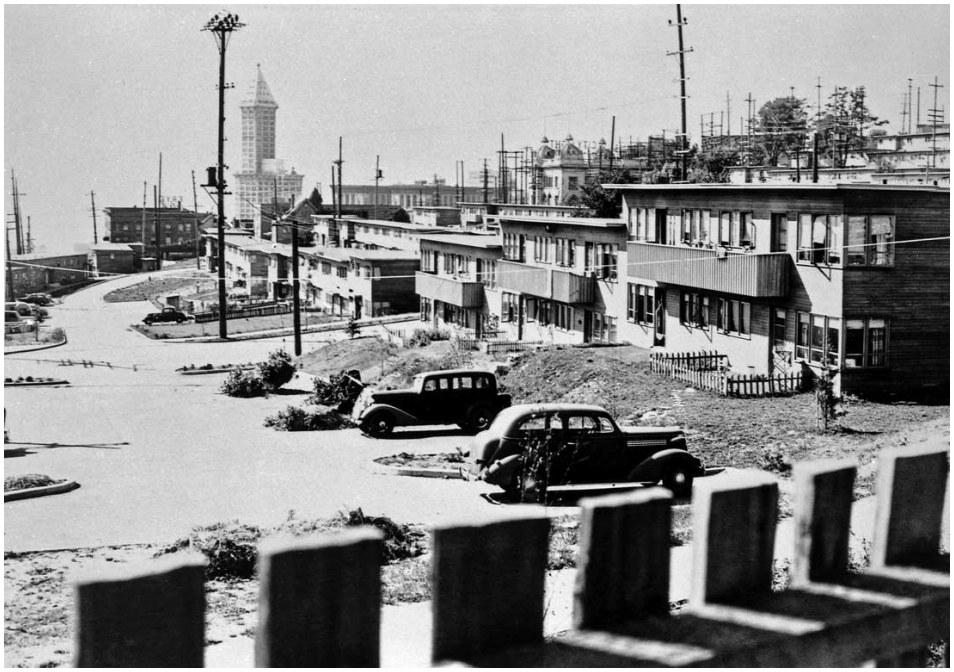


fig. 1: Yesler Terrace 1940's.

THE STORY

This is a story of a relationship, a couple, two distinct entities that come together to support, bring pleasure, and challenge each other. It won't always be happy and at times there will be arguments and fights, but hopefully these will only make the connections between the two stronger. Of course this isn't guaranteed, and with any connection it will need to be repaired, rebuilt, and refreshed or it will wither.

The relationship is between affordable public housing and industrial spaces. Affordable housing, domestic space, brings up images of home and family as well as the projects and failed social policy mixed with top-down urban planning. Industry and factories bring up images of smokestacks, trucks, and large open spaces with manufacturing processes churning within. How do these two come together and why?

I am proposing this relationship along the Duwamish waterway, an EPA superfund site, because like many couples, what at first doesn't make sense, can actually create a powerful and deep relationship that allows each to flourish and thrive. The Duwamish River provides the dynamic landscape that is the basis and site for the connection. It also is constantly in flux - flowing water that demands change because of its incessant flow.

PERSONAL HISTORIES

Housing

We moved to Seattle one month after the birth of our first child. After six months of living with family, apartment managing, and experiencing an intense need to feel settled, we began to look for a home we could buy. We had decided to live on one income and quickly realized that our options were extremely limited even in the heyday of sub-prime mortgages. We ended up in Bremerton, an hour ride from Seattle by ferry, and one of the few places that you could buy a house for under $100,000, which is what we did.

fig. 2: 217 High Ave. Bremerton, our first house

The experience of the searching the city for an affordable home quickly demonstrated to me how larger social, economic, and cultural forces shape and limit our access to opportunities and determine our everyday lives. How close we can live to where we work, schools, and socialize, and how many options are open to us is largely determined by our available resources and priorities. Where to live at a personal level is a complex decision; at an urban level it seems to be an impersonal market force that sifts and sorts urban inhabitants into the neighborhoods and suburbs that constitute the fabric of the city.

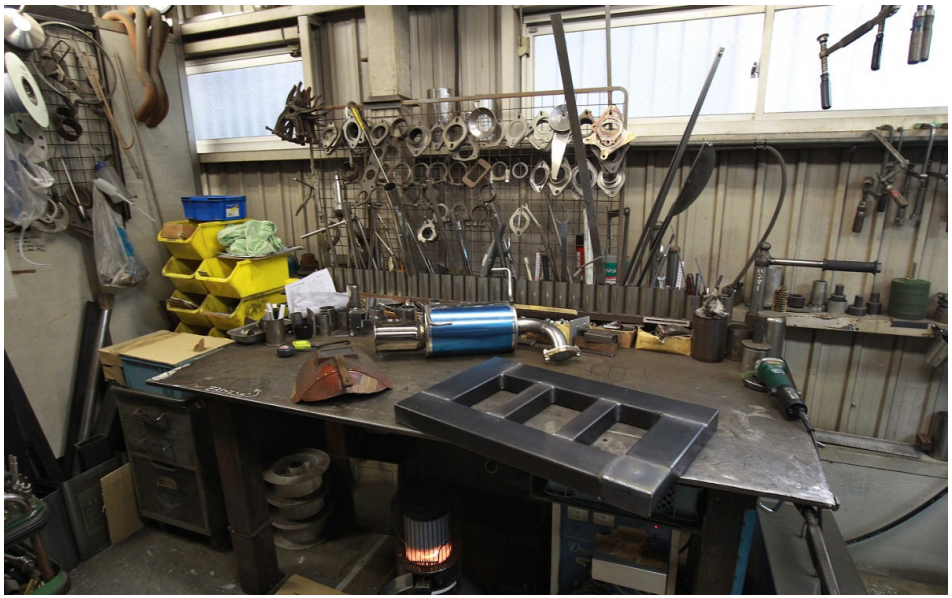


fig. 3: A workshop space

Working

We lived in Bremerton for one year. We discovered that we are not settling down people and since then have moved regularly from apartment to apartment. Although we have enjoyed the flexibility of renting, I often think of the basement workshop I had created in our Bremerton house. Of course with a new baby, a long commute and a job, the amount of time that I was able to spend making things was minimal. But the possibility was there - I had a space for it. That space has been difficult to find again.

In many homes the garage, basement, or attic serve as the leftover space for creativity, entrepreneurial endeavors, or invention. Ostensibly for storage, these spaces are appropriated as alternative space for personal creativity (hobbies), entrepreneurial activity or combination of all - a space that expands to fill the needs and wants of the occupant.

The appropriated workshop space of the single family home convinced me of the importance of providing work spaces and the possibility of creating alternative means of livelihood in any domestic space. For some it could be a space for digital production, while others prefer to get dirty and physical - either way it is a space defined by the creative and productive urges that may defy a clear typology.

Place

In the first year of the graduate program we moved into graduate family housing in Laurel Village by University Village. This subsidized housing for students with children provided a place for our family where we are surrounded by others who were have a common set of circumstances. This combination of place and circumstance allowed a sense of community to develop within a diverse set of people from different religions, nationalities, and classes. In addition, there is a sense of the importance of sharing resources and mutual support that develops and reinforces our commonality, while not diminishing our differences.

Living together in close proximity while pursuing a common interest proved to be a powerful connection that fostered a sense of community despite the transient nature of our tenure. Some people came for one year and left, others have been around while a finished dissertation continues to elude them; either way having kids and the need to study brings people together to share resources, time, and energy.

fig. 4: Aerial view of the University of Washington. Laurel Village occupies the upper right corner

fig. 5: A South Park house on the river

ISSUES AND QUESTIONS

These personal experiences frame my thesis - they are my individual and visceral connection to the design. The experiences have motivated the research and investigation that expands the individual moments into a broader architectural and urban context and engage larger social issues. The primary issues this thesis grapples with are:

- Expanding the vision for equitably inhabiting the city through combining housing and flexible work spaces in an industrial area

- the relationship of spaces for living and work within a building, community, neighborhood, and city.

- the role of design in fostering community and communication, and mitigating forces of displacement (gentrification), isolation (access), and misery (miserable surroundings).

While these questions provide the impetus for engaging with the design of public housing with work spaces along the industrial Duwamish Waterway, this thesis is not an answer, but the first step in testing my abilities and my capacity to fruitfully engage the issues and provide a possible vision.

Housing

Affordable housing, workforce housing, or social housing are all terms used to describe housing that is created, maintained, and/or managed outside of the general real estate market. While all housing is in some way subsidized (Davis, 1995), since the late 1800's there have been a series of policies and practices around the creation and maintenance of housing that is affordable, healthy and decent for those lacking access to quality housing. This subsidized housing is a vital part of urban policies and practices and the nature of the approach and mechanisms vary depending on the time and place (Davis 1995, Wright 1981, Hayden 2002).

Currently there is a shortage of subsidized housing in Seattle and there is an acknowledged need to provide more diverse housing types to meet the demand (Seattle Planning Commission 2011). The recent redevelopments of the workforce housing communities of High Point, NewHolly, and Rainier Vista, have followed the model of mixed-income communities connected to social services and public transportation. Even with the redevelopment of Yesler Terrace that will add another 1,000 new units of affordable housing, there will still be a lack of housing in Seattle for those that fall below 50% of the Area Median Income (AMI). While these redevelopments provide one model of subsidized housing, there is a need to create a diversity of possibilities that can address the diverse populations that need housing. There is not a single solution; however, most ofthe current solutions do not provide space for economic activity in the home.

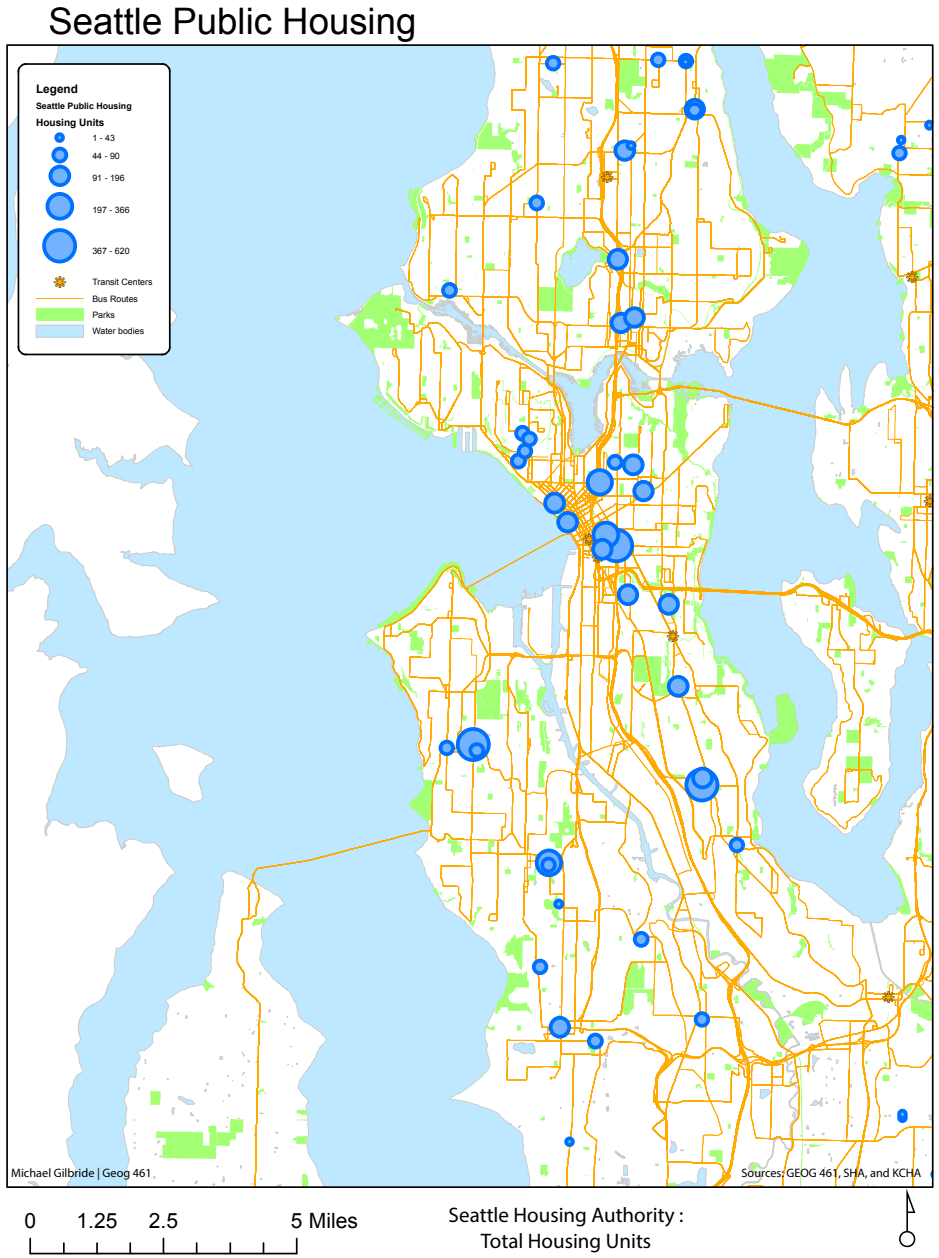


fig. 6: Map of SHA public housing properties.

fig. 7: A home at High Point, a Seattle Housing Authority mixed income community.

housing and work

The single family house continues to exert a powerful influence on the design and planning of all housing - this can be seen in the redevelopments of Rainier Vista and High Point. However within the city of Seattle it no longer makes sense to develop at the density of the single family home and it becomes the object of design “to incorporate as many if the features of the single-family house as possible at increasing densities.” (Davis 1995, pg 4). One of the key features of many single-family homes is a garage, basement or attic that can be appropriated for informal income generation through custom fabrication, niche food production, or just as a creative hobby space that may produce income or creativity.

While many affordable housing communities tie commercial and retail space in a mixed-use community, mixing living space with flexible work spaces that allow the opportunity for economic production through custom fabrication, niche manufacturing, or small scale food production under the right circumstances would provide better living conditions and a way to generate income and prosperity. What exactly are the conditions for a higher density affordable housing development that can connect to small scale industrial spaces and where are they present in the Seattle area? Additionally how should the living spaces and work areas be configured to allow for higher densities and flexibility? What are the connections between the living and work spaces and the larger communities

Duwamish Waterway

The Duwamish Waterway is home to one of the two manufacturing and industrial areas in Seattle - the other being the Ballard Interbay area. The Duwamish Waterway is unique in being the outlet of the only river running through Seattle and is the natural infrastructure around which first agriculture thrived (fig. 7) and then industry grew (Klingle 2007). Due to the industrial development around its banks, the waterway is also designated as an Environmental Protection Agency (EPA) Superfund Site in 2001 and clean-up is underway. This portion of the Duwamish illustrates the power and unintentional consequences of human intervention; first with straightening and deepening the meandering river in the early 1900's, and now with the dredging, capping, and riparian restoration of the Environmental Protection Agency.

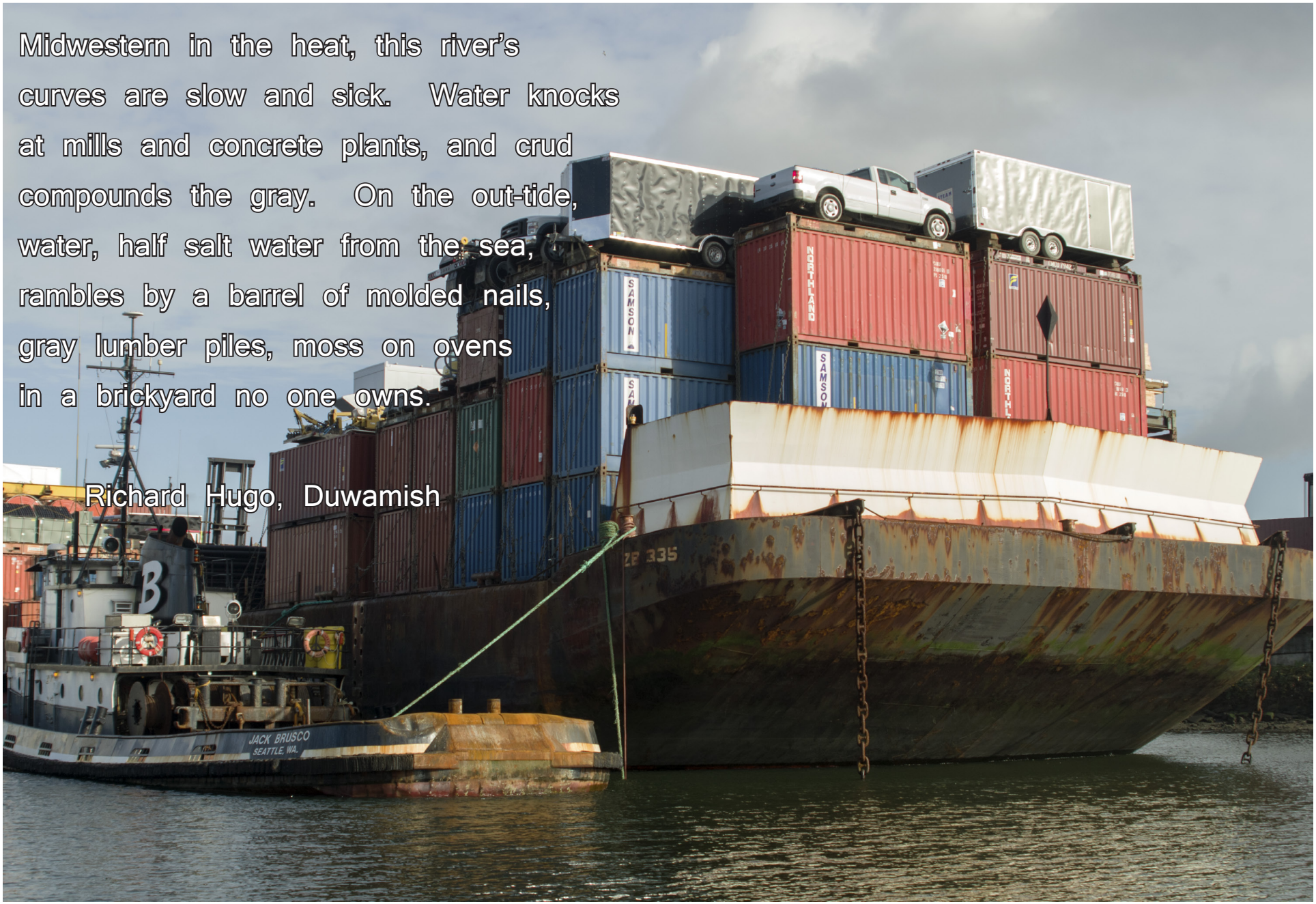
Alongside the transformation of the Duwamish floodplain from rich agricultural land to industrial area there have always been people living in the neighborhoods of Georgetown and Southpark. These two neighborhoods share a history shaped by the river and the industry around it and have become two islands of residential fabric in a field of industry. For this reason, these areas are also two of the most affordable places to live and are home to a higher percentage of immigrants, minorities, and the poor than the rest of Seattle (UW School of Public Health 2013). Many who live in these communities work in the surrounding industrial area, which is a source of manufacturing jobs at a decent wage (Brown 2011).

fig 8. Aerial view of Duwamish River Circa 1922.

fig. 9: Straightening of Duwamish River, 1914.

The combination of a vibrant industrial area and dynamic affordable neighborhoods that co-exist, but do not have strong connections beyond proximity drew me to the Duwamish Waterway My thesis explores a live/work community that is tied to the industrial fabric and the river as a means of creating a place to live, work, and thrive amidst industrial fabric and alongside a rapidly changing riverbed. These are the strange bedfellows: affordable housing and an industrial area. This proposal argues that the particularities of the Duwamish Waterway provide a fertile ground to combine housing specifically designed for living and working alongside both industry and a restored river's edge.

Chapter 2: Approach



Architecture's destiny has always been colonization, the imposing of limits, order, form, the introduction into strange space of the elements of identity necessary to make it recognizable, identical, universal. In essence, architecture acts as an instrument of organization, of rationalization, and of productive efficiency capable of transforming the uncivilized into the cultivated, the fallow into the productive, the void into the built.

Ignasi de Sola-Morales, in Marianni 2014, pg 28

DESIGN APPROACH

Wandering through the Duwamish industrial area, I was struck by how this productive territory in terms of jobs, manufacturing, and infrastructure (DPD 2013), is also characterized by large areas of seemingly empty land, abandoned lots and buildings, and the remnants of past uses no longer active. This layering of activity and void imbues the area with a strange sense of possibility as we project our own ideas of what was and what could be on the vast spaces.

Terrain Vague

Ignasi de Sola-Morales documents the appeal of the spaces he defines as terrrain vague that:

> exist outside the city's effective circuits and productive structures. From the economic point of view, industrial areas, railway stations, ports, unsafe residential neighborhoods and contaminated places are where the city is no longer. Marianni 2014, pg 28

While Sola-Morales defines the spaces as outside of the productive structures; to me many of these spaces are only shaped by a single productive industrial need, be it storage, transportation, or staging. This singular purpose does not fill the space, but requires that it be available: it is also available for appropriation and ephemeral exploitation of the void.

Given that I am not proposing to leave the spaces as a

void, but to fill them with people, is it possible to maintain the sense of possibility while providing the spaces for living, working and community? For Sola-Morales what is needed is attention to the continuity "of the flows, the energies, the rhythms established by the passing of time and loss of limits." (Marianni, pg. 29) I interpret this to be engaging the histories and uses of the site and context and engaging the natural systems, providing adaptable and flexible spaces that can be appropriated and exploited in unforeseen ways, and creating moments when the boundaries between uses are vague and must be negotiated.

Context

Currently the residential areas of the Duwamish Waterway are islands in a sea of industrial use with clearly defined boundaries. People cross through the industrial areas, but also enjoy a sense of community that isolation and mutual support brings. (Cummings 2013) By combining industrial spaces that can be used for formal and informal economic activity, I am continuing the practice of many turn-of-the-century tenement residents of working from the home to earn income. (Wright 1981, Dolan 2012) By embracing the industrial character, a different type of community can emerge that is centered around both a shared location and a shared activity of making, fabricating and creating. Alongside the blurring of the boundary between living and working, there is also the river's edge, which currently is hard and clear, but with the

fig. 10: Slip 4 smoking area for Boeing employees

fig. 11: Industrial building that is currently used for recycling - adaptable framework

restoration will be become more fluid. My site strategies include bringing water into the site as well as providing for a connection to the water through program and activity.

Flexible and Adaptable

Many industrial buildings are appropriated for other uses as the areas around them change. By designing spaces that can be modified and altered easily, adapting to change is fostered. In addition, there are many unknowns in any new attempt, so an element of trial and error has to be accepted and incorporated in the design. Since there is an element of uncertainty surrounding how the current pollution clean-up, the changing nature of manufacturing, and rising sea levels will impact the area in the future, it is crucial to maintain a resilient adaptability to the many possibilities. This also opens up the spaces to unexpected uses and appropriations.

Negotiated Boundaries

As people occupy the spaces that can be adapted to multiple types of uses from fabricating to play, there will need to be opportunities to negotiate differing ideas of appropriateness. The design must accomodate spaces of encounter where differences can be worked out - there has be a continuum of personal to collective space in which the exact boundaries are negotiated and in flux.

fig. 12: Port of Seattle riparian restoration and with continued industrial use

fig. 13: Aerial view of the Duwamish River

DUWAMISH RIVER

I began the site selection process by looking at the larger Duwamish River Valley from where the Green River becomes the Duwamish Waterway up to the First Avenue South Bridge. Where the Black River once drained Lake Washington and joined with the Green River to become the Duwamish River is now the confluence of two highways and the site of one of the largest regional shopping malls. This stretch of water encapsulates the conditions I want to investigate; an primarily industrial landscape with portions of residential fabric that are connected by the natural infrastructure of the river. The residential areas are more affordable because of the proximity to industrial areas, lack many traditional amenities of neighborhoods like large parks and proximate schools, and infrequent public transportation. By marrying subsidized housing to industrial spaces can vibrant community thrive because of these challenges and what design would foster that?

History

At the beginning of the nineteenth century Seattle was shaped by incredible acts of engineering: the lowering of Lake Washington, the Denny Regrade and the straightening of the Duwamish River. With the lake lowered by the Montlake Cut and its waters moving through the Ship Canal to the Puget Sound, the Duwamish's waters were diminished, but the straightening and deepening of the waterway meant that this would be the site of the for the developing industrial center of the city (Klingle 2007).

Along with the industrial development of the river, there also developed the neighborhoods that housed the workers of the factories and warehouses. Both South Park and Georgetown were home to war worker housing complexes during and immediately after World War Two. However; unlike High Point and Holly Park these were not converted to low-income housing, but were sold off and demolished after the war and alleviation of housing shortage by the development of the suburbs. Once existing these neighborhoods fought for their right to continue despite the overwhelming presence of industrial zoning (Wilma 2001). These communities advocate for the continued presence of vibrant residential neighborhoods and "creative efforts in Georgetown and South Park are also transcending individual, institutional, and corporate interests to extend the richness of community to all local residents." (Cummings 2013, pg. 43)

Current conditions

Most of this stretch of the river is straightened; however, through Tukwila the curves have been channelized and the banks are edged by single family homes and business parks (fig.15). As you move North the banks become dominated by industrial uses and lined with barges and loading docks (fig.14). My investigation centered around how in each of these conditions there would be different possibilities for marrying housing and work spaces depending on the site, infrastructure, and relationship to the river.

fig. 14: Barges docked along Slip 4 in the Duwamish Waterway

fig. 15: Pedestrian Bridge over the Duwamish River in Tukwila

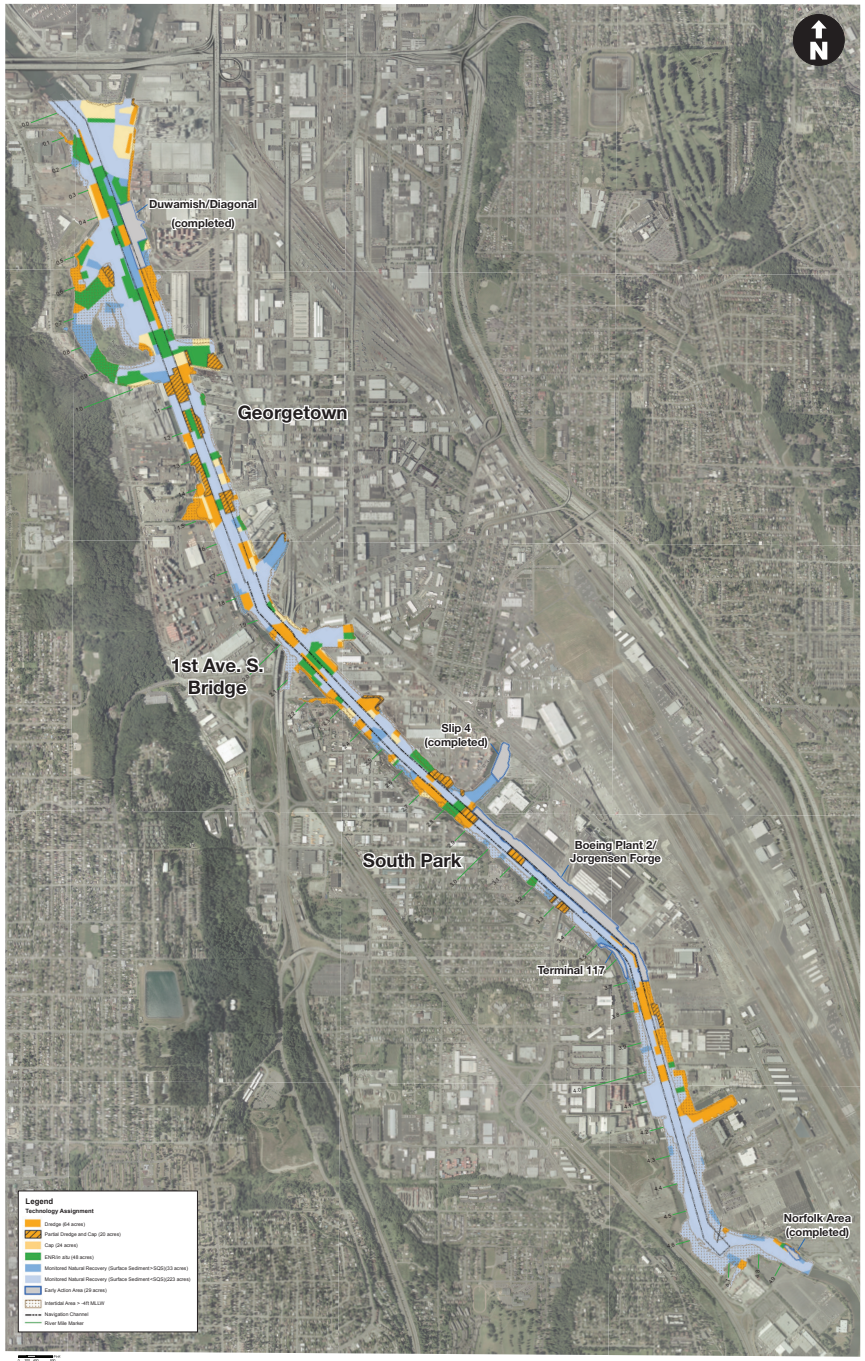


fig. 16: Duwamish Waterway map of EPA superfund site

My interest in exploring the continuum of the river from suburban conditions to the intensive industrial use is the trend in affordable housing moving to the suburbs. The geography of poverty has changed due to increasing poverty in the suburbs, and one of the primary factors is the availability of affordable housing (Kneebone 2013). This availability is driven by cheaper land, older housing stock, and the gentrification of many neighborhoods in the city pushing rents up. The role housing plays in this process is central and therefore subsidized housing will be an important aspect to how this phenomena is addressed in both cities and suburbs. In the city keeping housing affordable will be vital to maintaining the diversity and accessibility of the city. In the suburbs subsidized housing can help address issues of rapid social change and provide social supports in a suburban context.

EPA Designation

In 2001, the EPA designated the Duwamish Waterway from Turning Basin 1 to the southern tip of Harbor Island a Superfund site. Clean up has begun and is expected to continue for the another 10 years. Alongside this clean up the Port of Seattle is also pursuing efforts to make the Waterway healthier for migrating Salmon. Through all of these efforts the river edges will be very different than they are now and will be more of an amenity for the communities that surround them, despite the current limited access to the water. Placing subsidized housing along the river now guarentees equitable access in the future despite gentrification.

SITE SELECTION

Criteria

After determining that the Duwamish Waterway is the organizing spine, or marriage bed, for the coupling of affordable housing and industrial work spaces then it became clear that the site had to be along the river and have a direct connection to it. Although conceivably the combination of living and working spaces can work without it, and in fact there are many examples of this, the river became the connective tissue that allows the density of housing and work to function. The river and the open space it provides along its edge allows the housing to be surrounded by working industrial spaces and have working spaces below it, and have a place to retreat to or a sense of expansiveness.

In addition to being on the waterway, I looked for sites in which some form of subsidized housing would be appropriate and feasible. However, I was very broad in my interpretation of this since I am proposing housing in an industrial area, which can already be seen as inappropriate. Additionally I did not want to displace any industrial businesses that were actively using the waterfront. Maintaining and strengthening the industrial area and use of the river is part of the proposal - housing does not necessarily conflict with manufacturing.

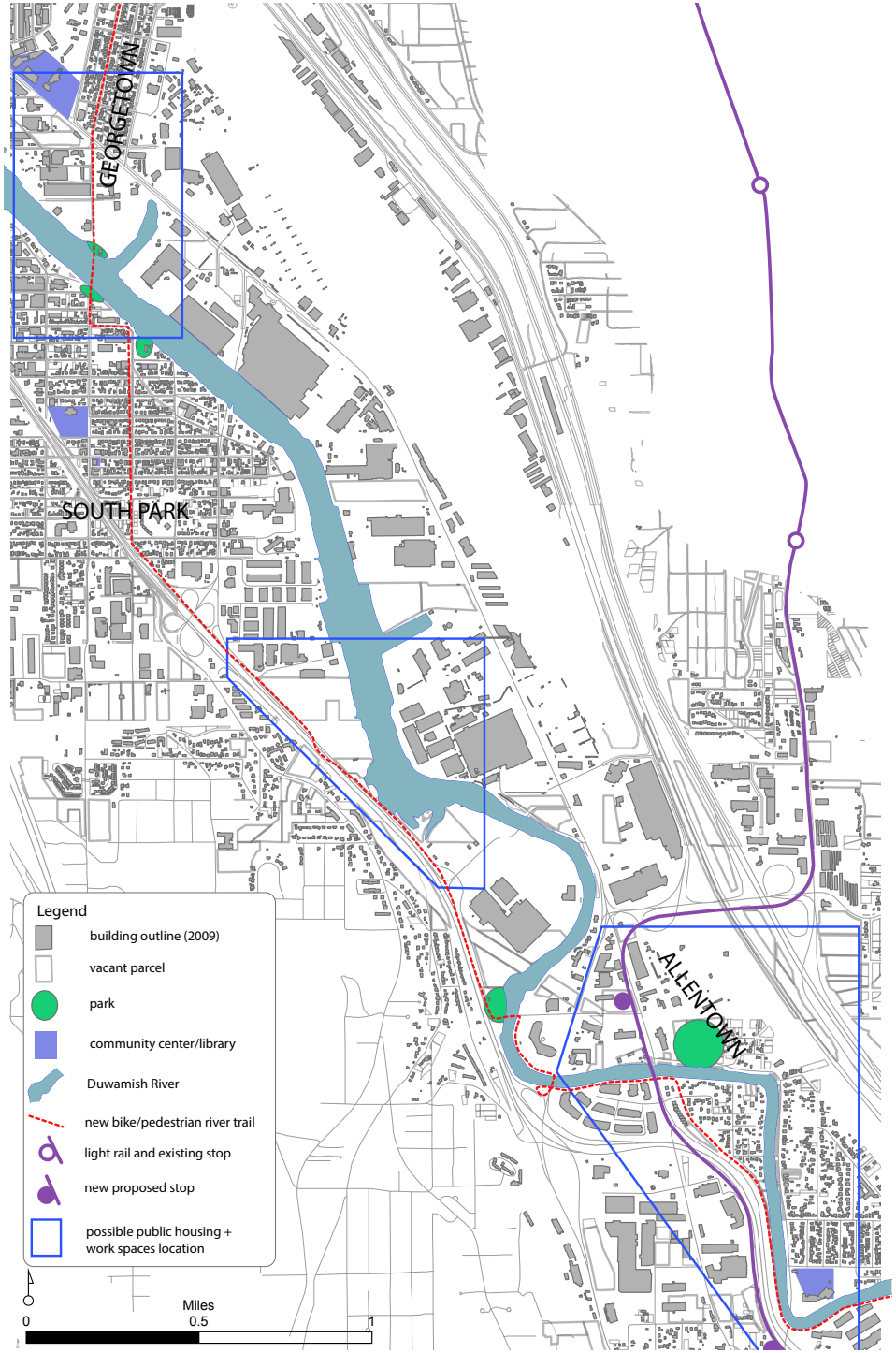


fig. 17: Analysis of possible sites for project

sites

fig. 18: looking south from Duwamish Hill, a park in Allentown

fig. 19: Hamm Creek site as seen from the parking on the edge of the road

In the end I selected three sites to evaluate further:

1. Allentown - South of the turning basin, this is a single family residential neighborhood on the west bank of the river.

2. Hamm Creek - a large open field just north of the turning basin with Hamm Creek on the East and North

3. Gateway Park North and South - The lots surrounding these parks are utilized for parking and storage and do not rely on river access.

Although the Allentown site presents an interesting opportunity to engage with a more suburban context and possibly a more disperse intervention, I decided against it for these same reasons. I wanted to explore a more dense housing solution that could move beyond the garage model of incorporating work spaces. At the other extreme the Hamm Creek site is large and is not connected to any residential fabric.

The Gateway Park sites immediately drew me in since they are right across the water from each other and are anchored by under utilized parks. The parcels surrounding them are being used for parking and storage or are vacant. They are also at the site where they once existed a bridge connecting South Park and Georgetown. An ideal site to investigate the marriage I am proposing

fig. 20: looking south from Gateway Park North at the South Park site to the left of the red crane

fig. 21: looking north from Gateway Park South at the Georgetown site to the left of the white building and trees

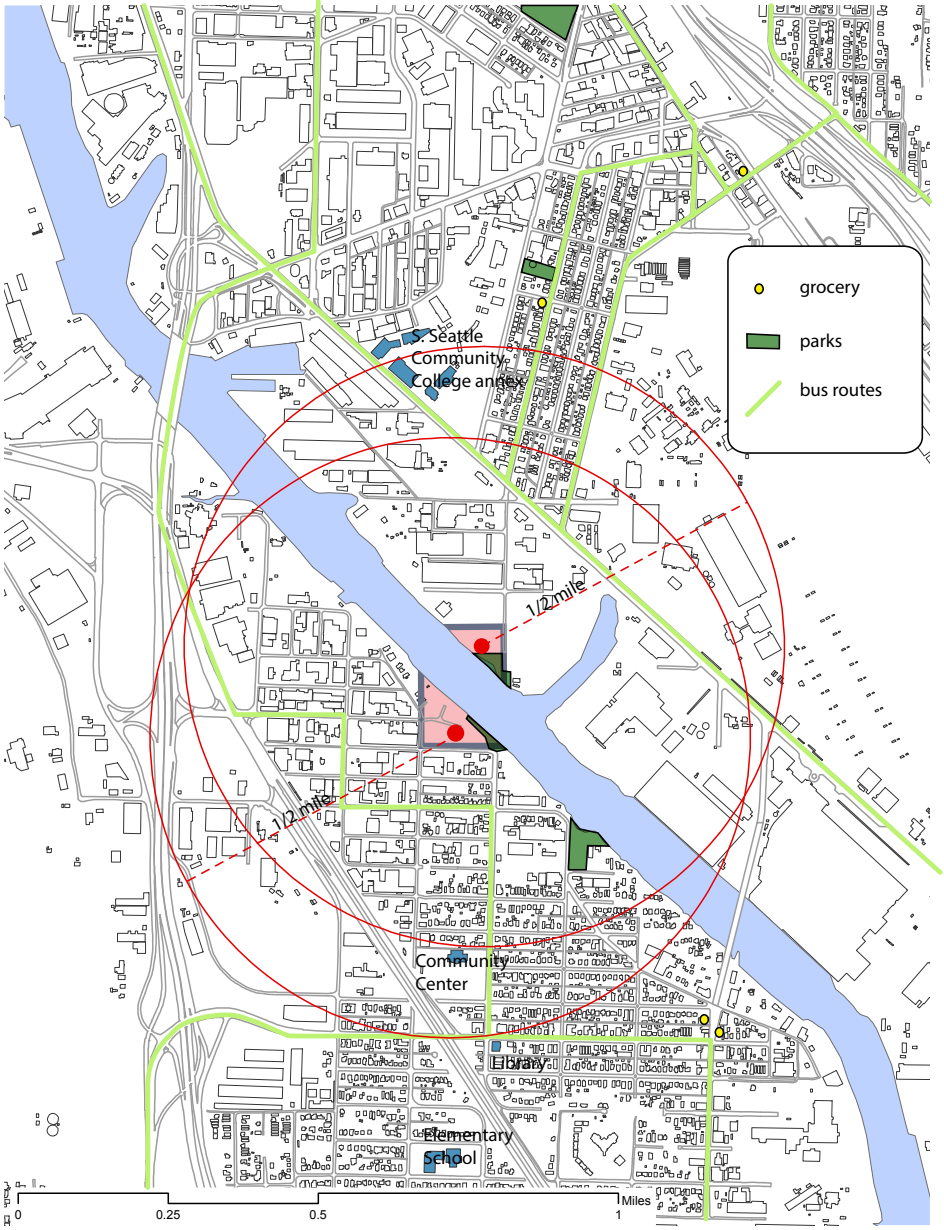


fig. 22: Context analysis of selected site

SITE ANALYSIS

Currently the site bridges the two sides of the river, occupying the ends of 8th Avenue South and adjacent to street end parks that are only infrequently used. In over twenty trips to the parks, I only saw other people twice. The site was once the point of connection between the neighborhoods, which is now occupied by 1st Avenue South bridge and the South Park bridge North and South of the site. Although each site is separated from the other residential neighborhoods by intervening industrial use, there are within a 1/2 mile walk. Public transport to Downtown Seattle and Burien also exist with a 1/2 mile. Along 8th Avenue on the South Park side there is a Community Center and Library, while on the Georgetown side there is the South Seattle Community College Annex which houses the Center for Labor Studies and several vocational programs.

Early on I focused on the Georgetown site, but decided to engage both sides of the river to enhance access and bring activity across the river and on to it. The two street end parks face each other and provide a direct visual access across and along the river. Both neighborhoods lack public access to the water and this site provides the opportunity to become a hub of public engagement with the river.

Property of Museum of History & Industry, Seattle

fig. 23 8th Avenue South Bridge 1925. This bridge existed until the 1930's

fig. 24: A view of the river from Gateway Park South, South Park

fig. 25: A view of the river from Gateway Park North, Georgetown

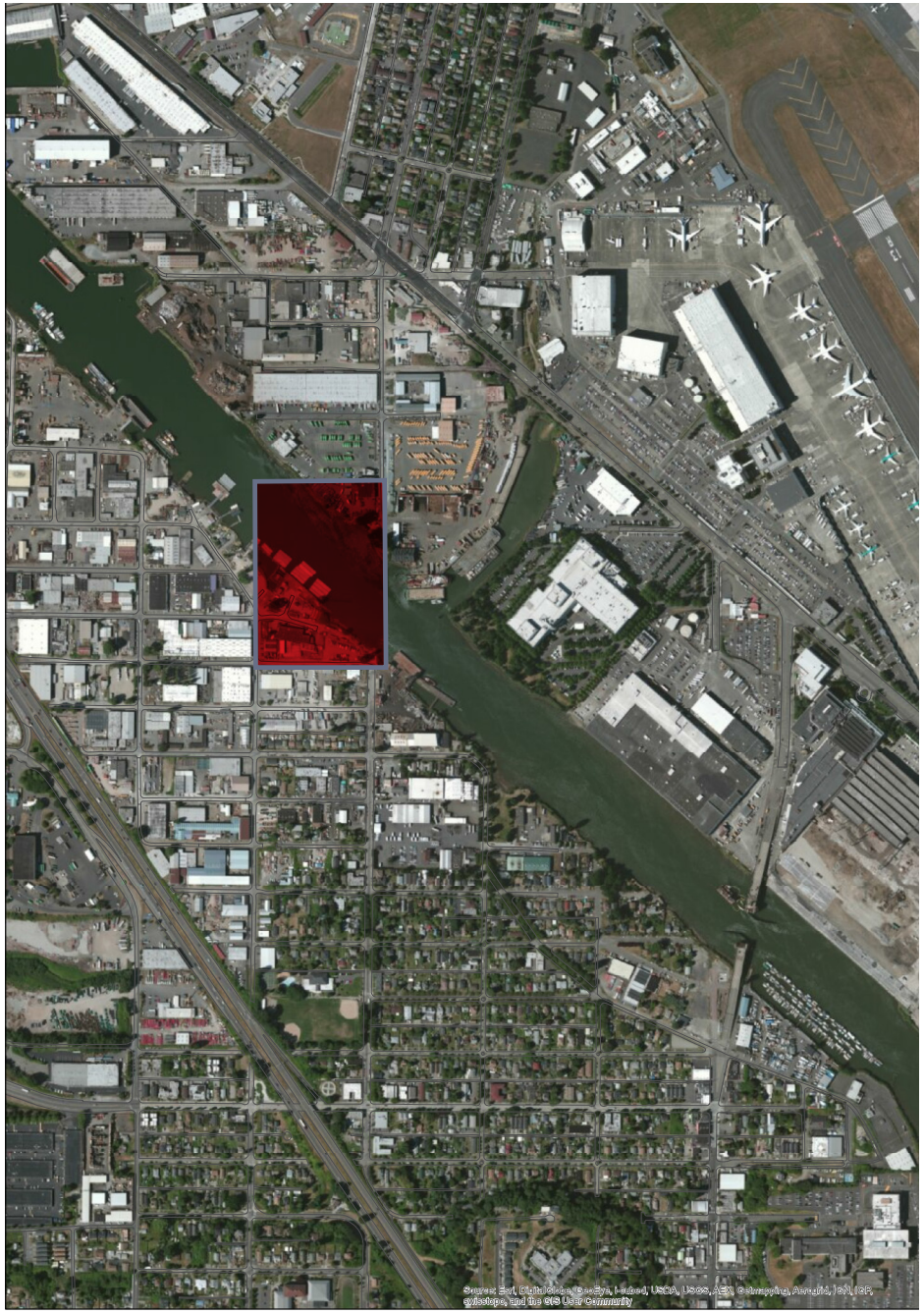
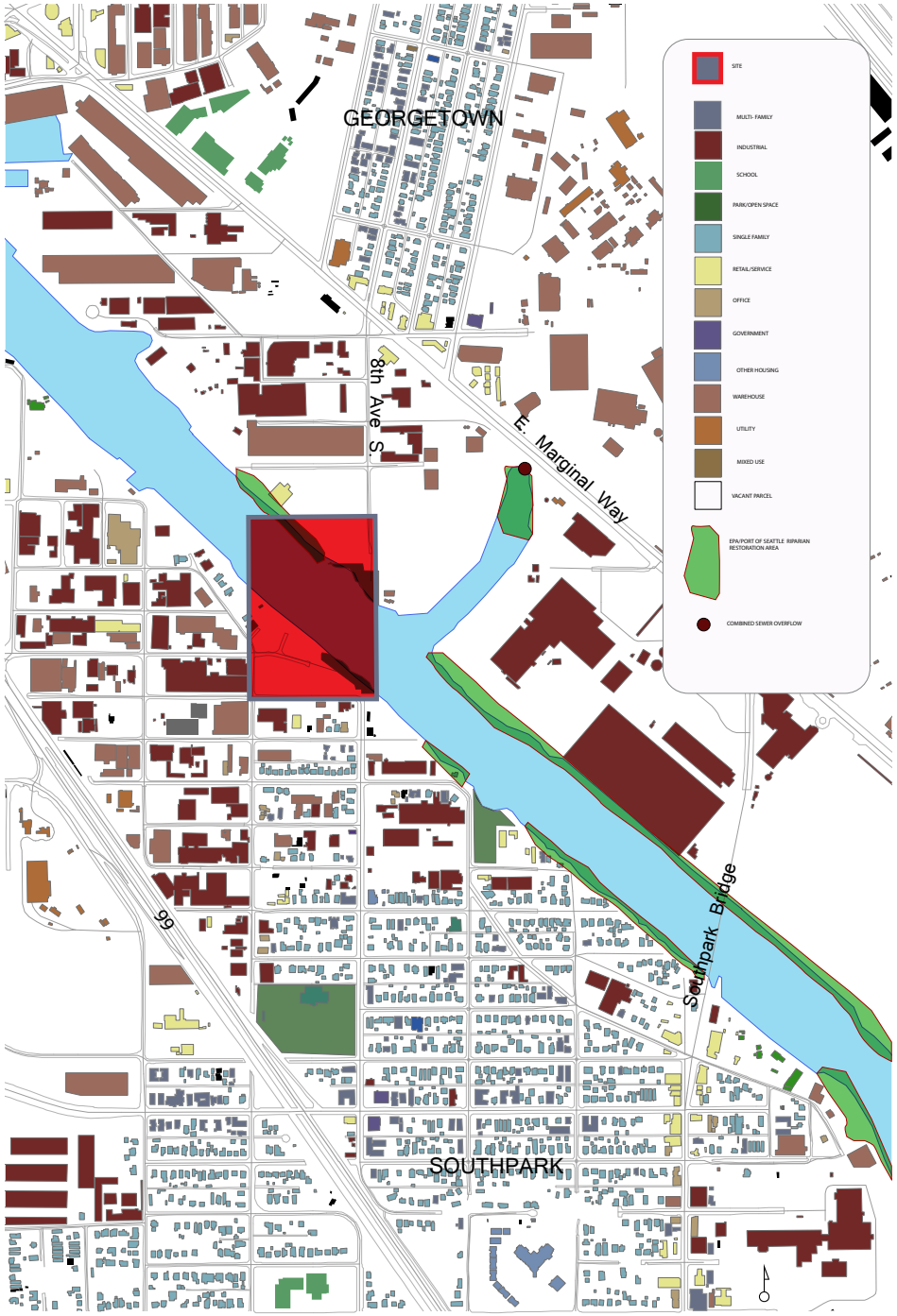


fig. 26: Map of existing conditions

fig. 27: Looking north up 8th Ave S. from the parking area of Gateway North Park

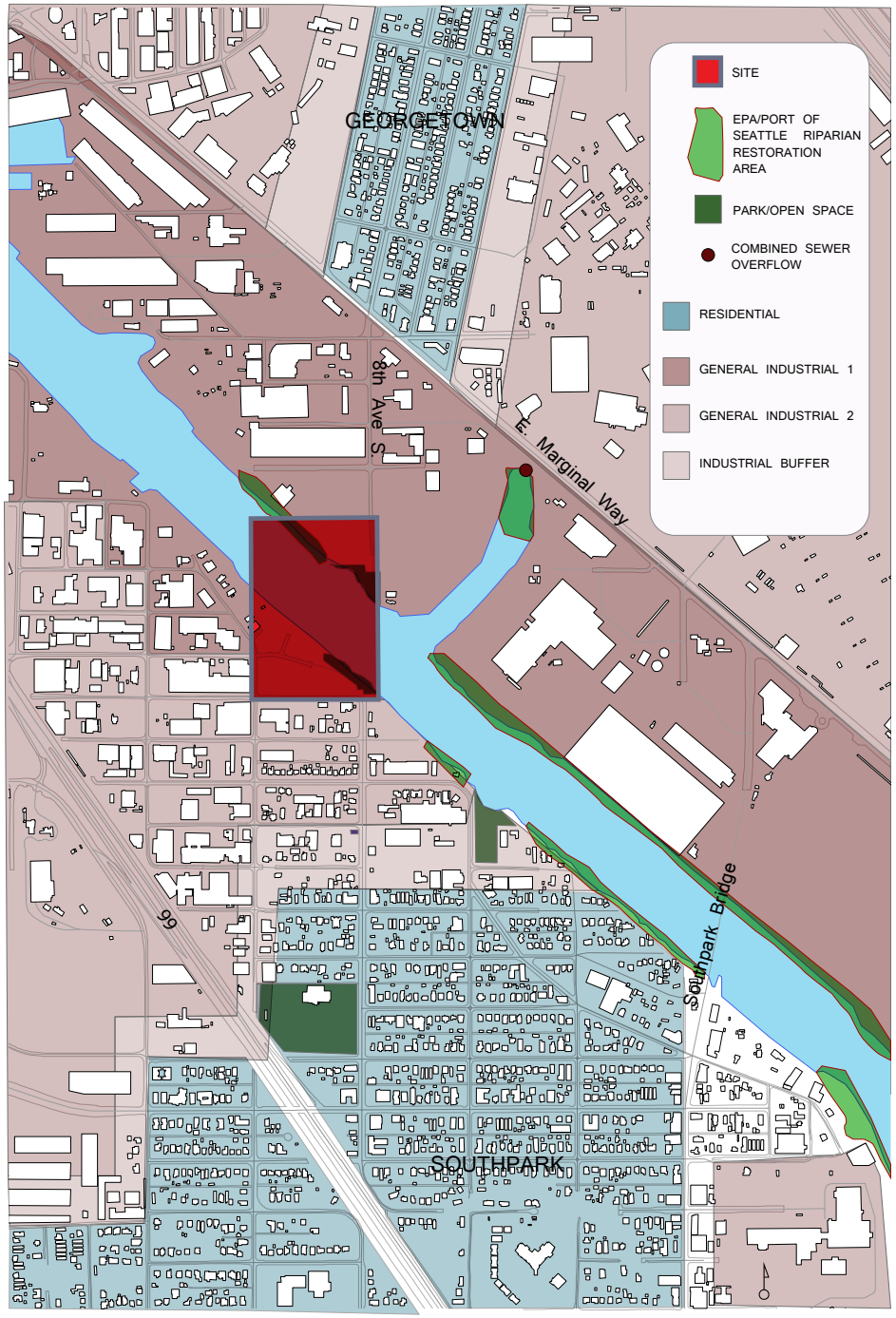
fig. 28: Looking west across the South Park site from 8th Ave S. street end.

fig. 29: Map of land use



Existing conditions and land use

The current conditions around the site (figs. x and x) are typical of industrial land use - roads are minimal and not pedestrian friendly with large areas devoted to parking and material storage. The parcels are larger and the industrial use is more intense on the Georgetown side. On both sides of 8th Ave. are large parking lots for school buses and garbage trucks, neither of which relate to the river in any way. On the other side, the residential and industrial fabric is more interwoven with some older houses remaining within the industrial zone. However, at the street end there is not any residential activity and the transition to more light industrial use is complete except for the Gateway South Park.



Zoning

The zoning is General Industrial 1

The intent of the IG1 zone is to protect marine and rail related industrial areas from an inappropriate level of unrealted retail and commercial uses by limiting these uses to a density or size limit lower than those allowed for industrial uses.

This zoning does not allow for residential uses outside of caretaker's quarters or artist studios in building built before 1987.

Since each residence is tied to a workspace of varying size there may be a possibility of being granted an easement for the entire development being a combination of industrial space and caretaker's quarters or artist studios.

fig. 30: Map of current zoning

Proposed zoning and phasing

Currently the residential areas of South Park and Georgetown are surrounded by industrial areas, freeways, and infrastructure. The sites on the Duwamish Waterway are between the these residential areas and act as a connection to the river's edge and also across the river. The first phase focuses on the water and creates an enclave along the water that will be connected back to the larger neighborhoods by a new zoning designation that allows for work related residential land use in the area between South Park and Georgetown.

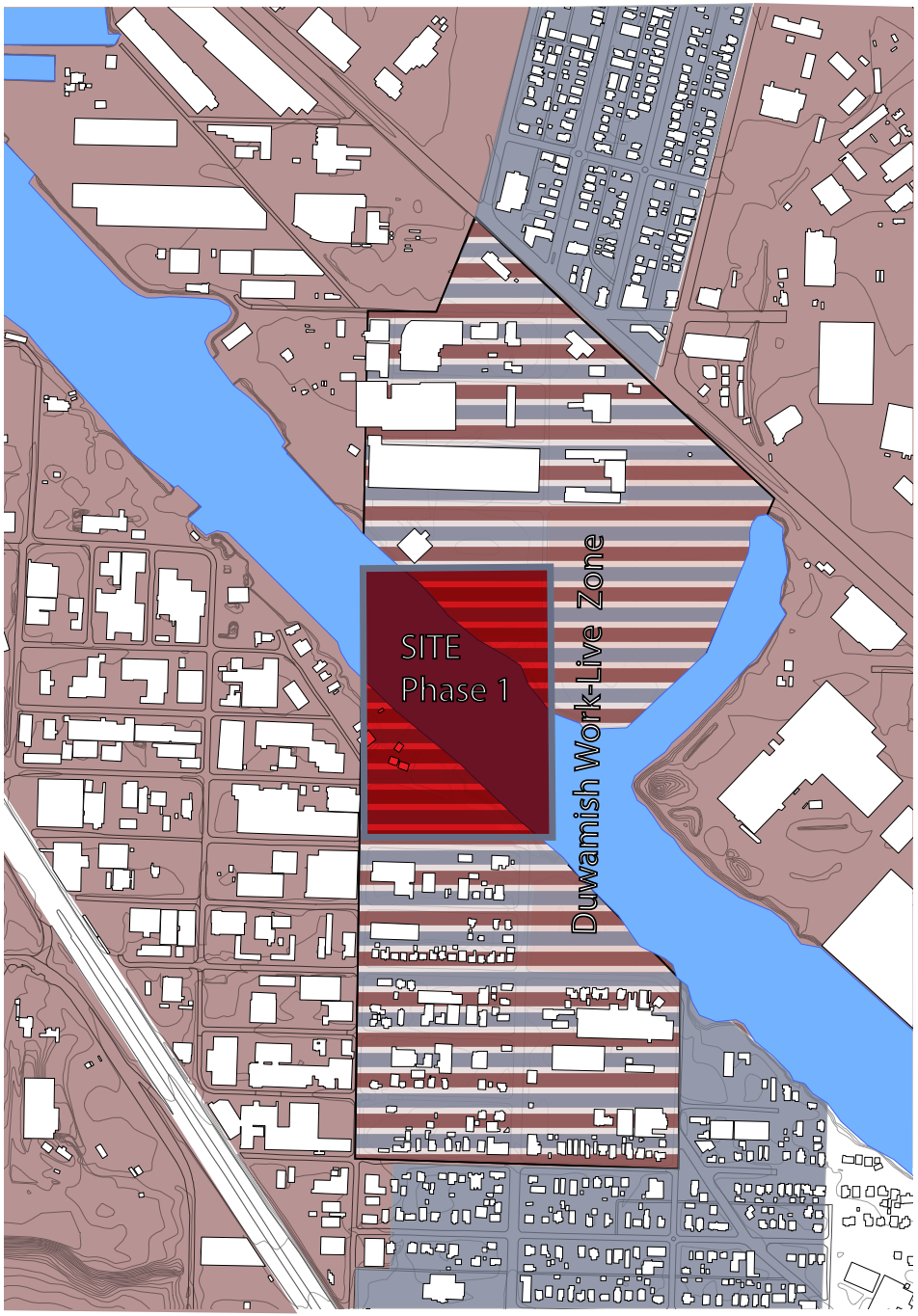


fig. 31: Map of proposed zoning and phasing

PROGRAM

Work Spaces

Space	Square feet	number	location
common work area	2,000	3	South Park
common work area	2,000	3	Georgetown
exterior work yard	1,000 - 2,500	3	South Park
exterior work yard	1,000 - 2,500	3	Georgetown
material storage	500	6	South Park
material storage	500	6	Georgetown
exterior material yard	4,000	1	South Park
small workshops	80	45	South Park
small Workshops	80	40	Georgetown
townhouse shop	500	8	South Park
townhouse shop	500	4	Georgetown

Living Spaces

Space	Square feet	number	location
townhouses	1,200	8	South Park
townhouses	1,200	4	Georgetown
studios above work	360	12	South Park
2 bdr above work	710	6	South Park
2+ bdr above work	750	12	South Park
studios above work	360	24	Georgetown
2+ bdr above work	750	12	Georgetown
small Workshops	80	40	Georgetown

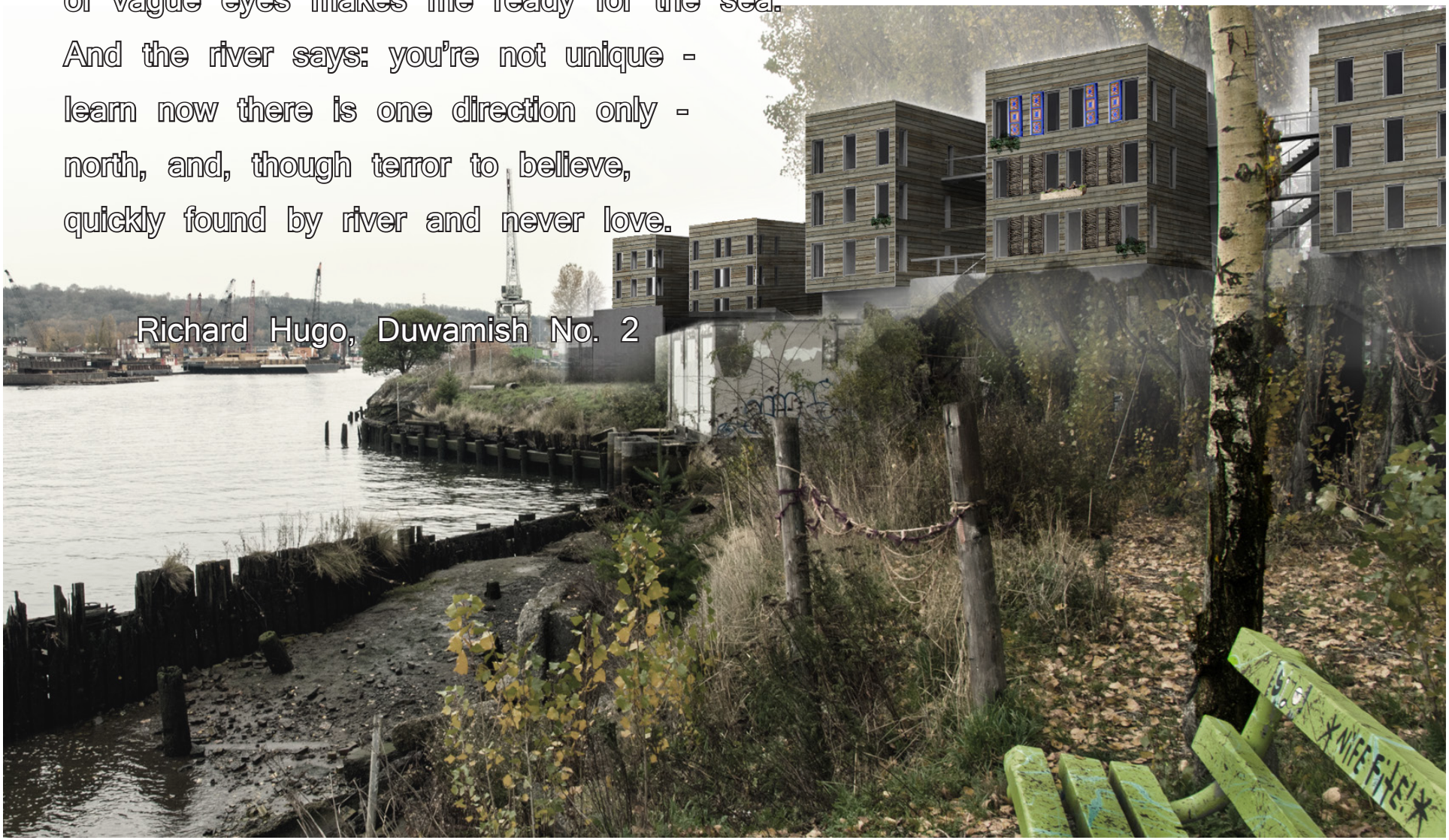
Community Spaces

Space	Square feet	number	location
Childcare			
-classrooms	650	2	South Park
-offices	60	4	South Park
-play area (indoor)	300	2	South Park
-play area (outdoor)	2,000	1	South Park
Water Craft			
-storage	1,200	1	South Park
-work area	1,200	1	South Park
-offices	60	2	South Park
Meeting/Event	2,400	1	Georgetown
Playground	2,000	1	South Park
Playground	1,000	1	Georgetown

Chapter 3: Design

When the world hurts, I come back alone
along the river, certain the salt
of vague eyes makes me ready for the sea.
And the river says: you're not unique -
learn now there is one direction only -
north, and, though terror to believe,
quickly found by river and never love.

Richard Hugo, Duwamish No. 2



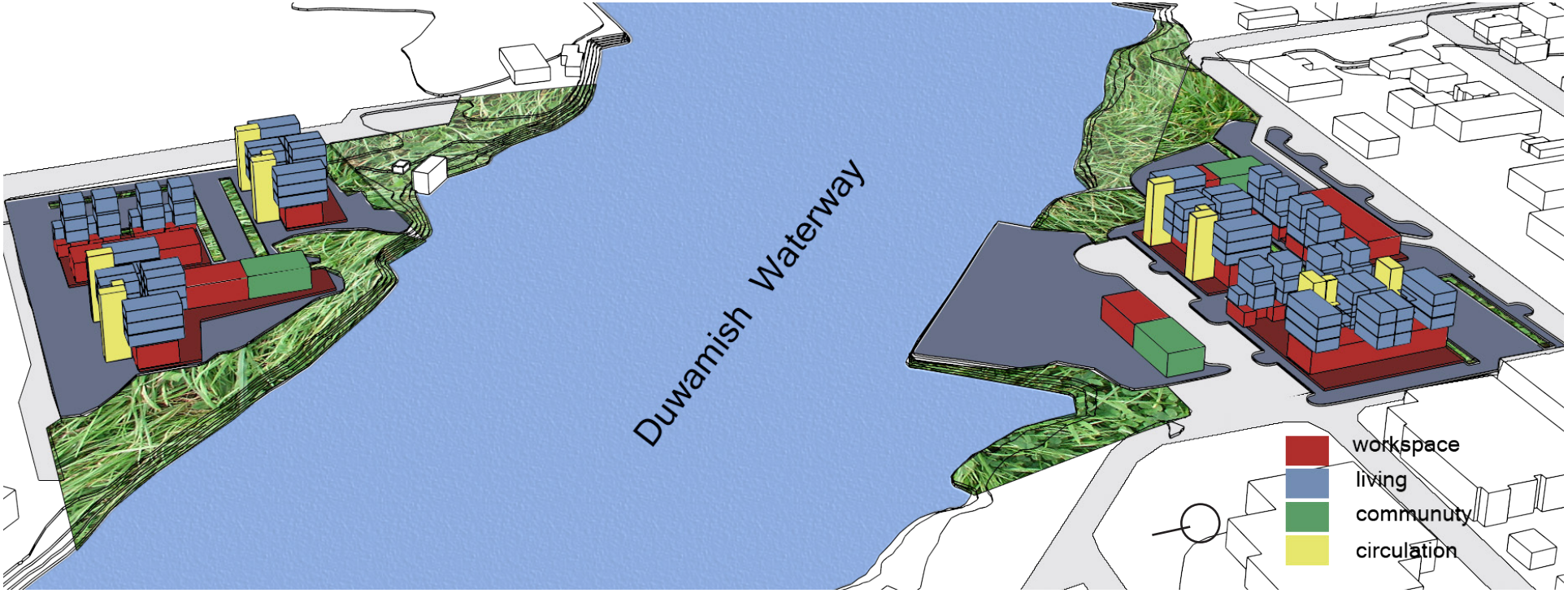


fig. 32: Program diagram of overall site design

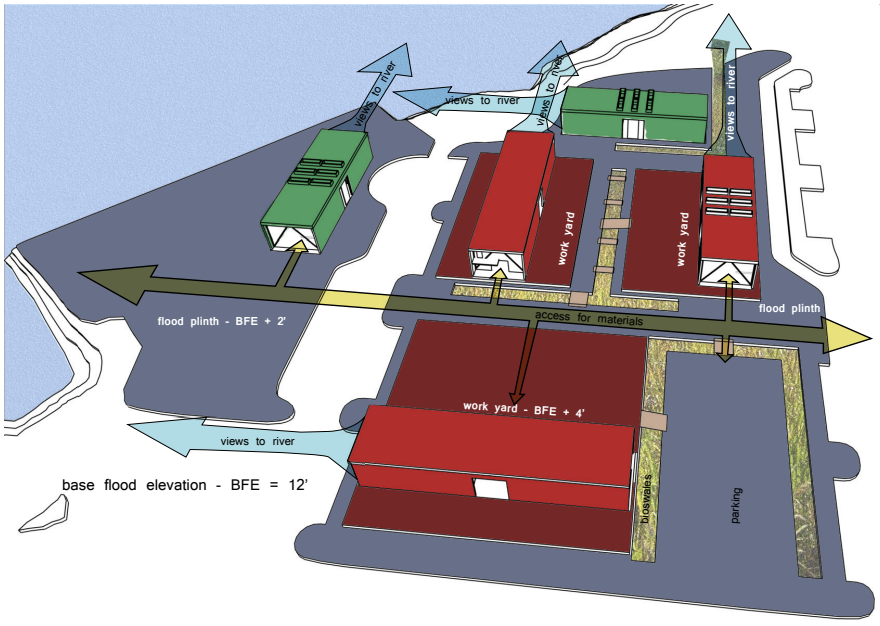


fig. 33: Ground floor strategies for views and flood elevations

SITE DESIGN

Site diagrams

One of the main strategies for the site was to place all of the work areas at the ground floor on pliths. This was both to establish an active base that would have access for materials and also to lift the entire complex above the base flood elevation (BFE). Living spaces are placed above the larger work buildings, but are not entered through them, rather they have their exterior vertical circulation. This provides a physical and figurative separation of the living spaces from the work. As people move from work to home of home to work there is the opportunity for encounters with their neighbors or other people working.

Site plan

On both sides of the Waterway the sites are bordered on the east side by 8th Avenue South. Street improvements along this street include trees, separated bike lane and paving and the street provides a connection to the bordering neighborhoods through the industrial area. This area is more monolithic and intense on the Georgetown side, while the fabric on the South Park side includes some homes, smaller businesses, as well as light industrial factories. The ground floor for each site is the place for working and community spaces. The interior of the sites are defined by townhouses with ground-floor workshops and bioswales that define interior streets and treat the water from the site.

The water side edge is thickened by the riparian restoration on the tides - this allows for places for people to enjoy the river. Paths along the edge bring people through the site and into it, while at certain points you can either cross the river on the ferry, take a trip to downtown on the water taxi, or launch you own watercraft into the water. On the South Park side, an exiting barge dock allows for the landing of a water taxi and the delivery of building materials by water. Recycled metal can be brought to the workshop from the recyclers on the water.

Community spaces on the South Park side are a childcare center that borders the park and river, and a watercraft center for storage and repair of small personal watercraft. Across the river is the meeting center which overlooks the water and provides a place for meetings, dances, and events.

fig. 34: Site Plan

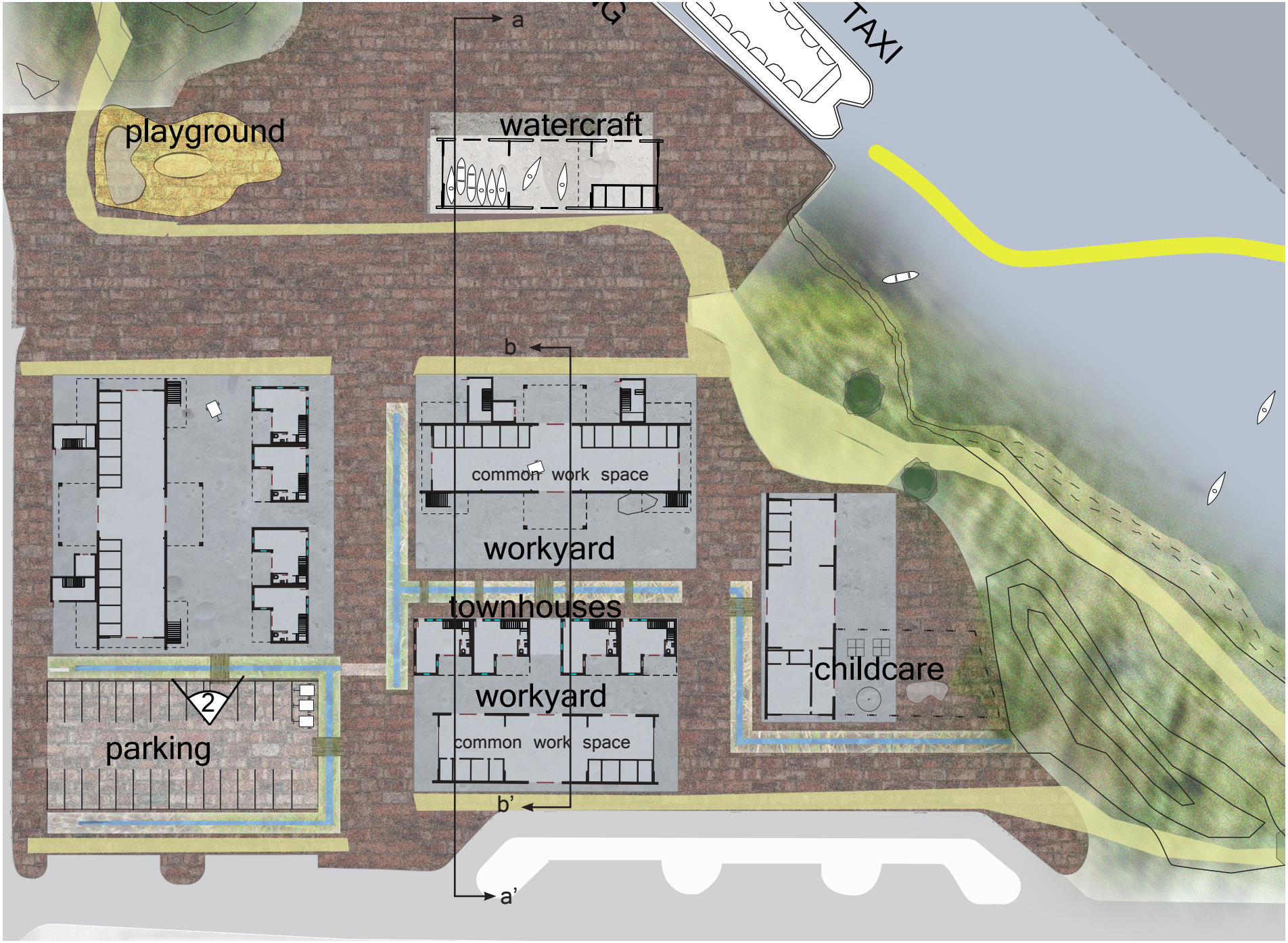


fig. 35: South Park site plan

fig. 36: Georgetown Site Plan

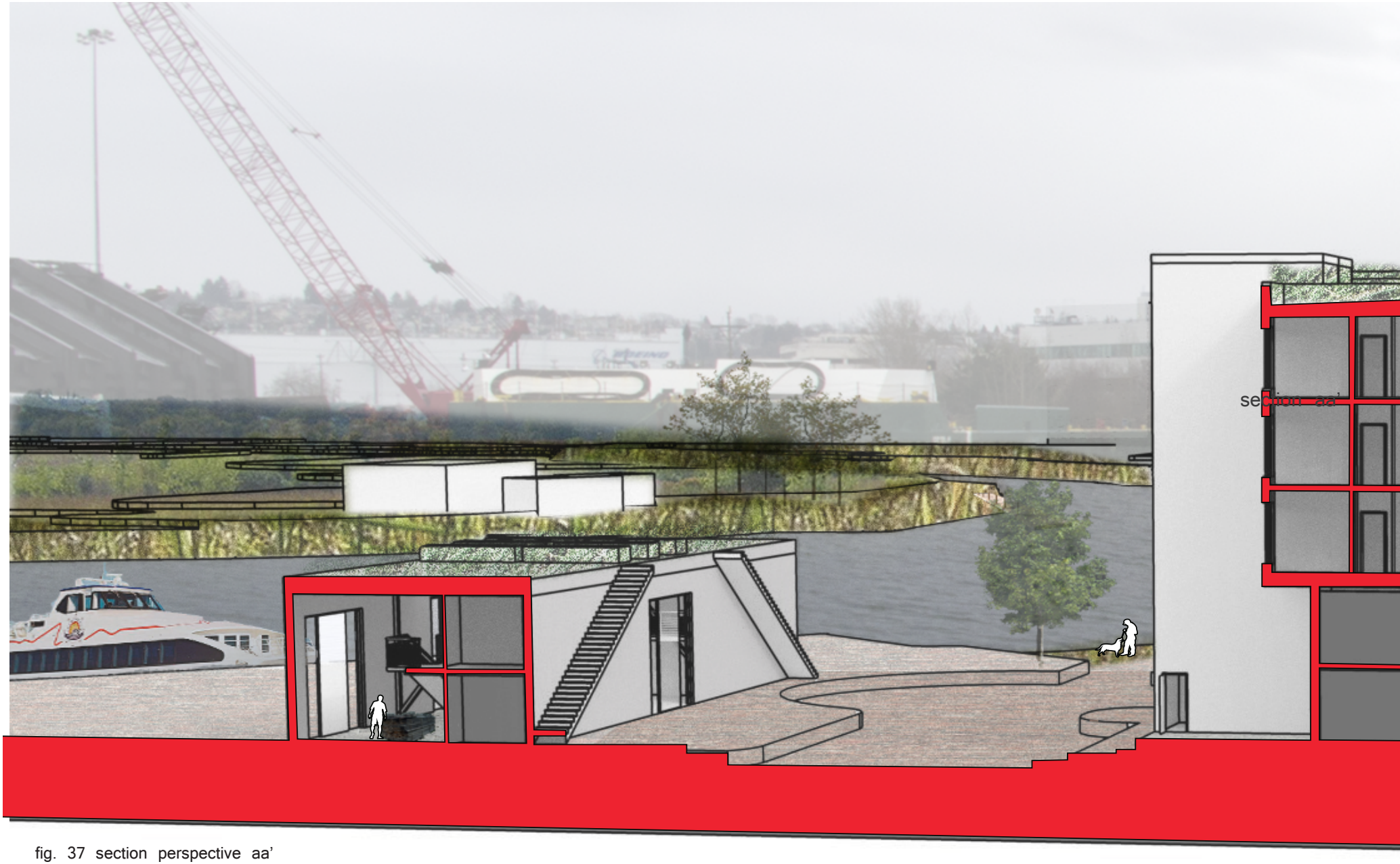


fig. 37 section perspective aa'

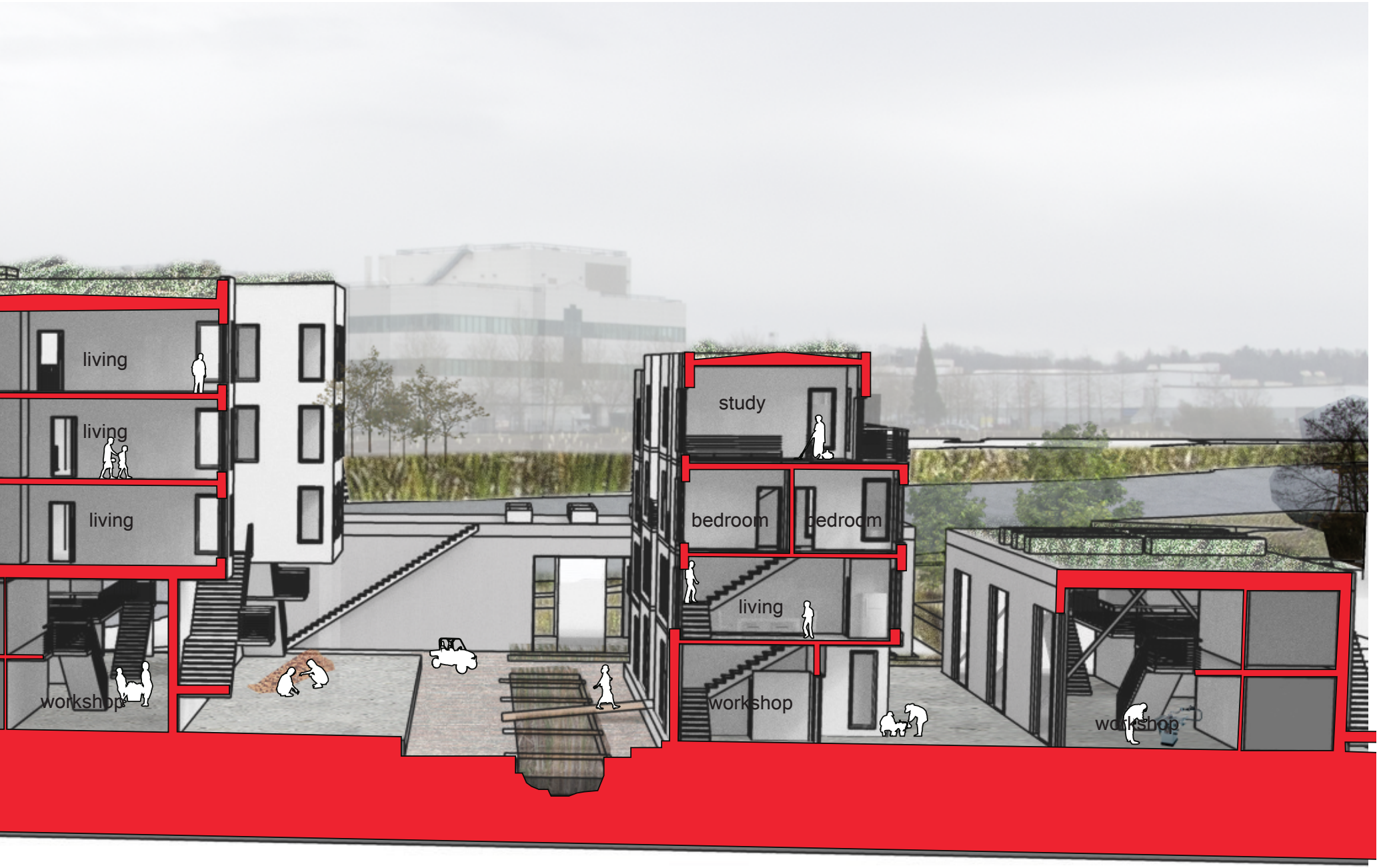

living
living
living
workshop
study
bedroom
bedroom
living
workshop
workshop

fig. 38 section bb'

fig 39 Rendering of the work yard between the townhouses and work-shed with living above

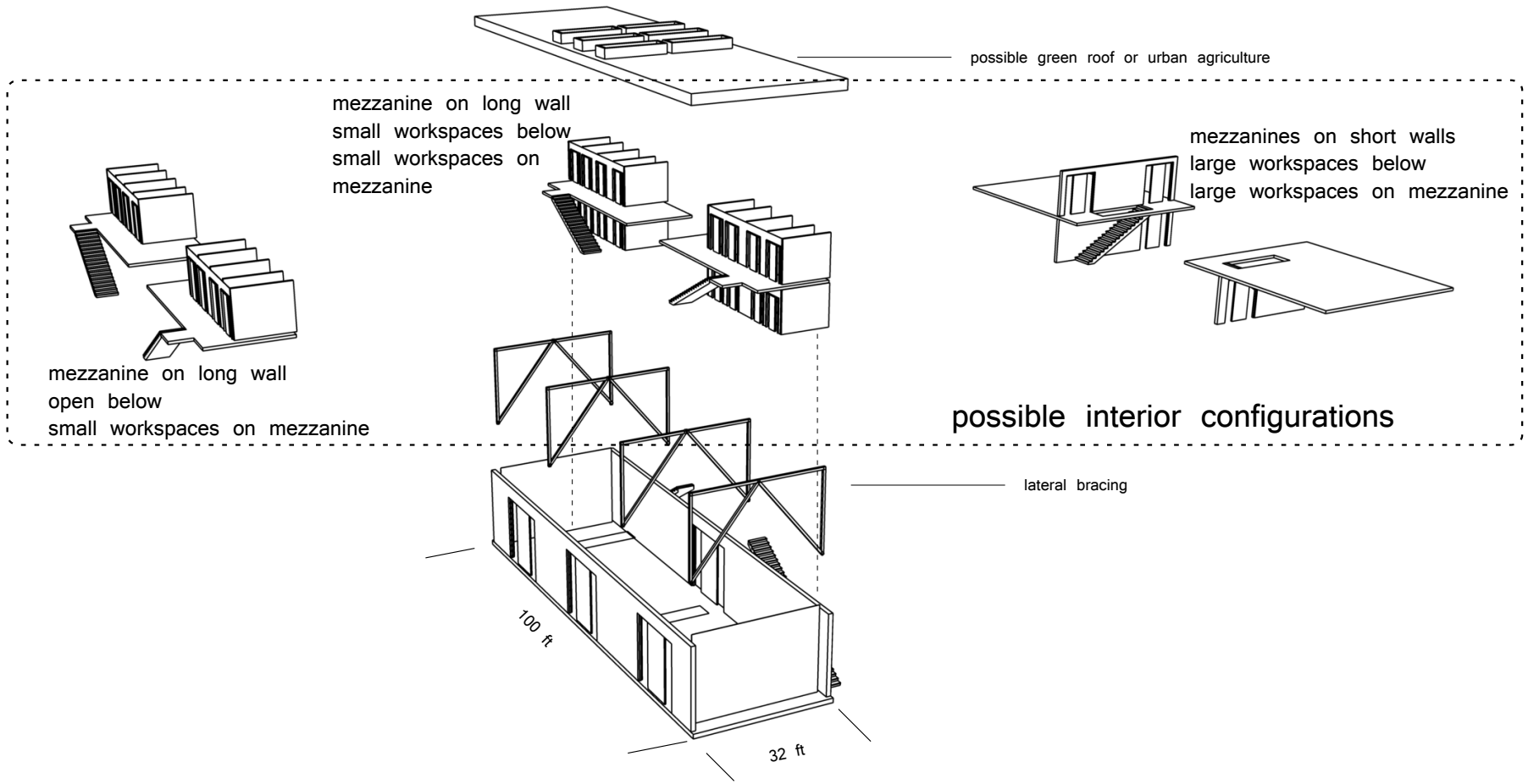


fig 40 Flexibility of work-shed with multiple interior configurations

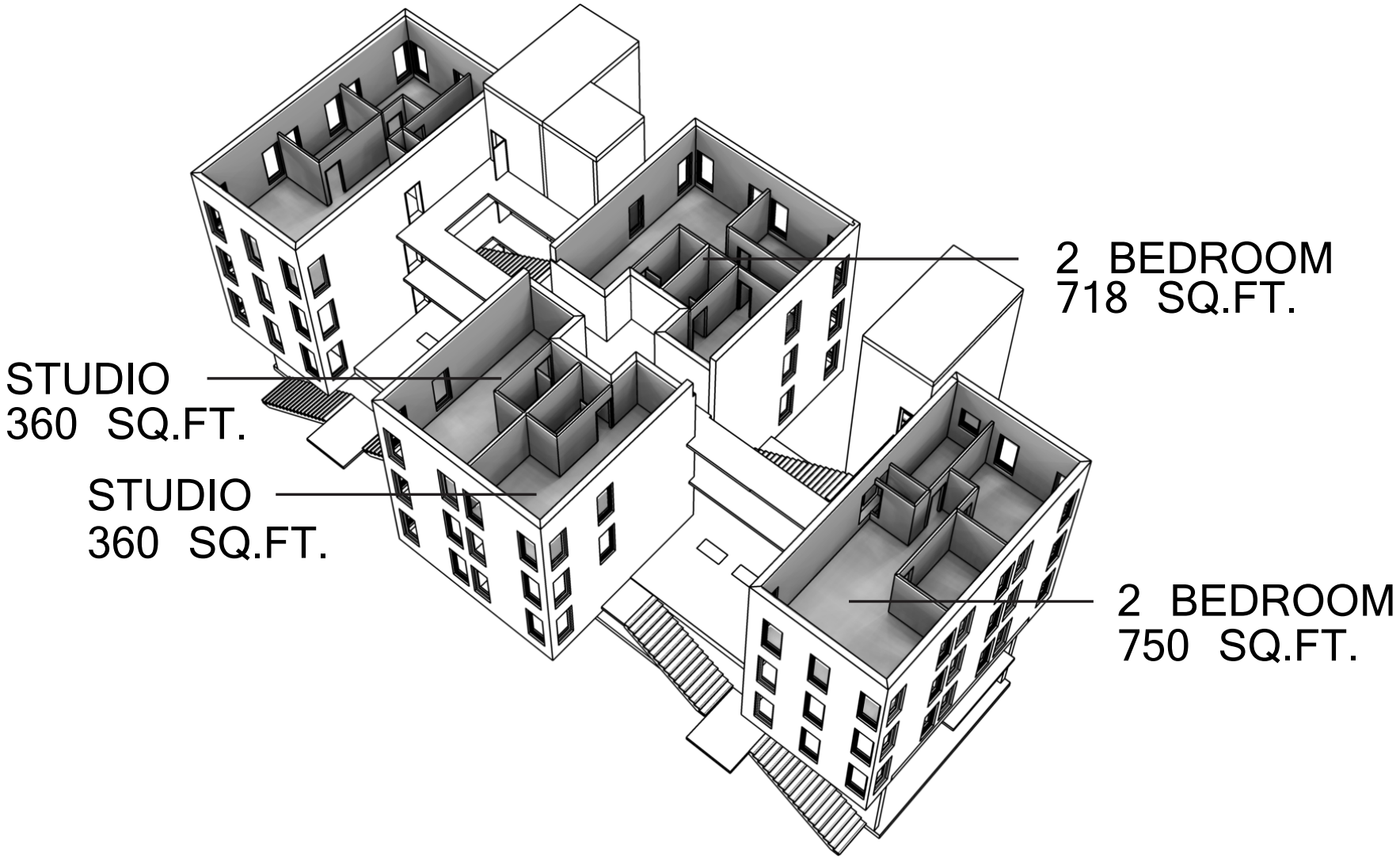
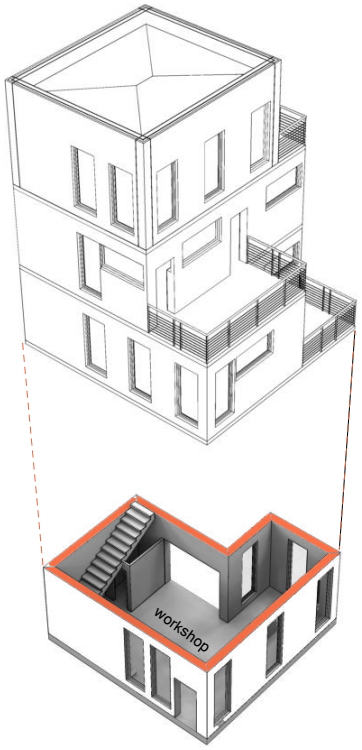
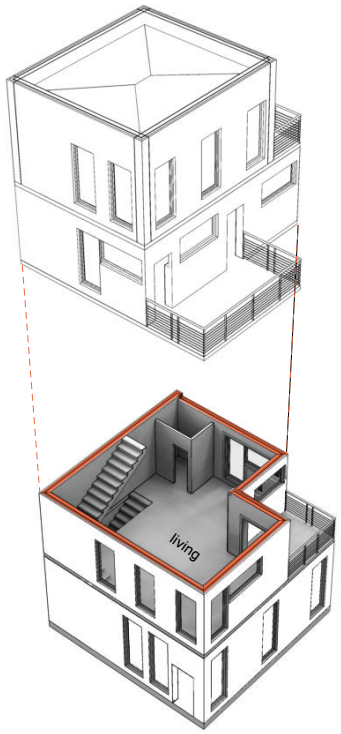


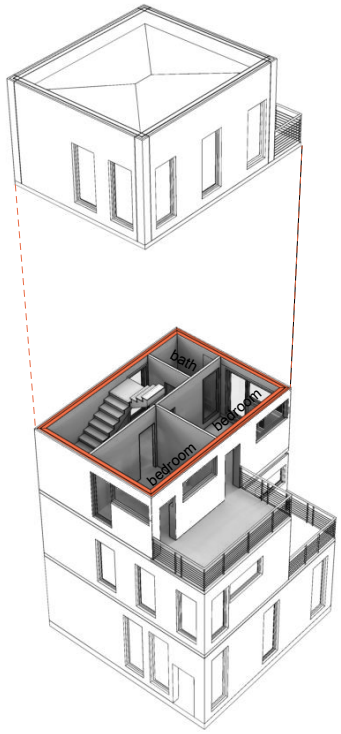
fig 41 possible configurations of the living spaces above work-shed



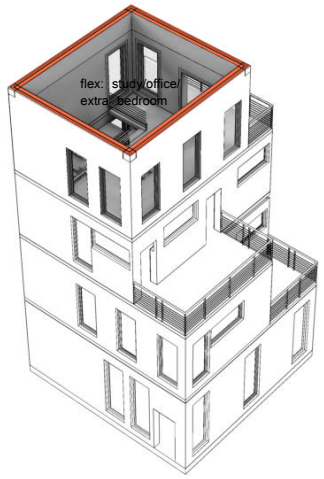
TOWNHOUSE: first floor



second floor



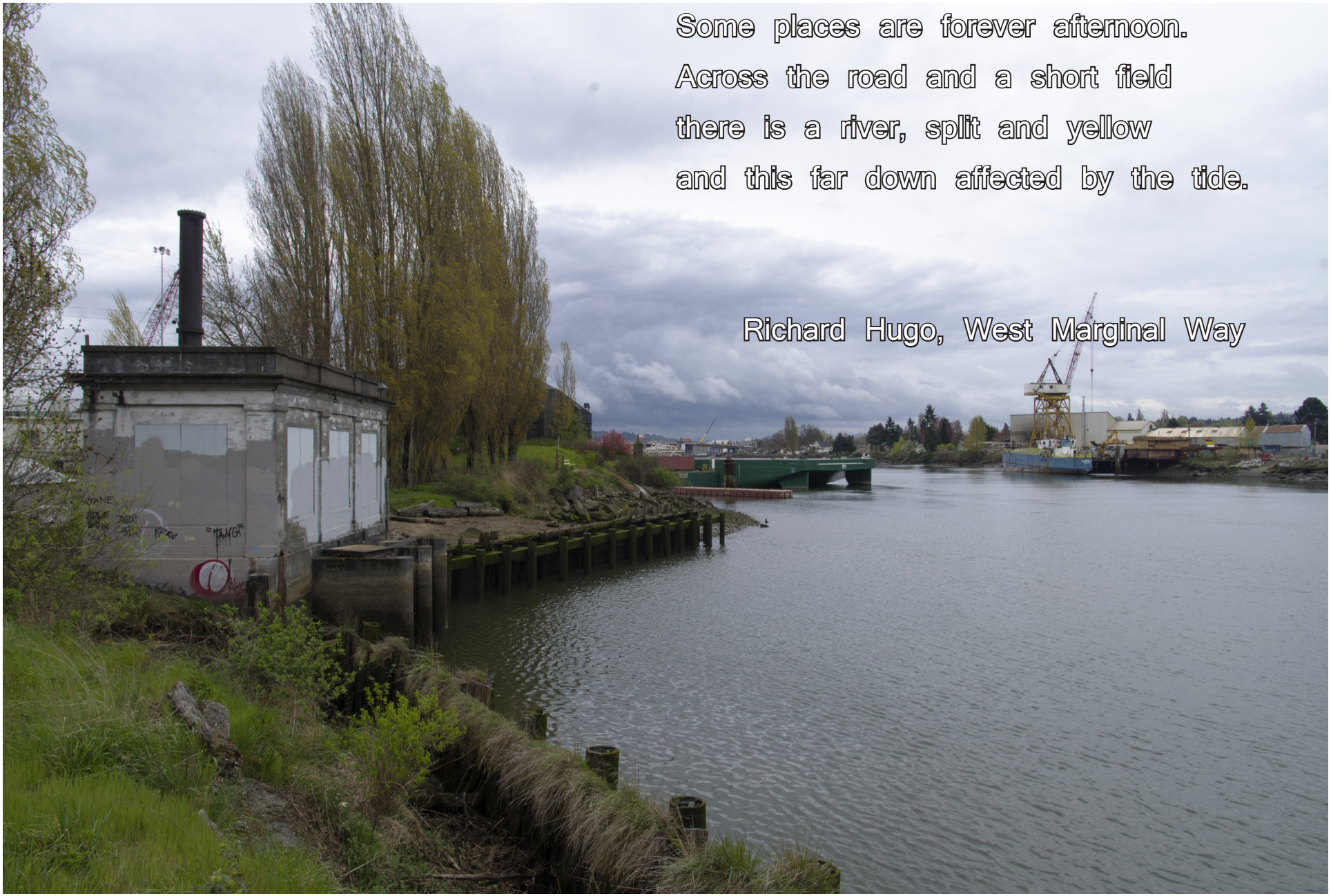
third floor



fourth floor

fig 42 Arrangement of the spaces within the townhouses

Chapter 4: Conclusion



WILL THE MARRIAGE WORK?

From the beginning this thesis was trying to understand the role of architecture in addressing social issues. The vehicle for this investigation is housing and how it relates to both economic and creative endeavors and its connection to natural systems. I choose to approach these large complex and conflicting issues knowing that this was a beginning of a much longer process. Housing provides a "fruitful place of investigation" (Davis 1995, pg. 5) that has a history both local, regional, and international, as well as multiple approaches and practices. While I touch on some of these practices, my main argument is that there are many possibilities to be explored, and locating affordable housing in an functioning industrial area, I hope to expand the idea of what is possible and even feasible.

As in any marriage, there is a possibility of failure - of irreconcilable differences, conflict and abuses of power, and growing apart and apathy. What would help foster a dynamic and resilient relationship between affordable housing and work spaces? Three ideas emerged from my research and design iterations:

1. The importance of the context and history - the continuity of flows that Sola-Morales identifies in discussing terrain vague. (Mariani 2014)

2. Flexibility and adaptability - there are many unknowns and the design must be robust enough to change and be appropriated.

3. Support and negotiation - conflict will happen and so will reconciliations

Context and history

The site encompasses the both sides of the river, essentially the river divides and connects. By activating the water's edge through bringing people to live and occupy it, the river becomes a meeting place and a node of activity that can complement the industrial uses. For industry to remain within the city, it will need the support of the people who live around and also are comfortable living with it.

The Duwamish River historically and currently is the thread that brings multiple uses and interpretations and weaves them together: it is what binds the affordable housing and industrial spaces to each other and will allow each to thrive together.

Flexible and adaptable

Through the design of the site with workyards that could be employed for fabrication and assembly, a site for an impromptu meeting, or even children playing; the plan provides spaces to be appropriated and deployed according to the particular needs. The buildings also need to be configured according to the needs that would be defined by the community and are beyond any individual designers ability to predict. Would each work-shed be a series of smaller workshops or a few larger ones with individuals occupying open workbenches? Would there be a higher demand for studios or two bedrooms - the living spaces above would be constructed according to a best guess.

Support and negotiation

In any relationship there is the constant need for negotiation and support. In this marriage, it would be crucial for the community to discuss and clarify the boundaries between the working spaces and the living spaces. Both have certain requirements, but also room to tolerate a wide range of possible arrangements and agreements. However, with each change there would be a need to renew these understandings. There is no solution, but rather a series of compromises, sacrifices, and concessions in order to maintain the strength of the union. The unique opportunity to live and work on the river with others that are equally committed and passionate would make that union something desired and fought for.

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