

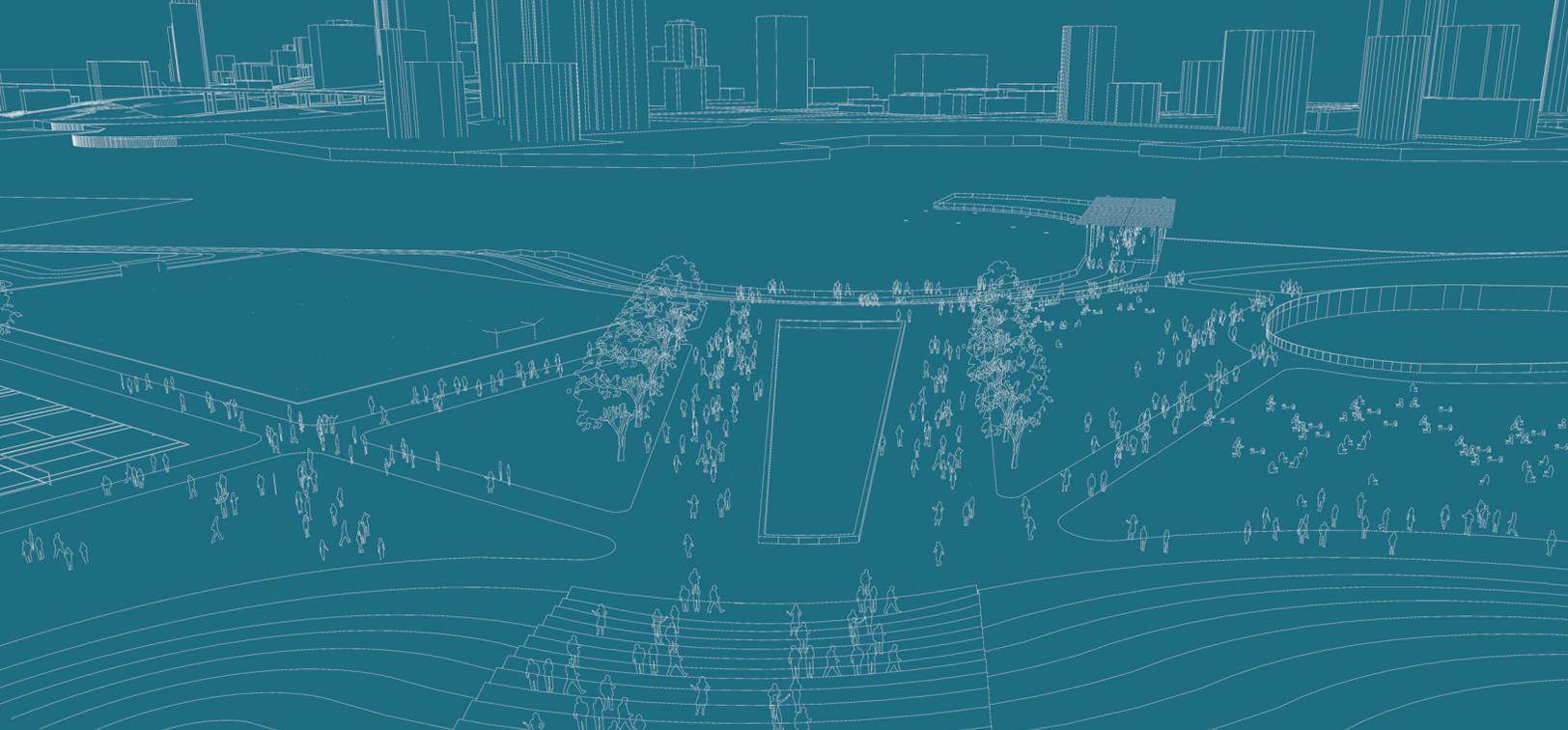
# THE CHARLESON VERANDAH

By  
Tamanna Arora

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Tamanna Arora



# The Charleson Verandah



## ABSTRACT

Vancouver's False Creek South neighborhood was built during the 1970s as a low-density community along the southern shores of Vancouver's False Creek. It is separated from the adjacent Fairview Slopes neighborhood by an arterial street (6<sup>th</sup> Ave.) and a rail right-of-way. As the bulk of the land belongs to the municipality, the City of Vancouver is investigating if and how additional density might be accommodated. Before intervening in the existing FCS neighborhood, it is exploring the development potential of the *Community Edge Zone*, a strip of undeveloped land through which the rail right-of-way runs.

This thesis explores a multi-modal transit route that acts as a catalyst and an armature for high density development through the *Community Edge Zone* along North side of 6<sup>th</sup> Ave. The proposal consists of rail and bike paths on grade, coupled with an elevated walkway into which pedestrian bridges connect across 6<sup>th</sup> Ave.

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## INTRODUCTION

The 55-hectare neighborhood known as False Creek South (FCS) is situated along the southern shores of Vancouver's False Creek inlet. The area is bounded by the Burrard Bridge to the West, 6<sup>th</sup> Avenue and Fairview Slopes to the South, and the Cambie Bridge to the East. It is considered one of Vancouver's most desirable and livable communities. Dating to the 1970s, the complex was planned as a relatively low-density mix of housing types designed at the human scale. Eighty per cent of the land is owned by the City of Vancouver and the 60-year leases on the land on which buildings were constructed are due to expire between 2036-2046.

With the stewardship of valuable public land at play, the City must decide who should have access to False Creek South and how to best use it. Part and parcel of this is revisiting density targets in the face both of high market demand and a chronic lack of affordable housing in Vancouver. The City has agreed to look first at the least developed portion of FCS, namely a stretch of land it is calling the *Community Edge Zone* that separates False Creek South from the adjacent Fairview Slopes Neighborhood. This land flanks an abandoned CP rail line that runs north of and roughly parallel to 6<sup>th</sup> Ave. During the 2010 Olympics the line was temporarily repurposed as a streetcar connection between Granville Island and Gastown.

The point of departure for the thesis is the re-activation of streetcar service along

the rail right-of-way. Starting at Grandville Island, this line would be extended around the eastern end of False Creek and loop through downtown. The area of focus, however, is the portion of this line that runs through False Creek South, i.e., between the Granville and Cambie Bridges. In its redeveloped and elaborated form, the transit corridor is intended to act as a means, mechanism and catalyst for the intensification of FCS, with an emphasis on the *Community Edge Zone*.

The revitalized rail corridor is envisioned as multi-modal transportation route into which new development can connect. It is comprised of a pedestrian walkway – equal parts boardwalk and verandah -- elevated above a tramline and a multi-use pathway. While, for the most part, the rail line runs at grade, it is decked over for portions of its route, i.e., through the berm at Charleson Park and where it dips below grade near Granville Island. To better connect it with the Fairview Slopes neighborhood, multiple longitudinal walkways will bridge across 6<sup>th</sup> Ave, taking cues from the existing land bridge at Laurel Street. The joints at which these elevated crossings meet the raised boardwalk will be developed as key public spaces.

The proposed *Charleson Veranda* has been strategically positioned to encourage development through the *Community Edge Zone*. Typically, a verandah is a porch attached to the exterior of a domestic structure to sit and look out. Similarly, the elevated walkway is called the *Charleson Verandah* because it is designed and land-

scaped such that it offers space to sit and look around when the between buildings and towards spectacular and unobstructed views of False Creek and Vancouver skyline when near the Charleson Park. The elevated boardwalk is alternatively detached and connected into the podium level of the adjacent buildings.

Several precedents were analyzed by way of identifying best practices. Case studies were divided into two main categories, namely elevated walkways and grade-level transit lines. Special attention was paid to the design of pedestrian walkways in relation to the range of functions they could support. As each of the precedents represents a response to a unique set of conditions, their impact on the design of the *Charleson Verandah* will vary with their context, topographical and social conditions.

### **Structure of the thesis**

The thesis comprises both research and design -- with design being understood as a form of research. Following the Introduction, Chapter 1 examines the history of the site and of the planning principles that make it unique. Chapter 2 discusses the existing conditions and identifies the issues at play, leading to Chapter 3, which examines several key precedents. Chapter 4 applies the lessons learned from precedents towards the formulation of a design strategy. Chapter 5 presents a detailed description of the proposed design, while Chapter 6 reflects on the outcome, the research method, and the role of the architect in transforming False

Creek South.

### **Research method**

The mode of inquiry considers layered design exploration as a form of research and a primary means of developing a strategy for the intensification of False Creek South. Research into the history of the site, amenities, traffic patterns, existing transport networks, density targets, and the location of False Creek South in relation to areas of employment, informed both the configuration of the proposed transit loop and its alignment through the *Community Edge Zone*. Among the issues at play in determining the form of the transportation armature through False Creek South – what I’ve labeled the *Charleson Verandah* -- were the location of the various circulation paths (rail, bicycle, pedestrian) in relation to each other, to 6th Avenue, to the adjacent buildings (existing and proposed), to existing circulation routes (vehicular and pedestrian; at-grade and elevated), and, finally, to views out over the neighborhood and False Creek beyond.

## **THE PAST: A BRIEF HISTORY**

### **CHAPTER 1**

This chapter traces the journey of redevelopment of South False Creek from an Industrial district to a residential neighborhood. It discusses lessons learned and the rejection of orthodox modernist planning strategies in favor of the approach that led the form of the community. It identifies some of the key design principles that make it unique.

#### **Keywords**

Industrial	Residential	City of Vancouver	Modernist
Organicist	Patterns	New way of thinking	Inclusiveness
Low-density	Community	Pedestrian oriented	Public realm



Fig. 1.1. Looking west along False Creek from 7th Ave. and Birch St.. First Granville St. bridge in the background. (1890)

The transformation of False Creek from an industrial district to a series of high-profile waterfront communities is a significant chapter in the history of Vancouver. This transformation is still very much underway. Not only are abandoned industrial sites still in the process of redeveloping, but some of the earliest sites to redevelop – notably False Creek South – are being called upon to further transform.

By the late 1960s, the manufacturing operations around False Creek were perceived as being inappropriate for inner-city sites and False Creek itself was polluted. Moreover, as multiple owners controlled different tracts of land, the City's efforts to force companies to clean up their operations proved frustrating.<sup>1</sup> With City and Provincial leaseholds set to expire in 1971, pressure for renewal was rising.

Interest in reclaiming False Creek resulted in a public rally in 1967.<sup>2</sup> In 1970, City Council appointed a special committee on False Creek. Comprised of city staff and local architects, the committee was charged with studying the area and consulting with the public.<sup>3</sup> Since the City of Vancouver owned of 80 percent of the land in question, had jurisdiction over land uses and zoning, and was in a position to act as developer, there was a possibility of a relatively rapid transformation.

Several factors shaped the False Creek South (FCS) neighborhood. While Van-

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1 Hulchanski, John David, Canada Mortgage and Housing Corporation. *St. Lawrence & False Creek: A Review of Planning and Development of Two Inner City Neighbourhoods*. Vancouver: University of British Columbia, School of Community and Regional Planning, 1984.

2 Hardwick, Walter. *Responding to the 1960s: Designing Adaptable Communities in Vancouver*. *Environment and Behavior* 26.3 (1994): 338-362.

3 *Ibid.* 1.

couver's business district was thriving in the 1960s and '70s, there were no specific guidelines in place to direct its development. Reflecting a bias towards modernist urbanism, the downtown core had evolved as a monotonous fabric of commercial buildings with few open spaces and with streets dominated by cars. According to Hardwick, negative reactions to downtown helped to frame the public's expectations, needs and wants for the redevelopment of what became FCS. It was seen as an opportunity to redress the modernist vision of the city as a machine through an "organicist" paradigm. Vancouver's West End neighborhood also influenced the vision for FCS. This neighborhood had overcome the 'concrete jungle' stigma of American inner-city neighborhoods and become a vital downtown residential district. Comprised of mid- and high-rise buildings, its residents walked or used transit systems to reach the central business district for work. <sup>4</sup> This urban live-work lifestyle proved attractive to many involved in the making of FCS. Public involvement also proved important -- as people were invited to project their imaginations on activities, places and spatial qualities they wished to see in the False Creek neighborhood.<sup>5</sup>

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4        *ibid.*2.

5        Wiley, Danielle. *House as City: Re-constructing Vancouver's urban imaginary in master-planned neighbourhoods, South False Creek (1976-1986) and Concord Pacific Place (1990-2000)* PhD Thesis. Carleton University. 2012.



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The site developed in multiple phases starting from Area 6A, 10A, 6B, 10B, and 6C (see fig. 1.6). The principles applied to Area 6A were applied to subsequent phases. Thompson Berwick Pratt and Partners (TBP&P's) conceptual plan for FCS was based on *Christopher Alexander's book, A Pattern Language: Towns, Buildings, Construction*<sup>6</sup>, which advocates a pattern-based approach to architectural and urban design in accordance with people's interaction with different built environments over time.

The Official Development Plan for FCS (1974) set various guidelines for site planning, open spaces, and residential, commercial and industrial uses. The document represented a "new" way of approaching a masterplan. In marked contrast to traditional land-based zoning bylaws, it focused on considering neighborhoods as places of social inclusion, where people from all age and income groups had access to a variety of household types, with an emphasis on family housing (25%).<sup>7</sup> The division of tenure was set at 33 percent market rental, 33 percent co-op housing, and 33 percent affordable housing.

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6 Alexander, Christopher, Sara Ishikawa, Murray Silverstein, Max Jacobson, Ingrid Fiksdahl-King, and Angel Shlomo. *A Pattern Language: Towns, Buildings, Construction.* , 1977. Print.

7 Munro.Kent.False Creek Neighbourhood Association. *False Creek South: Demographics Analysis.* 2012. Retrieved from [http://www.falsecreeksouth.org/wp-content/uploads/2015/12/2012-False-Creek-South-Demographic-Analysis\\_Full-Report.pdf](http://www.falsecreeksouth.org/wp-content/uploads/2015/12/2012-False-Creek-South-Demographic-Analysis_Full-Report.pdf) .Accessed Sept 13 2017.



Fig. 1.6. Phases of development of False creek Site

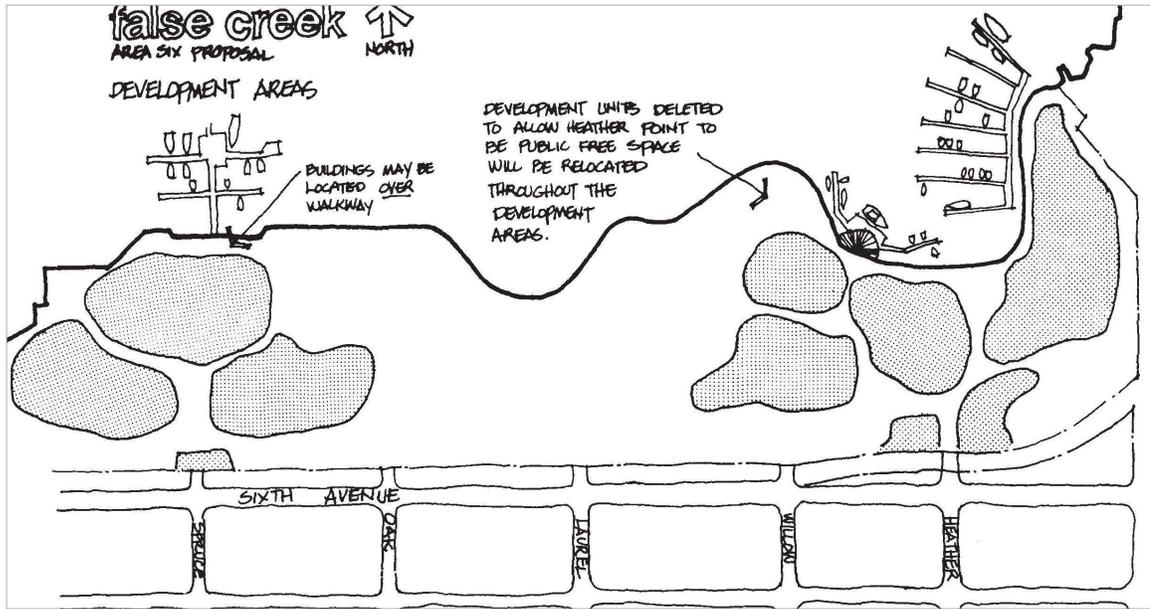


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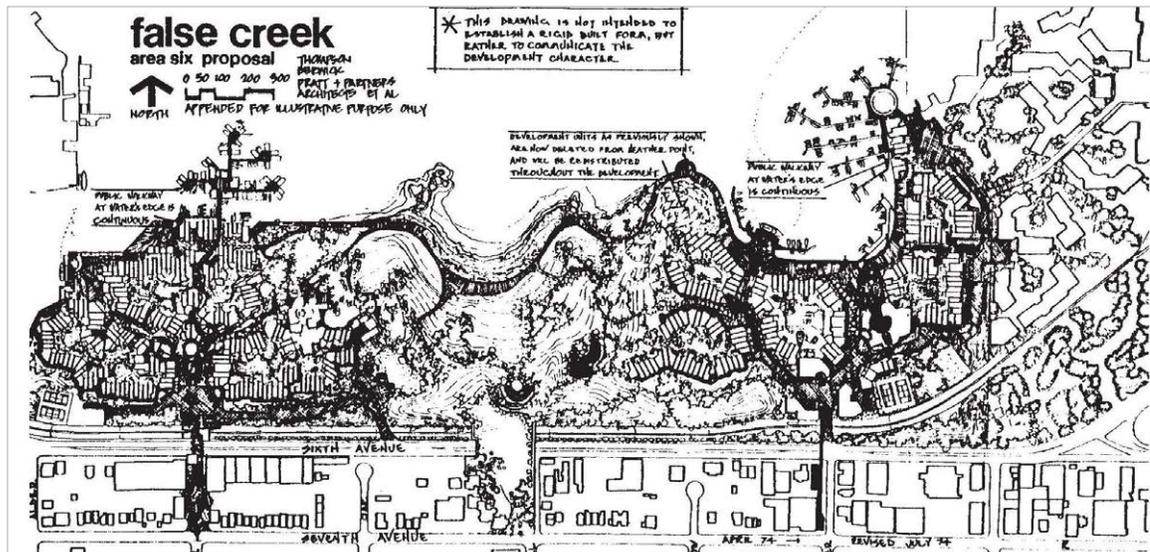


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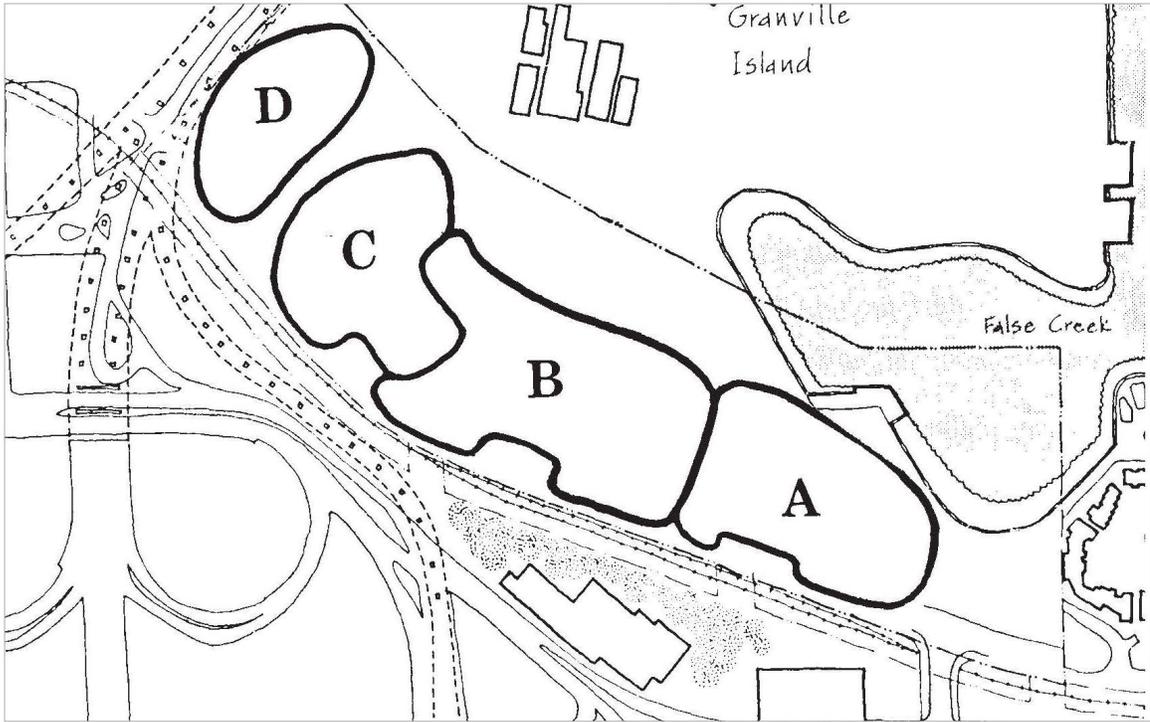


Fig. 1.11. Phase 6B Development zones

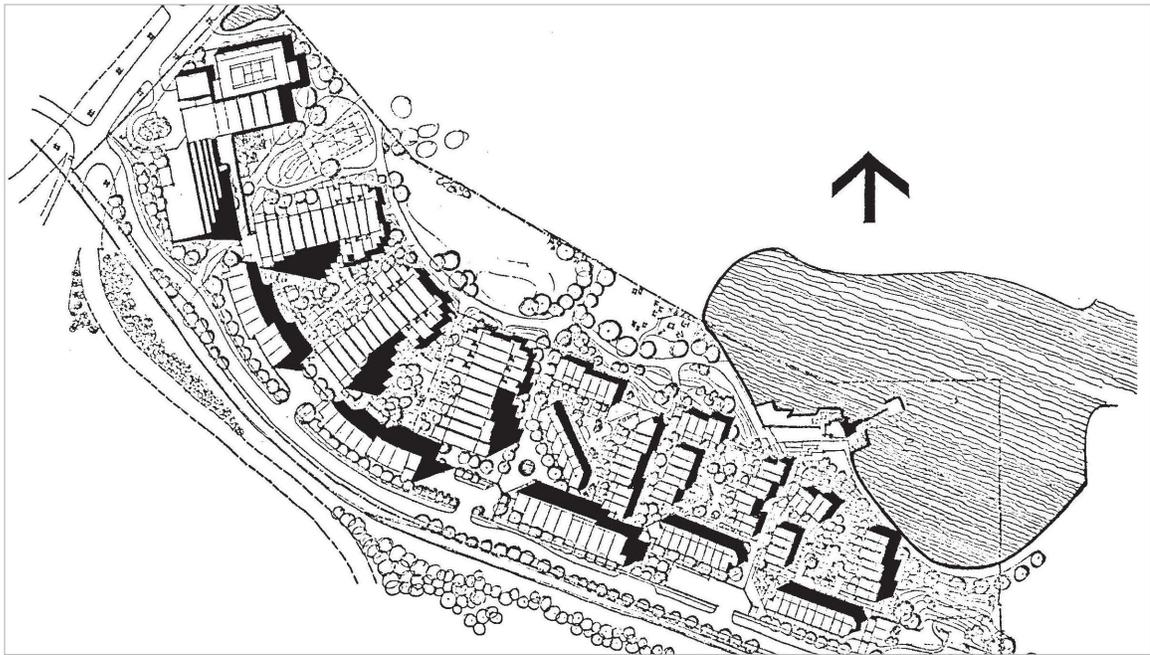


Fig. 1.12. Phase 6B Site Plan

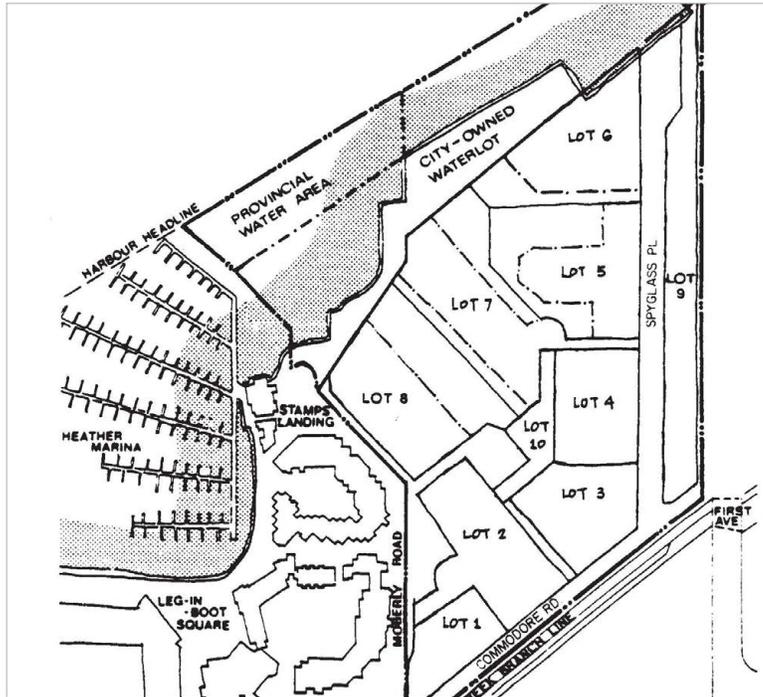


Fig. 1.13. Phase 6C Development zones with lots

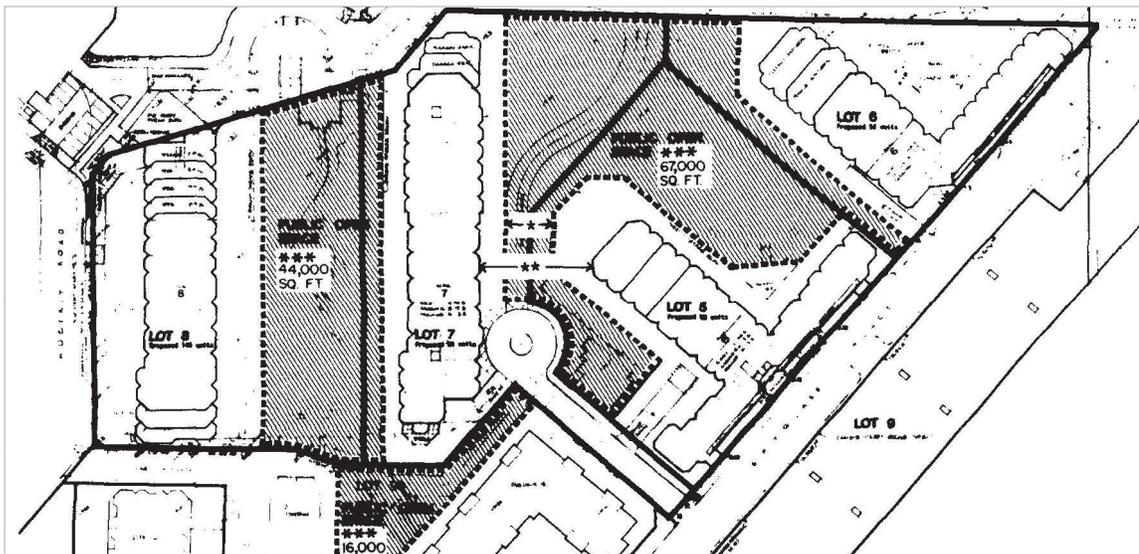


Fig. 1.14. Phase 6C building footprints (Design varies with the developing agency)

Spatial experience and social situations also played an important role, reflecting the influence of Jane Jacobs's *Death and Life of the Great American City*,<sup>8</sup> which addressed the impact of basic urban elements like streets, sidewalks, parks, and neighborhoods on the formation of public spaces. Adaptability was also considered by way of enabling the community to respond to future needs by leaving certain spaces unbuilt or developing them at a lower density to facilitate change. A pedestrian-centric approach to planning was taken, with major walkways converging at nodes to promote social interaction, accommodate community functions, and to create spaces that encourage walking. This approach also led to the decision to locate parking lots below the pedestrian level.

The planning also addressed the challenge of maintaining privacy while designing buildings to engage and interact with the public realm. Three views were considered: those immediately outside the unit, views of the immediate neighborhood (enabling residents to glimpse community life), and views of nature, both close at hand and distant elements like water and mountains. Courtyards incorporated into every enclave acted as outdoor rooms for gatherings. Attempts were also made to develop key points of reference where one could orient oneself relative to a vista or a public space. The inclusion of terraces and usable rooftops on which to grow plants, helped to integrate nature with the built environment. All the guidelines re-

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8 Jacobs, Jane. *The Life and Death of American Cities*. New York: Random House.1961.

lated directly or indirectly to experiences at the human scale.<sup>9</sup>

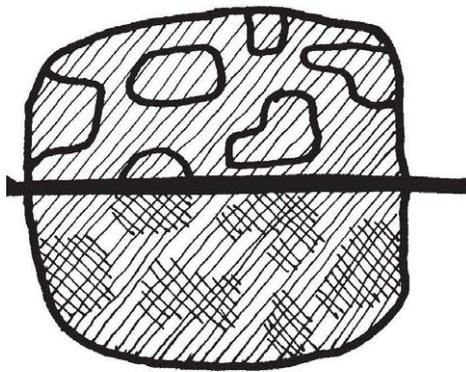
FCS proved to be a watershed project for 1970s inasmuch as it successfully broke away from the spatial rigidity of both traditional and modernist city planning by introducing an experimental and creative approach to configuring the public realm.

It was also notable for its emphasis on pedestrian movement and experience.

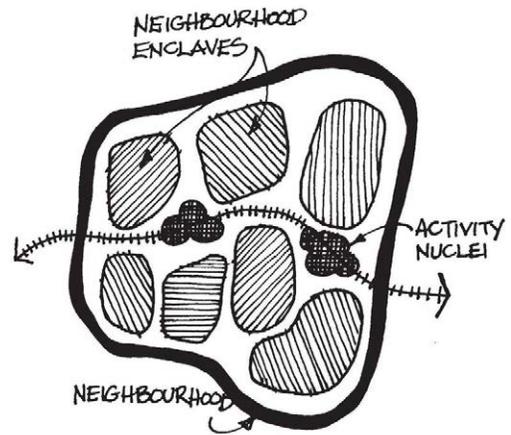
development of SFC.

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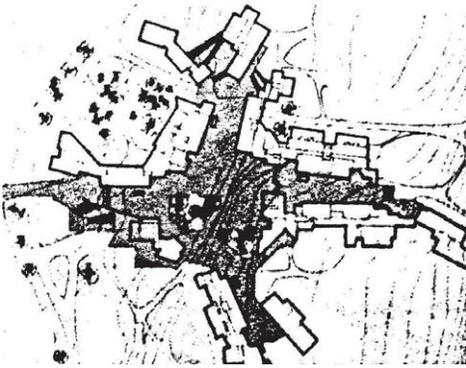
<sup>9</sup> Ibid.6.



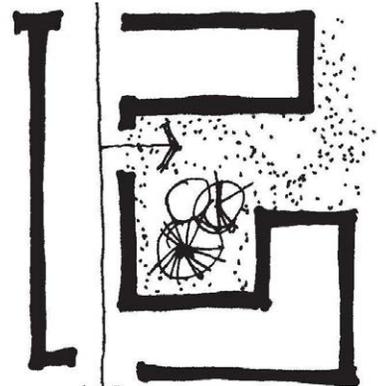
a. Adaptable communities



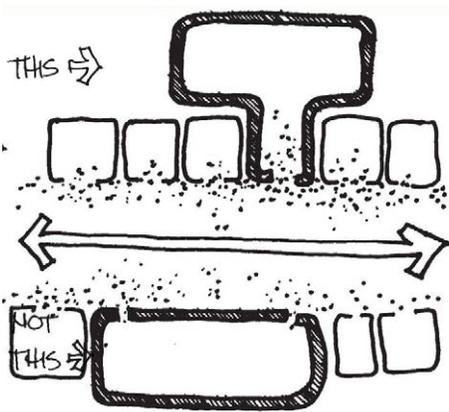
b. Inter community transit



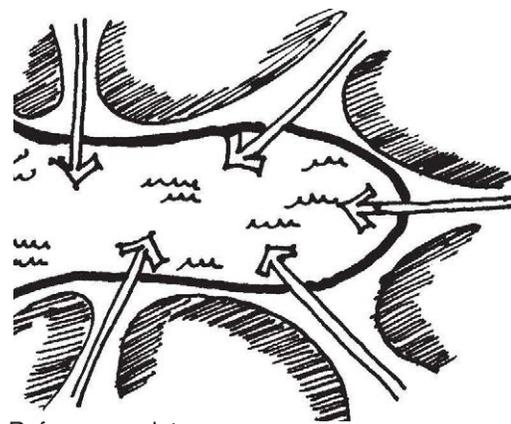
c. Pedestrian activity focus



d. Courtyards for community interaction



e. Shop front diversity



f. Reference points

Fig. 1.15. Design Guidelines for False Creek South



Fig. 1.16. The Industrial False Creek



Fig. 1.17. The transformed False Creek

**THE PRESENT: IDENTIFYING THE ISSUES**  
**CHAPTER 2**

Noting that opinions about the design of False Creek South have changed substantially over time, this chapter discusses the impact of the imminent expiration of land leases. Among other things, this is seen as an opportunity to respond to current shortages in affordable housing, life-cycle reinvestment in existing buildings, the changing needs, goals and demographic make-up of co-ops, and opportunities for intensification in an around FCS. The chapter address the various issues and opportunities that led to the thesis proposition.

**Keywords**

Low density	Community	Replan	Housing
Density	Patterns	Bike and pedestrian	Inclusiveness
Underdeveloped	Community	Streetcar discontinued	Armature

Opinions about the relatively low-density and quasi-suburban approach to the planning of False Creek South have changed over time – as have attitudes about urban living and density targets for inner-city neighborhoods. At the broadest level there are two major concerns. First, since the leases on city-owned land will expire between 2036-2046, City Council has recognized the need to provide assurances to current residents, who have a financial, social and emotional stake in their neighborhood. Increases in population coupled with significant increases in housing costs in Vancouver, however, is putting pressure on the City to optimize the use of its assets. As such, a new (or, at the very least, revised) vision for False Creek South could help to address citywide challenges. Among other things, the site is extremely well located with respect to existing and proposed transit lines. City Staff have recommended that consideration of future leasehold properties (extension of leases, creating new leases, changing land uses, etc.) be accompanied by a comprehensive study of new development opportunities and their impact in the neighborhood.<sup>10</sup>

The community-based *\*RePlan* group, a committee of the False Creek South Neighbourhood Association (FSCNA), has been active in advancing the interests of the neighborhood. A unique stakeholder in City's planning process, *\*RePlan* includes members from all strata and co-operative housing enclaves on city-owned land, as well as representation from market rental properties. The *\*RePlan* com-

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10      *ibid.*7.

mittee was established “ ... to create a dialogue with the City of Vancouver to establish a process to preserve and enhance the False Creek South community beyond lease end, enabling the community to evolve and diversify in a way that is sustainable for existing residents and the City of Vancouver.”<sup>11</sup>

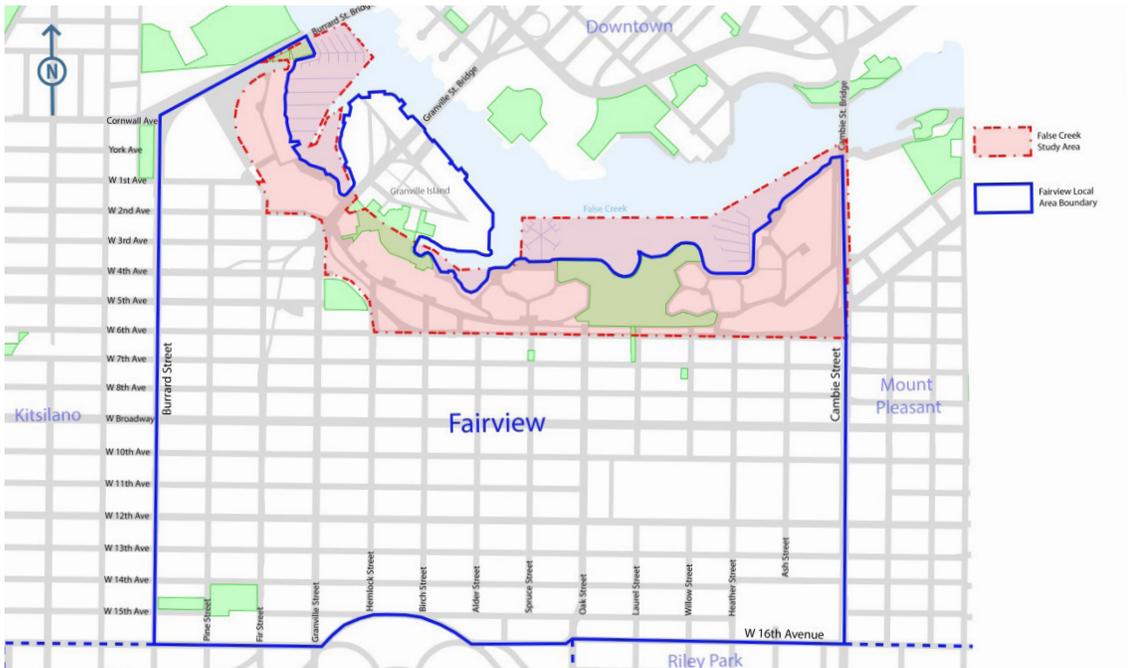


Fig. 2.1. The study area and overall boundary



Fig. 2.2. Land Ownership in False Creek South

11 False Creek Neighbourhood Association. Accessed August 15 2017. Retrieved from <http://www.falsecreeksouth.org/replan/>

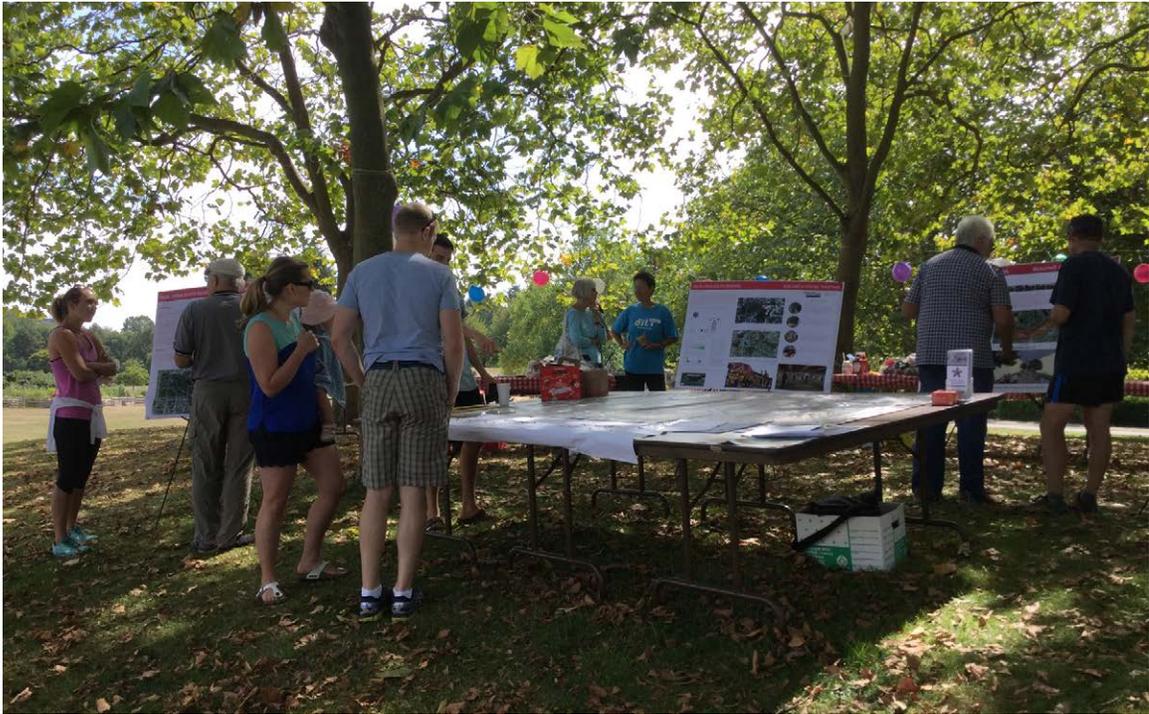


Fig. 2.3. Grill and Chill Community participation event in False Creek South



Fig. 2.4. Community wide planning workshops

universities to develop ideas for improving the conditions of FCS, and their work is displayed at community events every few months to keep the public engaged. Finally, it collaborates and shares ideas with City Staff to make the process of planning rich and inclusive.

By way of establishing a focus for the thesis project, several aspects of the site were studied.

### *Housing*

As noted above, eighty percent of the land is City-owned. Where intensification is concerned, the City must set its priorities for the so-called “highest and best use.” Among the issues at play are whether this translates to a greater emphasis on affordable housing on the site (both in terms of proportion and overall number of units) or whether the City should maximize the potential tax revenue from the site, leveraging its prime location and the extraordinary views across False Creek to the downtown skyline. It could be argued that tax revenue from high-end market housing could support affordable housing elsewhere in the city. Where affordable housing is concerned, it may be relevant to remember that while FCS was originally designed to include a significant percentage of family housing, the number of children in the community has decreased as the community has matured. The number of residents under the age of 19 decreased from 21% in 1986 to 13% percent in 2001. While the bulk of the residents that moved into the community in

the 1970s were between the ages of 20 and 44, 60% of current residents are 45 or over.<sup>12</sup> The mix of housing types will have a significant impact on the nature and level of activity in the community. To what degree, then, can additional housing help existing co-ops manage demographic changes in order to welcome new families by providing alternatives to long-time residents whose space needs have changed? Another important point is the heritage value of the existing architecture and community as a whole. It may mean not only not tearing down the existing buildings (the enclaves on either side of Charleson Park) but making sure that any new construction among or adjacent to these buildings does not compromise the architectural character of the enclaves. The success will be in minimizing the impact new development on social fabric the existing community.

*Disconnect between the site, 6<sup>th</sup> avenue and the False Creek South neighborhood*

Hidden behind a berm and separated by a dis-used rail right of way, even those that pass by False Creek South on a regular basis may not even be aware that the neighborhood exists. It is largely disconnected and invisible from Fairview Slopes, which abuts it on the south. Aside from two, misaligned vehicular connections through the Community Edge Zone, the only link between FCS and Fairview slopes is an elevated pedestrian connection across 6<sup>th</sup> Ave. at Laurel St. Known as the Laurel Street Land Bridge, it links 7<sup>th</sup> Ave. with the berm along Charleson

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12 Krause, Daniel. False Creek Neighbourhood Association. *False Creek South: Demographics Analysis*. 2012. Retrieved from [http://www.falsecreeksouth.org/wp-content/uploads/2015/12/2012-False-Creek-South-Demographic-Analysis\\_Full-Report.pdf](http://www.falsecreeksouth.org/wp-content/uploads/2015/12/2012-False-Creek-South-Demographic-Analysis_Full-Report.pdf). Accessed Sept 13 2017.

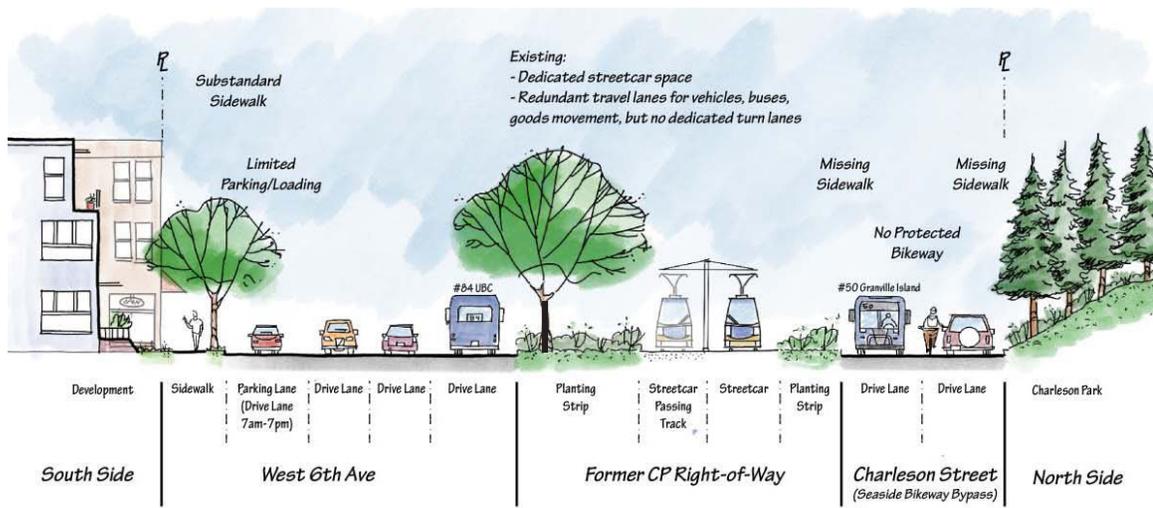


Fig. 2.5. Cross section showing exiting condition



Fig. 2.6. Images corresponding to the cross section



Fig. 2.7. Existing boundary wall between two communities



Fig. 2.8. Existing perpendicular connection- Land Bridge



Fig. 2.9. Bike and pedestrian unfriendly- Narrow sidewalks

Park.

*The cycle and pedestrian “unfriendliness” of 6th Avenue*

6th Ave. is a one-sided street and is used largely as a traffic arterial. Narrow sidewalks make it uncomfortable to walk along, and no have cycling lanes have been provided. The intensification of False Creek South will create both the demand and the opportunity to reconsider the form and function of 6<sup>th</sup> Ave. Additional public transit options may help relieve traffic pressure from the street. Coupled with street-oriented development along the north side (backing on to Lamey’s Mill Rd.), there is tremendous potential to enhance the quality both of the built environment and the pedestrian experience along 6<sup>th</sup> Ave. This includes more connections across 6th Ave into Charleson Park and False Creek South.

*A dis-used rail corridor*

Streetcar service through downtown was proposed in 1999 by way of augmenting Vancouver’s status as transit-oriented city. The intent was a seamless connection to existing transit services, strengthening the overall network. It was proposed in three phases, Phase 0 connected Granville Island to Science World, passing through False Creek South, Southeast False Creek (Olympic Village) and continuing along 1<sup>st</sup> Avenue to Quebec Street. Phase 1, extended the line from Science World to Gastown and Chinatown, linking Granville Island with downtown. Phase 2 connected Science Word to Granville St., linking GM Place, BC Place Stadium,

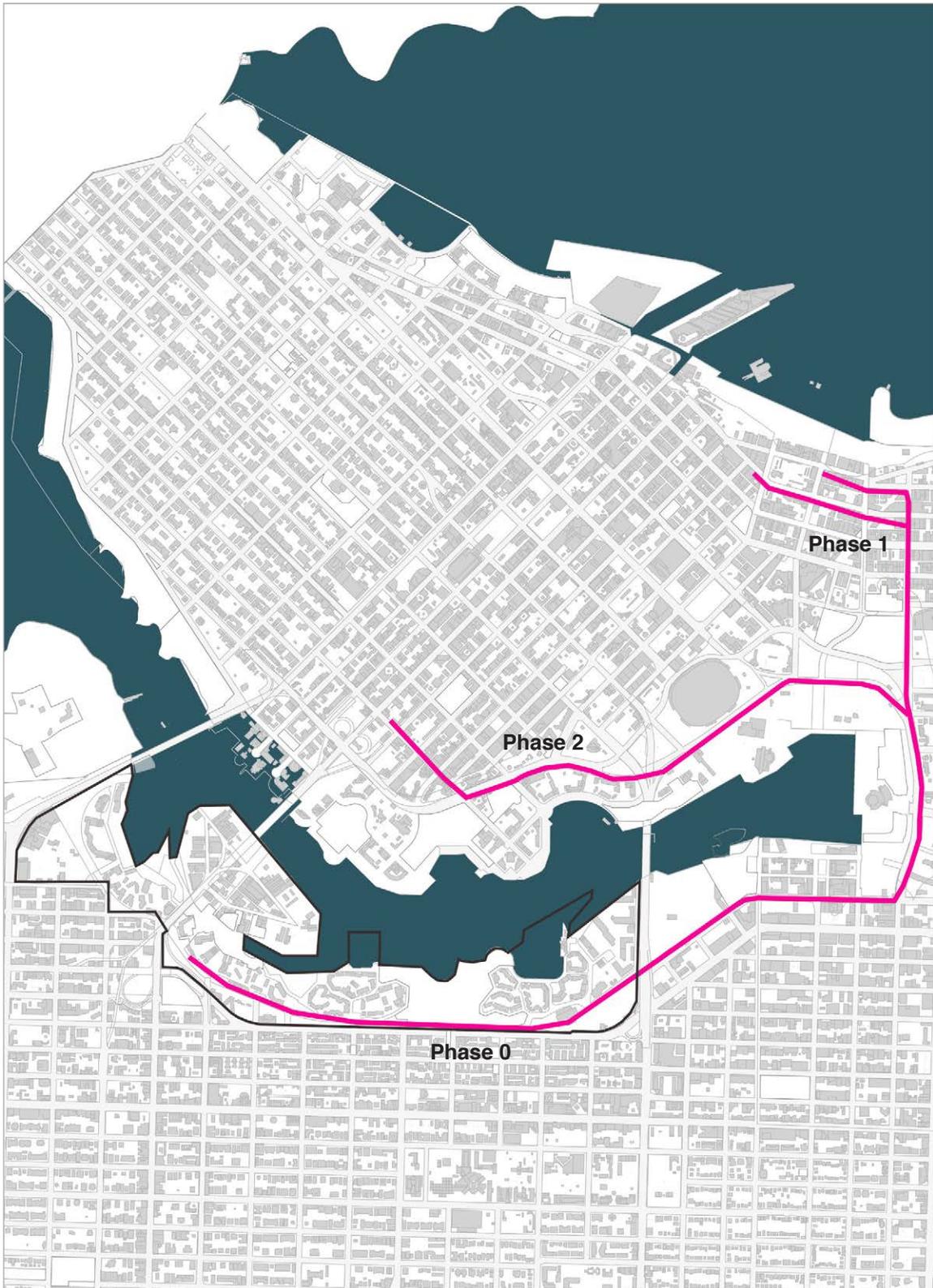


Fig. 2.10. Streetcar route for Olympic line



Fig. 2.11. Existing condition of tracks



Fig. 2.12. View from Charleson berm towards tracks and 6th Avenue showing boundary wall

the Plaza of Nations, the Roundhouse Community Center, the Yaletown and North False Creek neighborhoods, and the Granville corridor.

While streetcar service along these routes (the so-called Olympic Line) proved to be very successful during the 2010 Olympic Games, service was discontinued due to the lack of funds.<sup>13</sup> To better understand where streetcar service best be re-introduced, I looked at bus, train, subway and ferry service around False Creek as well as areas of employment. While the thesis proposes a larger loop through Gastown the CBD, the portion through False Creek South, between the Granville and Cambie Bridges, is the focus of study.

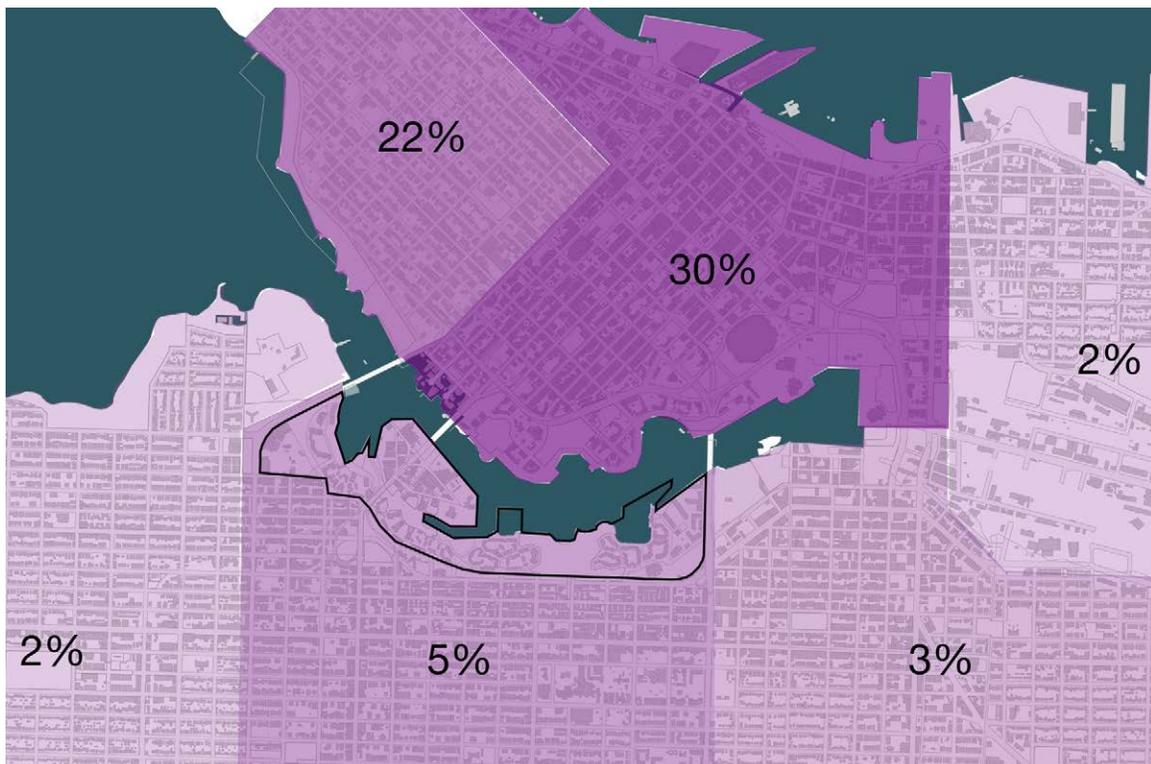


Fig. 2.14. Areas of employment to understand where tram connections should be made

13 Bracewell, Dale. City of Vancouver. *Downtown Streetcar Project Update* (Report No. 13-1400-20). 2006. Retrieved from <http://council.vancouver.ca/20061005/documents/pe5.pdf>. Accessed October 2.2017

*Underdeveloped portions of the site*

A significant amount of underutilized lands abuts FCS, including overgrown green and areas given over to parking. This land, much of which is included in the *Community Edge Zone*, has the potential to be redeveloped without disturbing the existing community. The City is currently concentrating on this portion of False Creek South by way of exploring how much development it might be able to support, the nature of this development, and how much land might be set aside for public amenities, etc.

The thesis proposal represents an attempt to address the issues identified above by creating a significant new piece of multimodal circulation infrastructure (tram, bike, and pedestrian) into which the adjacent communities can connect and into which new development might plug.

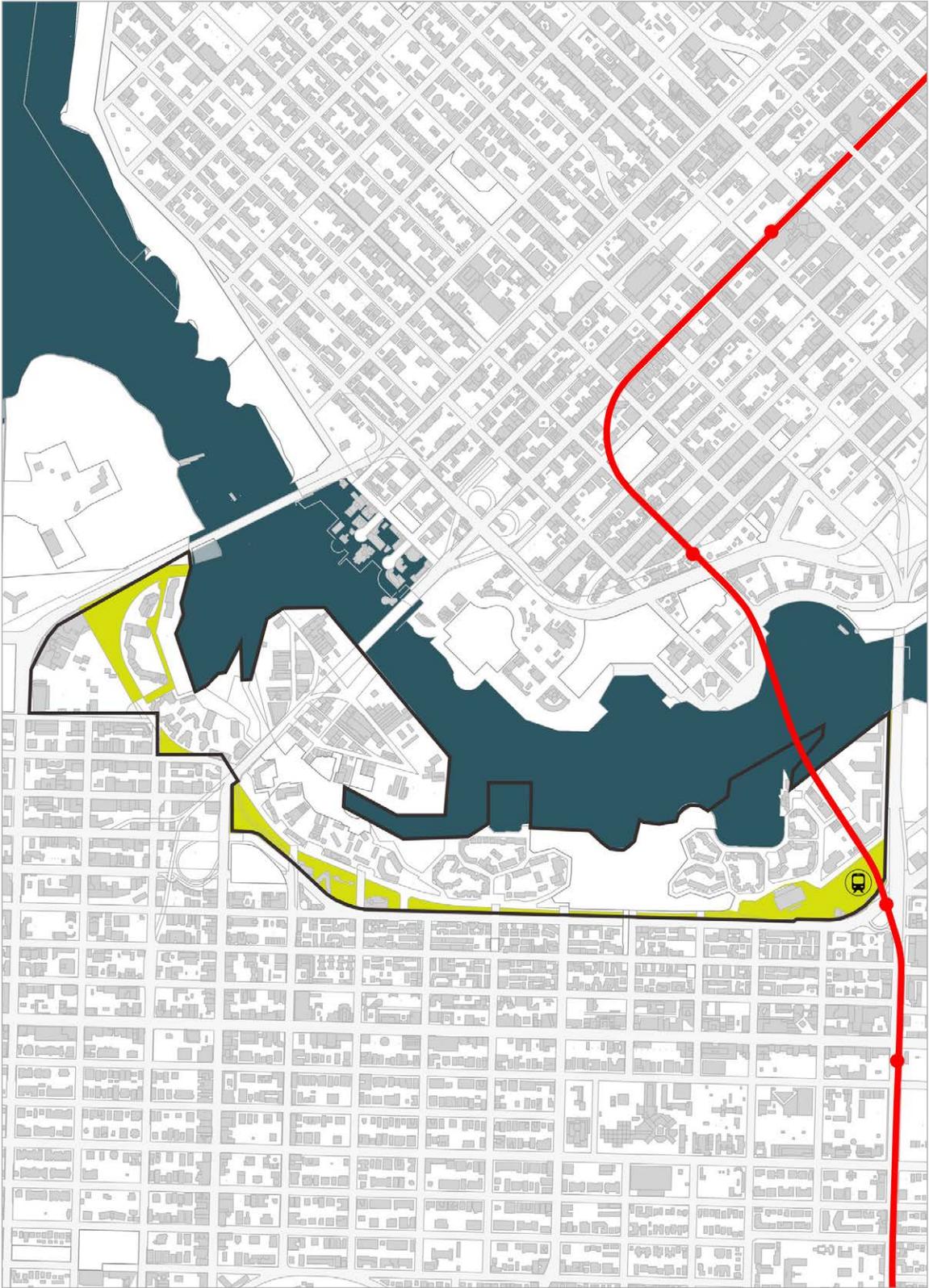


Fig. 2.13. Underdeveloped portions of the site- Community Edge

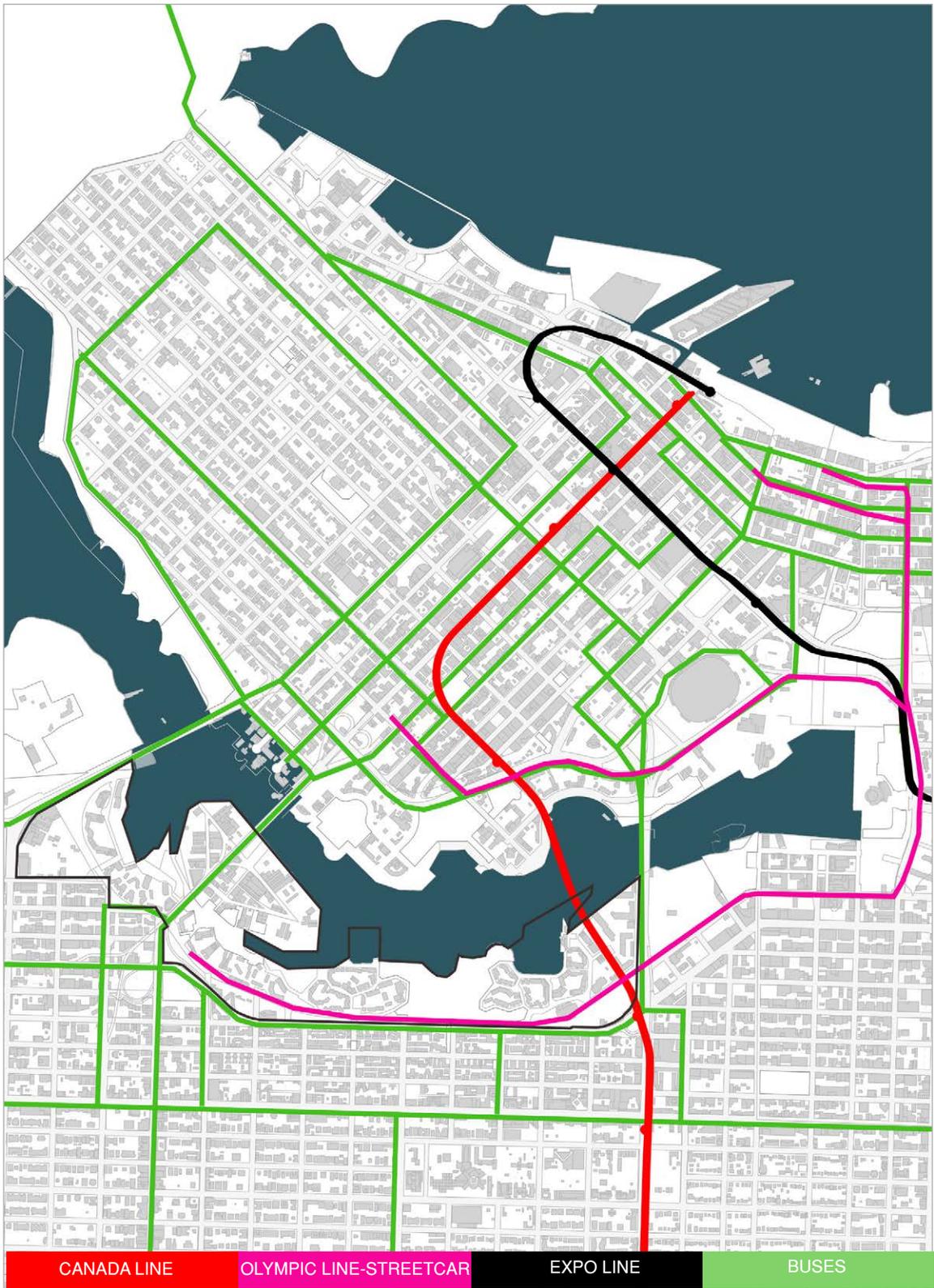


Fig. 2.15. Existing network



Fig. 2.16. Proposed loop



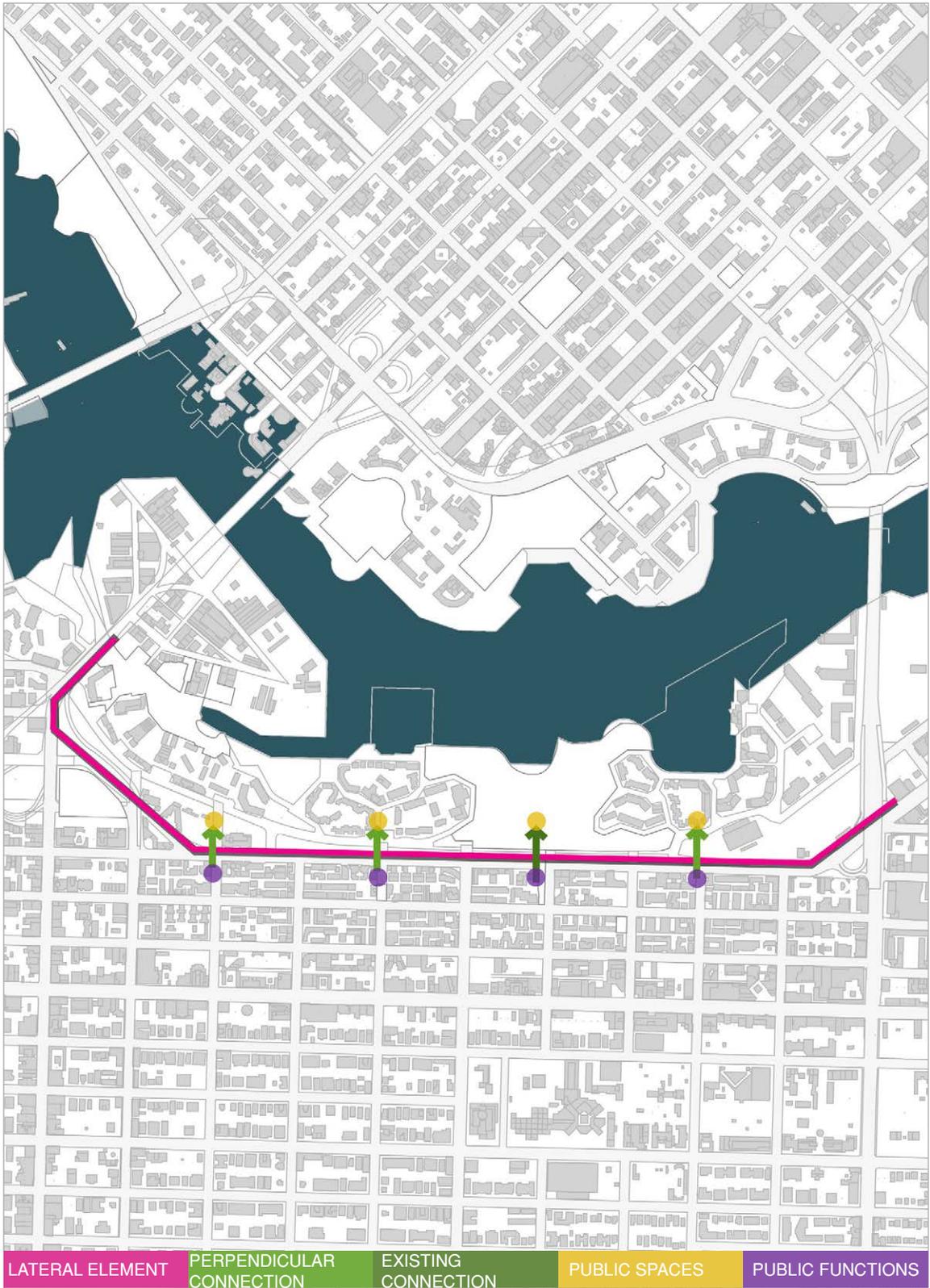


Fig. 2.18. Proposing lateral connection (tram) and perpendicular connections (pedestrian)



Fig. 2.19. Proximity of amenities to decide the public functions at edges of perpendicular connections

## WHO ELSE HAS DONE IT? : THE PRECEDENTS CHAPTER 3

This chapter examines several projects that might serve as precedents for a significant new piece of transportation infrastructure. Precedents have been broken into two basic categories: elevated walkways (e.g., The Highline, Seoul Skygarden, Klyde Warren Park and Brooklyn Bridge Park) and on-grade transit lines (e.g., Atlanta Beltline and Paris Tramline T3). Each of these are categorized according to four attributes namely, historical background, length of the walkway/transit line, configuration, and the features and functions they support.

### Keywords

Landscape	Elevated walkway	Activity	Dynamic
Experiential	Infrastructure	Bike and pedestrian	Access
Sustainable	Community	Tram	Livable



Fig. 3.1. Highline



Fig. 3.2. Seoul Skygraden



Fig. 3.3. Klyde Warren Park



Fig. 3.4. Brooklyn Bridge Park



Fig. 3.5. Atlanta Beltline



Fig. 3.6. Paris Tramline T3

## THE HIGHLINE, NEW YORK

New York City's Highline was constructed in the 1930s as an elevated freight rail line between warehouses on Manhattan's West Side. Due to increase in trucking, it fell into disuse and service was terminated in the 1980s. Today, it has been repurposed as a 1.45-mile-long elevated park and pedestrian walkway, featuring more than five hundred species of plants and trees. It extends up the west side of the island from Gansevoort Street to the Javits Center on the 34th St., travelling through West Chelsea and around the Hudson Yards. The self-seeded vegetation that grew on the abandoned rail line was the inspiration for the Highline's planted landscape. The pattern for the paving system was digitized into discrete units of paving and planting, which produces naturalistic effect and a 'pathless' landscape.<sup>14</sup> The path offers relief from the chaotic city streets and provides views of the city skyline. It is also a place for social interaction, popular as a meeting point and serving as a landmark. Thirdly, to local users who commute daily, it offers an alternative transport option that enhances the experience of walking. Users also appreciate that there is no particular sequence to the park, which offers an unobtrusive environment for meandering. The High Line holds various tours, stargazing workshops, and art camps. Various public art projects and commissions have been produced for the walkway and volunteers help to maintain the plantscape.<sup>15</sup>

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14 Ciento, Karen. *The New York High Line officially open*. 2006. Retrieved from <http://libguides.gwumc.edu/c.php?g=27779&p=170369>. Accessed October 7 2017.

15 Friends of the Highline. Retrieved from <http://www.thehighline.org/visit>. Accessed October 7 2017.

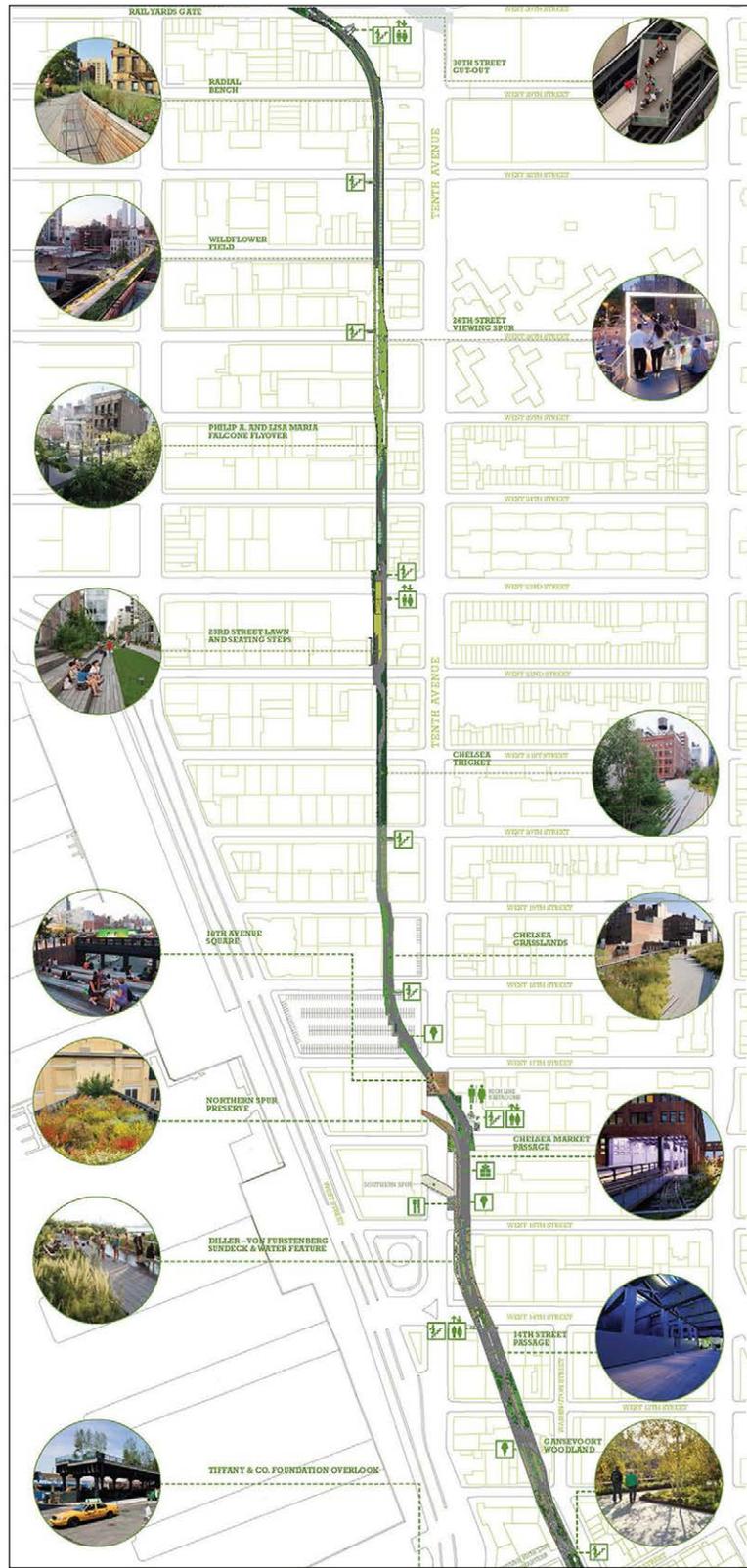


Fig. 3.7. Highline plan



Fig. 3.8. Amidst the city



Fig. 3.9. View showing landscaping

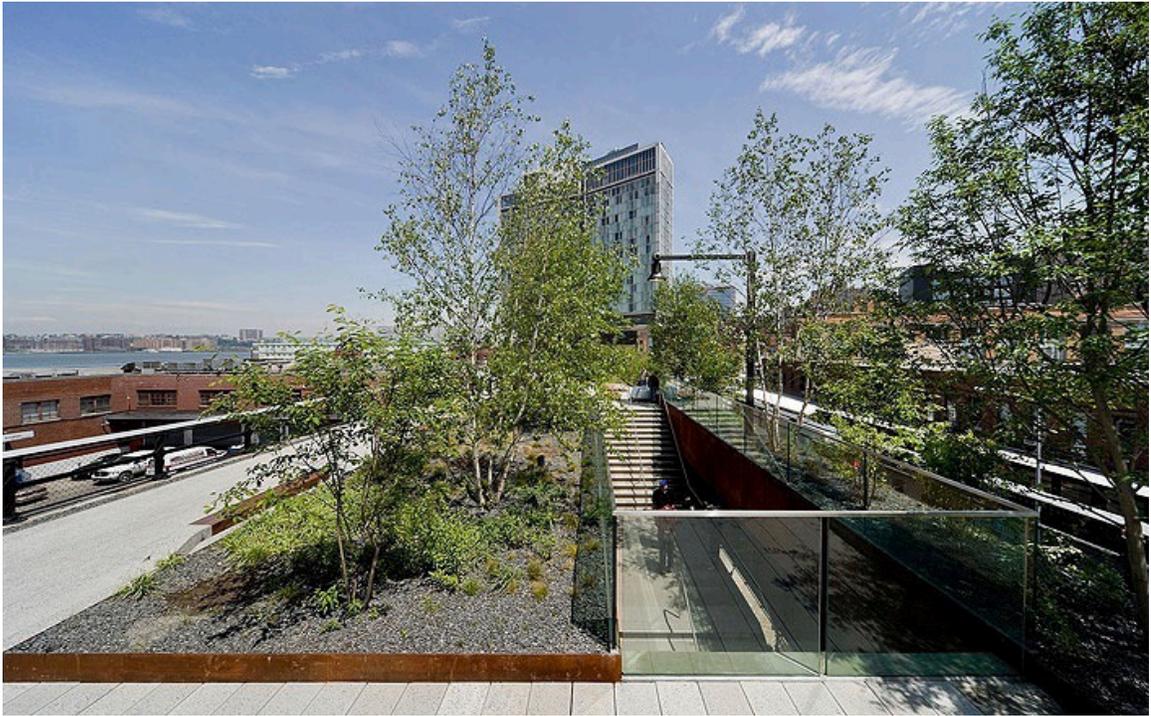


Fig. 3.10. View showing system of connection to ground level

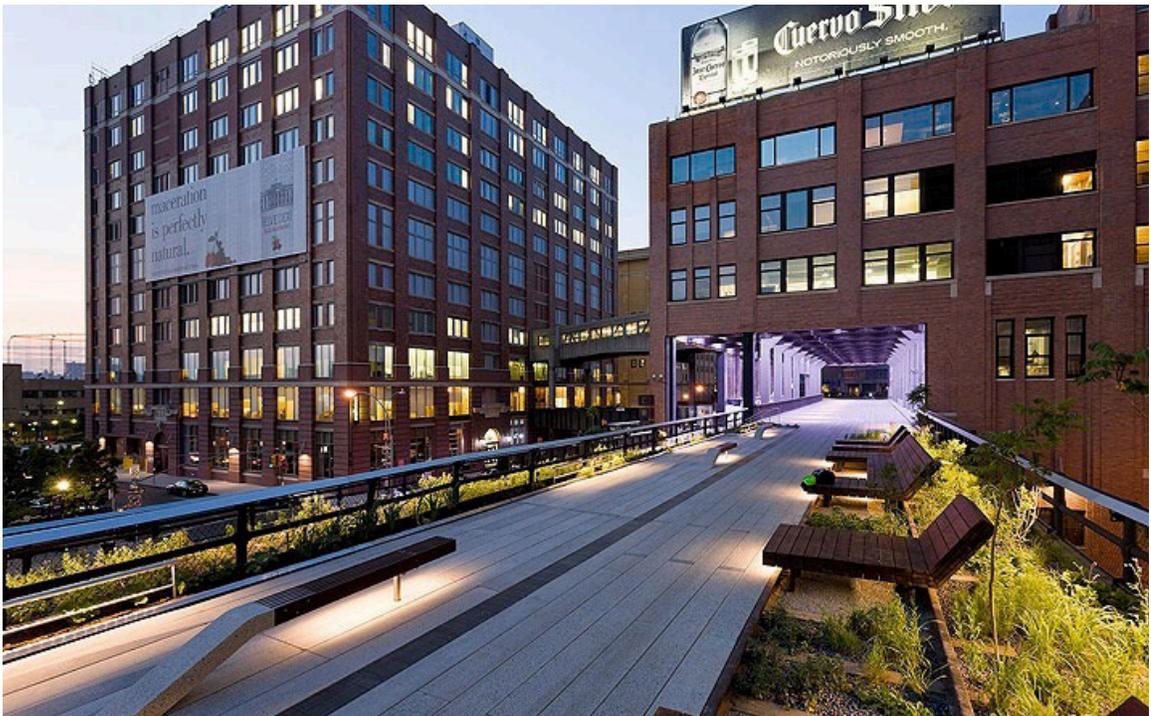


Fig. 3.11. Walkway becoming a part of the building

## SEOUL SKYGRADEN, SEOUL

In the 1970s, an elevated roadway was built to link east and west sides of the central rail station in Seoul. Due to safety issues, however, the road was closed to traffic. Rather than tearing it down the roadway was repurposed into an elevated pedestrian garden called the Seoulo 7017. This name combines the year the structure was built (1970) with the year it was transformed into a sky garden (2017).

The conversion of highway into a piece of “green infrastructure” was intended to be a catalyst for greener Seoul. The stand-alone structure attaches to hotels, shops, and gardens at different points. 983m in length, the park incorporates some 24,000 plants, most of which are native to Korea. They provide both educational and sensorial experiences, for which variations can be observed in different seasons. Plant materials are organized into small gardens, each having its own composition, size, fragrance, color, and identity. Arranged in the form of the Korean alphabet, these gardens produce interesting spatial compositions. When the plants mature, each of the gardens will become an “urban nursery”.<sup>16</sup>

The Skygarden not only connects commuters with nature but also provides spectacular views of the Historical Seoul Station and the Namdaemun Gate. This pedestrianized viaduct has helped to make the district around the train station

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16 MVRV. *Seoulo 7017 Skygarden*. 2017. Retrieved from <https://www.mvrdv.nl/projects/seoul-sky-garden>. Accessed Oct 8 2017.

greener, friendlier and more attractive.<sup>17</sup>Shops, galleries, restaurants, teahouses, theatres, and an information center have been incorporated into the design of the walkway to enhance the overall activity level.

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17 Stott, Rory. *MVRDV's Skygarden, a Transformed 983-Meter Former Highway, Opens in Seoul*. 20 May 2017. Retrieved from <https://www.archdaily.com/871754/mvrdvs-skygarden-a-transformed-983-meter-former-highway-opens-in-seoul>. Accessed Oct 8 2017.



Fig. 3.12. Seoul Skygarden



Fig. 3.13. Landscaped walkway with functions accommodated as a part of the design



Fig. 3.14. The integration of Skygarden with city infrastructure

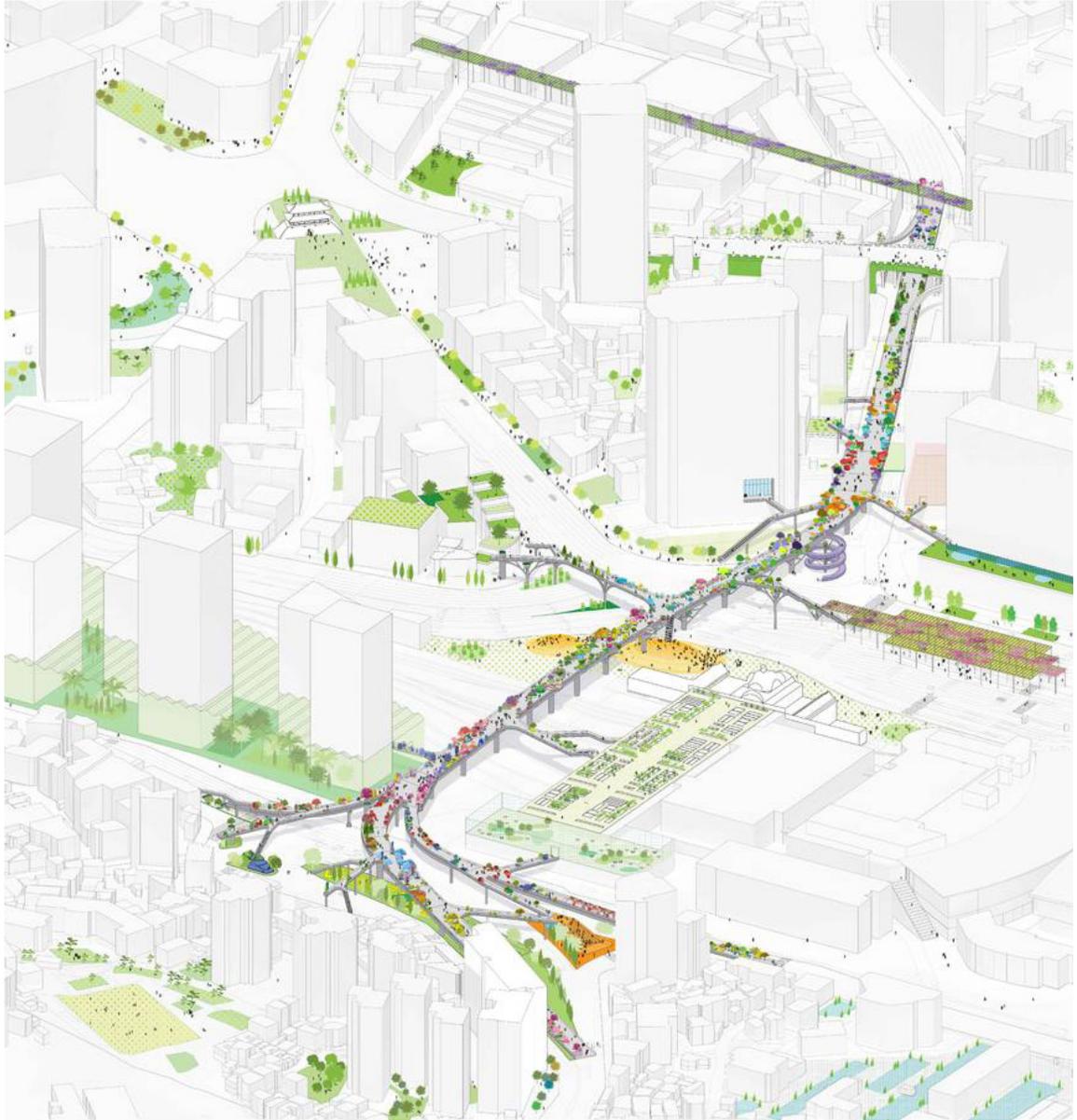


Fig. 3.15. Skygarden as an integral part of the city



Fig. 3.16. Enhanced pedestrian experience

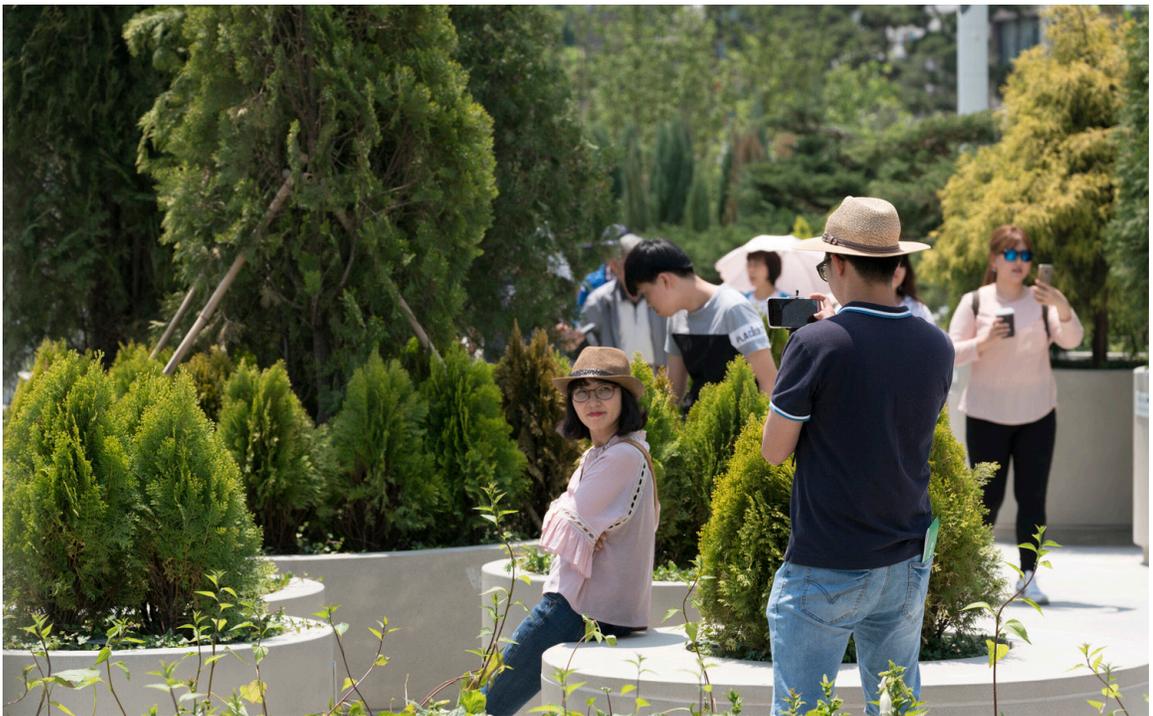


Fig. 3.17. Skygarden more than a means of transition

## **KLYDE WARREN PARK, DALLAS**

This 5-acre park has been created by decking over a portion of a recessed, eight-lane freeway in downtown Dallas. While the idea was proposed in the 1960s, construction began in 2009 and the park opened in 2012. One traverses the park through different “rooms,” encountering a range of things including a performance pavilion, food vendors, a great lawn, badminton and croquet areas, walking trails, an area dedicated to exercise classes (yoga, tai chi and ballroom dancing), and a children’s zone.<sup>18</sup>

Klyde Warren Park is a significant feat of engineering and design. Given the difference in elevation across the site, access by foot, trolley and bicycle from Uptown, Downtown and the Arts District were important considerations.<sup>19</sup> Aligning with the adjacent streets it maintains clearance for highway below. The deck is supported by deep forming trenches that act like planter boxes to accommodate mature trees. The park incorporates 37 native plant species and 322 trees, giving it the qualities of an urban oasis.<sup>20</sup>

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18 Klyde Warren Park. *Our story*. 2015. Accessed Nov 10 2017. Retrieved from <https://www.klydewarrenpark.org/About-the-Park/our-story.html>

19 Dallas Arts District. *Klyde Warren Park*. 2017. Accessed Nov 10 2017. Retrieved from <http://www.dallasartsdistrict.org/community/klyde-warren-park/>

20 Ibid.18



Fig. 3.18. Freeway before the Park



Fig. 3.19. Klyde Warren Park today



Fig. 3.20. Exercise in the Park



Fig. 3.21. Pedestrian promenade



Fig. 3.22. Play area for kids



Fig. 3.23. Screening of a film in the Park

## **BROOKLYN BRIDGE PARK, NEW YORK**

Prior to its transformation into a park, the site was comprised of a series of piers and areas of landfill used for shipping and bulk cargo storage. Extending 1.3 miles along the waterfront from just north of the Manhattan Bridge to the foot of Atlantic Avenue, the 85-acre industrial area was developed by Port Authority of New York and New Jersey in the 1950s. In recent decades, however, it became obsolete due to the rise of container shipping. (Harvard) Prior to its transformation, the site included large areas of weedlot and several light industrial complexes. The designers of the park were charged with respecting the industrial heritage of the waterfront and preserving its monumental character while repurposing it into a self-sustaining ecosystem with new social and recreational uses.

Brooklyn Bridge Park is seen as a threshold between the city and the river.<sup>21</sup>One of the most challenging aspects of design was improving public access to a very long and narrow site. Each access point becomes an urban junction, which is an amalgamation of activities and programs serving as a “lifeline” to surrounding neighborhoods. Various salvaged materials were repurposed in service of sustainability and to reduce construction costs. The design uses man-made landscapes to kick-start new ecologies that will flourish in the years to come.<sup>22</sup>The park accommodates functions that cater to all types of users, e.g., local residents, daily

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21 Michel Van Valkenburgh Associates [MVVA]. Brooklyn Bridge Park Master Plan Brooklyn, NY. 2005. Accessed Dec 27 2017. Retrieved from <http://www.mvvainc.com/project.php?id=86> .

22 *Ibid.*21.

commuters, and visitors. Unlike other waterfront parks, which are elevated above the water's edge (e.g, Riverside Park in Manhattan), Brooklyn Bridge Park provides an opportunity for people to interact with water through services like boat ramps, salt marshes, beaches and a waterfront promenade.<sup>23</sup> Different locations in the park accommodate different functions. The piers are used for active recreation (baseball basketball, soccer, seating areas, lawns with picnic tables, etc.) while functions requiring solid ground are placed on the uplands.

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23 Brooklyn Bridge Park. *Park Design*. Accessed Dec 27 2017. Retrieved from <https://www.brooklyn-bridgepark.org/pages/parkdesign> .



Fig. 3.24. Existing marine structures in 2005

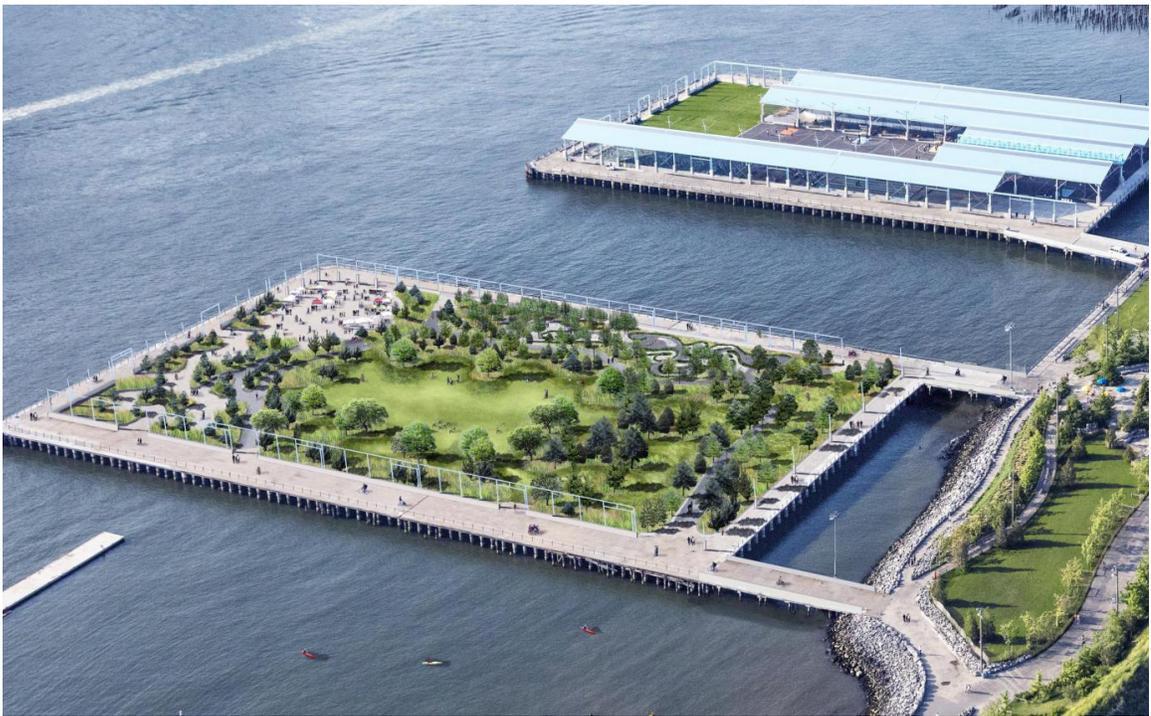


Fig. 3.25. Transformation of waterfront



Fig. 3.26. Screening of film in Brooklyn Bridge Park

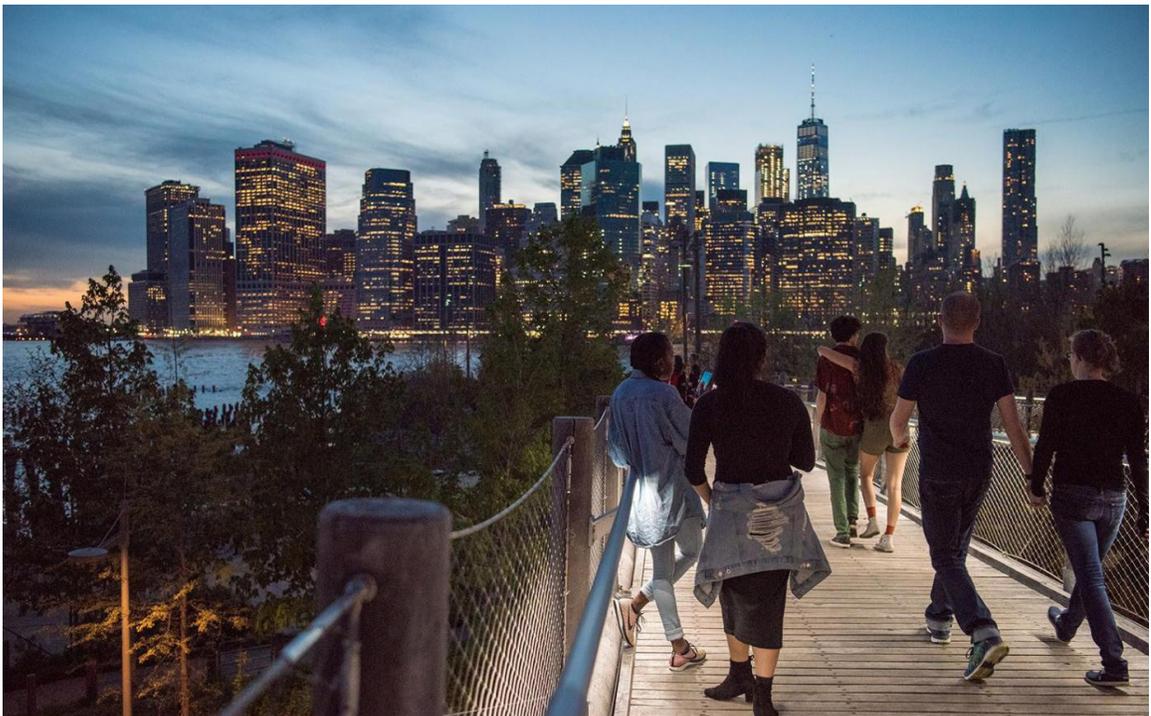


Fig. 3.27. Squibb Bridge



Fig. 3.28. View showing overall scheme of the Park



Fig. 3.29. Cross section of the Park

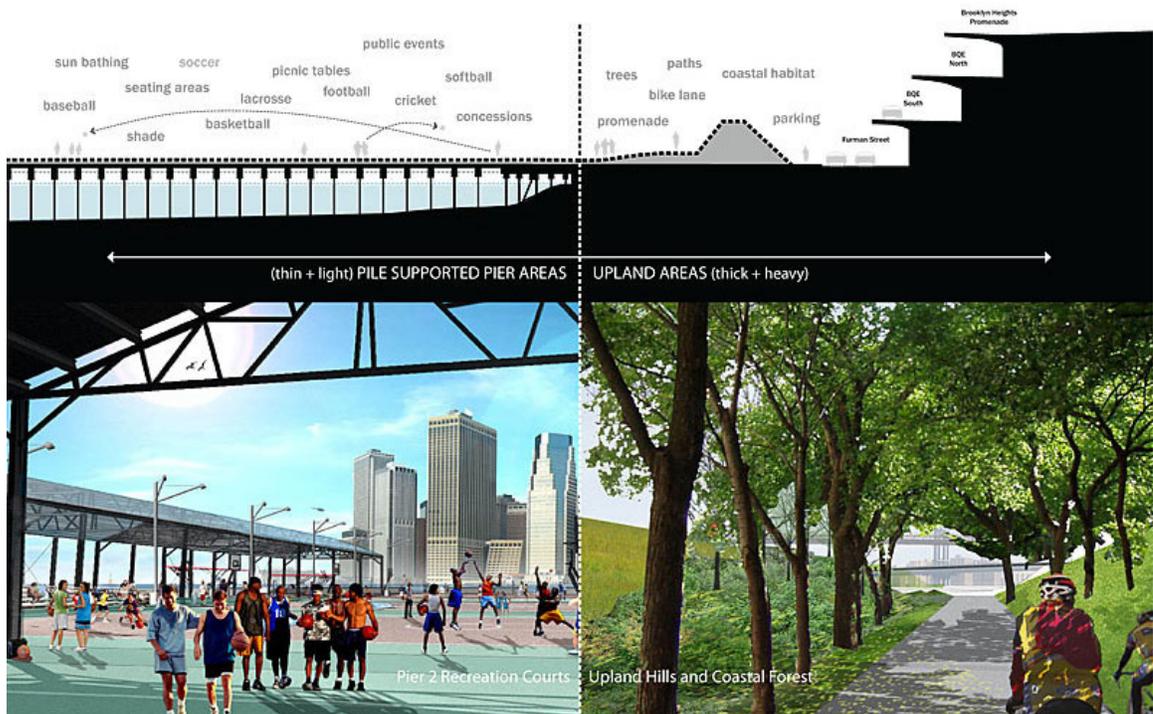


Fig. 3.30. Zoning rationale

## ATLANTA BELTLINE, ATLANTA

The Atlanta Beltline is comprised of several historic rail rights-of-way that, together, form a 22-mile loop around the downtown core. Rail service along most of these corridors has long since been discontinued.<sup>24</sup> Integrating parks and a variety of uses and modes of transportation, the loop connects 45 different neighborhoods located within a half-mile of the corridor. It incorporates multiple transit lines, one that loops around and five others that meet the loop at various points, connecting to other modes of transport.<sup>25</sup>

Due to the massive size of the loop, it is divided into ten sub-areas, each of which is planned separately, depending upon the context and local requirements. Executive summaries for each area identify goals, redevelopment concepts, historic strategies for land use and design, a street framework plan, transportation and transit mobility improvements and green spaces for parks. Several principles guide the transformation of these subareas into more livable communities. These include attracting economic and business opportunities to help stabilize the communities, incorporating the voice of the community in the planning process, and preserving the historic and cultural characteristics of each neighborhood.<sup>26</sup> Another principle

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24 Atlanta Beltline. *History on the Atlanta Beltline – Piedmont Park*. 2004. Retrieved from <https://beltline.org/2014/02/28/history-on-the-atlanta-beltline-piedmont-park/>. Accessed Oct 5 2017.

25 Tunnell-Spangler-Walsh & Associates, Grice & Associates, Inc. & Smith Dalia Architects *Atlanta Beltline Master Plan- Subarea 1: Plan recommendation Report*. 2010. Retrieved from <https://beltlineorg-wpengine.netdna-ssl.com/wp-content/uploads/2012/05/Atlanta-BeltLine-Subarea-1-Master-Plan-All.pdf>. Accessed Oct 6 2017.

26 *Ibid.* 25.

is to provide housing for all ages, incomes, and lifestyles.

The project envisions a light rail transit loop with wide walking and biking paths, access to neighborhoods and business parks, new housing and retail, facilitating transit-oriented development.



Fig. 3.31. Atlanta Beltline proposal



Fig. 3.32. Retail development along tramline



Fig. 3.33. Pedestrian and bike friendly access

### **TRAMLINÉ 3, PARIS**

There are eight tram lines in Paris, all but one of which serve suburban areas on the outskirts of the city. The exception is Tramline T3, which loops around the historic core of Paris within the Boulevard Périphérique. It travels for 13.6 miles, following a series of boulevards that encircle the city along the route of the last defensive wall (the Thiers Fortifications).<sup>27</sup> On the west side of Paris it skirts the towns of Levallois-Perret and Neuilly-sur-Seine, midway between the business district of La Défense and the Place de l'Étoile.<sup>28</sup>

At many points Tramline 3 links to other modes of transit, including regional rail service (RER), the metro and numerous bus routes. In addition to its impact on mobility, tram service is seen as an opportunity to improve the quality of public spaces encircling the historic city. Sidewalks will be expanded along the route to facilitate better pedestrian and bike movement. The tramline travels on a dedicated right of way and traffic signals at intersections are calibrated to minimize congestion. The bulk of the rail bed is intended to be green, with trees and other plant species contributing to the quality of boulevards along the way.<sup>29</sup>

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27 Régie Autonome des Transports Parisiens [RATP]. 2017. Retrieved from <https://www.ratp.fr/en/visite-paris/english/visiting-paris-and-its-surrounding-areas>. Accessed on Oct 8 2017.

28 T3 extension West. *The project*. Retrieved from <https://www.prolongement-t3ouest.paris.fr/le-projet/>. Accessed Oct 8 2017.

29 T3 extension West. *The goals*. Retrieved from <https://www.prolongement-t3ouest.paris.fr/le-projet/les-objectifs/>. Accessed Oct 8 2017.

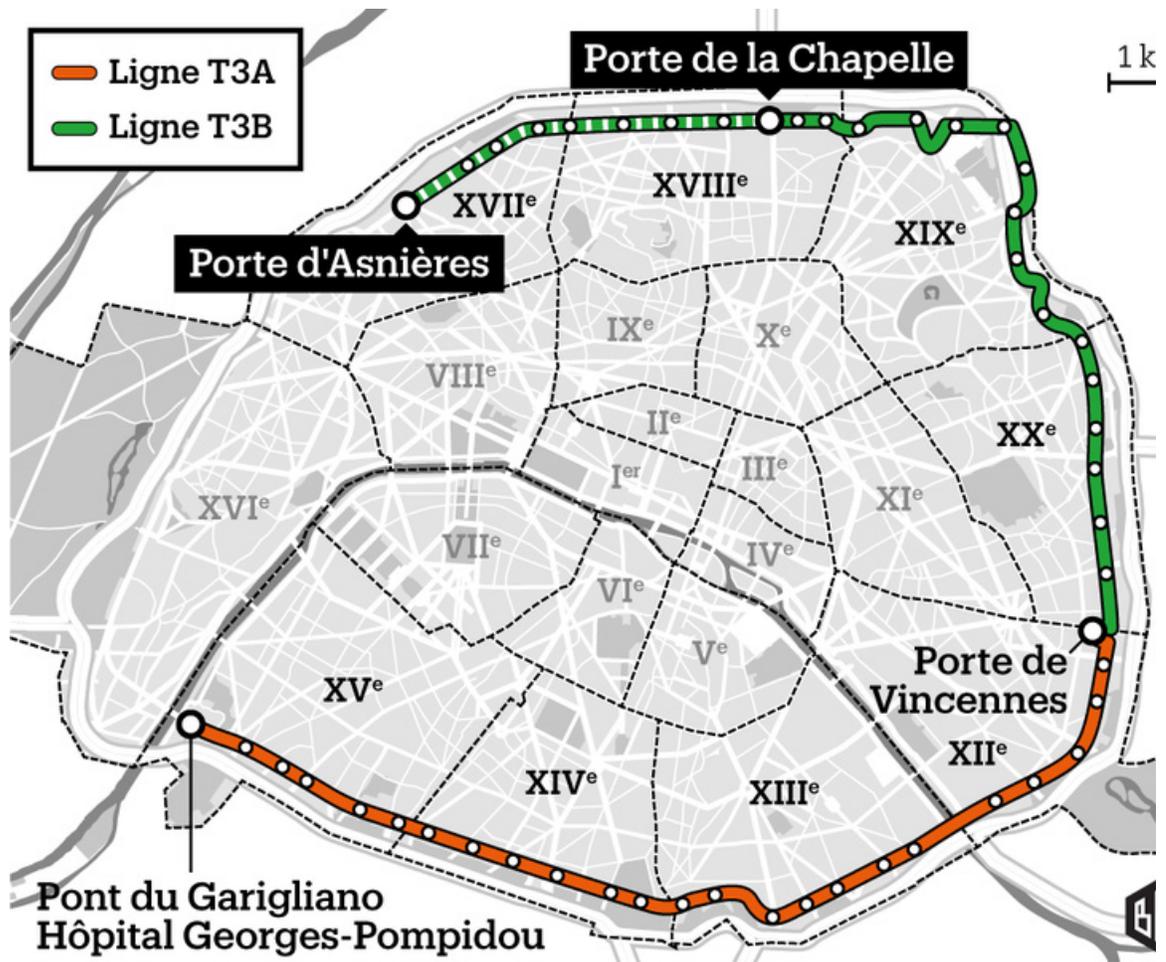


Fig. 3.34. Tramline 3 route



Fig. 3.35. Tramline right of way in the center of the road



Fig. 3.36. Tramline following the contours

## LESSONS LEARNED

Each of the precedents listed above contributed to my understanding of key components and principles that might be applied to the development of a multi-modal transit armature through Fals Creek South.

The Highline, a landmark, represents the opportunity to integrate nature into the city. The landscape concept of this elevated walkway highlights the history of the old infrastructure which captures a sense of history. This study is relevant in understanding the elements used to enhance the spatial and experiancial quality of the pedestrian portions of the *Charleson Verandah*.

Hotels, restaurants, theatres, and libraries attach themselves to the Seoul Skygarden, enhancing the activity on the walkway and transforming it into a destination. It integrates one the most extensive collections of Korean plant species, organized according to size, fragrance, color, and identity, making it both a recreational and educational experience. Being elevated above the train tracks, the Skygarden offers spectacular views of the city. This helped me to understand how the *Charleson Verandah* might connect into adjacent buildings, integrate a variety of forms of planting, and provide views across False Creek to the Vancouver and the mountains beyond.

The division of Klyde Warren Park into “urban rooms” enables it to be experienced in differet way at differen locations. The park caters to all age groups, providing

spaces to exercise, play areas for kids, a dog park, lawns, restaurants, and active recreation areas with fields for team sports. It demonstrates how a change of activities can change the nature of space, which is important for my project so that the elevated boardwalk does not become monotonous.

Brooklyn Bridge Park is seen as a meeting point between the city and water, which is also a key aspect of False Creek South. Each access point from adjacent neighborhoods is an urban active center. Interaction with waterfront is another distinguishing characteristic, which informed the decision to make connections through the neighborhood to the water at Leg In Boot Square, Charleson Park, and Alder St.

A unique feature of Atlanta Beltline is that it connects 45 neighborhoods and the proposed tram loop promotes transit-oriented development. The mission of the Beltline reinforces one of the key goals of the thesis, namely to use a transit line to connect False Creek South to the adjacent neighborhoods and to downtown Vancouver.

Tramline 3 follows the contours of the site and moves on a dedicated right of way without interrupting traffic. The tramline component of the *Charleson Veranda* must also negotiate changing topographies -- an important issue whether or not the train moves along the grade. A multi-use cycle path (adjacent to the tram line) and continuous, landscaped pathway (above) is proposed along the route to enhance the

quality of pedestrians and cyclists.

To conclude, the multimodal infrastructure comprising the *Charleson Veranda* can be envisioned as a landmark in the city, connecting neighborhoods and combining practical uses with quality sensorial and functional experiences for a wide range of users.

## THE DESIGN: PLANNING STRATEGIES

### CHAPTER 4

This chapter discusses considerations that led to the final design. It describes the various options explored to arrive at the location of the multimodal infrastructure. It identifies three topographical conditions in the site through the means of sections. Finally, it explains the steps taken to lay out the site and arrive at a landscaping strategy.

#### Keywords

Tramline	Elevated walkway	Connection	Dynamic
Conditions	Level difference	Re-alignment	Retail
Nodes	Mid-block residential	Courtyards	Tower

A fundamental aspect of the design was to on the alignment and configuration of the multimodal armature, i.e., what became the *Charleson Veranda*. With respect to alignment, it was important to determine whether the rail line should continue to operate on its current right of way, whether the right-of-way should be modified to better accommodate new development along 6<sup>th</sup> Ave. and through the *Community Edge Zone*, or whether rail service should be shifted onto 6<sup>th</sup> Ave. Assuming the rail line continued to operate on grade, I also needed to assess whether the current vertical alignment of the tracks should be maintained and, if so, whether or not to deck over the tracks where they dropped in relation to the adjacent topography. Where configuration is concerned, it was necessary to determine which modes of circulation to integrate (e.g. bike, pedestrian, rail, automobile, service and emergency vehicles), and the way in these various modes (paths and rights-of-way) related to each other and to the adjacent streets.

Four options were explored, primarily by drawing sections through the site. Each option was evaluated in terms of

1. ease of access for potential users to all modes of transportation,
2. its ability to improve the streetscape along 6<sup>th</sup> Ave.,
3. its ability to support and enhance connections between False Creek South and Fairview Slopes,
4. its ability to support and enhance development through the *Community*

*Edge Zone*, in particular residential uses and street-oriented retail.

5. its impact on False Creek South (significant or minimal; positive or negative; short-term and long-term), and
6. its potential to augment the visibility and visitability of False Creek South within the larger city of Vancouver, e.g., by creating a landmark and by integrating public spaces and buildings.

The **option** located tram, bike, and pedestrian paths at grade down the center of 6th Avenue. Placing the tram on 6<sup>th</sup> Ave. made it equally convenient for residents of both communities (FCS and Fairview Slopes). It did little, however, to improve connections between the neighborhood, nor did it connect well with the land bridge at Laurel St. It generally ignores the challenges and potentials of the topography of the site including the fact that Fairview Slopes is much higher than 6<sup>th</sup> Avenue.

The **second option** located all three modes of transportation (cycle path, pedestrian walkway and rail line) on the north side of 6<sup>th</sup> Avenue and elevated the rail line to the level of the Laurel St. Land Bridge. While there are numerous examples of elevated rail lines in cities around the world (e.g., New Delhi), this option is both costly and obtrusive.

In the **third option** maintained the alignment of Option 2 (along the north side of 6<sup>th</sup> Avenue) but reversed the positions of the tram line and pedestrian walkway.

The benefit of this is was better pedestrian connection with the Laurel Land Bridge and Fairview Slopes, and the potential to integrate the walkway above the tram line with a retail plinth designed into buildings along the north side of 6<sup>th</sup> Ave. This would enable two levels/kinds of commercial activity, e.g., retail at street level and restaurants with terraces above. The problem, however, is that the elevated pedestrian walkway is, for the most part, redundant with the sidewalk below it – with which it would likely compete for pedestrian activity. As with Option 2, the elevated walkway is also likely to decrease the quality and viability of street life along 6th Ave. inasmuch as it casts a significant shadow (notwithstanding the fact that a covered arcade might be welcome on rainy days).

The **fourth option** maintained the configuration of Option 3 (i.e., walkway above with rail line and bike path below) but shifted the system of paths off of 6<sup>th</sup> Ave. and on to the existing rail right of way. As with Option 3, the elevated walkway can connect to and integrate with the retail plinths along the rear of new buildings along 6<sup>th</sup> Ave. In addition to being at the same level as, and integrating well with, the Laurel St. Land Bridge, the walkway now follows the berm along the southern edge of Charleson Park, from which it benefits from extraordinary views across False Creek. In this location, it transforms from a mere walkway into a significant urban amenity -- equal parts boardwalk and front porch.

In addition to capitalizing on views and connecting directly with the Laurel St. Land Bridge -- and two connections proposed across 6<sup>th</sup> Ave. (at Heather and Alder Streets, see site plan, fig 4.13) -- the decision to position the boardwalk above the rail right-of-way optimizes the use of space. Along much of its length the *Community Edge Zone* is quite narrow and the developable area within it is quite limited. Space is at a premium.

#### *Adjusting the alignment in plan*

Even in its stacked configuration, a significant amount of space is necessary to accommodate the multiple modes of circulation that comprise the Charleson Veranda. In addition to the rail line and bike path, accommodation has been made at grade for a service road and sidewalk behind the buildings proposed along the north side of 6<sup>th</sup> Ave. Except at transit stops, where there are platforms, the service road is wide enough to accommodate both a parking and a travel lane (see fig 4.29, 4.40 and 4.41).

To enable this – and to allow for reasonable floorplates for retail at the base of new buildings facing 6<sup>th</sup> Ave. through the *Community Edge Zone* — the alignment of the rail right-of-way has been adjusted slightly and Charleson Road (along the south side of the park) has been closed. The tracks were also shifted slightly as they approach the Olympic Village station at Ash Street.



Fig. 4.1. Option 1- Tram, pedestrians and bike at grade in the center of 6th Avenue



Fig. 4.2. Option 2- Elevated tram, pedestrians and bike at grade along the edge of 6th Avenue



Fig. 4.3. Option 3- Tram and bike at grade, pedestrians on elevated walkway along the edge of 6th Avenue



Fig. 4.4. Option 4- Tram and bike at grade, pedestrians on elevated walkway at rear of proposed housing towards FCS

*Changes in the vertical alignment along the length of the Charleson Veranda*

When considering the alignment of the various components of the *Charleson Verandah*, one must be cognizant of the existing contours in and around the Community Edge Zone. As noted, a 7-meter-high berm runs through a portion of the site (along the southern edge of Charleson Park) and Broadway, the main east/west street through Fariview Slopes street, is about 20 meters higher than 6<sup>th</sup> Avenue. The elevation of the 6<sup>th</sup> Avenue also continuously changes.

Two site sections were generated to better understand how the elevations of 6<sup>th</sup> Avenue, the CP tracks, and Lamey's Mill Road change in relation to each other between the Granville and Cambie Bridges. Based on the different alignments, this portion of the site may be divided into three segments. In the easternmost section, spanning from Cambie Bridge to Charleson Park, the three routes are at roughly the same elevation. In the middle segment, i.e., between Charleson Park and Alder Crossing, 6<sup>th</sup> Avenue is slightly higher than Lamey's Mill Rd, but both are higher than the rail right-of way. West of Charleson Park, then, the tracks run through a culvert.

In the Westernmost section, extending from Alder Crossing to the Granville Bridge, there are significant level difference between all three routes. 6<sup>th</sup> Avenue is significantly higher than Lamey's Mill Rd. which, in turn, is considerably higher than the tracks.

For the purposes of designing the *Charleson Veranda*, then, it was helpful to divide the site into three parts, each corresponding to a different sectional relationship and a different phase of development. Section A, the easternmost portion where the three routes are roughly aligned with each other, became the typical condition for testing out planning principles for Phase One. The sectional differences in Sections 2 and 3 were dealt with in Phase Two.

#### *Development through the Community Edge Zone*

5400 people live on the 55-hectare site under consideration by the City of Vancouver. including the CEZ, the gross density of False Creek South is currently 98 persons per hectare (PPH). Assuming 1.6 people per housing unit, the residential density of False Creek South is at about 62 units per hectare (UPH). To receive the full 6 points for “Compact Development” in LEED ND, we would need at least 156 units per hectare. As such, we would want to increase the density by a factor of 2.52 to meet minimum requirements for maximum points for Compact Development ( $62 \text{ UPA} \times 2.52 = 156 \text{ UPH}$ ).

As structured, the thesis proposes additional density in two phases. In Phase 1, additional buildings are added to the *Community Edge Zone* – including the north side of 6th Ave. In Phase 2, intensification occurs along the greenways up Heather and Alder Streets and along the south side of 6th Avenue. Across these two phases, the changes increase the overall density for False Creek South to

140 UPH. This assumes an average of 6 stories for buildings along 6th Ave., with three pairs of 15-story buildings flanking the elevated bridges across 6th Ave. at Alder, Laurel and Heather Streets. The scheme also recommends two 20-story towers at either end of the site, i.e., adjacent to the Cambie and Granville Bridges. Additional density can be achieved by increasing the height of buildings and/or by swapping out some of the existing buildings in FCS for new, higher-density buildings. Note that in neither of the proposed phases are existing buildings torn down or replaced.

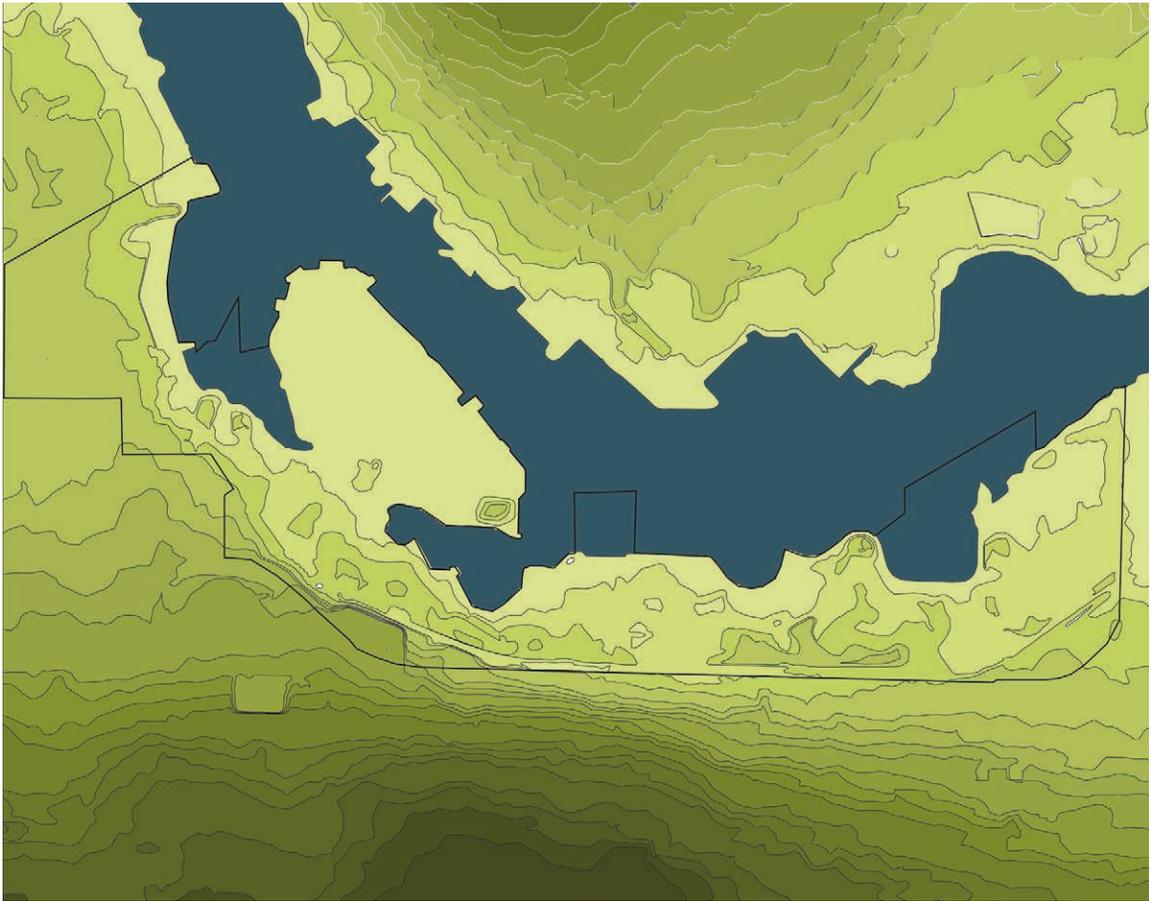


Fig. 4.5. Contours in and around the site

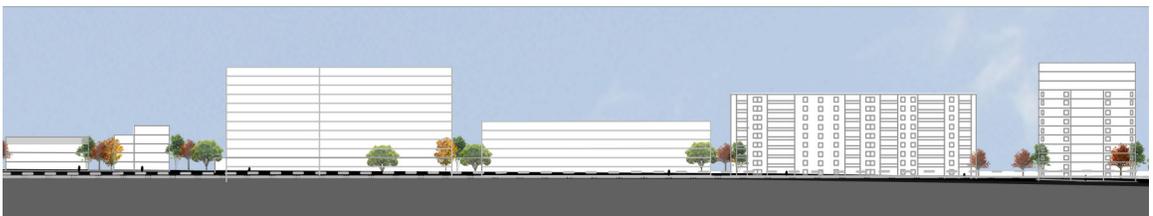
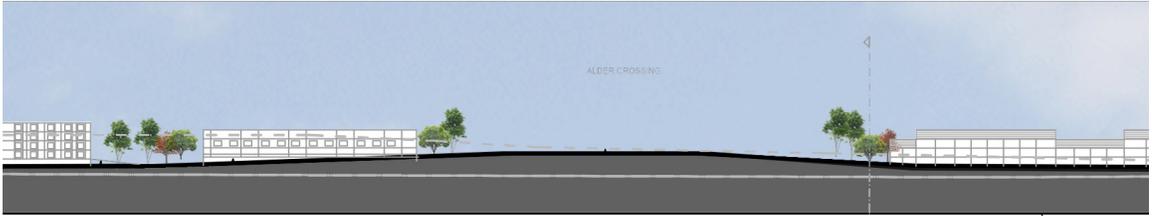
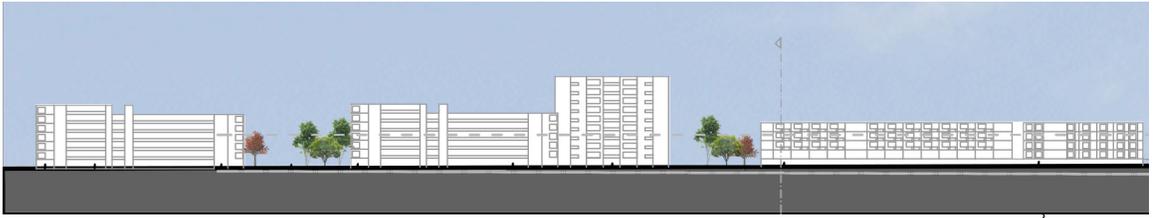


Fig. 4.6. Section along 6th Avenue facing FCS

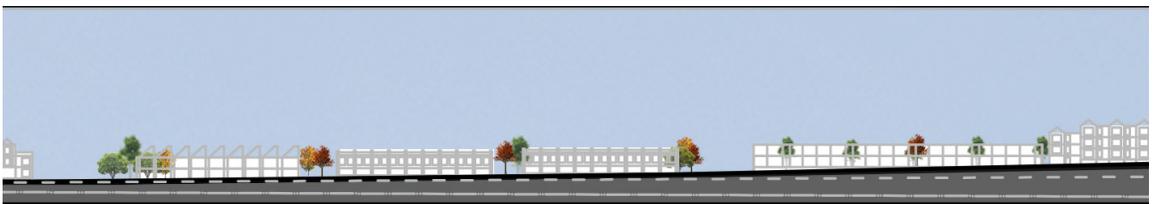


Fig. 4.7. Section along 6th Avenue facing Fairview slopes

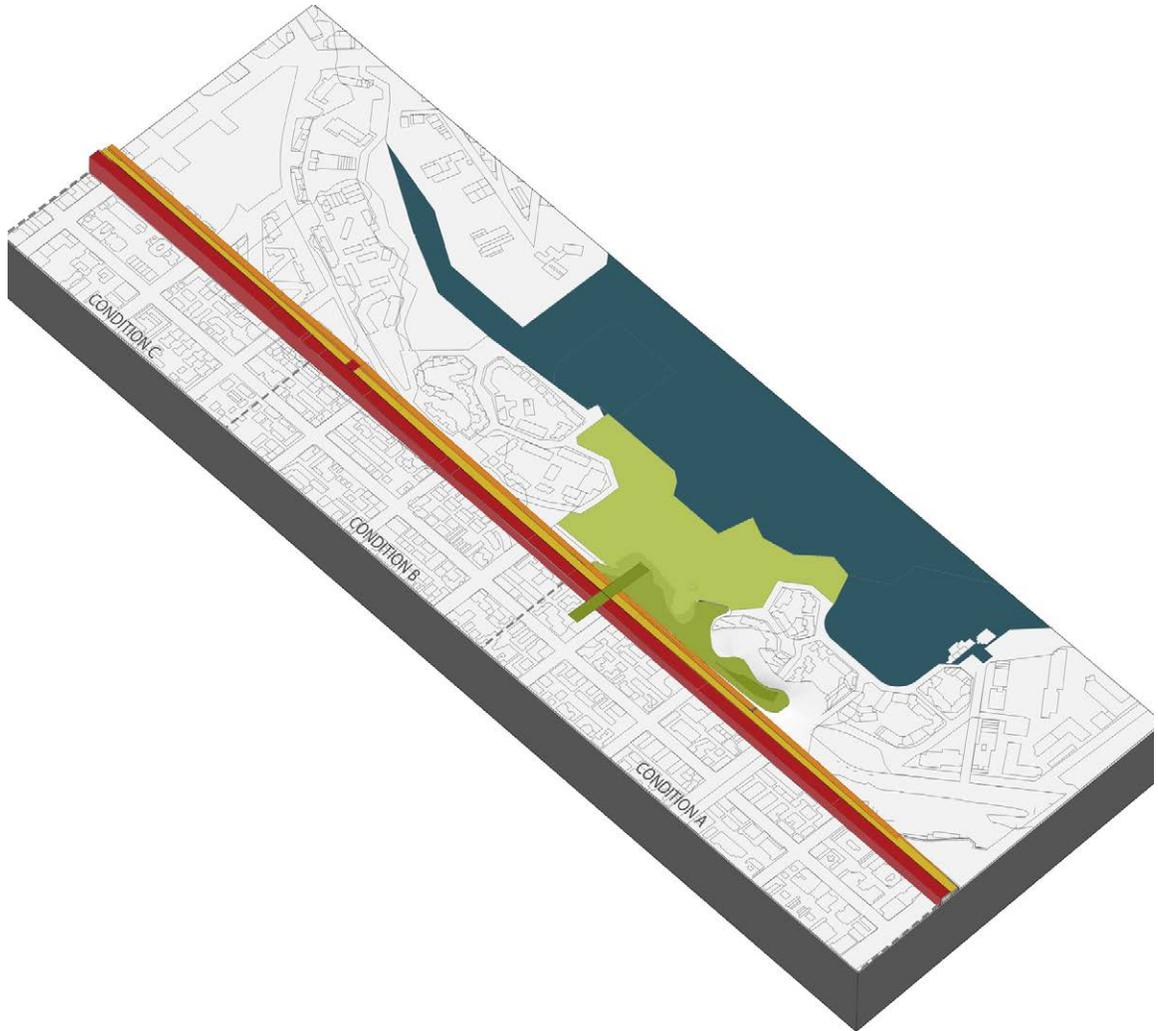


Fig. 4.8. Development of three conditions according to topography



Fig. 4.9. Section A - Cambie Bridge to Charleson Park

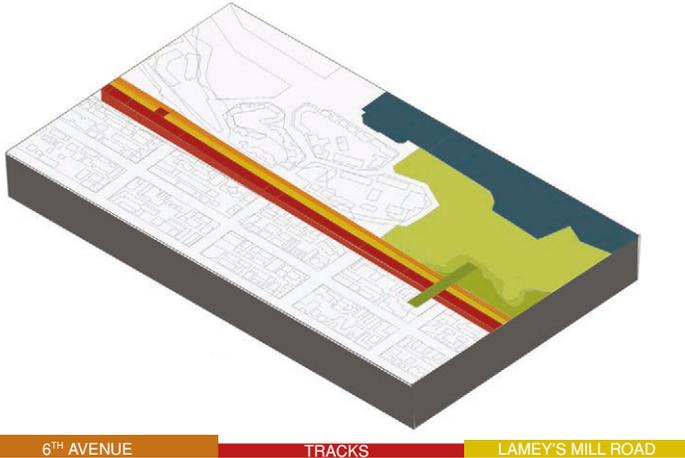


Fig. 4.10. Section B - Charleson Park to Alder Bay Crossing



Fig. 4.11. Section C - Alder Bay Crossing to Granville Bridge

The proposal for the *Charleson Veranda* – and the development it supports along 6th Ave. -- focusses on the *Community Edge Zone* to take advantage of underdeveloped land. The assumption is that development in this area should take precedence over changes to the existing community.

Having made the decision to maintain the rail line in its current location on the north side of 6<sup>th</sup> Ave., the overall design strategy unfolded as follows:

**STEP ONE: re-align of the tram route.** As noted above, the existing rail right-of-way divides the developable area half, limiting layout options in the *Community Edge Zone*. The proposal considers how to best position the tram line to act as a catalyst for new development.

**STEP TWO: determine which modes of transportation to incorporate into the east/west circulation armature** (i.e., rail, cycle, pedestrian, and vehicular) --and determine the relationship of the various modes to each other. As described above, the pedestrian walkway was lifted above the rail line at grade, which was flanked by a cycle path and service road. Elevating the walkway enabled it to engage the berm at Charleson Park and connect to the Laurel St. Land Bridge. It also allowed it to capitalize on the extraordinary views over Charleson Park and False Creek.

**STEP THREE: increase the number and quality of north/south connections between Fairview Slopes, False Creek South, and the waterfront.** At present

vehicles can access FCS at only two points along 6<sup>th</sup> Ave. (Moberly Rd. and Alder Crossing), neither of which aligns with north/south streets through Fairview Slopes. In addition, the Laurel St. Land Bridge provides a pedestrian connection from 7<sup>th</sup> Ave. to the berm along the southern edge of Charleson Park. The thesis proposes that vehicular access at Moberly and Alder Crossing be shifted to align with Heather and Alder Streets respectively. In addition, the design calls for connections across 6th Ave at Birch, Spruce, Oak, Willow and Ash Streets. While connections through False Creek South are not made at these points, the north/south block pattern of Fairview Slope would extend across 6<sup>th</sup> Ave. to inform the position of new buildings in the *Community Edge Zone* (see Step 4 below). Crosswalks across 6th Ave. would lead to small retail plazas through which, depending on the location, one could access the various circulation paths incorporated into the *Charleson Veranda*. Tram stops are proposed at Ash, Laurel and Alder Streets, where stairs and elevators also connect to the boardwalk above.

In addition to grade-level connections across 6<sup>th</sup> Ave., new elevated walkways are proposed at Alder and Heather Streets. Building on this, the thesis recommends that the City acquire properties abutting Heather, Laurel, and Alder Streets to create continuous planted pathways up the hill to Broadway – effectively pulling the landscape of False Creek South through Fairview slopes. On the north side of 6<sup>th</sup> Avenue, stronger connections are made from these pedestrian bridges, across the

*Charleson Veranda*, to the waterfront. The linear greenway along Alder St. would connect through False Creek South to a pedestrian link to Ron Basford Park on Granville Island, The Laurel St. path would extend through the Charleson Park to the waterfront, while the Heather St. greenway would connect Broadway to Leg In Boot Square.

**STEP FOUR: improve the streetscape along 6<sup>th</sup> Avenue.** The primary strategy for this – also key to the larger goal of intensification in False Creek South -- consists of a continuous row of buildings along 6<sup>th</sup> Ave. through the *Community Edge Zone*. While supporting both market and affordable housing (except around the Olympic Village Station, where office uses might be included), buildings along 6<sup>th</sup> Ave. would incorporate street-oriented retail at grade. And while most of these buildings would likely be no higher than 8 stories, taller buildings could mark strategic locations, like the elevated crossings at Alder, Laurel and Heather. The thesis also envisions public buildings at these locations (libraries, community centers, etc.). These would be located on the south side of 6<sup>th</sup> Ave. and incorporate the pedestrian bridges into their design.

Following best practices, generous sidewalks, parking (both for cars and bicycles), and street trees should be incorporated into the redesign of 6<sup>th</sup> Ave. Given the proposed bike path on the north side of the tram tracks, a bike path down 6<sup>th</sup> Ave. is likely unnecessary.

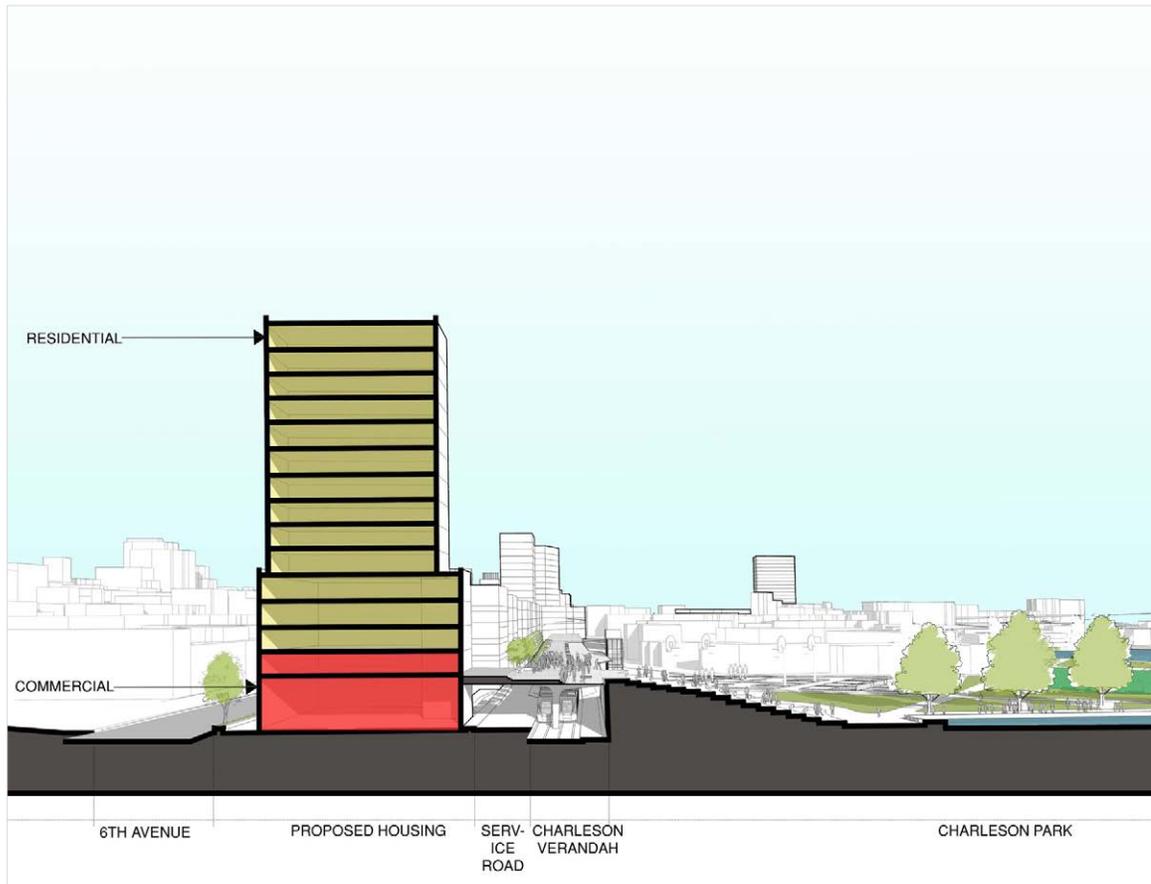


Fig. 4.12. Buildings along the veranda are designed to connect into the walkway if and as desired. The expectation is that each of the buildings along 6th Ave. would have street-oriented commercial facing 6th Ave. and an upper level of commercial (restaurants, cafés, etc.) facing the verandah.

**STEP FIVE: design articulation of the buildings along 6<sup>th</sup> Ave.** This consists of at least two things. First, transitions should be made between the more conventional urban fabric of Fairview Slopes and the organic, informal disposition of buildings in False Creek South. Adjustments and re-alignments to the fabric can be accomplished through the use of courtyards retail plazas -- positioned to correspond to the cross streets (Alder, Spruce, Oak, etc.). Secondly, buildings through the *Community Edge Zone* must be designed to take full advantage of the *Charleson Veranda*. Specifically (but by no means exclusively) they must be de-

signed to accommodate the elevated boardwalk running behind them to the north. In key locations, retail and restaurant uses facing 6<sup>th</sup> Ave. at grade should connect up to terraces and additional retail space facing onto the veranda.

**STEP SIX: create major urban nodes at Alder, Laurel, Heather and Ash.**

Among the design considerations are: 1) vertical connections up to the boardwalk, 2) proposed transit stops at Alder, Laurel and Ash (where transfers are made to the Canada Line), 3) the pedestrian bridges and greenways at Alder, Laurel and Heather, and 4) major vehicular connections into False Creek South at Alder and Heather. All four locations will also provide vehicular access to the service road (incorporated into the design of the *Charleson Veranda*), from which one can access underground parking.

Each of these steps is key to accommodating new development in the *Community Edge Zone* without compromising the distinct character of False Creek South. This, in turn, is key to achieving the City's goals for intensification on lands that it controls and fostering walkable, transit-oriented communities.

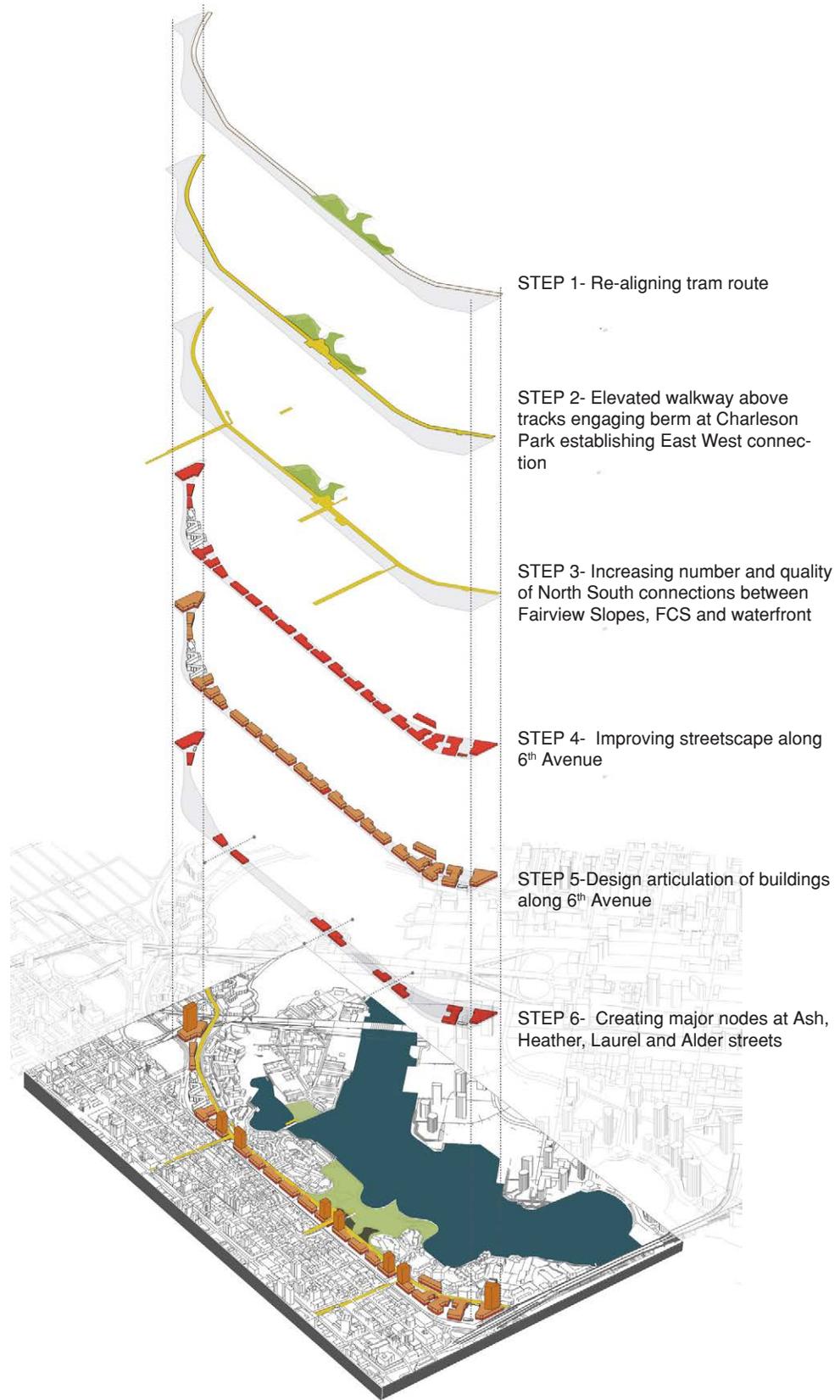


Fig. 4.13. Steps to achieve design



Fig. 4.14. Site Plan



Fig. 4.15. View showing site planning

## **LANDSCAPE STRATEGY**

The layout of the landscape design (the planters and planting areas) is formed by the extension of lines from False Creek South buildings placed at different angles creating an interesting pattern which varies according to the situation to become grass, planter, seating, cut outs etc. The landscape detailing is divided into two parts, namely, North-South connections and East-West connections between the Cambie bridge and Charleson Park.

### **North-South linkages**

As per Step 6 above, key locations/connections have been designed in greater detail. These are:

1. The plaza at the Olympic Village Canada Line station (at Ash St.).
2. The connection down Heather St. between Broadway and the waterfront at Leg In Boot Square.
3. The connection down Laurel St. between Broadway and the waterfront at Charleson Park.
4. The connection down Alder St. between Broadway and Ron Basford Park on Granville Island.

The plaza at the Olympic Village Canada Line station is the largest of the nodes associated with connections between Fairview Slope and False Creek South. It is envisioned as a dynamic space, brimming with activities and appropriate for all

age groups. A water feature surrounded by mounds in the plaza enhances the character of the space and becomes a kids friendly play zone. The plaza also has fountains, space for food trucks and an amphitheatre for small functions. It is surrounded by retail, including cafés, restaurants, brand stores and a grocery store. The second area of focus, namely the connection down Heather St., incorporates a terraced greenway inspired by the Villa Lante. The greenway extends from Broadway to a new pedestrian bridge that begins at 7<sup>th</sup> Ave. The landscaped plaza on the north side of the bridge has been designed to accommodate gatherings. This node connects to Leg In Boot Square, which has been redesigned to extend into False Creek.

The Laurel St. Land Bridge connects across 6<sup>th</sup> Ave. into the Charleson Park berm, which slopes gradually into the park. The connection between the berm and the waters edge has been further articulated with an amphitheater, steps and an extended deck capturing spectacular views of the waterfront. This provides both visual and physical links to False Creek. Charleson Park has been re-designed to include a promenade midway between the berm and the amphitheater. To the west of the promenade is a playground – with a football and tennis courts closer to the school. The pond to the east of the promenade has been redesigned and surrounded by community gardens.

Like the connection at Heather St., the path down Alder St. connecting Broadway

with Granville Island includes a greenway through Fairview Slopes. Given the drop in elevation from 6th Ave. to the waterfront, the pedestrian bridge drops down via ramp, then connects to a set of stairs down the slope to the waterfront. A second bridge connects False Creek South to Ron Basford Park on Granville Island. The waterfront is rejuvenated and used for kayaking.

Taller buildings at each of these North-South connections act as gateways, framing views of False Creek and the downtown skyline beyond.

### *Phasing*

It is envisioned that public buildings would be incorporated into design of the pedestrian bridges across 6<sup>th</sup> Ave. at Alder, Laurel and Heather Streets. Sitting at the southern end of each bridge, they could be accessible from (and front onto) both 6<sup>th</sup> and 7<sup>th</sup> Avenues, as well as the cross streets. Accommodating functions like libraries, community centers, day cares, etc – will be accessible from both 6<sup>th</sup> and 7<sup>th</sup> Avenues and will incorporate stairs to facilitate access to the bridges from the sidewalk along the south side of 6<sup>th</sup> Ave. These buildings, in turn, would be a catalyst for the progressive replacement of buildings along the south side of 6<sup>th</sup> Ave. – where additional density and a greater mix of uses could be accommodated. Zoning along 6<sup>th</sup> Ave. would have to be adjusted accordingly.

Similarly, in Phase Two, the lots abutting Alder, Laurel and Heather Streets south of Broadway could be up zoned to take advantage of the proposed greenways.

Additional height would compensate for the need to demolish buildings to create these linear parks.

As structured, the thesis proposes additional density in two phases. In Phase 1, additional buildings are added to the Community Edge Zone – including the north side of 6th Ave. In Phase 2, intensification occurs along the greenways up Heather and Alder Streets and along the south side of 6th Avenue. Across these two phases, the changes increase the overall density for False Creek South to 140 UPH. This assumes an average of 6 stories for buildings along 6th Ave., with three pairs of 15-story buildings flanking the elevated bridges across 6th Ave. at Alder, Laurel and Heather Streets. The scheme also recommends two 20-story towers at either end of the site, i.e., adjacent to the Cambie and Granville Bridges. Additional density can be achieved by increasing the height of buildings and/or by swapping out some of the existing buildings in FCS for new, higher-density buildings. Note that in neither of the proposed phases are existing buildings torn down or replaced.

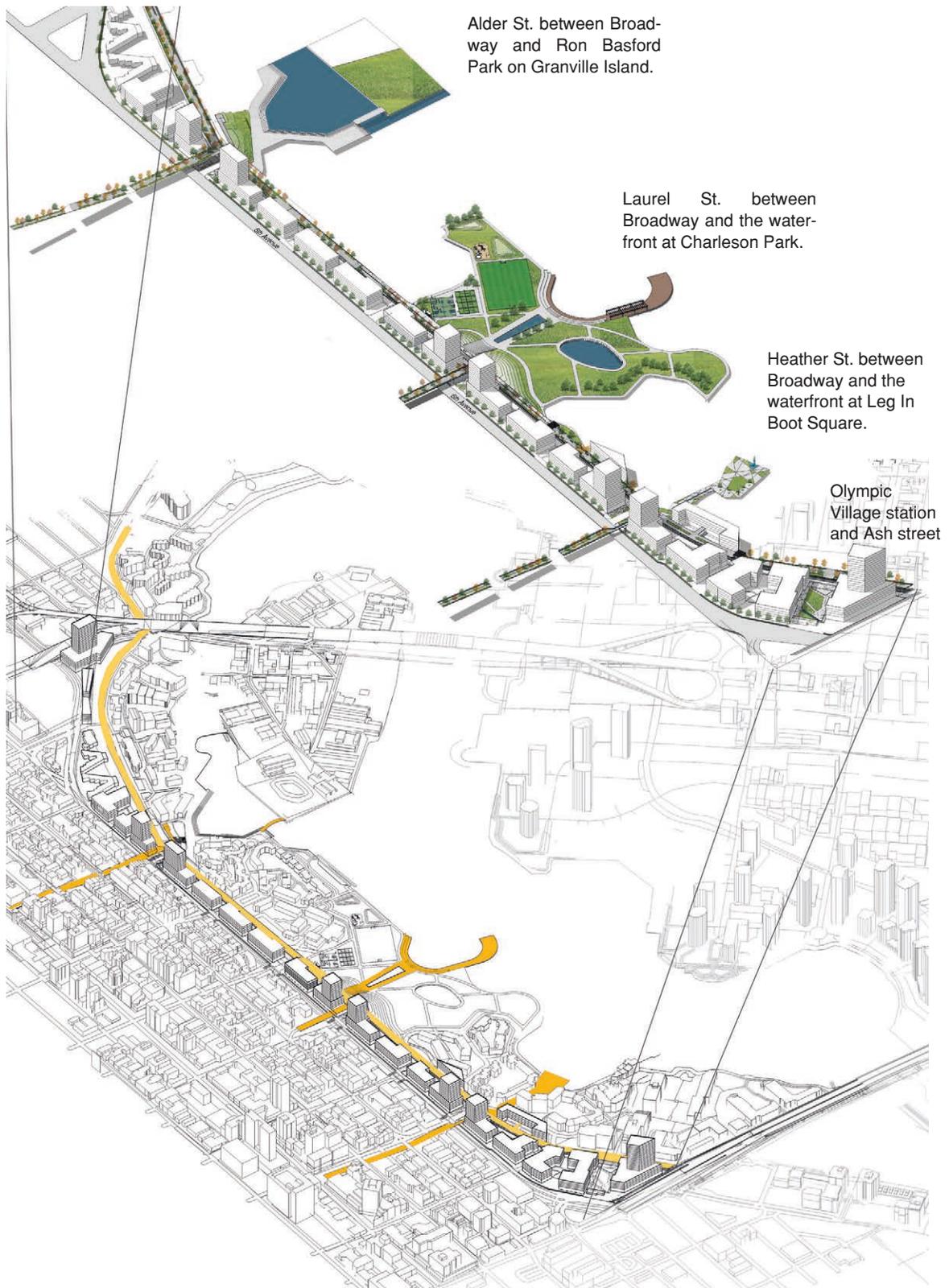


Fig. 4.16. Landscape strategy

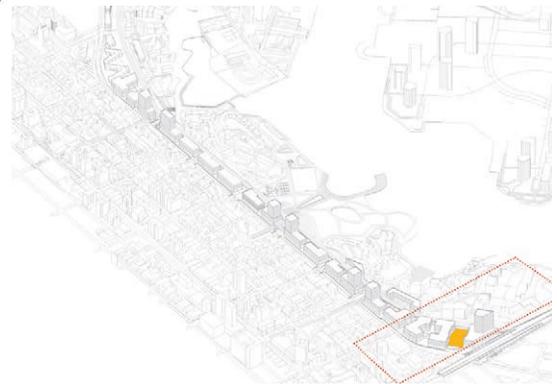
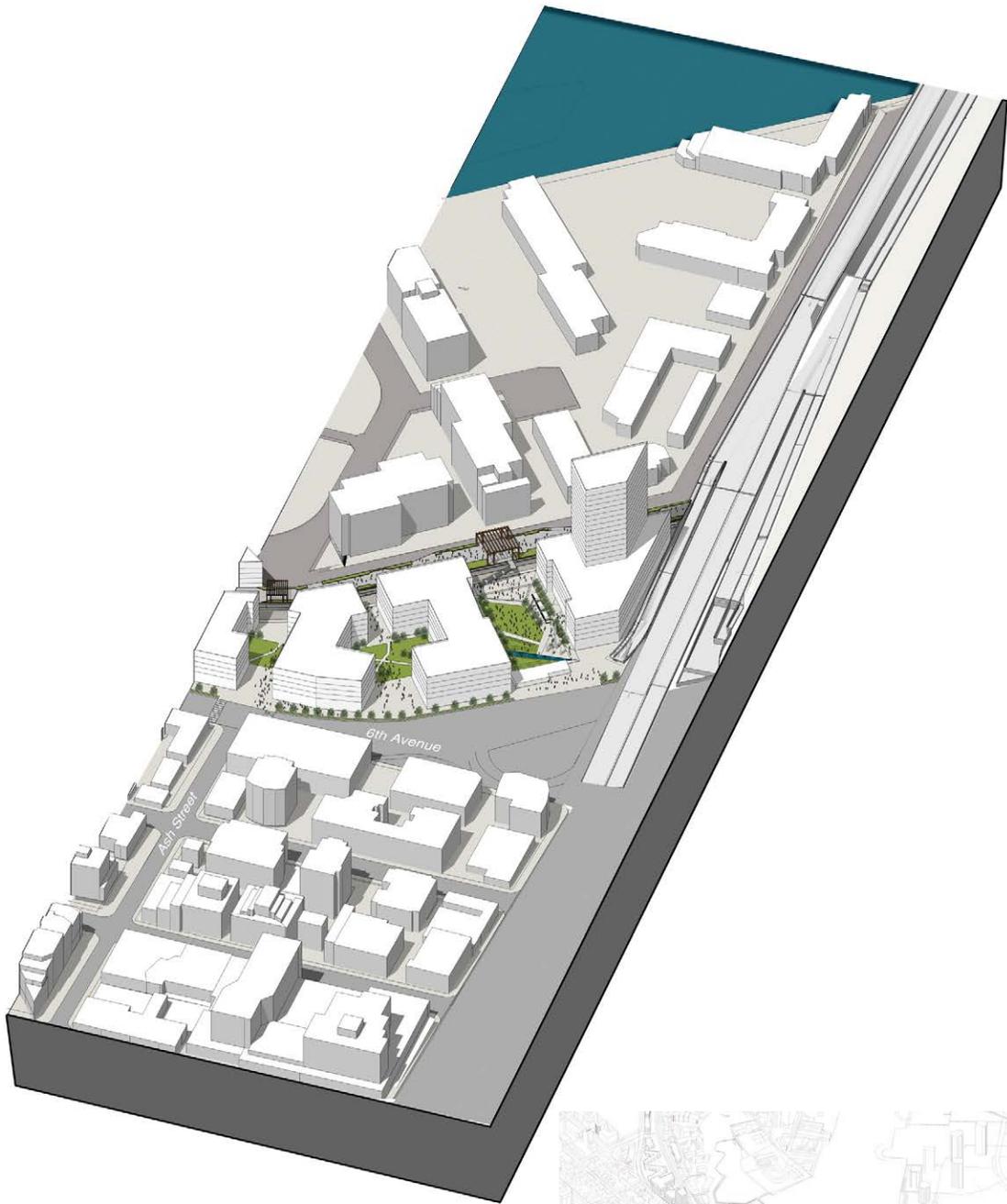


Fig. 4.17. The connection down Ash St. and Olympic Village Station

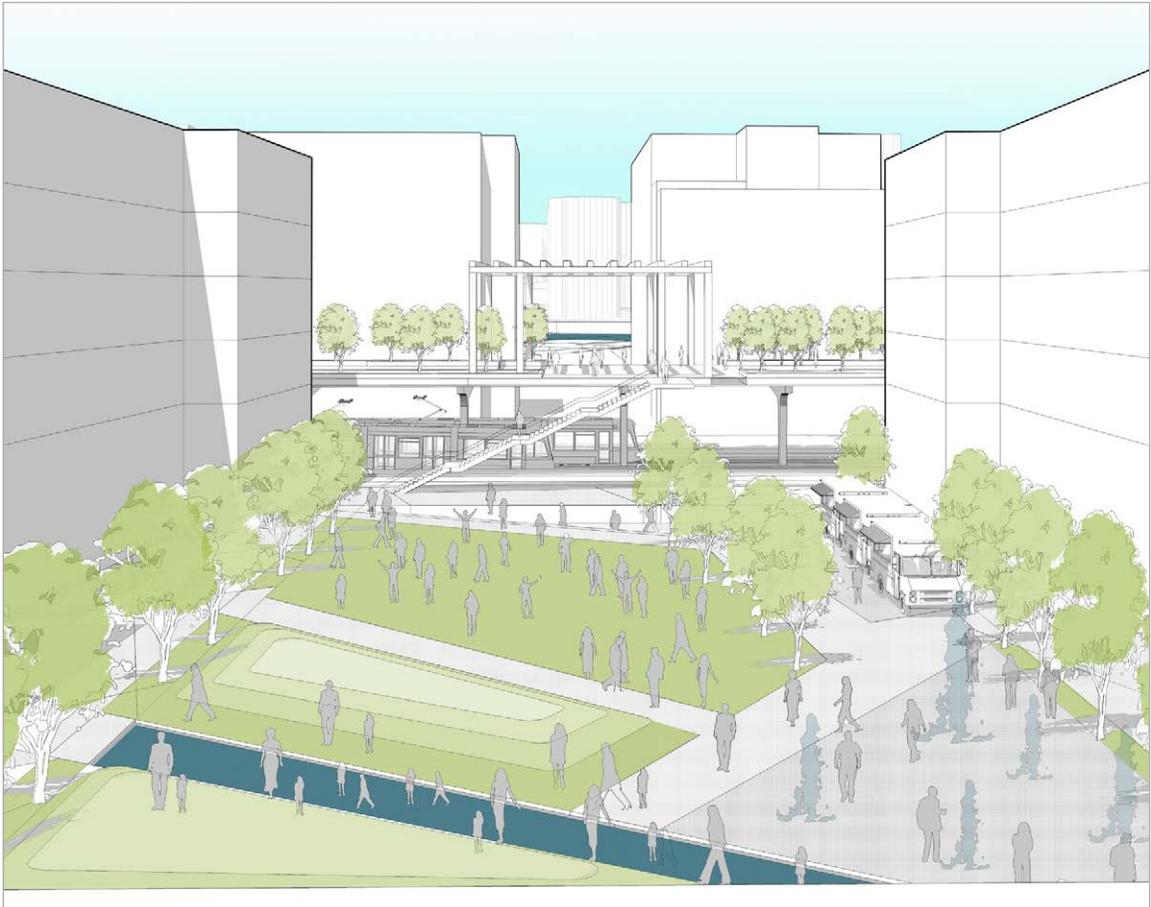


Fig. 4.18. View of Olympic Village Station Plaza looking south

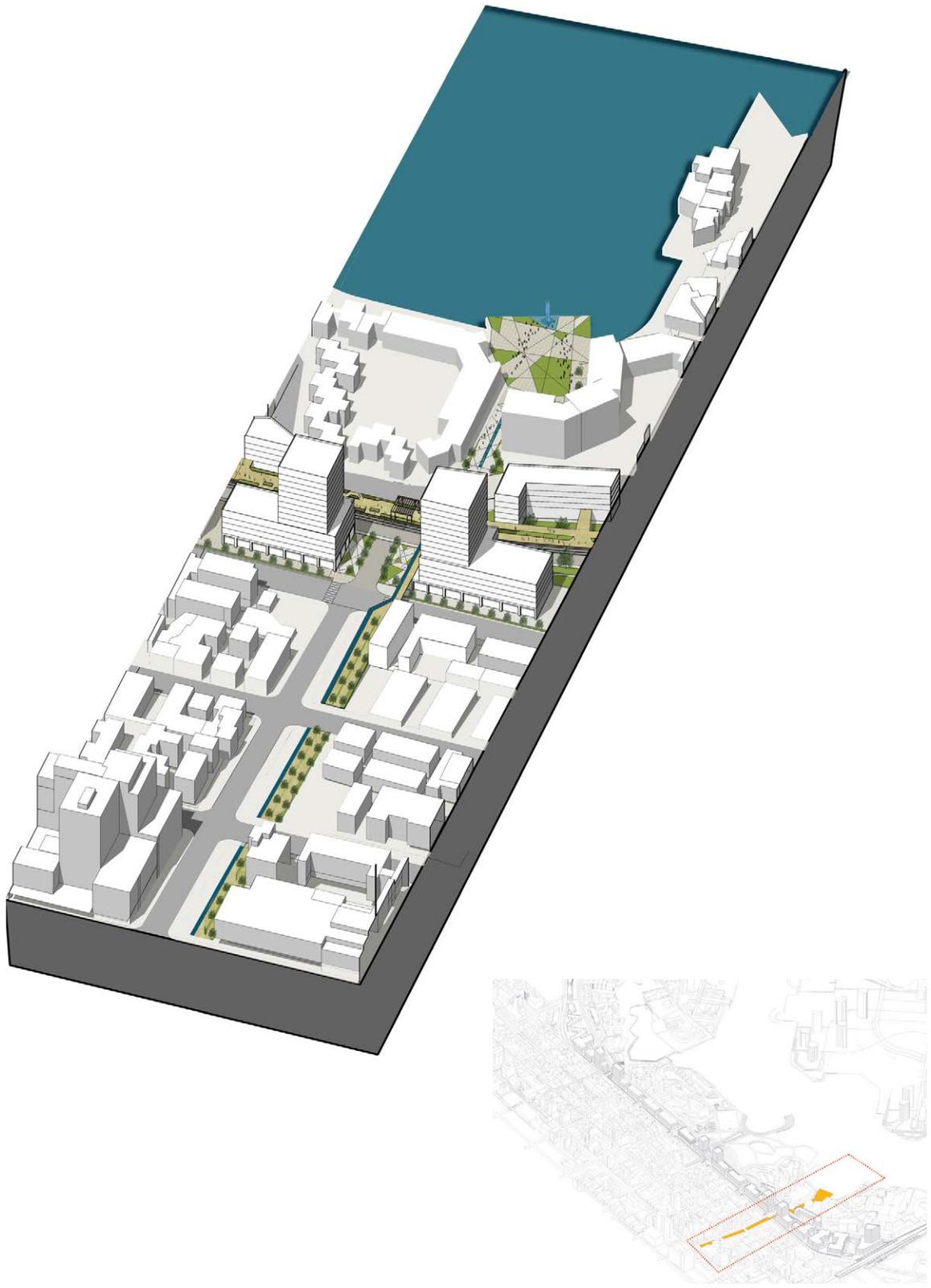
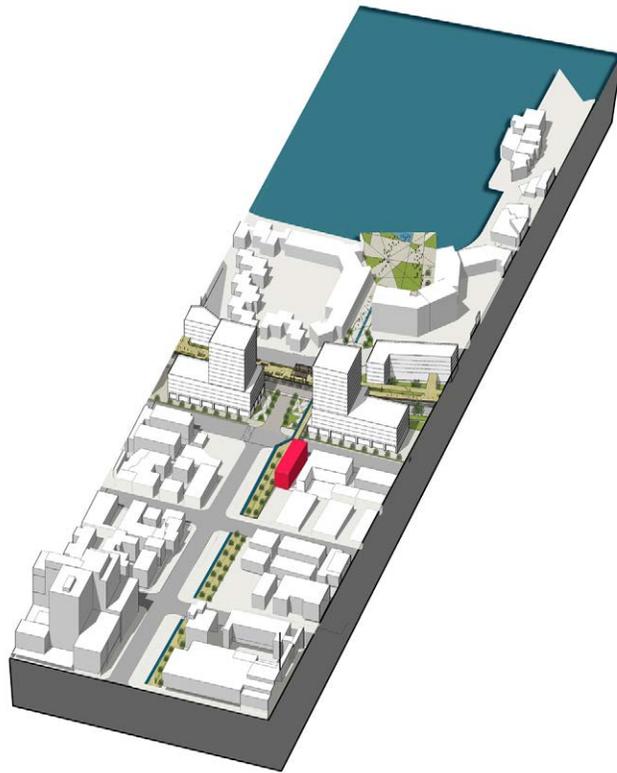


Fig. 4.19. The connection down Heather St. between Broadway and the waterfront at Leg In Boot Square.

As proposed (Phase 1)



Phase 2

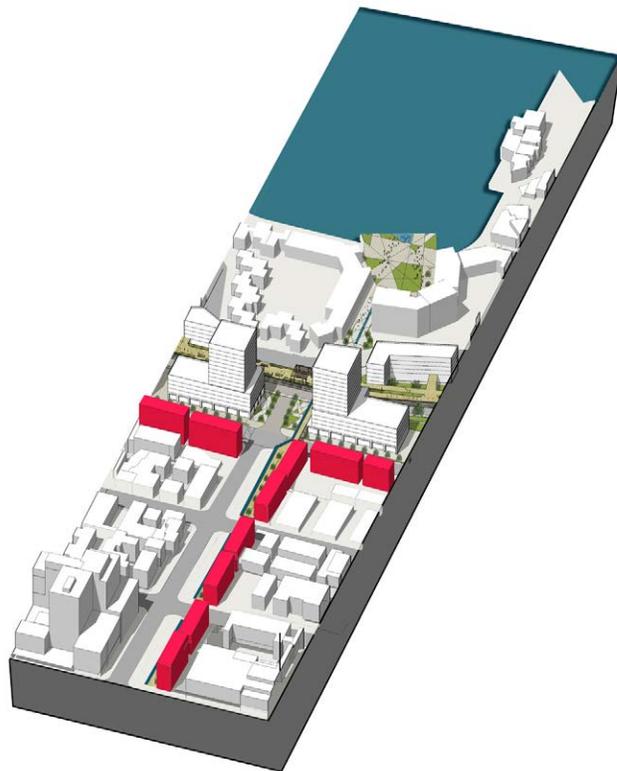


Fig. 4.20. Rezoning of buildings along the greenway and 6<sup>th</sup> Avenue

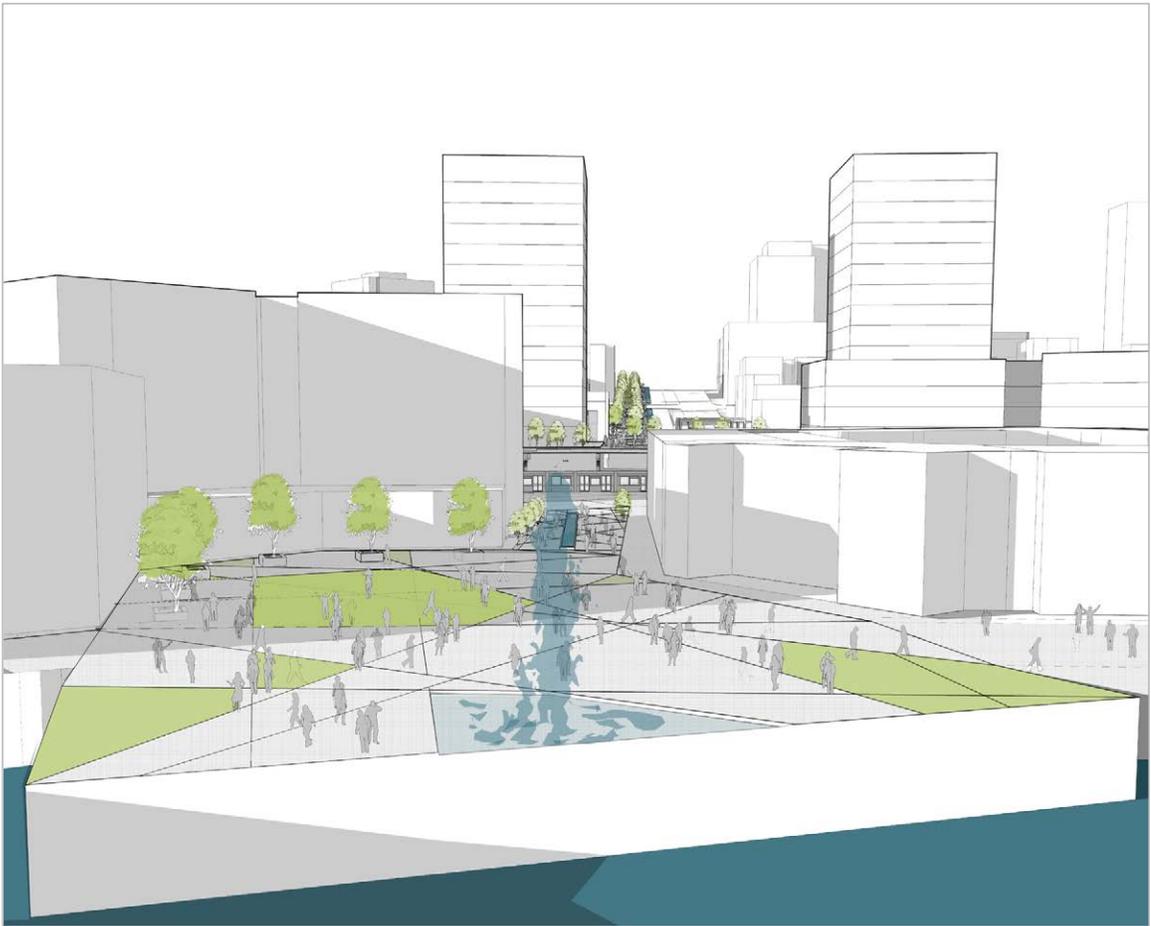


Fig. 4.21. View looking from Leg In Boot Square towards Heather St. and Broadway

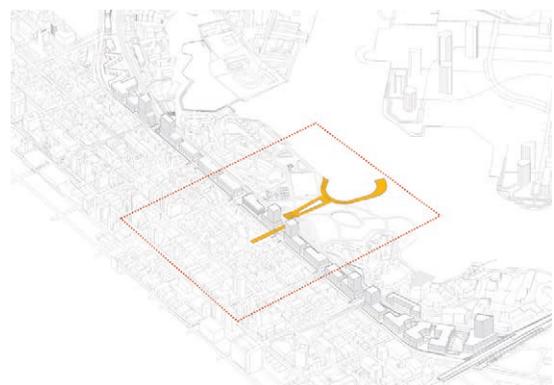
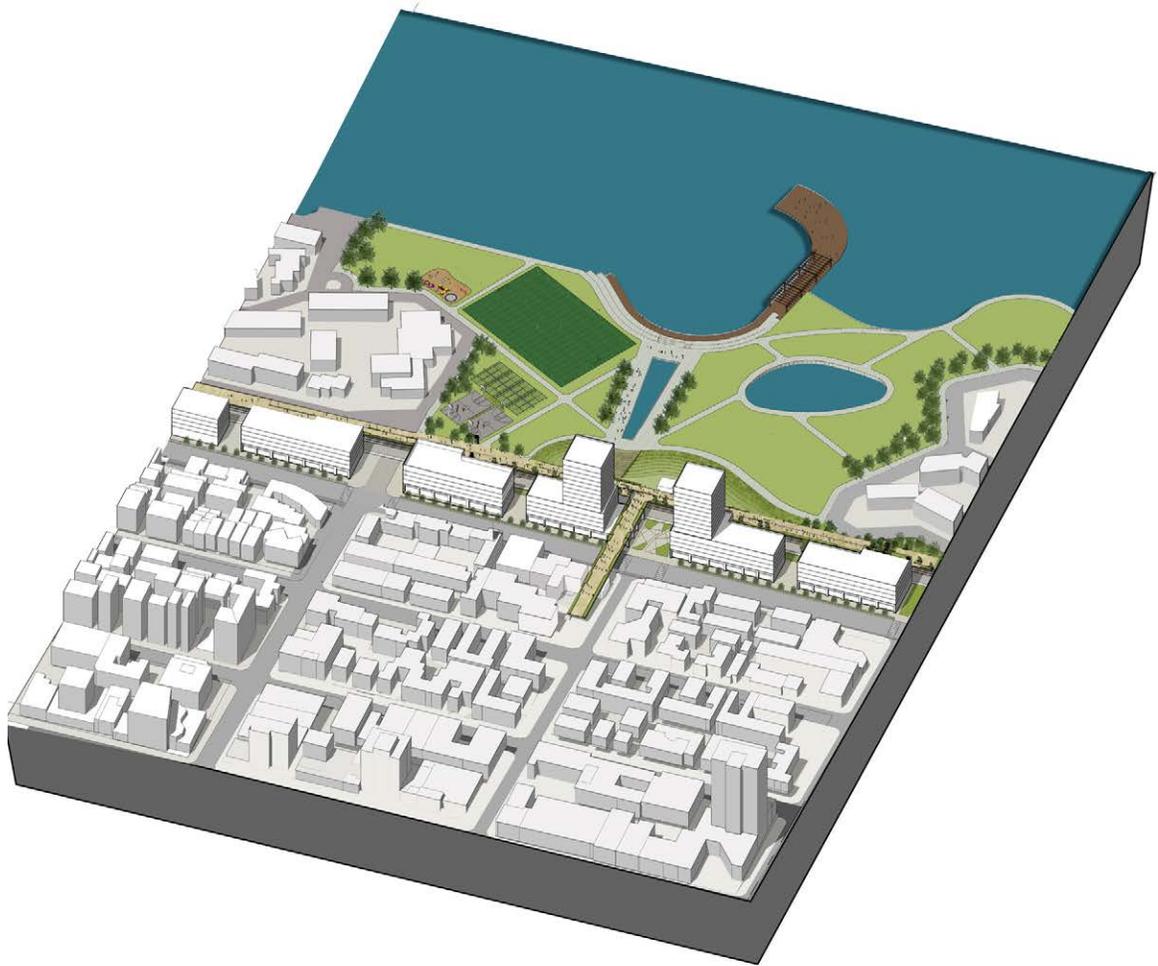
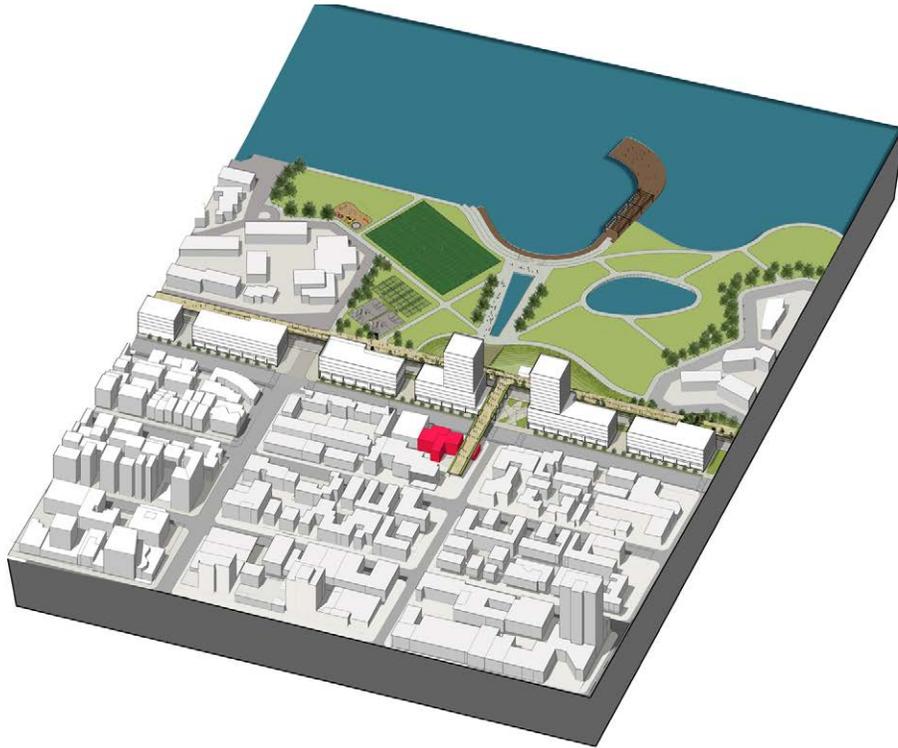


Fig. 4.22. The connection down Laurel St. between Broadway and the waterfront at Charleson Park.

As proposed (Phase 1)



Phase 1

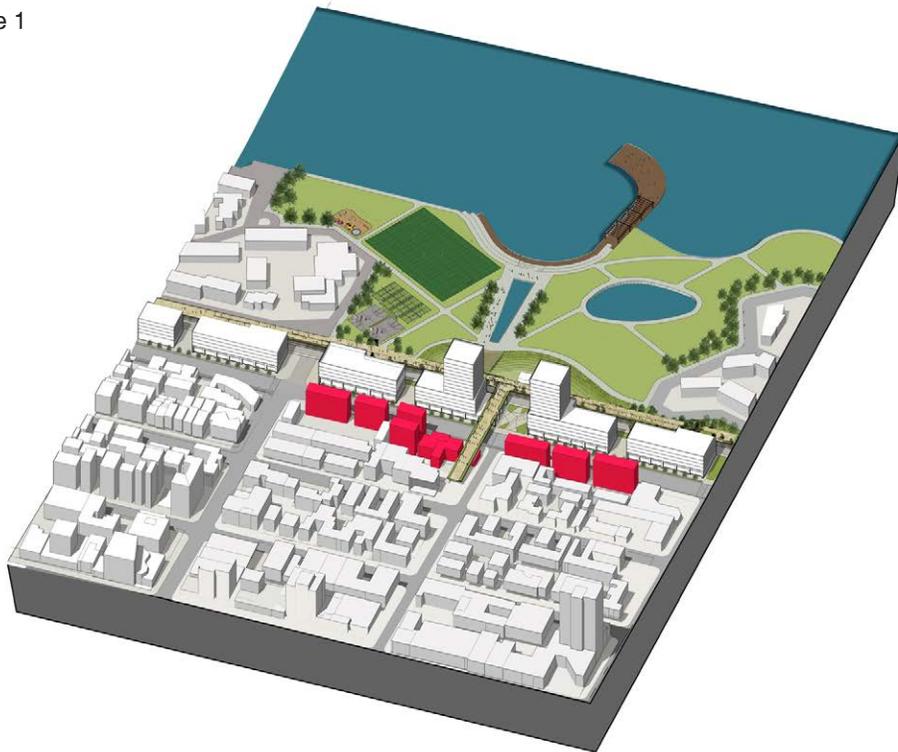


Fig. 4.23. Rezoning of buildings along the greenway and 6<sup>th</sup> Avenue



Fig. 4.24. View from redesigned Charleson Park looking towards Laurel Bridge

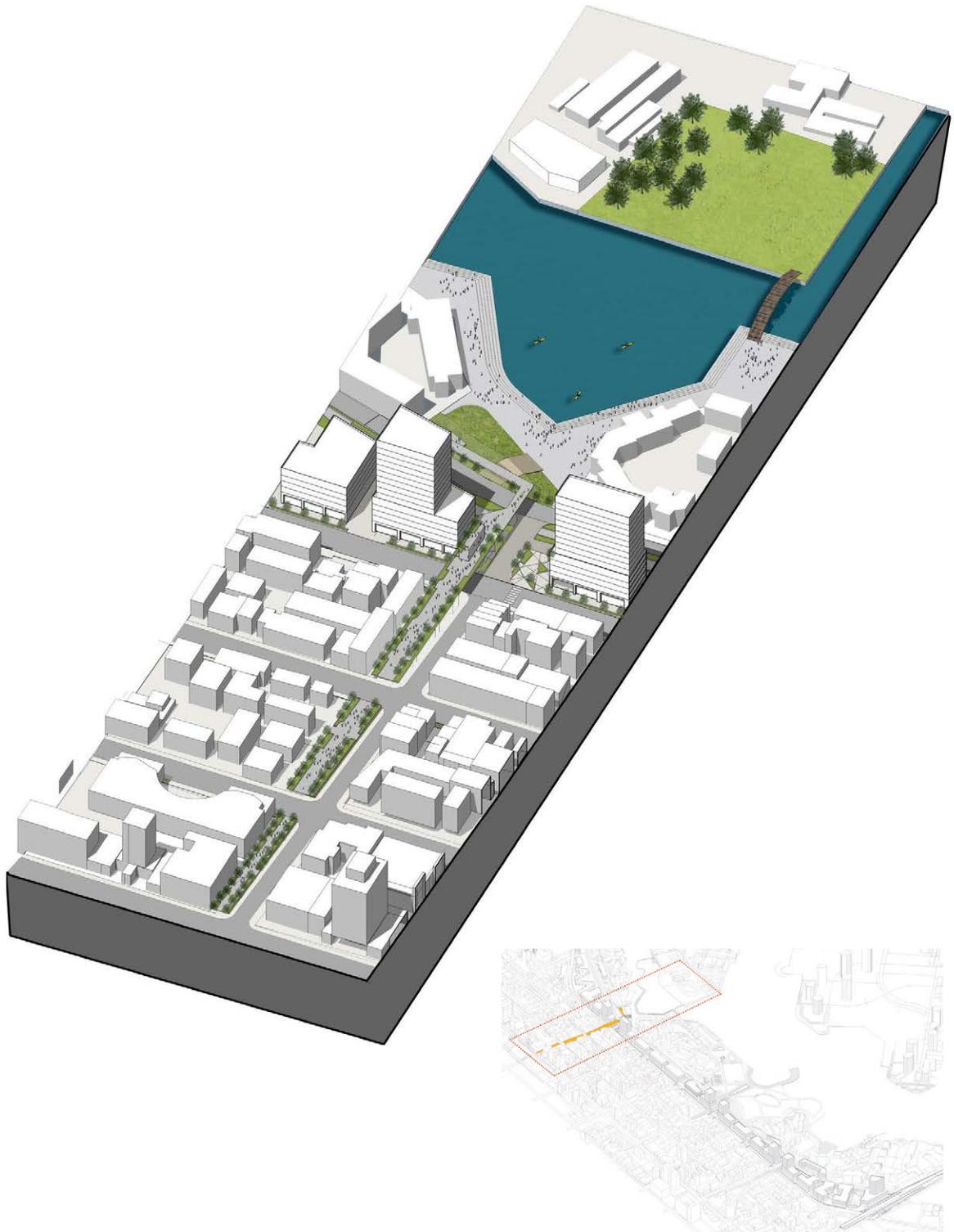
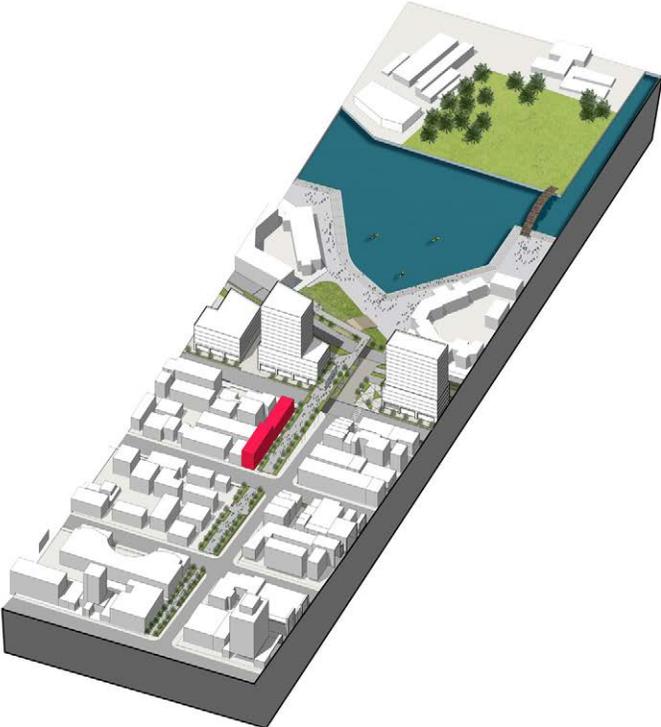


Fig. 4.25. The connection down Alder St. between Broadway and Ron Basford Park on Granville Island.

As proposed (Phase 1)



Phase 2

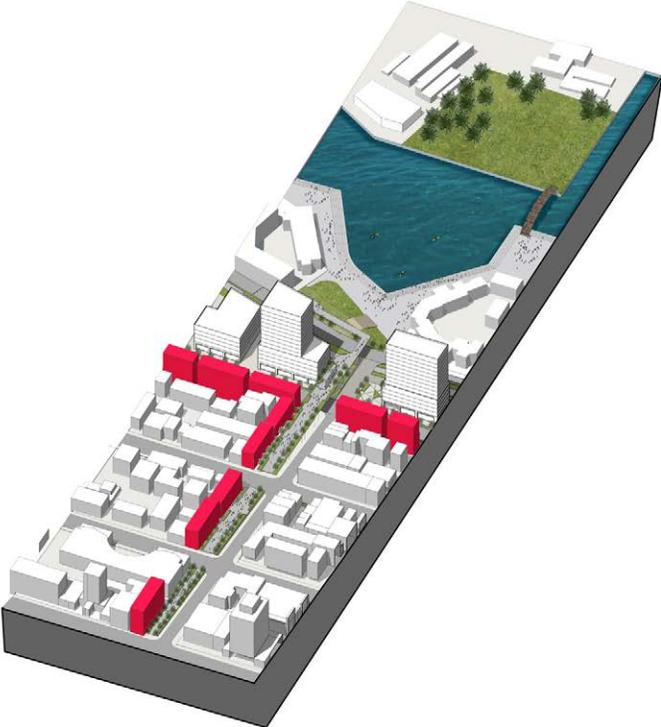


Fig. 4.26. Rezoning of buildings along the greenway and 6<sup>th</sup> Avenue

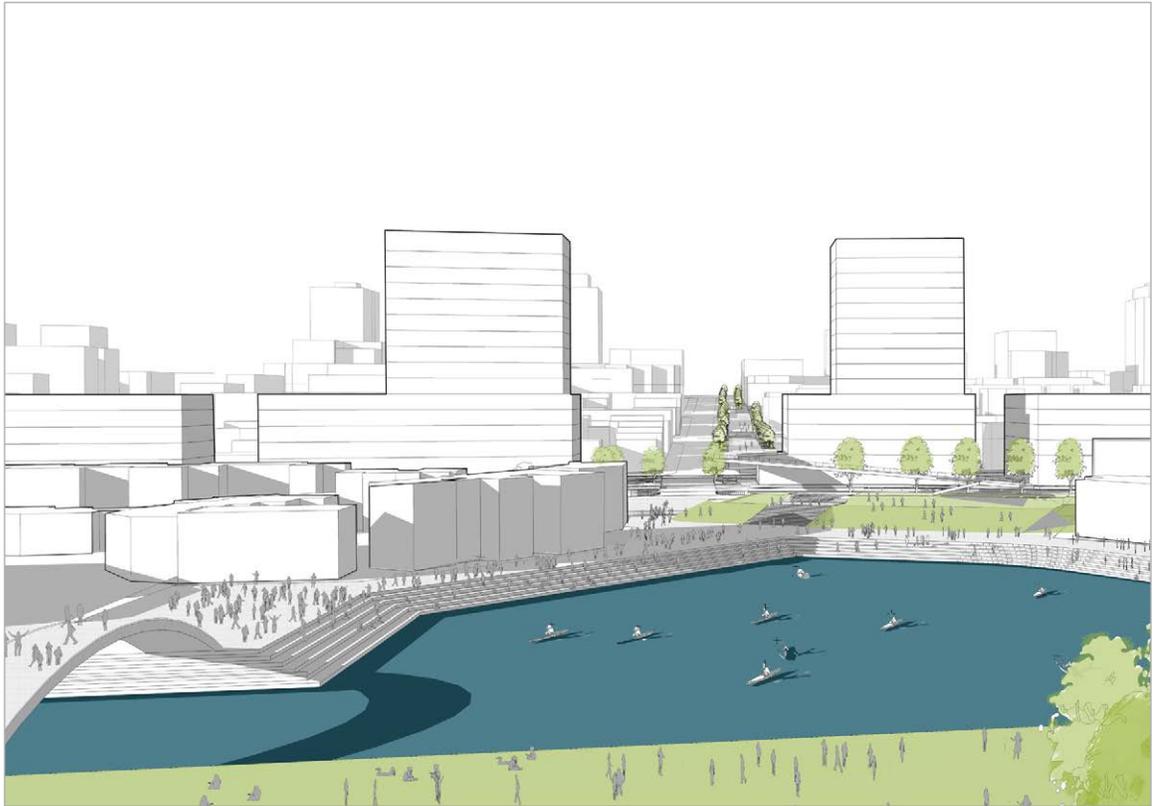


Fig. 4.27. View from Ron Basford Park looking towards Alder Street and Broadway

## **East-West Connection: The Charleson Veranda**

As described above, the *Charleson Veranda* is envisioned as an armature which integrates several modes of circulation. The proposed design incorporates a service road (with sidewalk), a tram line, a cycle path and an elevated boardwalk/veranda. This armature not only supports high-density housing -- complemented by street- (and veranda-) oriented retail -- but also other categories of buildings, like hotels, museums, and restaurants. In key locations such buildings can be clipped to the north side of the veranda without disrupting views.

Four different strategies have been applied to the landscaping of the boardwalk based on four different conditions. These have been categorized as 1) between buildings, 2) boulevard, 3) gateway, and 4) boardwalk.

The portions identified as “between buildings” – where the walkway passes relatively close to buildings on either side, lateral views are limited, and the users’ attention is primarily focused in the direction of travel, planters, trees and seating have been placed on either side of the walkway. These plantings act as edges for the walkway, screening views into adjacent buildings.

In the “boulevard” condition, by contrast, adjacent buildings sit at some distance from the walkway, offering the opportunity to incorporate planting on either side at grade. As with the “between buildings” condition, however, views between and beyond buildings are limited. In these locations, planters are positioned down the

center of the boardwalk and views are directed into the courtyards through which it passes.

The third condition, identified as a “gateway,” views of the waterfront are framed by adjacent buildings. This occurs primarily at nodes. The landscaping of these portions of the boardwalk is organized around a continuous water channel which drops down to the waterfront.

The fourth and primary condition, namely the “boardwalk” is characterized by views out over False Creek to the North. As such, planters are located along the southern edge of the boardwalk, with seating facing towards the water. In these portions, the walkway steps down to provide an unobstructed view from the seating. In the locations where the berm meets the walkway, various cutouts are provided to allow light to reach the multiuse paths below.



Fig. 4.28. Diagram showing the Focus Area (between Charleson Park and Cambie Bridge)

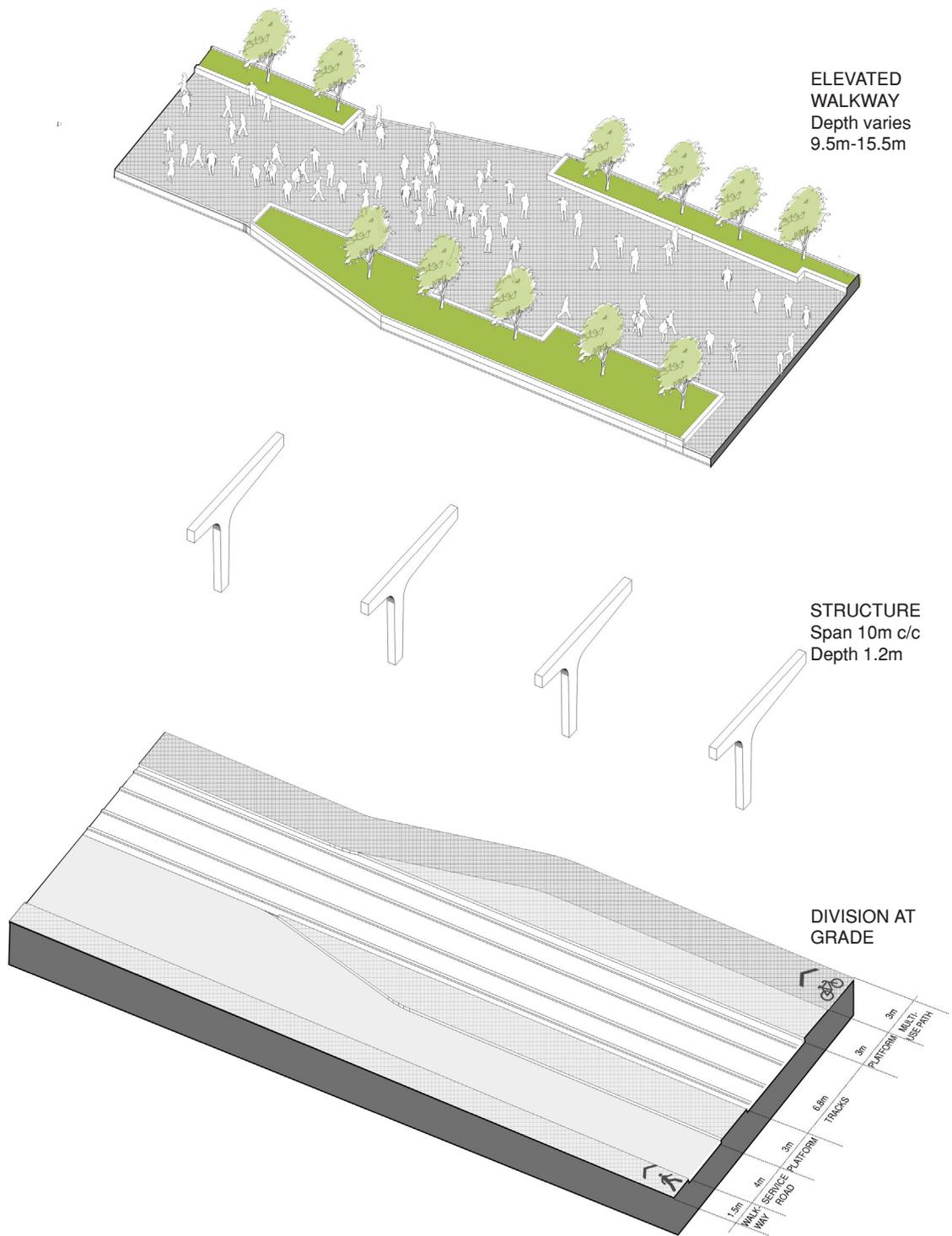


Fig. 4.29. Components of the Charleson Verandah

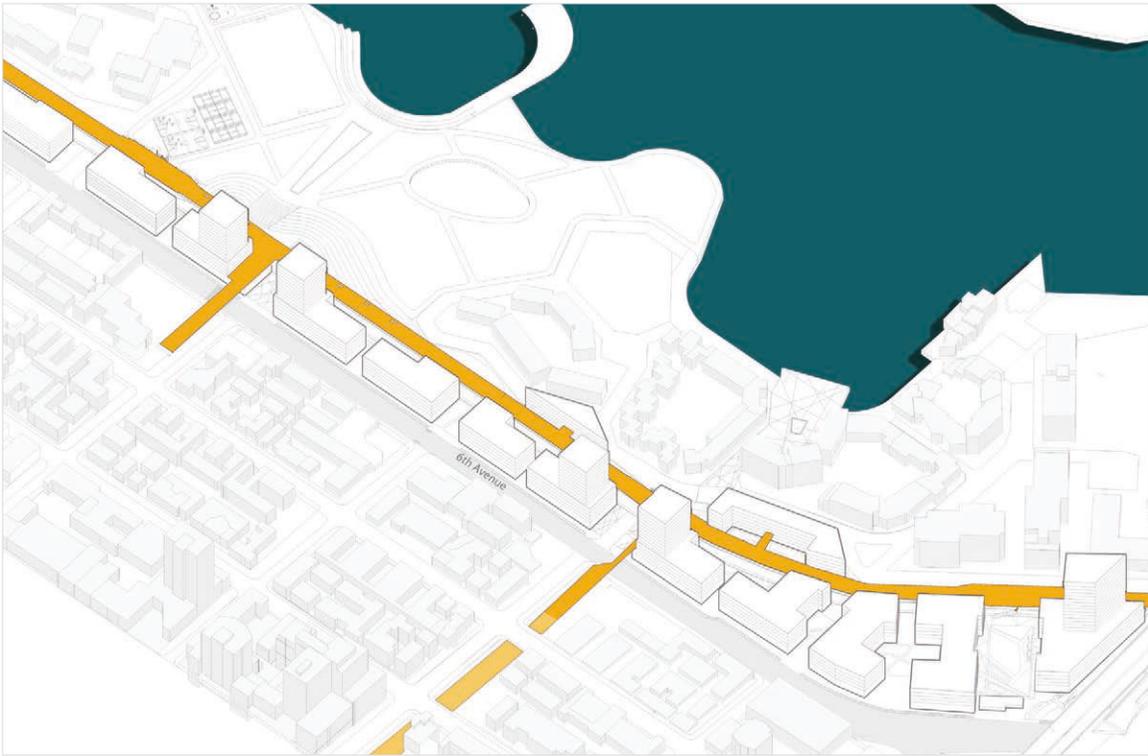


Fig. 4.30. Zoomed in view of Focus Area

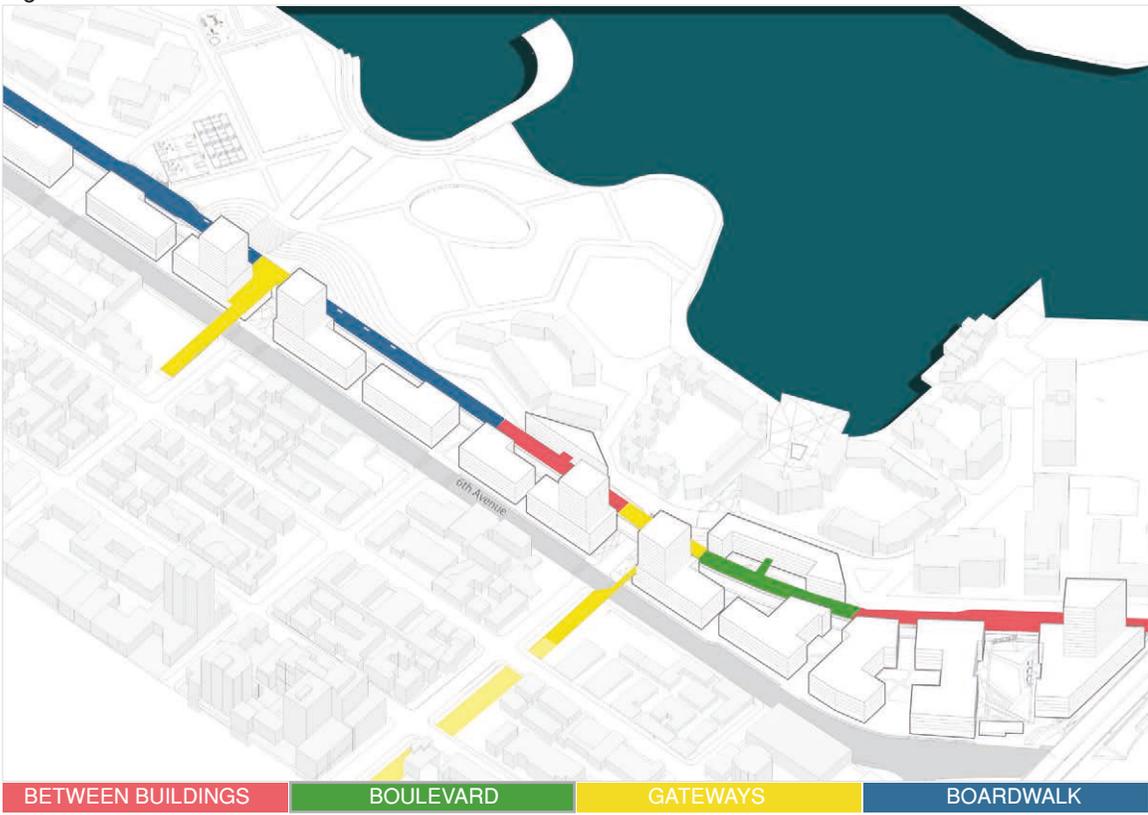


Fig. 4.31. The elevated walkway is divided on the basis of the experiences offered

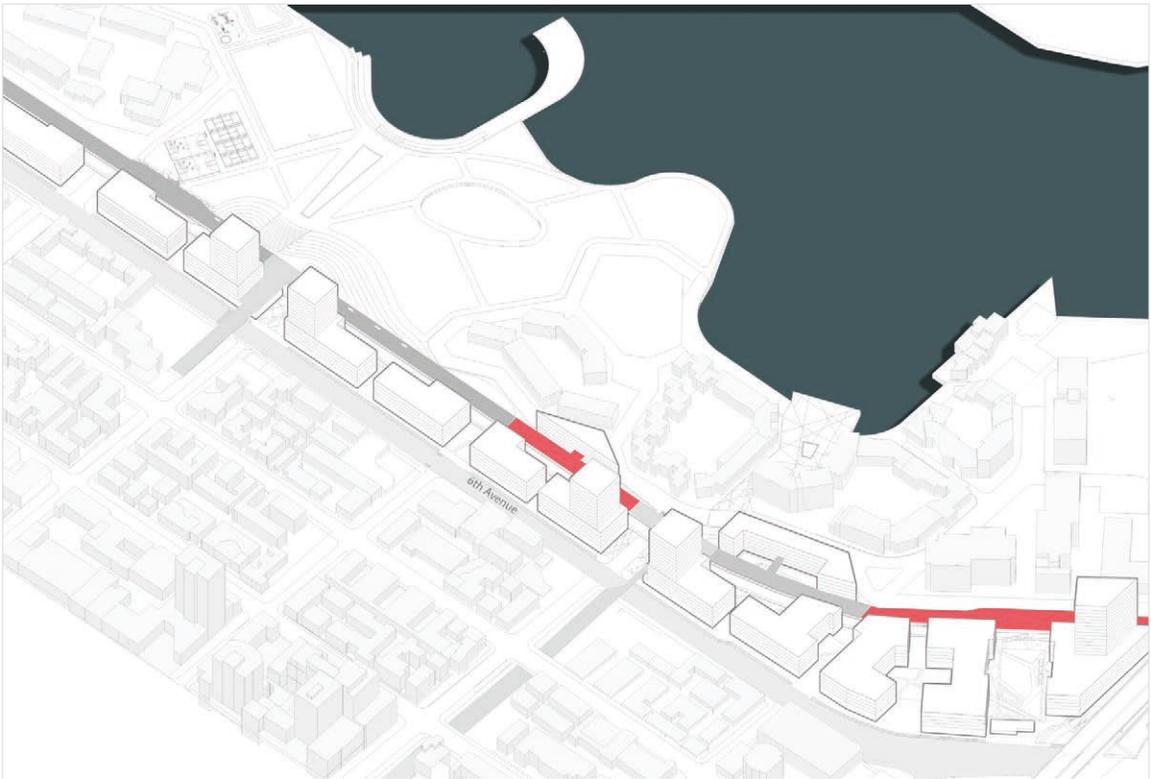


Fig. 4.32. Between-buildings zone

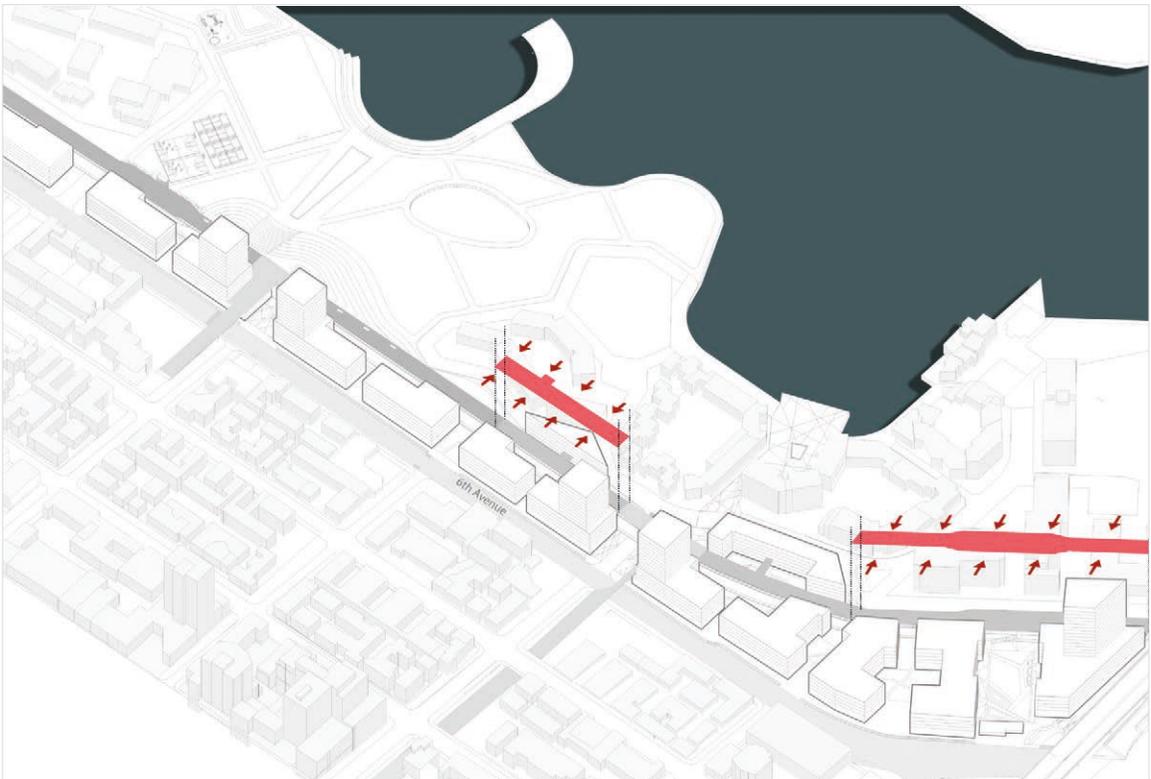


Fig. 4.33. This zone is mostly inward looking because of the limited views

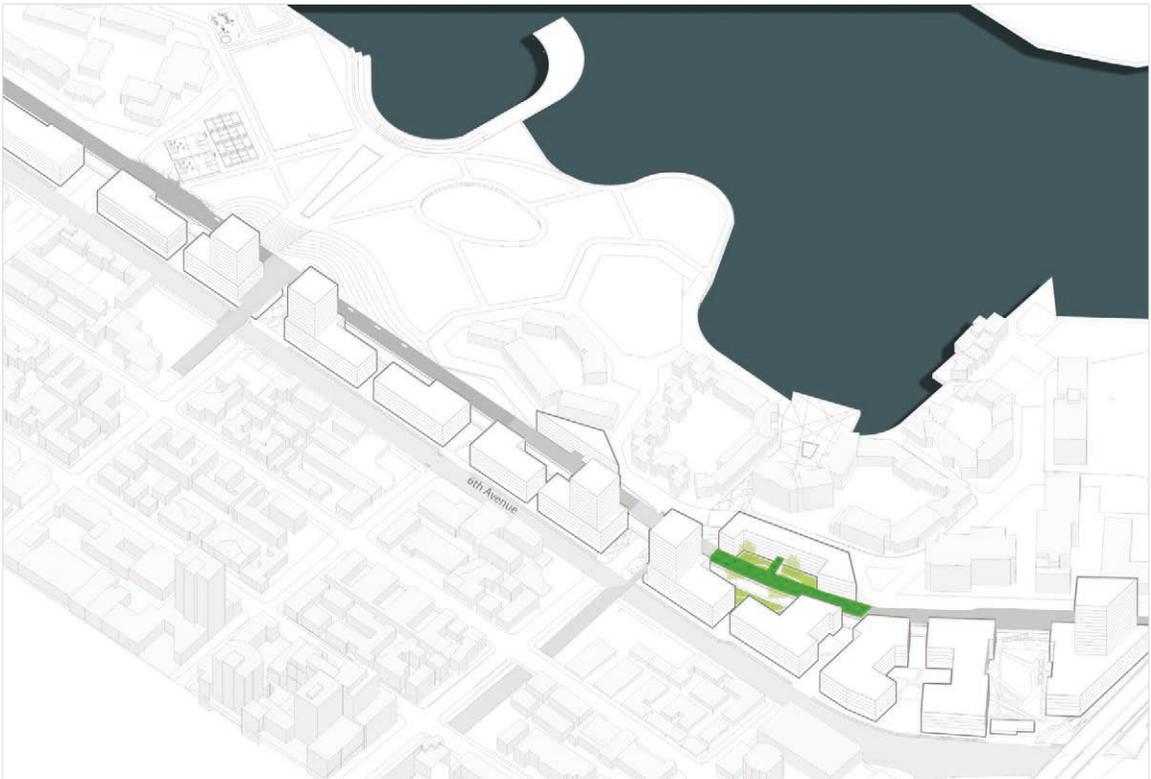


Fig. 4.34. The Boulevard zone

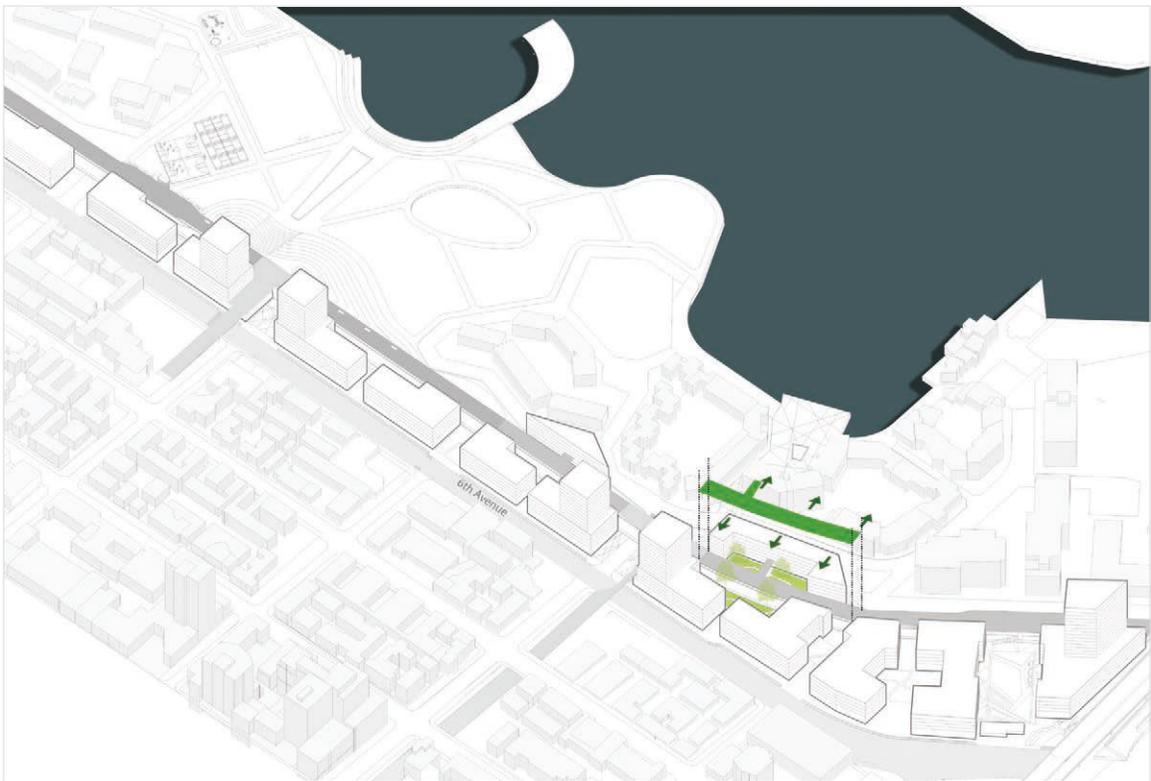


Fig. 4.35. This zone offers views down into the landscaped courtyards through which the veranda passes.

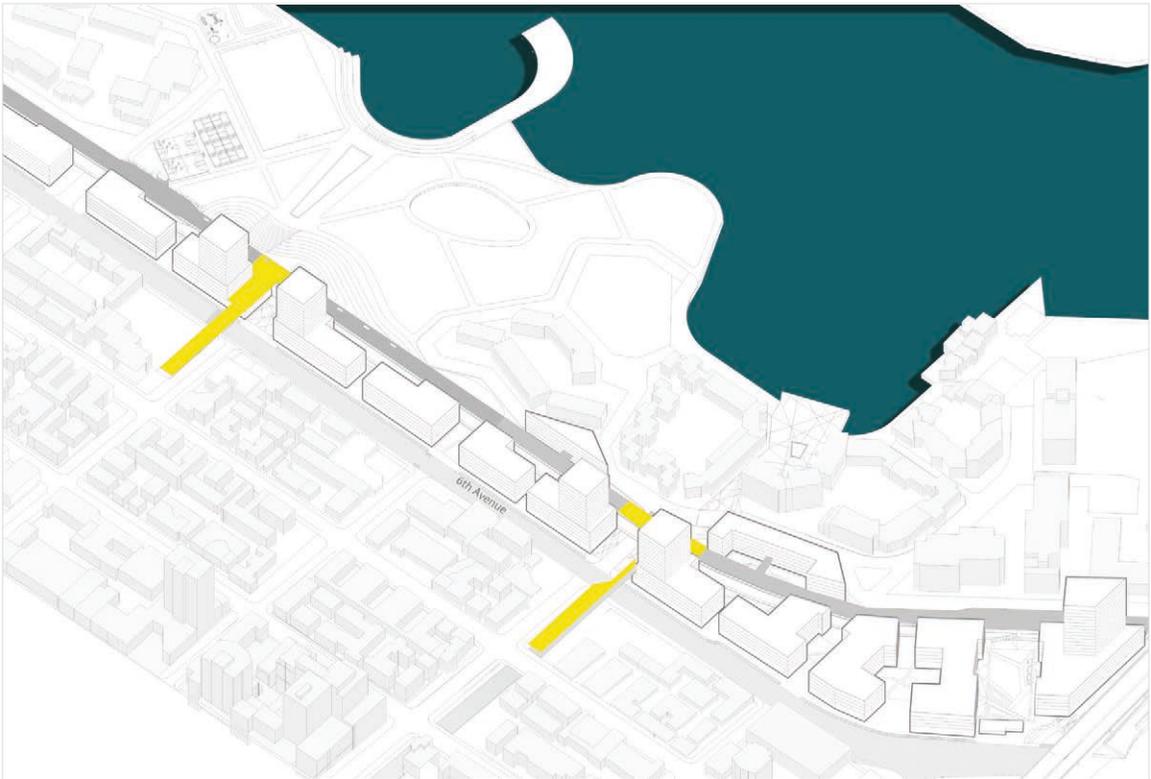


Fig. 4.36. The Gateway zone



Fig. 4.37. This zone frames the views of the waterfront, though adjacent buildings.

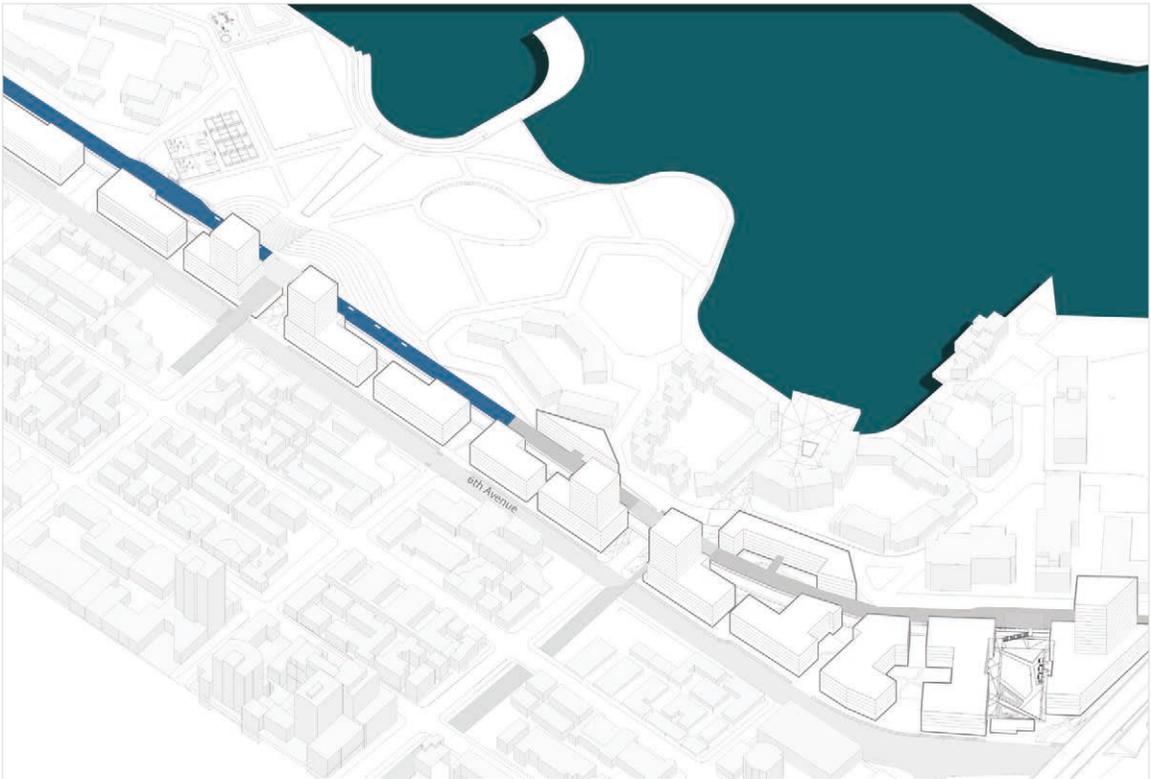


Fig. 4.38. The Boardwalk zone

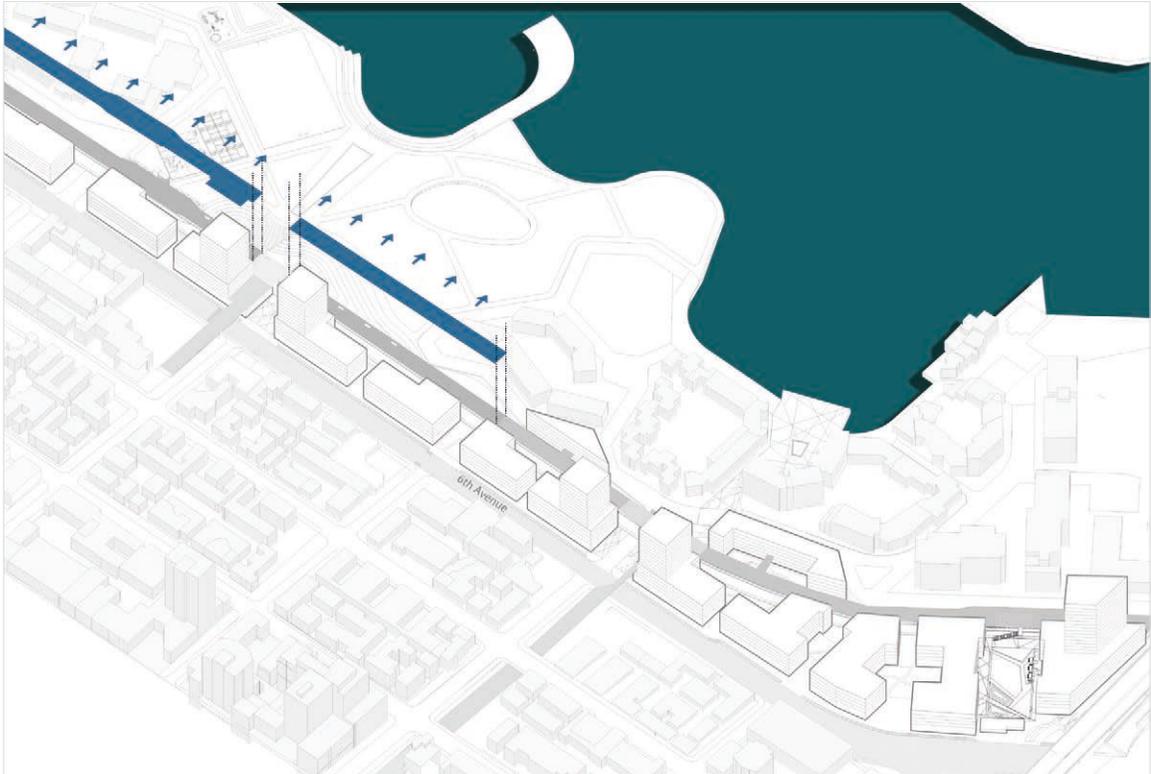


Fig. 4.39. This zone is outward looking and captures unobstructed views of False Creek

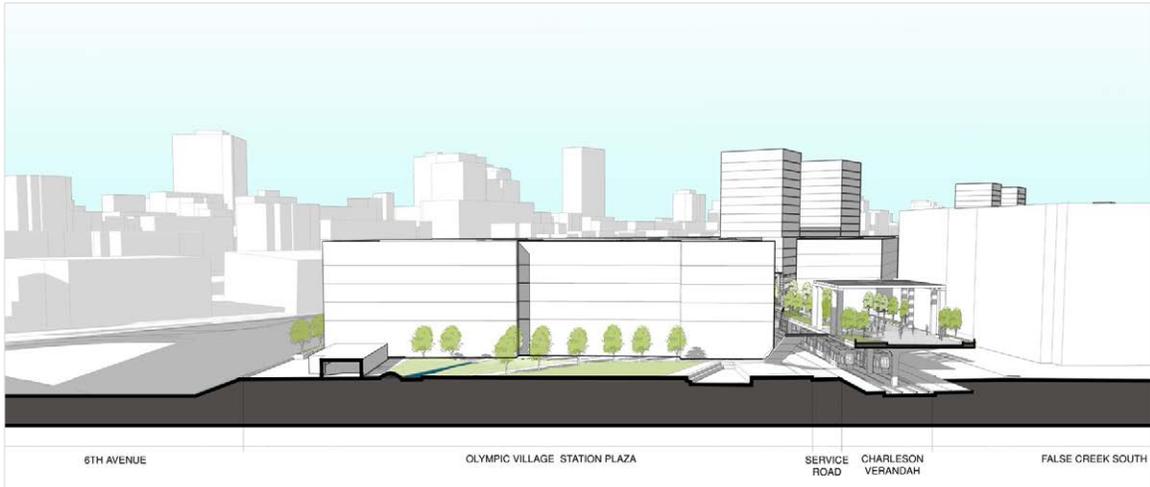


Fig. 4.40. Section through the plaza at the Olympic Village station, looking West. This is part of the “between-buildings” zone.

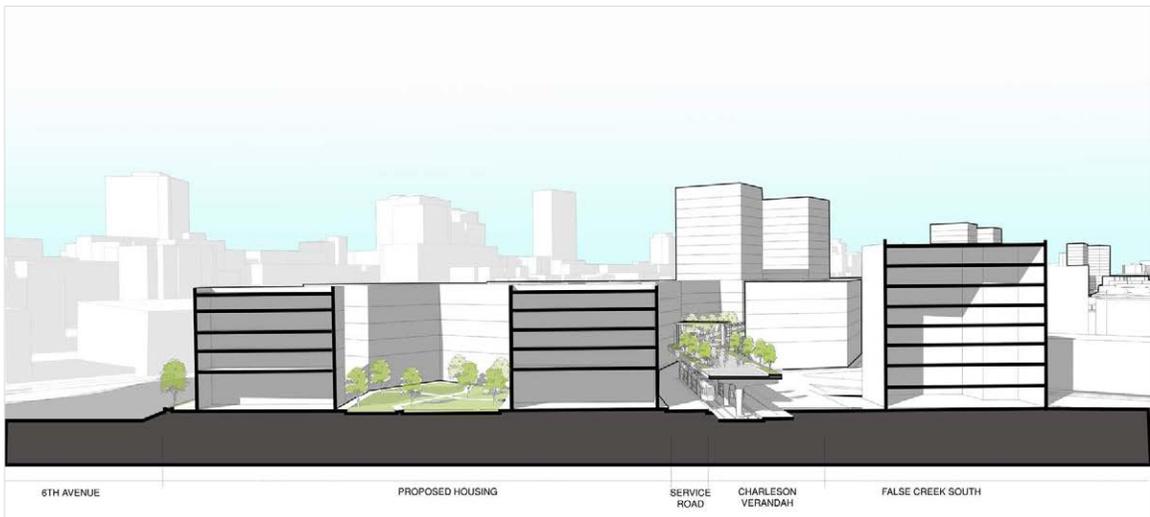
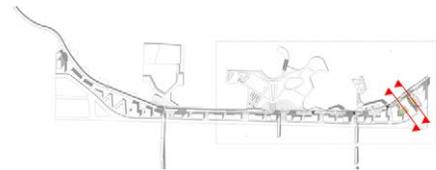


Fig. 4.41. Section through the courtyard of proposed housing looking West. The section is cut just before the “boulevard” zone.



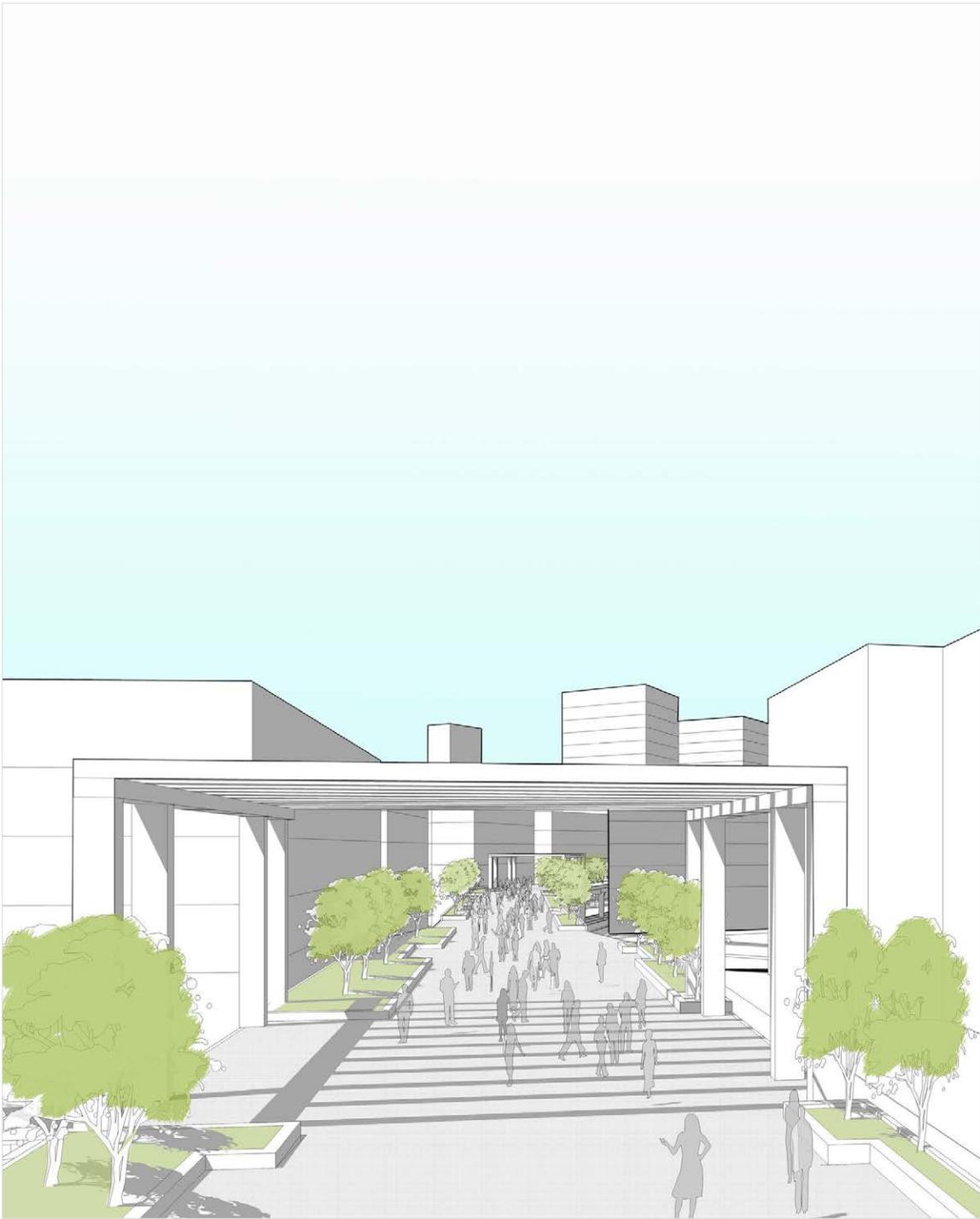


Fig. 4.42. View of the Veranda at the Olympic Village Station plaza. looking West.

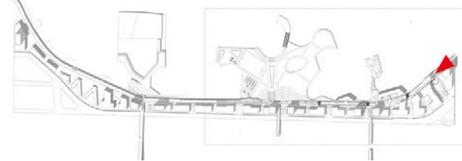
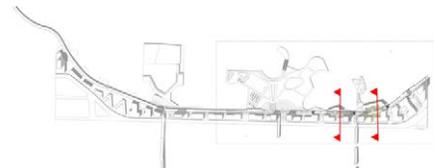




Fig. 4.43. Section through the proposed housing and library, looking West. This is part of the “boulevard” zone.



Fig. 4.44. Section through the proposed housing and museum, looking west. This is part of the “between-buildings” zone.



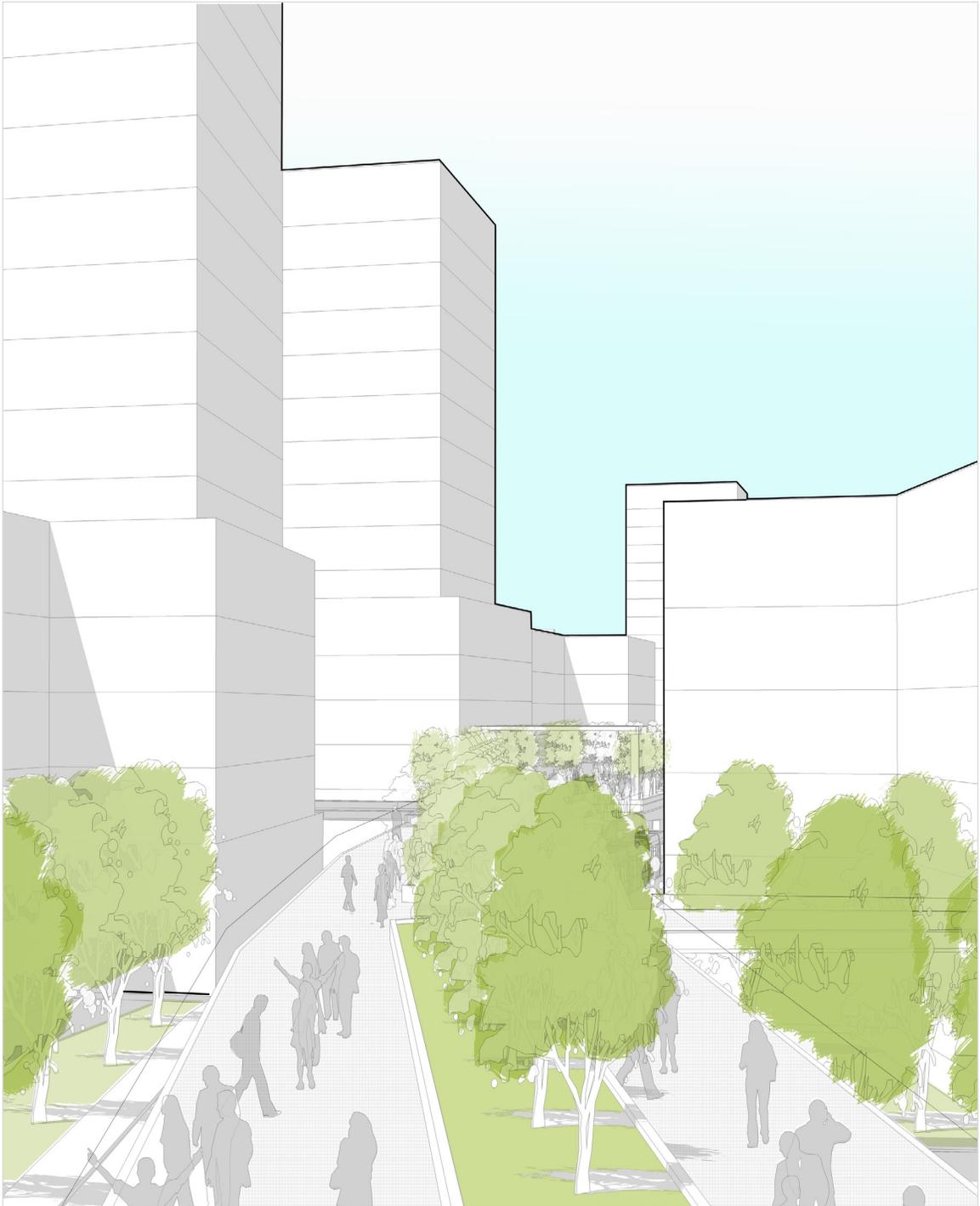
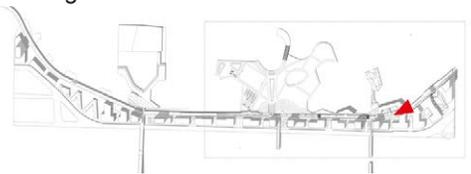


Fig. 4.45. View of the veranda through the "boulevard" zone, looking West.



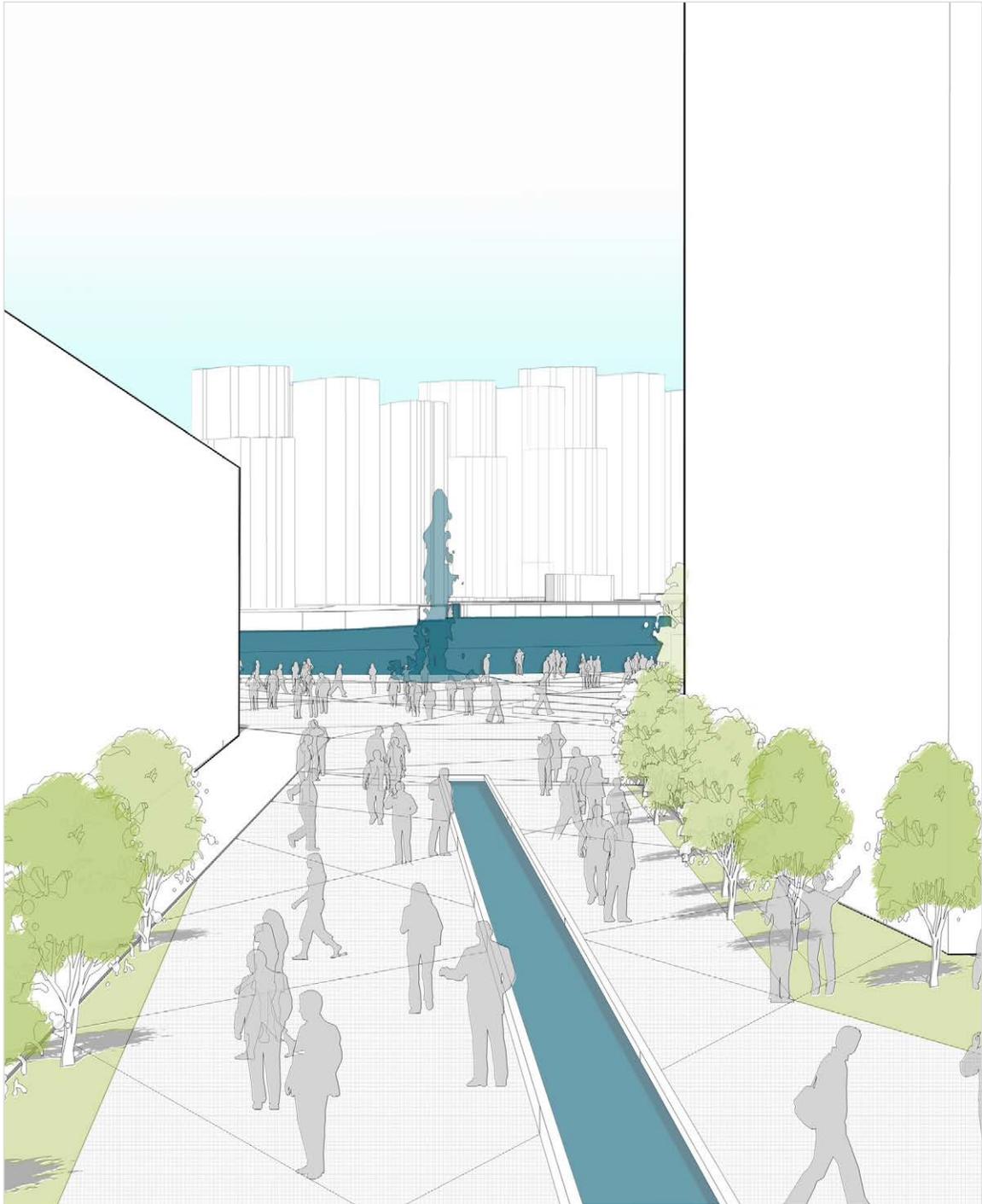


Fig. 4.46. View towards Leg in Boot Square, looking North.

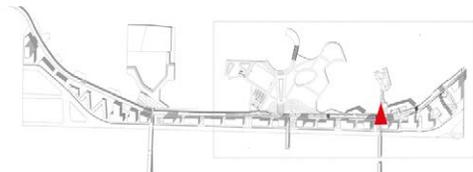
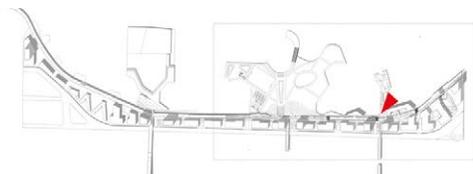




Fig. 4.47. View showing the overall experience of the Charleson Verandah at intersection of Heather St. and Lamey's Mill road



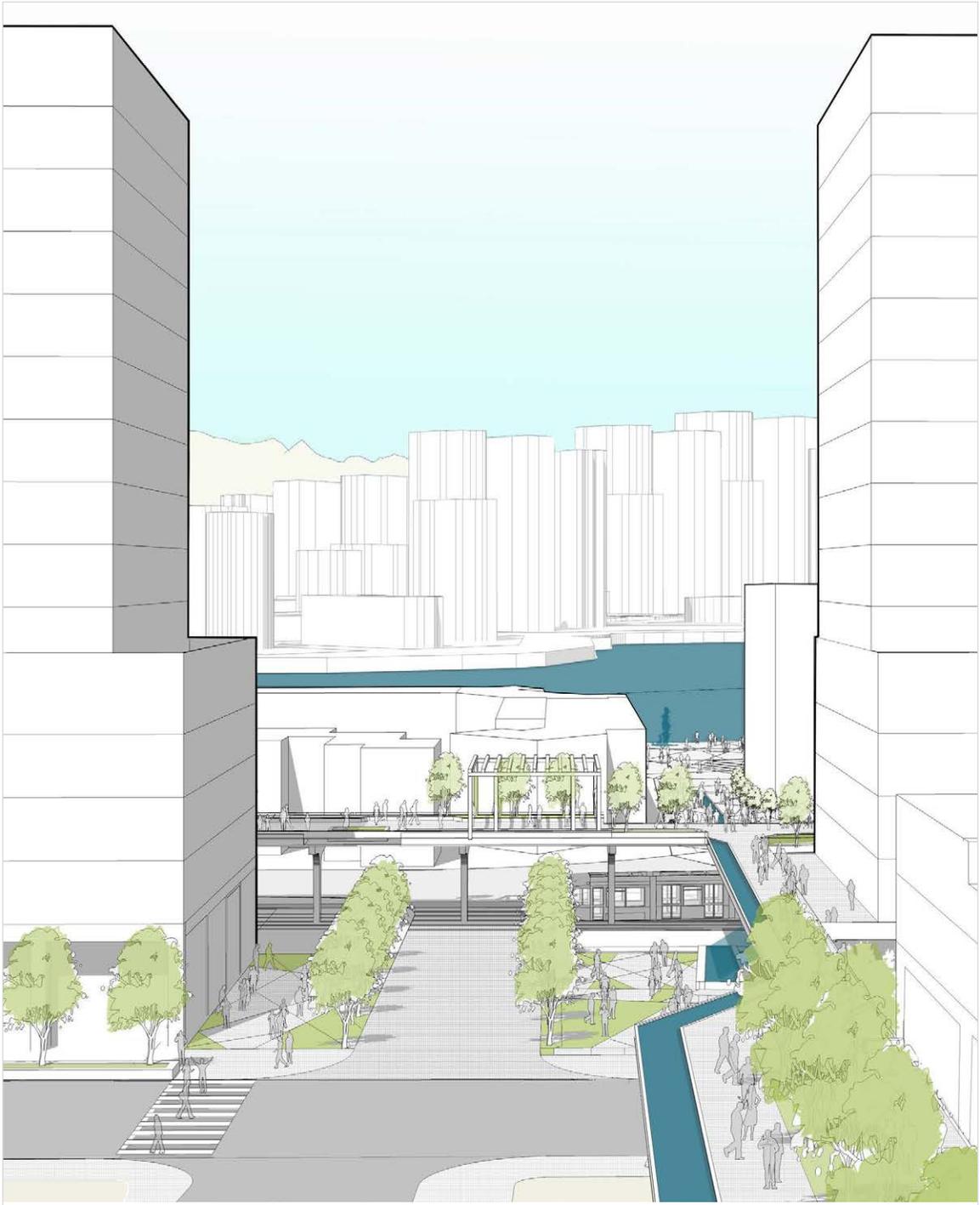


Fig. 4.48. View from Heather-Broadway connection towards Leg in Boot Square looking north

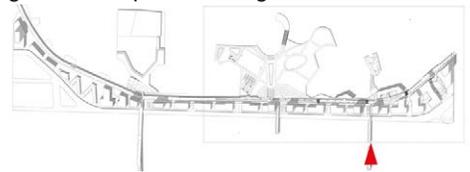




Fig. 4.49. View from beneath the pergola with proposed housing on the left and proposed Museum on the right

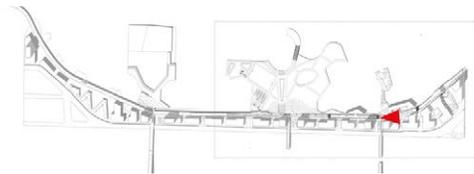
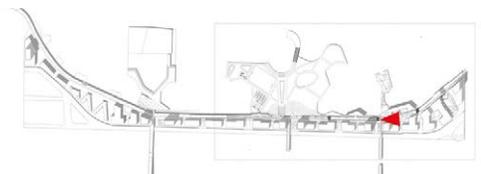




Fig. 4.50. View just beyond the pergola with proposed housing on the left and proposed Museum on the right, looking West.



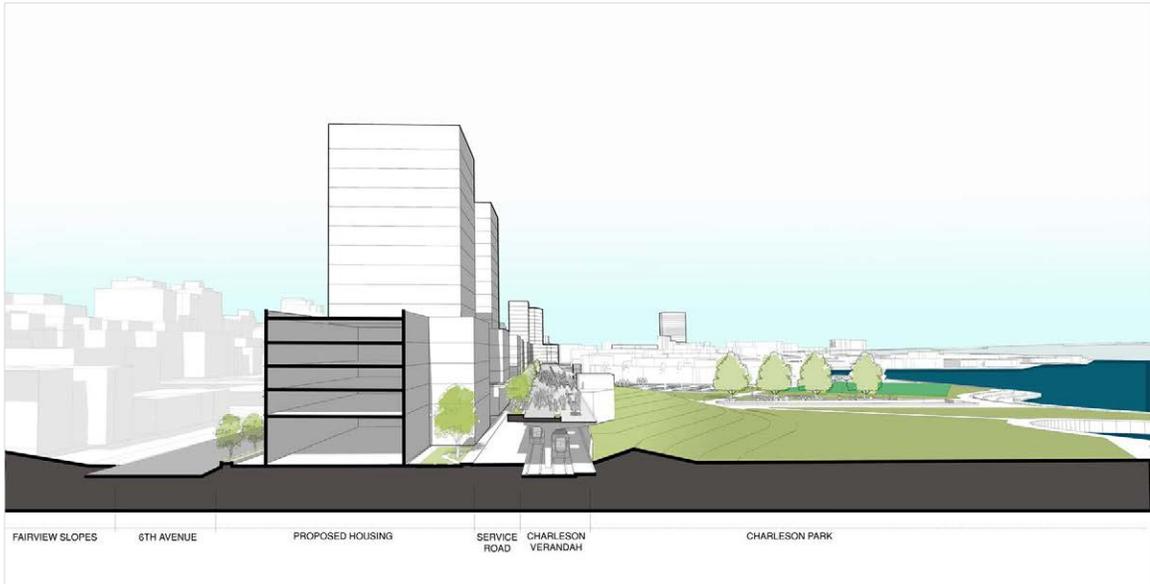


Fig. 4.51. Section through the proposed housing and Charleson Park, looking west. This is part of the “boardwalk” zone.

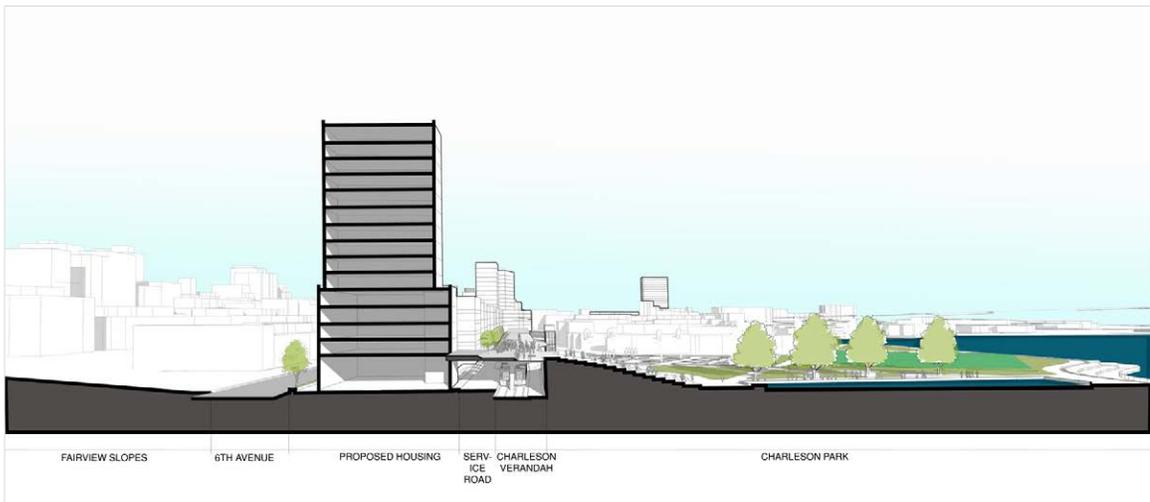


Fig. 4.52. Section through the proposed housing and Charleson Park. looking west. Here the veranda meets the berm -- into which an amphitheater has been cut. This is part of the “boardwalk” zone.

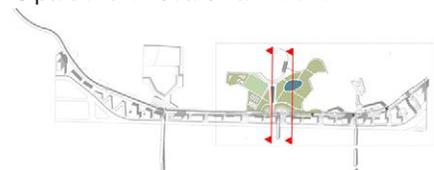
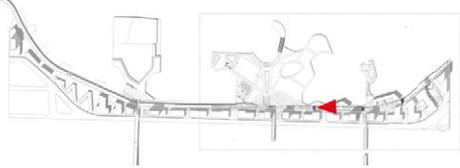




Fig. 4.53. A view of the veranda and Charleson Park, looking west.



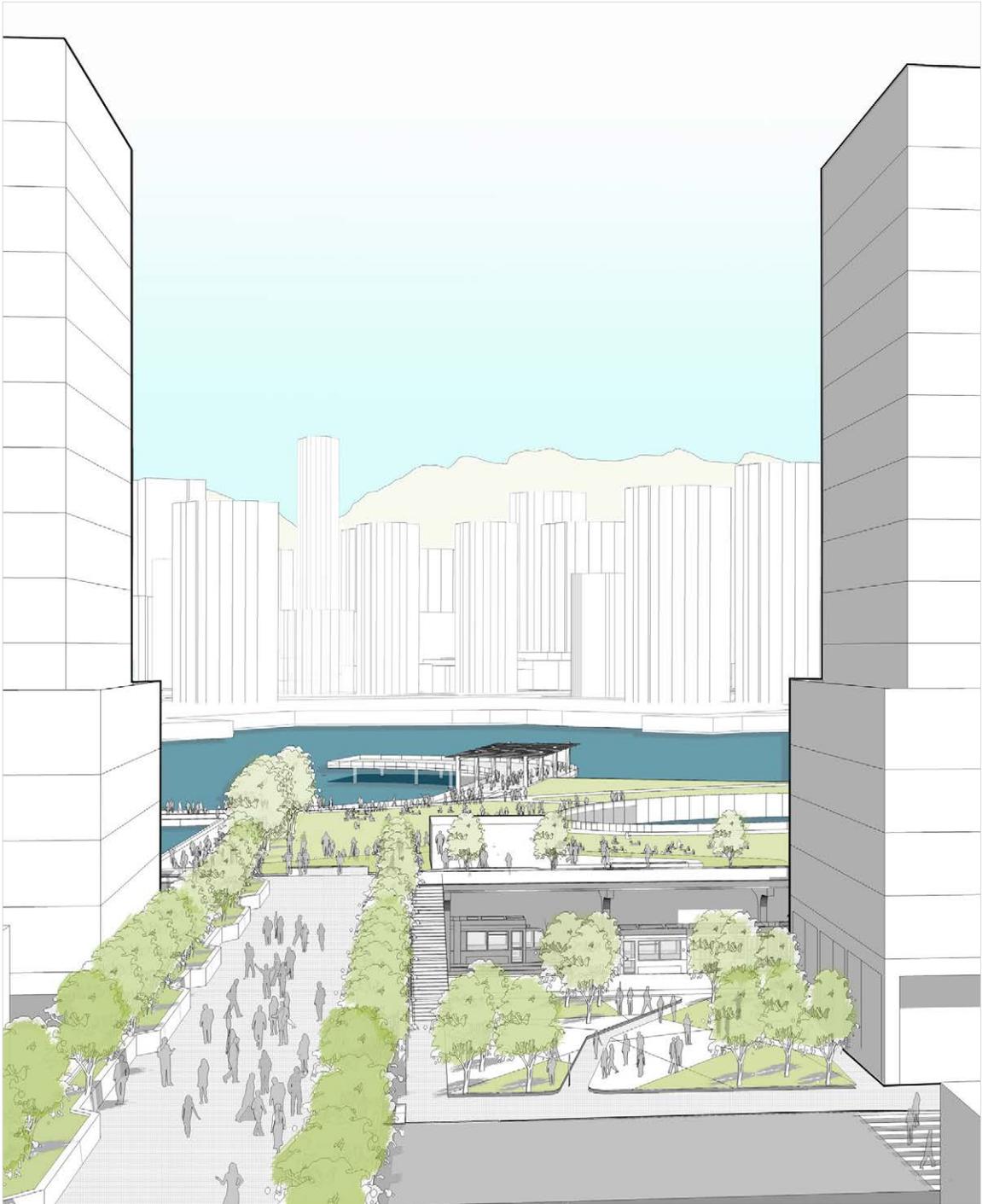


Fig. 4.54. A view of Charleson Park and False Creek between the tall buildings flanking the north/south connection at Laurel St.

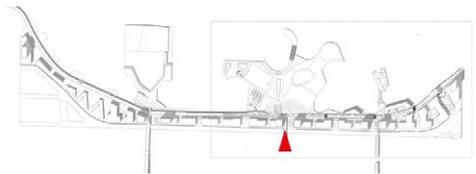




Fig. 4.55. A view of False Creek and the Vancouver skyline from the connection between the Laurel St. Land Bridge and the veranda.

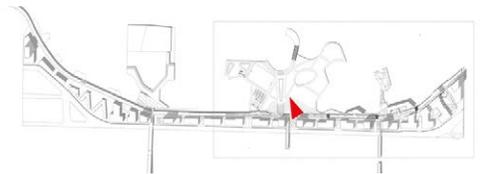




Fig. 4.56. View of False Creek South and the Charleson Veranda, looking southwest from Yaletown.

## **CONCLUSION**

### **CHAPTER 5**

This chapter discusses about the focus of the proposal, the issues and challenges faced through the process of design. It deliberates on the success of the project and the next steps.

#### **Keywords**

Urban Verandah	Transit-oriented	Densification	Connection
Elevated walkway	Pedestrian	Experiential	Spatial
Dynamic	Social integration	Destination	New image

This thesis has helped me to explore Vancouver through the lens of transit-oriented development, which is a major issue in cities with growing populations. It considers transit as an agent both to support densification and improve connections into and through False Creek South. Coming from a different country (India), this project has enabled me to engage with the city of Vancouver and False Creek South from an unbiased perspective in service of a “new image” for the neighborhood. As land leases in False Creek South will soon expire, the time is right to envision alternate futures.

In considering how the neighborhood might transform, it was important to understand the issues at play. The goals identified for the project were as follows:

1. To increase the number of people living and working in False Creek South by way of making better use of a key City-owned asset,
2. To leverage the existing rail right-of-way in order to reduce traffic along 6th Ave., accommodate additional residents and modes of transportation, and improve connections between Granville Island, the Olympic Village transit stop, and the downtown core.
3. To increase the number and quality of connections between False Creek South and Fairview Slopes,
4. To transform Sixth Avenue from a ‘traffic sewer’ into a lively and pedestrian-friendly neighborhood amenity,

5. To leverage the neighborhood's favorable location on the south shores of False Creek to create a city-wide amenity.

With respect to all of the above, it made sense to start with the *Community Edge Zone*, which could be transformed with minimal disruption to the form and feel of False Creek South. New development in the *CEZ* would also enable residents of False Creek South to consider phased redevelopment of existing buildings, should this be deemed necessary or desirable.

6<sup>th</sup> Avenue has been transformed into a tree-lined avenue with continuous street-oriented commercial at grade and public plazas at important nodes. As re-envisioned, it will be significantly more pedestrian friendly.

The lack of linkages, in part due to the existing abandoned rail right-of-way, led to the design of the "*Charleson Veranda*." An amalgamation of several circulation modes, it incorporates a tramline, a service road, and a multi-use bicycle path at grade, with a major public boardwalk above. The elevated walkway both facilitates better north/south connections across 6<sup>th</sup> Ave. and stronger east/west connections between Granville Island and the Olympic Village transit stop. Providing exceptional views out across False Creek and connecting into the plinth level of the buildings along 6<sup>th</sup> Ave., it has the potential to become a major new social space for the City of Vancouver.

The success of *Charleson Veranda* is tied to its attractiveness as destination – a place to go to as well as a space to move through. Envisioned as a new front porch for False Creek, it accommodates leisurely walks, promotes social interaction, provides varying landscape experiences and offers spectacular views of False Creek, the Vancouver skyline and the mountains beyond.

### *Next Steps*

Were I to continue working on the project – and building on the feedback I will receive at the community presentation in Vancouver -- I would develop other areas of the rail loop, namely those near and west of Granville Island. I would also work with the community to identify existing buildings in False Creek South that may warrant replacing and map their phased redevelopment to new buildings along 6<sup>th</sup> Ave.

In creating The *Charleson Veranda*, I have tried to blurr the lines between architecture, urban design, and infrastructure by orchestrating spaces to work in harmony by following a holistic design approach. These new urban linkages consider transit as a catalyst to better knit False Creek South to into adjacent neighborhoods and Vancouver as a whole.

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