

March 2<sup>nd</sup>, 2021

# Bellevue and 22<sup>nd</sup>

## Design Review Committee



# Bespoke Homes. Forward thinking.

## The Bellevue and 22nd development... Build Differently. Live Better.

The International Panel on Climate Change (IPCC) 2018 Special Report on Climate Change conveys critical findings and reinforces that now, more than ever, it is imperative to design low emission buildings, or better still, zero emissions buildings. The science is clear, the solutions are available, and we know where we have to go. Buildings represent close to **40%** of global greenhouse gas emissions, and as such, we have a responsibility to prioritize performance in the buildings we design.

The District of West Vancouver declared a climate emergency on July 8th, 2019. The district has dedicated itself to finding ways to reduce Greenhouse Gas Emissions and adapt to climate change. We cannot stand by and allow 'business as usual' to persist. This project will be an important step toward what we need—buildings that do not contribute to climate change, but act as a source of repair.

Buildings ought to be relied upon to do more to counteract their negative consequences. Ultimately, the project strives to be an example of how buildings should respond to climate change and establish a new model for private sector urban development locally, nationally, and internationally.

### **The project can offer a significant benefit to The District of West Vancouver as a precedent setting development with the potential to:**

- Commit to Zero Emissions. The building will not consume fossil fuels, nor rely on combustion of any kind to operate.
- Self Supply Energy. The building will produce a meaningful proportion of the energy it consumes, on site, through photo-voltaic technology, reducing demand on grid-source electricity.
- Use Less. Built to the Passive House Standard, the building will require a fraction of the energy to operate compared to typical West Vancouver homes.
- Store Carbon. The majority of the building will be made of with sustainably sourced BC timber, and will store more carbon than what it required to build it.
- Contribute positively to the livability, health and welfare of the building inhabitants.
- Exemplify best in class healthy material procurement.
- Increase the biodiversity on site through enhancement of the public realm with native landscapes.
- Be resilient to a changing climate and withstand major storm events.

This exemplar application will serve as a demonstration that The District of West Vancouver's ambitious targets can not only be met, but exceeded. It's time we acknowledge that the buildings we make, and how we live, contribute to climate change. We believe that through our conscious actions we can limit the negative consequences of our industry.

# Contents

<b>01 Project Team</b>					
Delta Group	1	5.5 Amenities and Services	31	6.16 Material Board	63
Perkins and Will	2	5.6 Surrounding Building Heights	32	6.17 Core Wall	65
Paul Sangha Creative	3	5.7 Zoning Plan	33	6.17 Public Realm - Views	66
		5.8 Building Heights	34		
		5.9 Transit Access	35	<b>07 Architectural Drawings</b>	
<b>02 Development Statement Brief</b>		5.10 Walkability	36	7.1 Survey	67
2.1 Project Description	5	5.11 Wind and Sun Characteristics	37	7.2 Context Plan	68
2.2 Site Statistics	7	5.12 Solar Access	38	7.3 Parking Plan - Level P1	69
2.3 Setbacks/Site Coverage	8	5.13 View Analysis	39	7.4 Parking Plan - Level P2	70
2.4 Project Area	9	5.14 Shadow Analysis	43	7.5 Plan - Level 01	71
2.5 Parking Counts	10			7.6 Plan - Level 02-08	72
		<b>06 Design Rationale</b>		7.7 Plan - Roof	73
<b>03 Sustainability Strategies</b>		6.1 Concept Diagram	45	7.8 Elevation - North	75
3.1 Sustainability Strategies	13	6.2 Massing Diagram	47	7.9 Elevation - South	76
3.2 Overarching Principles and Goals	15	6.3 Solar Energy Potential	48	7.10 Elevation - West	77
3.3 Proposal Summary - Key Objectives	17	6.4 Concept Images	49	7.11 Elevation - East	78
3.4 Proposal Summary - Environmental Goals	18	6.5 Landscape Plan	51	7.12 Section - North South	79
		6.6 Landscape Concept - Architectural Integration	52	7.13 Section - East West	80
<b>04 Policy Response</b>		6.7 Landscape Paving Strategy	53	7.14 3D View - East	81
4.1 Official Community Plan Compliance - Policies	19	6.8 Landscape Screening	54	7.15 3D View - West	82
4.2 Official Community Plan Compliance - Built Form Guidelines	21	6.9 Public Realm	55	7.16 3D View - North	83
4.3 West Vancouver Foundation - Vital Signs Compliance	23	6.10 Soil Depths	56	7.17 3D View - South	84
		6.11 Crime Prevention Strategy (CPTED)	57		
<b>05 Local Context</b>		6.12 Accessible Design	58		
5.1 Existing Site Photos	25	6.13 Tree List	59		
5.2 Site Sections	27	6.14 Plant List	60		
5.3 Site Photo Montage	29	6.15 Existing Tree Retention or Replacement Study	61		
5.4 Surrounding Building Types	30				



# 1.0 Project Team

## DELTA GROUP

### WHO WE ARE

Delta Land Development is a privately held Investment and Development company, operating in Vancouver for the past 35 years.

### WHAT WE DO

Since 1997, we have delivered over 6.8 million square feet of award winning projects in British Columbia. We are a boutique shop with a low volume of projects, with the ability to focus on the details and defy convention.

### WHY WE DO IT

We are committed to meaningful change in the building and construction industry and how we craft built forms and impact our planet. We aim to achieve shared success and a positive legacy with each of our projects.





# Perkins&Will

## WHO WE ARE

Perkins and Will is a multi-disciplinary Architecture and Design firm founded on the belief that design has the power to transform lives. We have practised in Greater Vancouver since 1984.

## WHAT WE DO

We provide a range of expertise in corporate/commercial, civic, healthcare, higher education K-12 and transportation practice areas. With hundreds of award winning projects annually, Perkins+Will is ranked as one of the top global design firms.

## WHY WE DO IT

Since our inception, sustainability has been pivotal in all our work. We are committed to creating regenerative designs which heal their environments and enhance society.





# PAUL SANGHA CREATIVE

## WHO WE ARE

Paul Sangha Creative is an award-winning landscape architectural practice based in Vancouver. With over 30 years of experience, Principal Paul Sangha's reputation has been built on his passion for timeless, high quality and site-sensitive design

## WHAT WE DO

Our strength lies in our ability to unite landscape, built form and site, resulting in thoughtful, experiential landscapes for both public and private spaces. Our award-winning work has established the firm as one of the Pacific Northwest's premier design practices.

## WHY WE DO IT

We are passionate about crafting outdoor spaces that inspire, refresh and nourish the soul. Our work is always rooted in a sensitivity to materials, water and ecology, which together form robust and resilient landscapes that thrive through







# 2.0 Development Statement Brief

## 2.1 PROJECT DESCRIPTION

### PRESENT AND INTENDED USE OF THE SITE:

The proposal is for an 8 storey, mass timber, Passive House residential building. In addition to the main lobby level, each level is one home, creating suites that are accessible, barrier free, and have access to natural ventilation and daylight on all sides, while still presenting in an apartment building form.

The site is currently zoned as RD1, Two Family Residential. It is the only such zoning in the immediate surrounding area. The proposal seeks to rezone the site to better align with the present form and density of the neighbourhood.

The current building is 3 storey residence containing 3 suites. Parking is on grade, and the property is surrounded by a solid wood fence. The proposal seeks to redevelop the property to increase the height to 8 storeys, providing 7 homes and 1 level of amenity uses. The ground level would be landscaped and provide a generous addition to the public realm.

The site is located within the Ambleside neighbourhood. The Ambleside neighbourhood is characterized by a walkable street grid extending to the waterfront. It has a strong concentration of apartment buildings (both strata and rental) as well as civic and cultural facilities such as the West Vancouver Community Centre. It is the civic, social, economic and recreational hub of West Vancouver and serves as West Vancouver's Town Centre.

The Official Community Plan encourages infill projects that match the character of the surrounding neighbourhood. The proposal fits within the typology, height, and scale of adjacent buildings. All parking will be located underground, and traffic increase will be minimal as only an additional 4 homes will be added to the site (from 3 current to 7 proposed).

The project is intended to be built of predominantly mass timber construction. As such, much of the fabrication will be done off site while the parkade is being built. This allows the storeys above grade to be erected quickly, reducing noise and disruption to neighbours.





## **RATIONALE FOR THE PROPOSAL/ COMMUNITY BENEFITS**

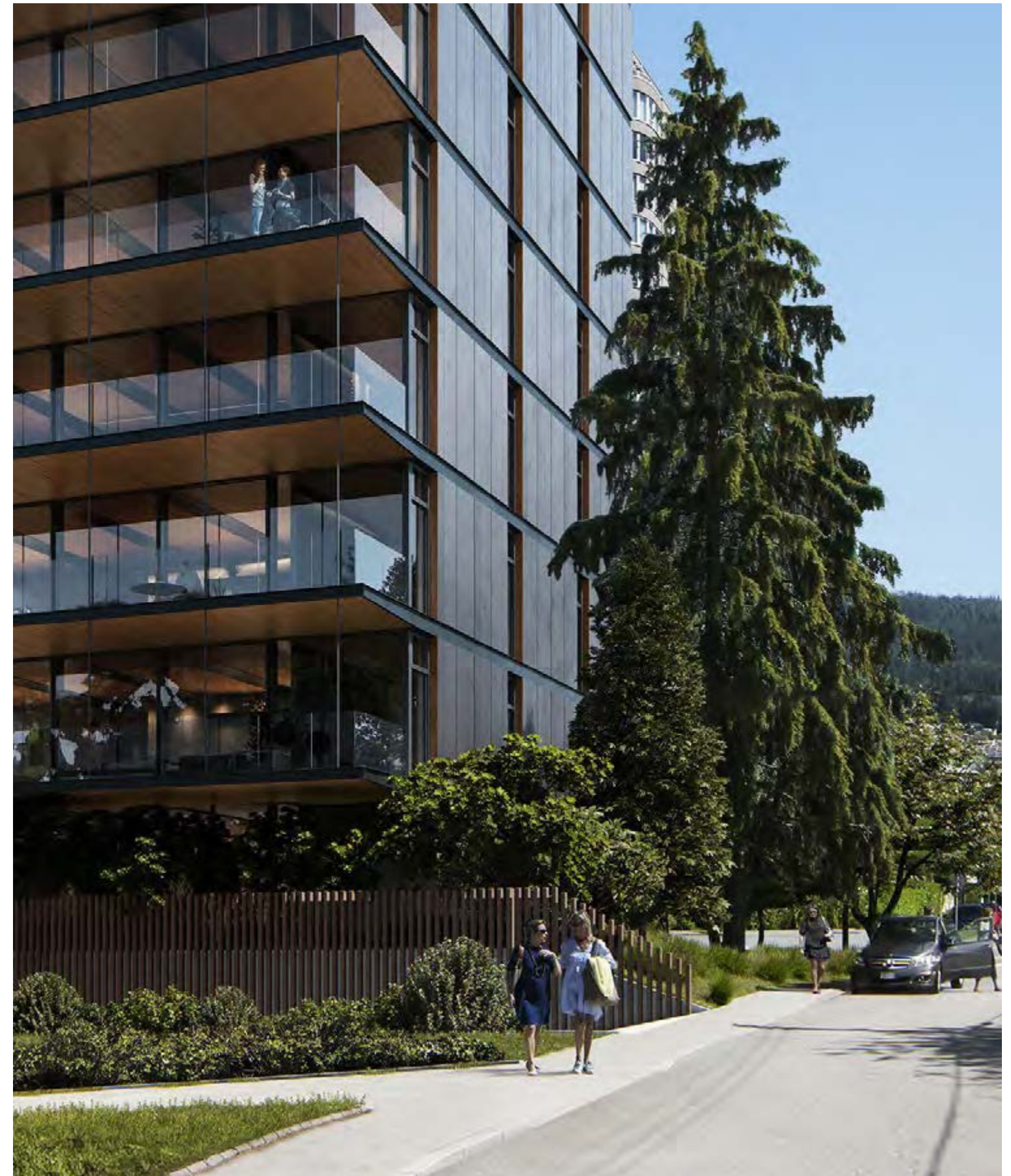
The project serves as a benefit to the community by adhering to the broad goals of the community as outlined in the West Vancouver Official Community Plan. West Vancouver has also adopted the Regional Growth Strategy "Metro Vancouver 2040 - shaping our Future (Metro 2040 hereafter). The strategy has 5 key goals.

- Create a compact urban area
- Support a sustainable economy
- Protect the environment and respond to climate change impacts
- Develop complete communities
- Support sustainable transportation choices

This project supports the OCP, the Regional Growth strategy, and the Climate Emergency Response by:

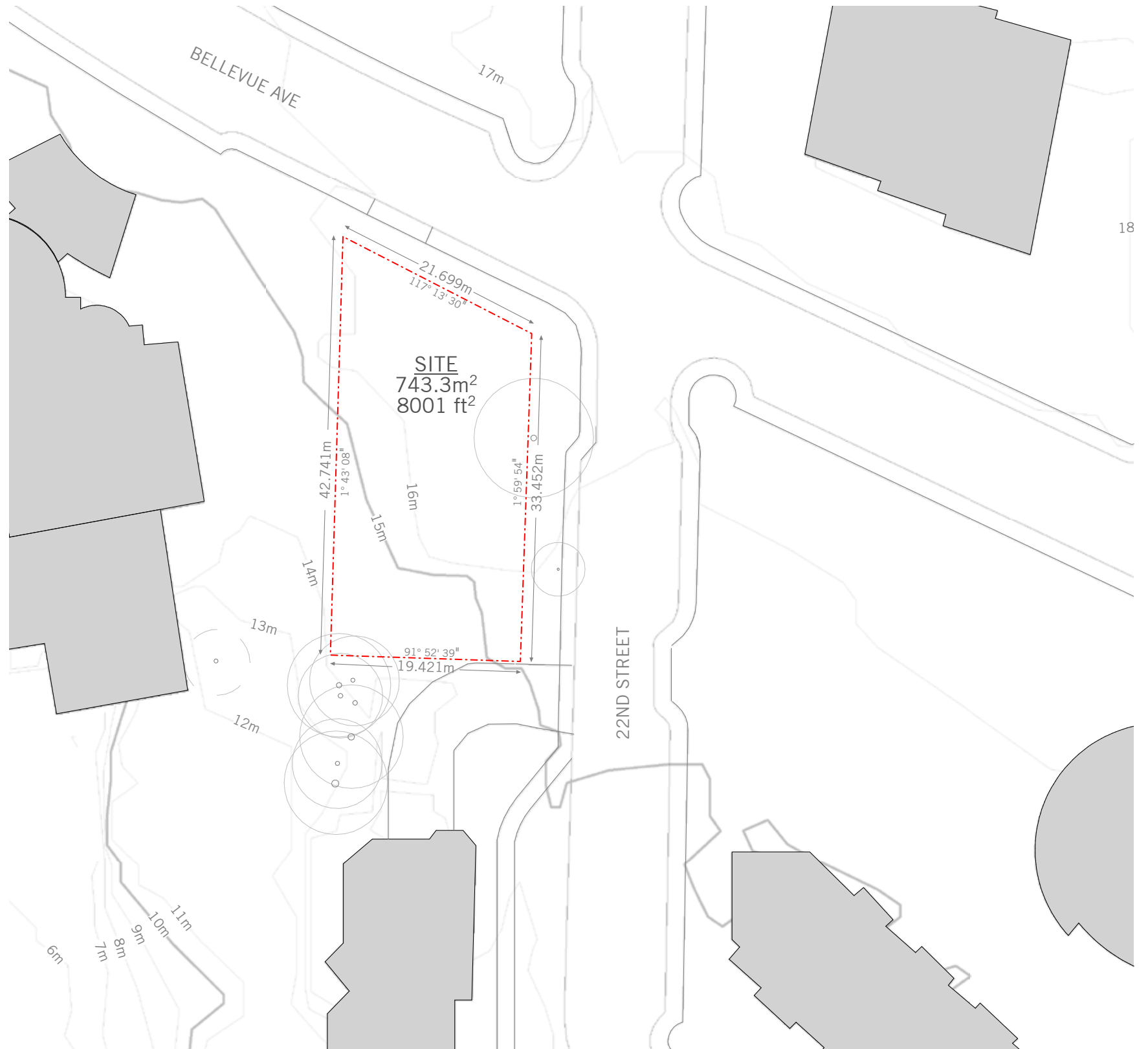
- Creating a sensitive infill project in an existing high density neighbourhood
- Pursuing Passive House certification for energy and emissions reduction beyond the step code
- Generating sustainable energy on site and committing to the use of zero fossil fuels on site. (Zero emissions and possible net carbon positive)
- Providing 7 single level adaptable homes that allow residents to age in place.
- Enhancing the pedestrian public realm by creating a link between the West Vancouver Community centre to the north and the Centennial Seawalk Trail public access to the south. The site will contain a pocket garden at the corner at Bellevue and 22nd with integrated seating to serve as a rest point along this path.

The exemplary sustainability and radical decarbonization features of this project can also serve as an example of and catalyst for ways and means for the district to take a leadership role in addressing emissions and resilience in the face of climate change.



**2.2 SITE STATISTICS**

<b>PROJECT NAME</b>	Bellevue and 22 <sup>nd</sup> .
<b>CIVIC ADDRESS</b>	177 22 <sup>nd</sup> St, 2204 Bellevue Ave.
<b>LEGAL DESCRIPTION</b>	Plan VAS450 District Lot 554 Lot 1
<b>ZONING BY-LAW</b>	4662, 2010
<b>SITE DIMENSIONS</b>	± 21.7m X 42.7m
<b>SITE AREA</b>	743.3m <sup>2</sup>
<b>EXISTING ZONING</b>	RD-1
<b>PROPOSED ZONING</b>	CD-1
<b>PROPOSED USE</b>	Multi-family Residential



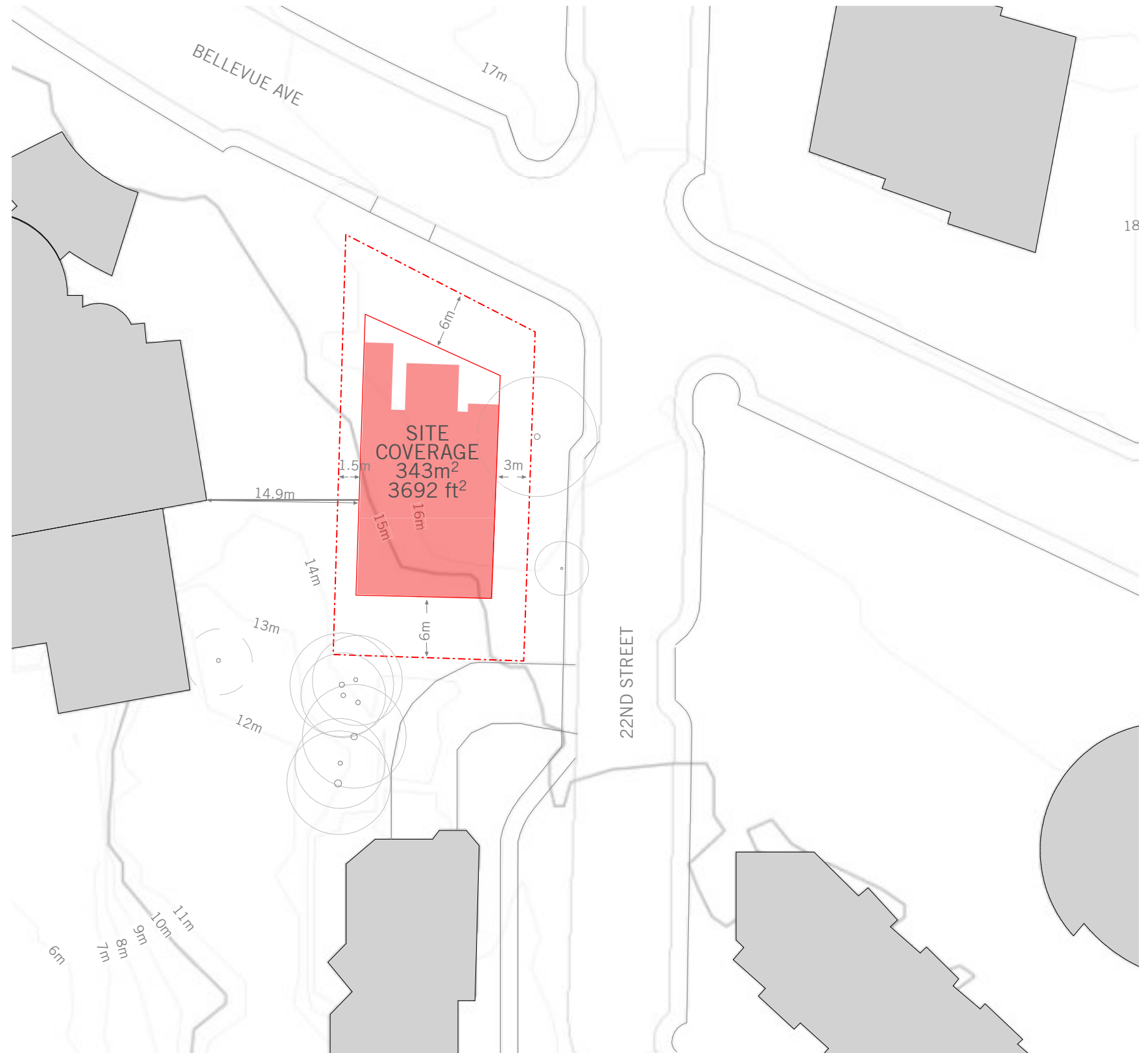


## 2.3 SETBACKS/ SITE COVERAGE

**BUILDING FOOTPRINT** 343m<sup>2</sup> (includes balconies and exterior stair)  
**SITE COVERAGE** 46%

### PROPOSED SETBACKS

**FRONT** 6m  
**BACK** 6m  
**SIDE (EAST)** 3m  
**SIDE (WEST)** 1.5m  
**TOWER SEPARATION** 14.9m



2.4 PROJECT AREA

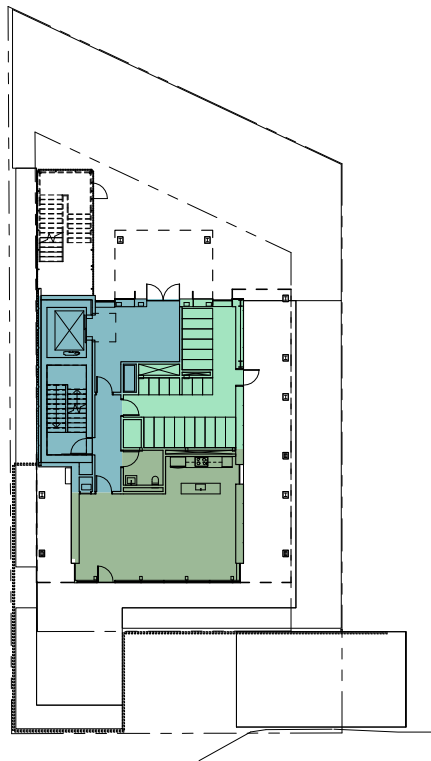
BUILDING STOREYS 8

RESIDENTIAL UNITS 7

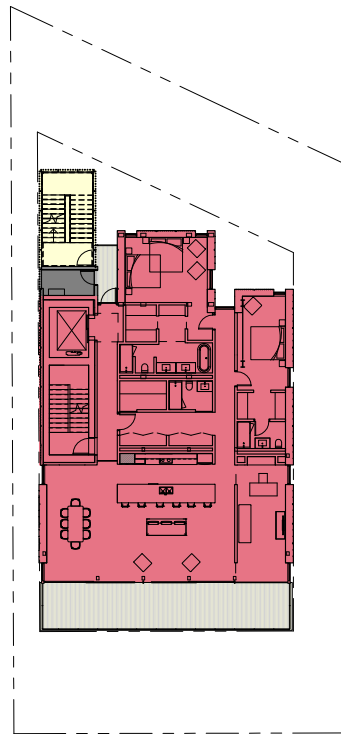
UNIT TYPE 2 Bed + Den

AREA/ FSR CALCULATIONS															
LEVEL	GROSS AREA		UNITS			FLOOR AREA RATIO EXCLUSIONS (M2)									FSR
	AREA M2	AREA FT 2	COUNT	AREA M2	AREA FT2	PARKING	STORAGE	MECH/ ELEC/ MAINTENANCE / GARBAGE	ELEV/ STAIR/ HALLWAY	LOBBY	AMENITY	BIKE ROOM	BALCONIES/ EXTERIOR STEPS	**HIGH PERFORMANCE BUILDING	AREA M2 (GROSS AREA - EXCLUSIONS)
LEVEL P2	262	2818	0	0	0	0	82	102	78	0	0	0	0	0	0
LEVEL P1	604	6502	0	0	0	461	0	91	52	0	0	0	0	0	0
LEVEL 01	189	2034	0	0	0	0	0	0	0	69	71	48	0	0	0
LEVEL 02	343	3694	1	272	2930	0	0	0	0	0	0	0	70	22	251
LEVEL 03	343	3694	1	272	2930	0	0	0	0	0	0	0	70	22	251
LEVEL 04	343	3694	1	272	2930	0	0	0	0	0	0	0	70	22	251
LEVEL 05	343	3694	1	272	2930	0	0	0	0	0	0	0	70	22	251
LEVEL 06	343	3694	1	272	2930	0	0	0	0	0	0	0	70	22	251
LEVEL 07	343	3694	1	272	2930	0	0	0	0	0	0	0	70	22	251
LEVEL 08	343	3694	1	272	2930	0	0	0	0	0	0	0	70	22	251
LEVEL ROOF	32	344	0	0	0	0	0	0	0	0	0	0	0	3	29
<b>TOTAL</b>	<b>3489</b>	<b>37553</b>	<b>7</b>	<b>1906</b>	<b>20513</b>	<b>461</b>	<b>82</b>	<b>193</b>	<b>130</b>	<b>69</b>	<b>71</b>	<b>48</b>	<b>492</b>	<b>155</b>	<b>1787</b>
<b>TOTAL FSR</b>															<b>2.40</b>

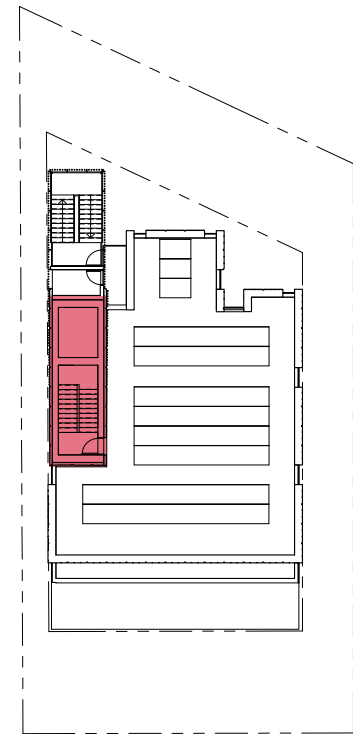




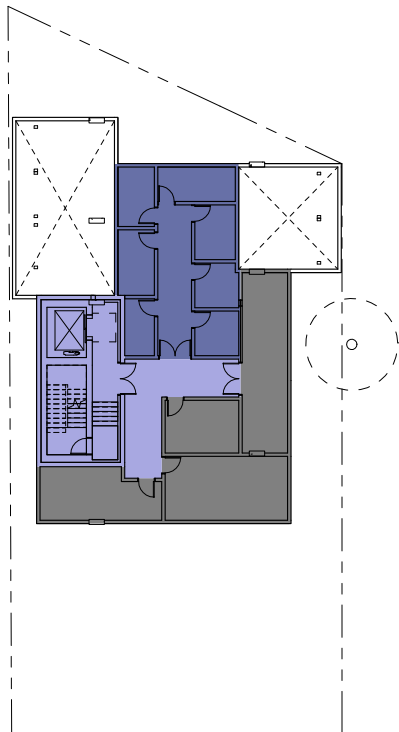
**LEVEL 01**



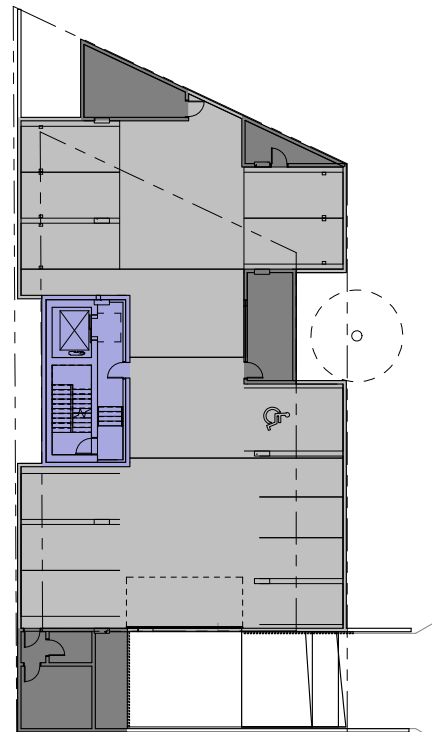
**LEVEL 02-08**



**LEVEL ROOF**



**LEVEL P2**



**LEVEL P1**

**FSR AREAS**

- AMENITY
- BALCONIES / EXTERIOR STEPS
- BIKE ROOM
- ELEVATOR / STAIR / HALLWAY
- LOBBY
- MECH / ELEC / MAINTENANCE / GARBAGE
- PARKING
- RESIDENTIAL
- STORAGE



**2.5 PARKING COUNTS**

**TYPICAL STALL** 2.7m x 5.8m

**ACCESSIBLE STALL** 3.7m x 5.8m

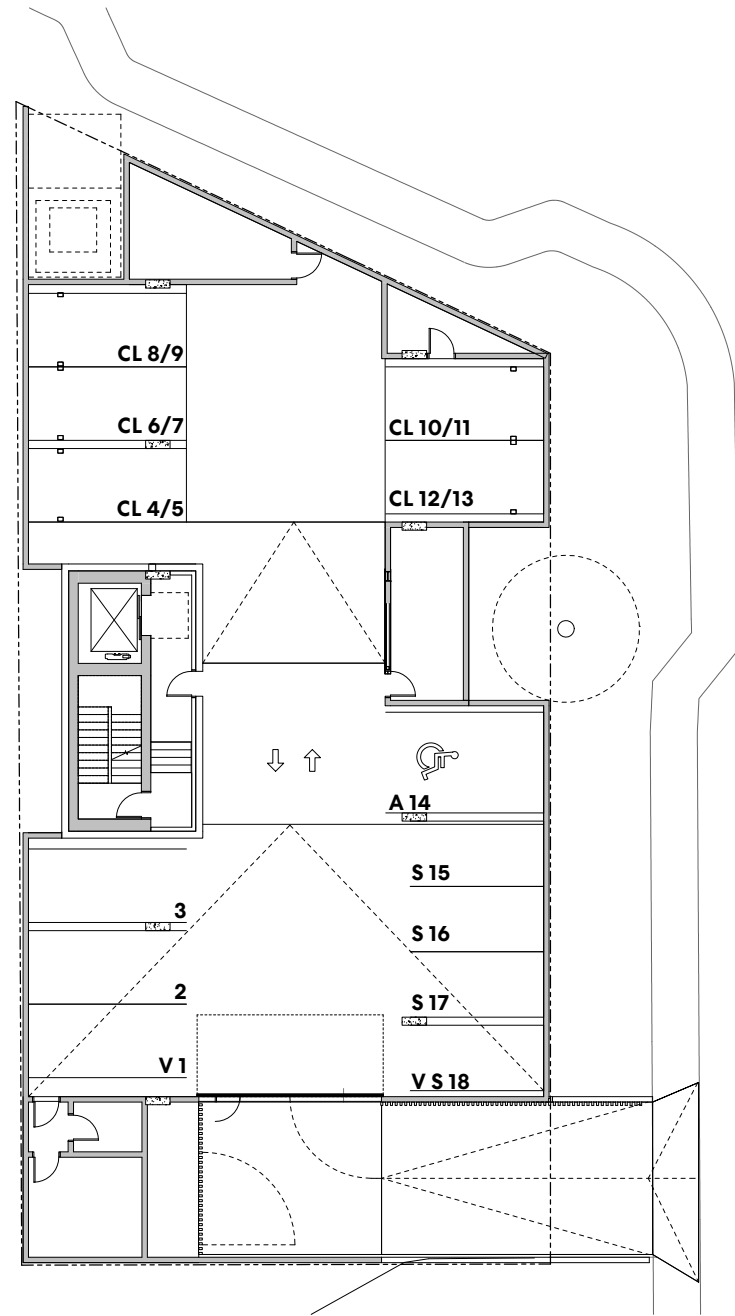
**SMALL CAR STALL** 2.4m x 4.9m (30% of stalls allowed)

CAR PARKING		Bylaw 4662, 2010		MIN REQ		STALLS PROVIDED		
				UNITS	GFA m2	UNITS	GFA m2	SINGLE
<b>MARKET RESIDENTIAL</b>		<b>Section 300</b>						
	A minimum of the lesser of:	1 parking space per dwelling OR	7		7			
		1 space per every 84m2 of GFA		2,127		25		
						5	5	
<b>TOTAL</b>			<b>7</b>	<b>2,127</b>	<b>7</b>	<b>25</b>	<b>5</b>	<b>10</b>
<b>MRKT RESID. VISITOR PARKING</b>		<b>Section 142.01</b>						
	30% of req stalls	1 parking space per dwelling OR	7		2			
	Each unit	1 space per every 84m2 of GFA		2,127	0	8		2
<b>ACCESSIBLE PARKING</b>		<b>Section 142.09</b>						
		Min 1 space req for between 10-75 parking spaces.			1	1		1
<b>TOTAL</b>					<b>10</b>	<b>34</b>		<b>18</b>

\*All parking stalls to have EV charging capabilities as per the requirements in Policy 02-80-386

BIKE PARKING		Policy 02-80-386, 2018		UNITS	BED ROOMS	MIN REQ	STALL PROVIDED		
							HORZ.	VERTICAL	TOTAL
<b>Policy Zoning Amendment Application</b>									
	3.3 - Provide 1 secure bicycle parking space per bedroom	7	2	14	14	7			
<b>TOTAL</b>		<b>7</b>	<b>2</b>	<b>14</b>	<b>14</b>	<b>7</b>			<b>21</b>
<b>SHORT TERM BIKE PARKING</b>		<b>Section 143.02</b>							
	0.2 per dwelling	7		1.4					2

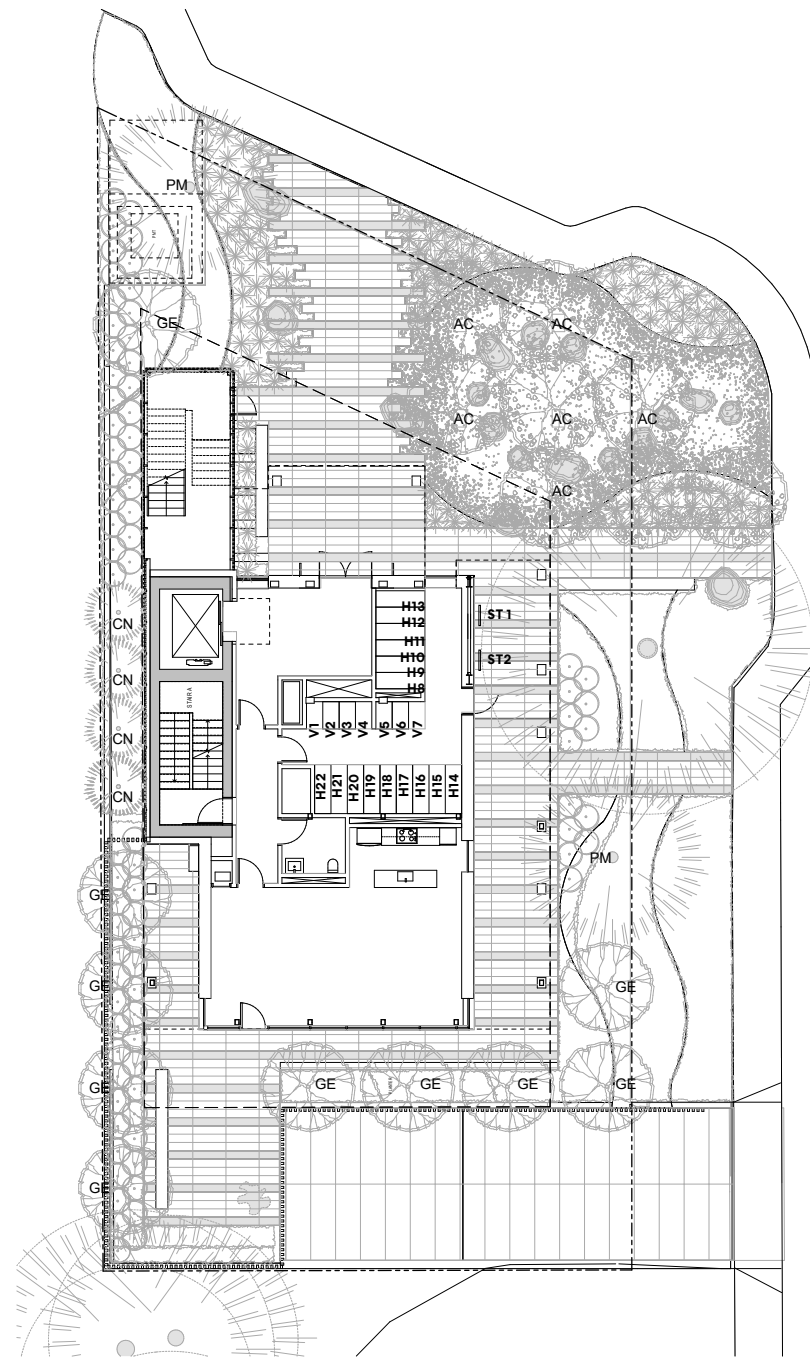
\*The project will provide 3 stalls per home, as it is recognized that the flex room could be used as a 3rd bedroom.



**LEVEL P1**

**PARKING LEGEND**

- V** VISITOR
- CL** CAR LIFT
- S** SMALL STALL
- OO** STALL COUNT



**LEVEL 01**

**BIKE PARKING LEGEND**

- V** VERTICAL
- H** HORIZONTAL
- ST** SHORT TERM



# 3.0 Sustainability Strategies

## 3.1 SUSTAINABILITY STRATEGIES

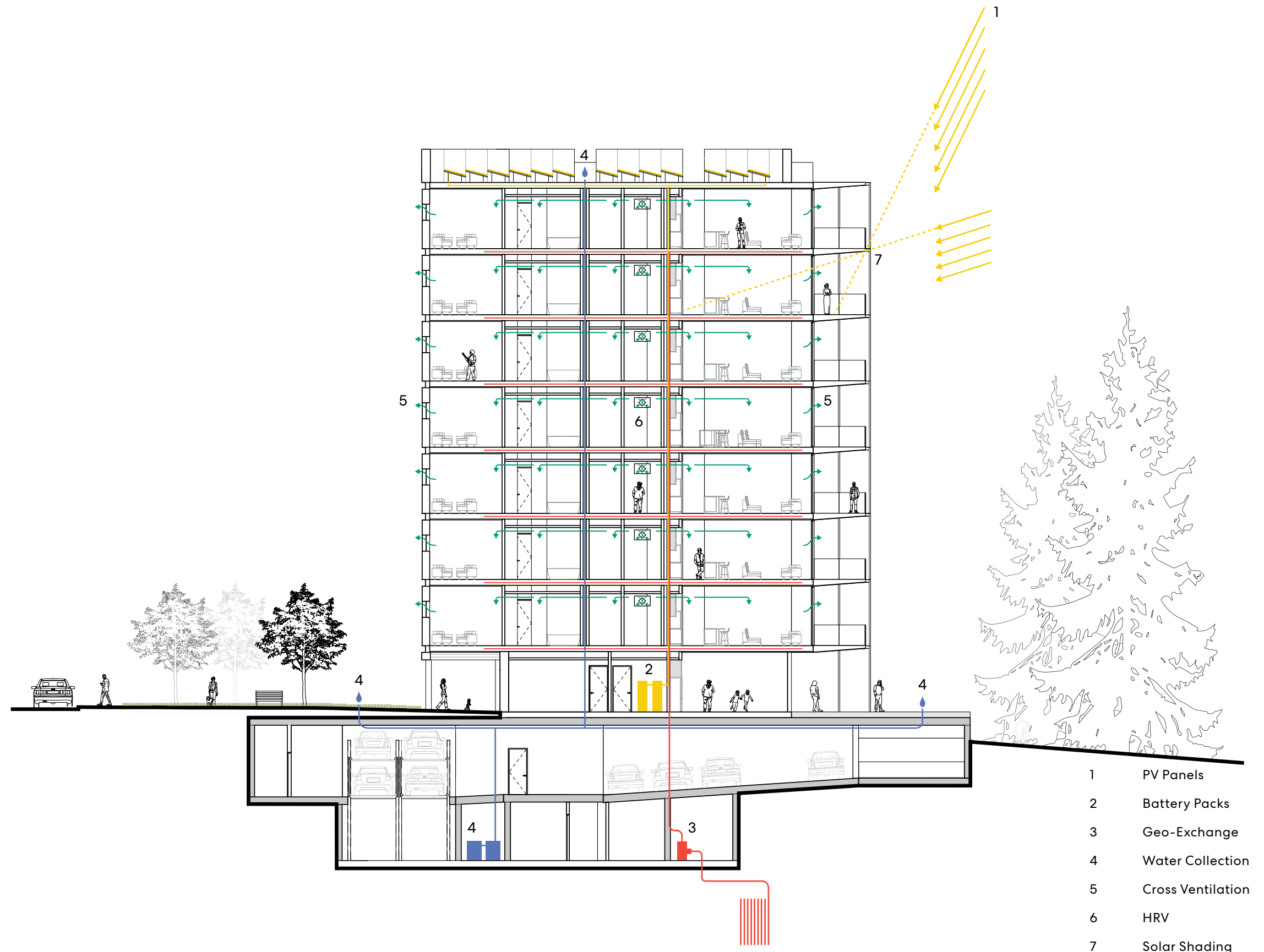
The building has been designed to respond to its site, with the massing purposefully oriented to maximize daylight, views and passive strategies.

The one-home-per floor layout ensures each home has cross ventilation which is critical to the passive cooling strategies. Public spaces are oriented to the south of the site to take advantage of views and solar gains, while private spaces, such as bedrooms, are located on the cooler north side of the site. Decks along the south facade provide solar shading.

Each home has an individual high efficiency Heat Recovery Ventilator unit. These units have been located adjacent to the outdoor stair case behind the stair screening so as to not be visible to adjacent neighbours.

Water will be collected from the roof and ground plane to be used for on-site irrigation.

Energy is generated on site through photovoltaic panels on the rooftop. The project is also looking into the viability of geo-exchange energy sources.





**MASS TIMBER STRUCTURE**

The project will participate in the Tall Wood Mass Timber Early Adoption Initiative.

By using wood predominantly, and concrete and steel selectively, the structure of the building is projected to be net zero carbon.

**BENEFITS:**

- Reduce GHG emissions
- Prefabrication reduces construction time and noise for neighbours.

**PASSIVEHOUSE CANADA** Build better. Feel better.



**PASSIVE HOUSE**

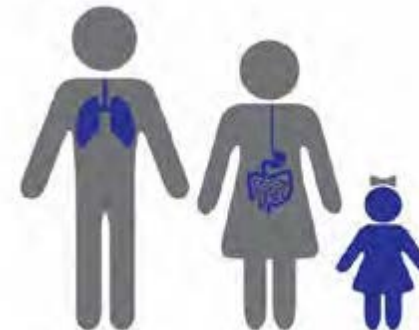
The project prioritizes an envelope first approach that reduced the need for energy consumption. This includes:

- Highly Insulated roofs and walls
- A comprehensive air barrier system to minimize infiltration through the building enclosure
- Triple glazed windows
- Passive cooling using natural ventilation

By pursuing Passive House, the project is projected to go beyond BC Energy Step Code 5.

**BENEFITS:**

- Ultra low energy building
- Outstanding comfort
- Optimal conditions for health



**HEALTHY MATERIALS**

The project seeks to avoid the use of harmful substances as identified on the Perkins + Will Precautionary List; and

- Use locally extracted and manufactured materials, whenever possible
- Prioritize the integration of low embodied carbon materials
- Be mindful of materials selected, embracing an honest aesthetic
- Use low-emitting sustainable building materials to foster good air quality
- Dramatically limit the use of human-made materials as finishes inside the building.

**BENEFITS:**

- Promote better health by avoiding known hazards
- Prioritize natural materials.



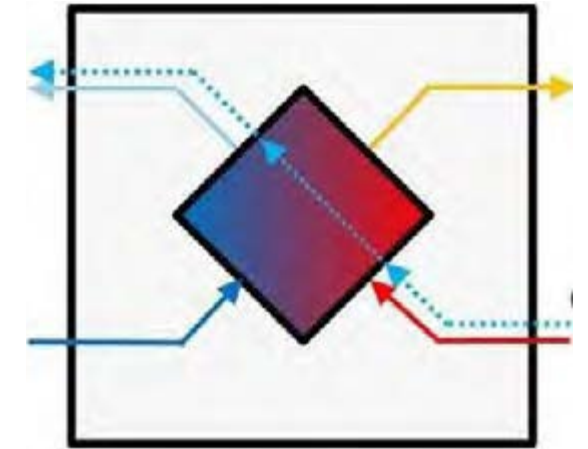
**ON SITE ENERGY GENERATION**

The current PV layout allows for an approximate 22% energy offset ratio. This percentage offsets grid-source GHG emissions. It will be enough to power the common spaces of the building, and potentially the back up power source (see below).

The project is currently looking into the feasibility of incorporating geo-exchange strategies to increase on-site energy generation potential.

**BENEFITS:**

- Less demand on grid source energy
- Reduced GHG Emissions



**HIGH EFFICIENCY SYSTEMS**

The project will specify high efficiency mechanical systems and plumbing fixtures to reduce energy consumption and water use.

Heat recovery ventilators (HRV's) with high efficiency recovery cores support mechanical ventilation and reduce overall energy consumption.

Low flow water fixtures reduce on site water consumption by approximately 40%.

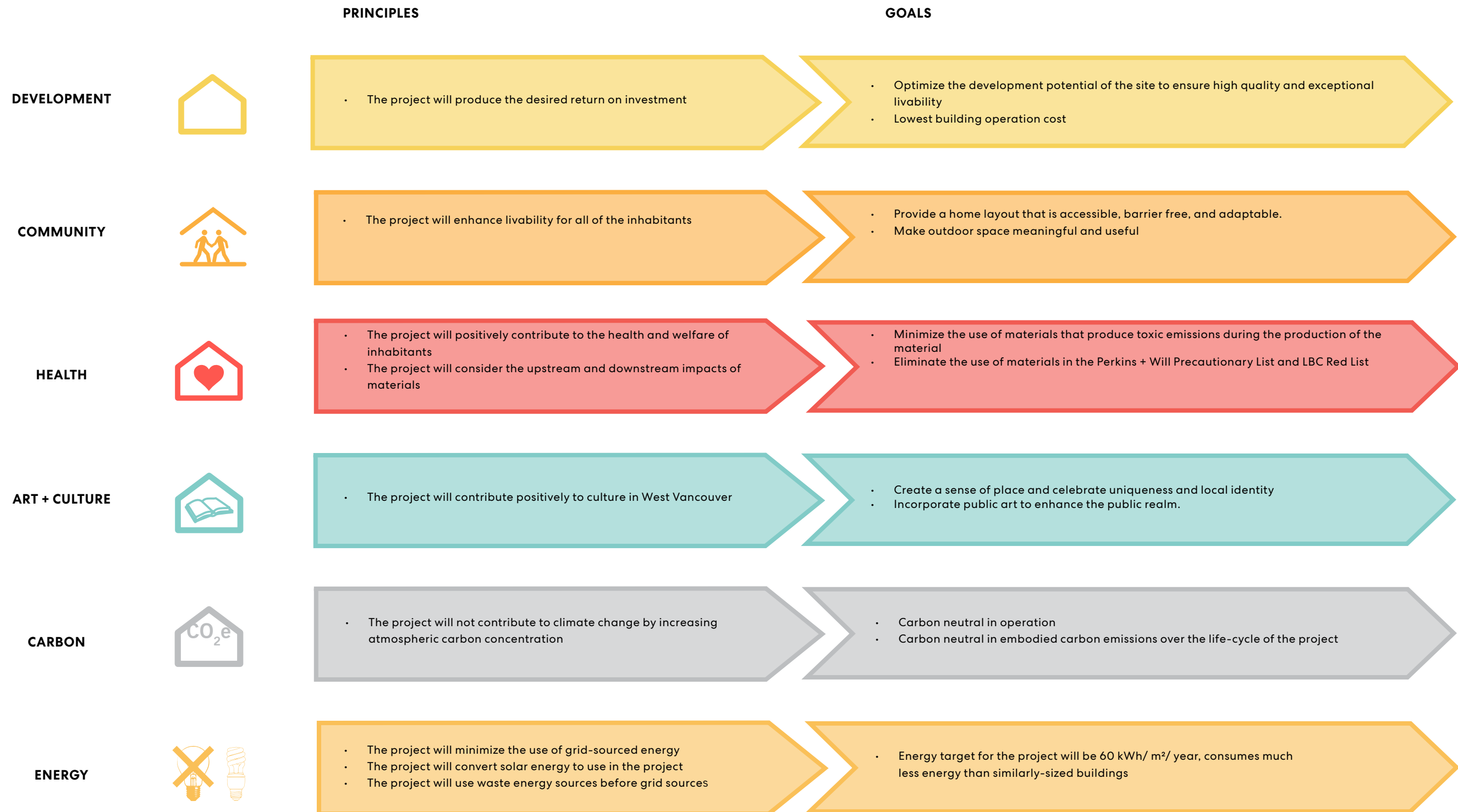
Landscape planting is native species that require little irrigation

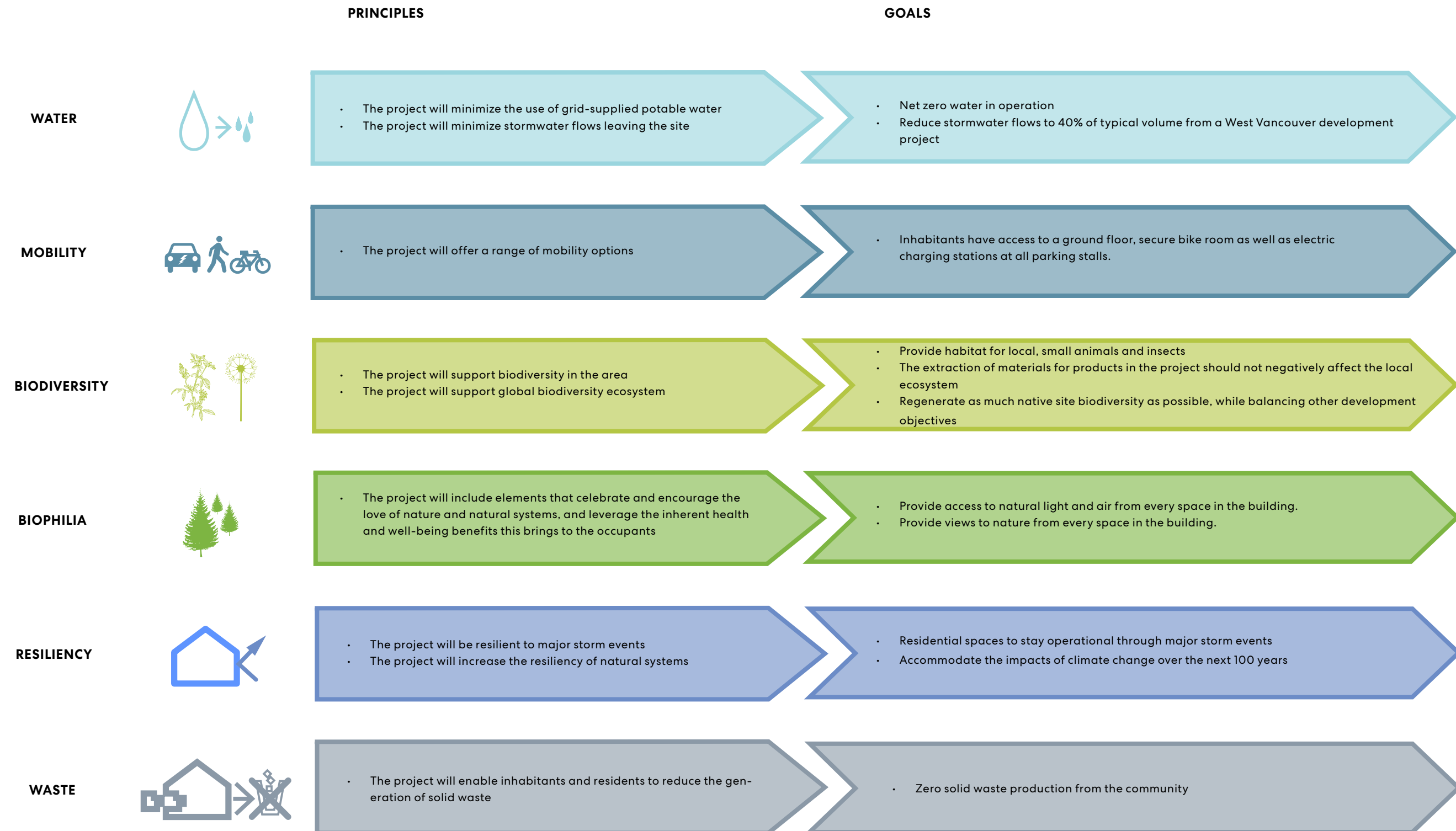
**BENEFITS:**

- Reduced energy consumption
- Reduced water consumption



3.2 OVERARCHING PRINCIPLES AND GOALS

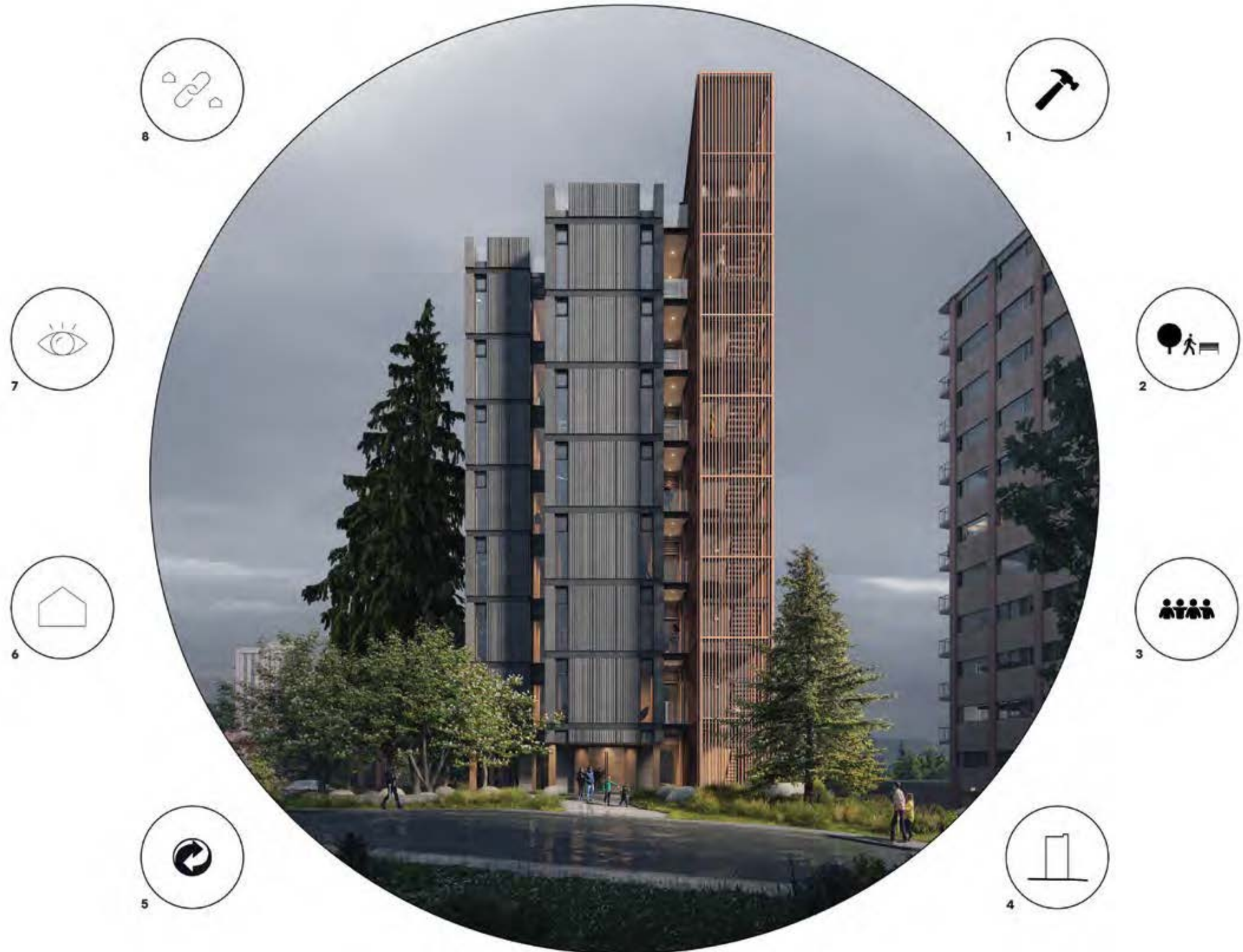






### 3.3 PROPOSAL SUMMARY - KEY OBJECTIVES

1. "Repair" and revitalize the corner for a better fit with the neighbourhood.
2. Enhance the public realm.
3. Adhere to the objectives of the West Vancouver Official Community Plan.
4. Create a building with an elegant, distinctive, and respectful character.
5. Showcase a new path forward that prioritizes an environmental approach, meaningful change in addressing CO<sup>2</sup> emissions and climate change .
6. Create bespoke homes that are livable, adaptable, and healthy.
7. Orient the building towards views
8. Celebrate Place - create a neighbourhood link.





### 3.4 PROPOSAL SUMMARY - ENVIRONMENTAL GOALS

1. High building airtightness.
2. Passive House certified glazing.
3. Healthy materials, "red-list" free.
4. Generate energy on site.
5. Balanced window to wall ratio - reduced heat loss.
6. Reduced heat loss through high thermal insulation.
7. Electric vehicle charging at all stalls.
8. Distributed heating, cooling and ventilation systems with dedicated heat recovery at each floor.
9. Street level secure bike parking.
10. Natural cross ventilation for each home.
11. Store carbon in the structure. (Target is net positive embodied).
12. Zero emissions and zero fossil fuels used on site.

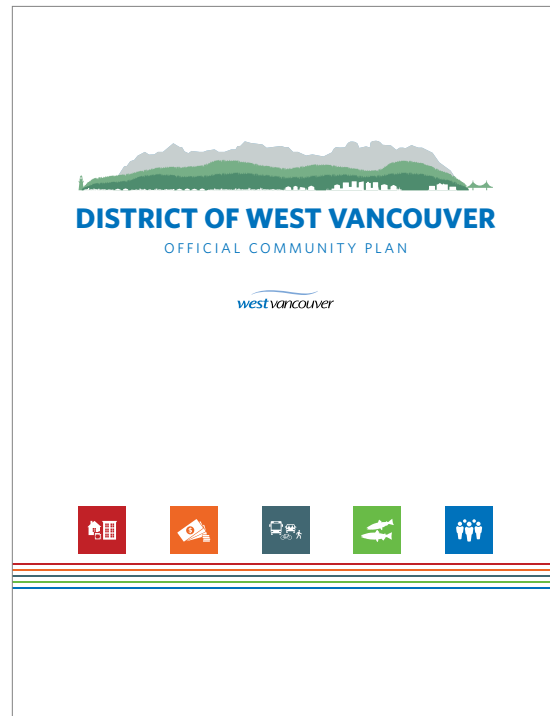




# 4.0 Policy Response

## 4.1 OFFICIAL COMMUNITY PLAN COMPLIANCE - POLICIES

The project adheres to the community goals outlined in the West Vancouver Official Community Plan and the Regional Growth Strategy "Metro Vancouver 2040 - Shaping Our Future."



### Strengthen our centres and corridors through local area plans

2.1.13 - Create capacity for an estimated 1,700–2,100 net new housing units through local area plans (see Map 3) for the following areas, subject to provision 2.1.14 of this plan:

- a. Ambleside Municipal Town Centre (1,000–1,200 estimated net new units)

Our site is located within the Ambleside Municipal Town Centre as defined on Map 16 - OCP Schedule i) pg 3. The project acts as an urban infill, creating density close to transit, amenities, and services.

2.1.14 Prepare local area plans by:

- b. Determining densities, heights and building forms that respond to neighbourhood context and character (e.g., topography, natural features, site area, transportation and amenities); and
- c. Prioritizing mixed-use and apartment forms in core areas and ground-oriented multifamily forms (e.g., townhouses, duplexes) to transition to adjacent single-family neighbourhoods.

The building proposal matches the height, form and density of the surrounding neighbourhood. The site is identified in the OCP as within the Ambleside Apartment Area boundary and responds with a similar typology fitting the surrounding neighbourhood.

2.1.15 Prior to the adoption of a local area plan, consider proposals within the local area plan boundary by:

- a. Applying relevant District-wide policies contained in this plan and any existing area specific policies and guidelines; and
- b. Requiring the proposal's contribution to rental, non-market or supportive housing, or its ability to advance the public interest or provide other community benefits as determined by Council.

While the proposal is being submitted ahead of the Ambleside Town Centre Plan, the proposal seeks to align to the guidelines and principals set out in the OCP and district wide policies, while providing numerous community benefits such as: Providing universal adaptable suites, enhancing the public realm, and going above and beyond the standards set for energy use reduction, GHG emission reduction (operational and embodied), and on site energy production.

### Advancing housing affordability, accessibility and sustainability

2.1.20 Ensure that new multi-family and mixed-use housing development meets the community's needs by:

- b. Supporting a variety of housing forms, including lock-off units, that allow housing to adapt to suit different life stages of residents;
- d. Establishing the minimum provision of accessible and adaptable units and

associated facilities (e.g., dedicated parking, barrier-free common areas); and

- e. Reviewing zoning regulations to remove potential barriers to providing accessible and adaptable housing.

The suites have been designed to be barrier free and adaptable to allow residents to age in place, and to suit the needs of ever changing family circumstances. Our expectation is that this addition to the community will allow some current residents who may live in other housing types to remain in the area as their lives change, providing additional housing choice.

2.1.23 Advance community energy efficiency and reduce GHG emissions by:

- a. Supporting transportation alternatives through housing location, design and facility provisions, and parking requirements;
- b. Increasing the percentage of efficient building forms;
- c. Requiring leading energy efficiency standards and considering site design and orientation;
- d. Encouraging renewable energy.

The site is located close to transit. All parking stalls will be equipped with electric charging stations. A bike room amenity is located for residents on the ground floor.

The building form has been designed to be compact, with minimal stepping or unnecessary articulation in order to

improve efficiency. The building form and orientation allows for optimal solar exposure for on site solar energy generation.

### Supporting tourism and visitors

2.3.13 Support placemaking through an attractive public realm and experience by:

a. Incorporating inviting public spaces in village and town centres;

The site is located between the West Vancouver Community Centre to the North, and the Weston Park to the south which provides public access to the Centennial Seawalk Trail. As such, a corner pocket garden with integrated seating will be provided to serve as a link between these two areas. This will provide a welcome moment of pause and rest for people traversing the slope from the waterfront.

The building form lifts at the ground floor to create a more generous landscaping areas, add articulation at the ground level, and to provide covered barrier free access between the resident open spaces and the public realm.

### Enhancing network accessibility, safety and efficiency

2.4.14 Incorporate universal access and age-friendly design principles in sidewalk, pathways, transit, and road improvement projects for pedestrians and cyclists of all ages and abilities (e.g., accessible

pedestrian signals, tactile walking surface indicators, appropriate curbcuts and letdowns).

All site improvements will follow best practices for accessibility, safety and efficiency.

### Promoting sustainability and innovation

2.4.24 Provide infrastructure for electric, alternative-fuel, and low-emission vehicles, including charging stations as a requirement of new development and preferential parking options.

All parking stalls will be equipped with electric charging stations.

### Applying best practices for municipal utilities -

#### i) Water conservation

2.5.7 Encourage use of development practices, landscape designs and built systems that reduce water demand and consumption.

Water will be collected from both the site and rooftop through landscape and pervious paving strategies. Planting will be native to the area and drought resistant. Aggressive potable water reduction strategies will be employed to limit consumption.

#### ii) Waste management and recycling

2.5.10 Expand organics and food waste reduction through education and on-site

composting and reuse.

2.5.11 Facilitate reductions in demolition waste through source separation and diversion, including whole-building demolition or deconstruction.

The existing building will be dismantled and recycled as much as possible. The parkade will contain an on site composting and recycling room.

### iii) Sewage and Drainage Systems

2.5.15 Employ low-impact storm and rain water management techniques such as infiltration, absorbent landscaping and natural environment conservation to mimic natural conditions and preserve pre-development conditions.

2.5.17 Employ green infrastructure or naturalized engineering strategies where possible to help manage anticipated increases in frequent storm events and associated flood risks.

Green roofs will be used on both the building rooftop and parkade roof to implement on site water infiltration and storage.

### Mitigating climate change and building resiliency

2.6.22 Expand the use of green infrastructure through public and private development to enhance long-term ecosystem services that support multiple benefits (e.g., storm water management, air quality, carbon sequestration, water

quality, and biodiversity).

The primary building material will be mass timber to store carbon in the structure. Storm water management will be implemented through pervious paving and green roofs to store and use water on site. A commitment to use zero fossil fuels on site will lead to dramatic GHG reductions over baseline targets. The air tight and high thermal performance of the Passive House envelope will make the building more resilient to extreme weather conditions.

2.6.23 Seek to incorporate renewable energy in public and private projects, and support the development of renewable energy systems as opportunities arise.

The project will implement solar photovoltaic panels on the roof top for energy generation. A geexchange system is being explored for passive heating and cooling.

### Promoting trails and access to nature

2.7.16 Provide access to beaches and stream corridors where environmentally appropriate.

2.7.17 Improve safety, universal accessibility, and signage/wayfinding to parks, open spaces, and trails for community members of all ages and abilities.

The project proposes to add a seating area at the corner, enhancing the public realm on the pedestrian link between the community centre and the Seawalk Trail.

### Enabling an active community

2.9.3 Encourage the on-site inclusion of active open space and play opportunities and provision of privately owned public spaces with new multi-family and mixed-use development as appropriate.

The project will contain indoor and outdoor amenity and garden spaces for residents at the ground floor. Active transportation will be encouraged through the provision of convenient, secure, street level bicycle storage.

### Embracing arts, creativity and lifelong education

2.9.6 Incorporate public art into both public and private sector projects to enhance public spaces and the walking and cycling environment.

The core wall to the west has been identified as a possible area for public art as it can be seen from both Bellevue Ave and from The Centennial Seawalk Trail.

The provision of a shared multi purpose room at the ground level will provide an important flexible space that may be used by residents in a variety of ways including fitness, performance and art.



## 4.2 OFFICIAL COMMUNITY PLAN COMPLIANCE - BUILT FORM GUIDELINES

The site falls within the boundaries of the Ambleside Apartment Area as defined under the Built Form Guidelines for Development Permit Area Designations. Guidelines BF-B 4.



Site

### I. Context and Site Design

a. Encourage renovation and conservation of buildings and features of heritage character;

Not applicable to this project.

b. Situate buildings to maximize views while minimizing impacts to surrounding buildings' views.

Building massing and glazing deployment has been considered to maximize views towards the south. The massing respects the 45° Building Height Grade line.

c. Minimize obstruction of views from public pedestrian areas, common living areas of other developments, and from existing residential units.

See view impact studies for further information.

d. Enhance the quality of streetscapes through the overall design of development.

The current development is enclosed behind a solid wood fence. The new development will improve the surrounding streetscapes by providing a well designed and garden-like public realm.

e. Encourage pedestrian amenities, such as courtyards, within and adjacent to apartment developments.

The building incorporates an entry courtyard as well as a corner pocket garden to link it to the larger pedestrian thoroughfare between the community centre and Weston Park which provides public access to the Centennial

Seawalk Trail.

f. Link ground level open spaces to adjacent streets, sidewalks and pathways.

The building features a stepping massing along Bellevue Ave and is lifted at the ground floor in order to maximize the public realm and link resident open spaces to public access areas.

g. Encourage the use of integrated public art compatible with adjacent development and street patterns to enhance the pedestrian experience.

The pedestrian experience is being enhanced with a generous corner garden at the north west corner of Bellevue and 22nd.

h. Bury utility wires underground where economically feasible.

To be considered alongside rezoning application.

### II) Building Design

a. Vary building mass to minimize its scale.

The building steps along Bellevue, following the property line to both provide more open space at the public realm and to minimize the building scale. Along 22nd St, the composition of the facade likewise breaks the massing down into smaller elements.

b. Address the compatibility of scale between new buildings and existing adjacent buildings.

The height, scale and separation between the adjacent building to the

west is comparable to other projects in the immediate surrounding blocks. The proposed massing was sensitively scaled to create a gradient from the lower building to the south to the larger buildings to the west and north.

c. Encourage the use of high quality materials.

The project is committed to using high end healthy materials on both the exterior and interior of the building, including elements of the mass timber structure being exposed.

d. Detailing should be designed in keeping with the character of the building and landscape.

Vertical divisions have been added to the facade to follow the structural rhythm of the building. Horizontal elements are implemented to add shadow and texture, while reducing the scale of the massing. Elements such as wood soffits and screening have been added to highlight the fact that the building is built of mass timber, as well as tie into the west coast aesthetic of West Vancouver.

e. Use building mass to emphasize the entrance to buildings.

The building has been lifted at the ground floor to create a generous porte cochere and entry area.

f. Entries should be visible, clearly articulated, and accessible.

The main entry is located off of Bellevue Ave. The entry is articulated by the stepping facade on either side. Entry off of Bellevue

Ave was chosen to work with the site topography to keep the entry accessible.

g. Encourage terraced buildings adjacent to the shoreline.

Due to tall trees to the south, the massing has not been stepped in favor of maximizing views and optimizing the roof top for solar Photovoltaic arrays. Furthermore, as the project is pursuing Passive House certification, simplified forms perform better for energy use reduction.

h. Avoid blank or undifferentiated facades at the ground level.

The ground level is articulated by soffit covered pedestrian access connecting the resident outdoor amenity to the main entry. The ground floor contains both a resident multipurpose room and bike amenities. The public realm with contain generous landscaping.

i. Screen roof top mechanical equipment from neighbouring properties

Mechanical equipment on the building will be minimal as the project is Passive House and is implementing individual heat recovery units within each home. They are located in a screened room next to the exterior exit stair. The rooftop will have solar panels which are arranged to be an asset, highlighting the buildings sustainable qualities rather than an eyesore.

j. Encourage private outdoor living space for each unit.

Each home has an outdoor deck to the south to maximize access to daylight and

water views.

k. Design buildings and landscape elements to minimize shading, and intrusion on privacy of adjacent buildings.

See shadow studies page 43. The core has been situated so that minimal glazing is deployed on the west side of the building to eliminate overlook to the adjacent building.

l. Provide detailing and articulation, especially at eye level.

The building mass is lifted and articulated at the ground floor to provide covered pedestrian walkway and drop off areas. Furthermore, landscaping will be deployed throughout the public realm to add visual interest and layering to create a sense of generosity.

m. Site and screen garage entrances, mechanical equipment and garbage bins, to minimize visual and acoustical impacts on adjacent properties and the streetscape.

The parkade uses the natural grading of the site to minimize appearance from the public realm. The parkade is screened. All mechanical equipment and garbage bins are located within the parkade and not visible from the street.

### III) Landscape

a. Integrate landscape features and elements with the adjacent streetscape, use established vegetation where feasible, and provide a mature and varied appearance upon construction completion.

A landscaped entry garden as well as a corner pocket garden with integrated seating have been planned for the development.

b. Avoid landscaping elements that inhibit pedestrian or barrier free access along sidewalks or towards buildings.

All site improvements will provide barrier free access to the common areas.

c. Maximize the use of roof spaces for roof gardens and common areas.

The rooftop is currently planned for solar panels and energy generation. In lieu of a rooftop garden, each home has a generous outdoor deck. Furthermore, resident indoor and outdoor amenity space has been provided on the ground floor to the south.

d. Minimize the scale of apartment buildings at ground level with the use of trelliswork and other landscape features.

The ground floor has been lifted to minimize the scale at grade, provide covered pedestrian access and expanded landscape areas. Using a layered approach, a variety of scale in planting, combined with a range of species, will create a sense of invitation to the landscape.

e. Minimize glare and light spill to surrounding properties through design and siting of exterior lighting.

The service core was purposefully placed to reduce glazing along the west side of the building to reduce overlook and glare to the neighbouring property. Exterior lighting will be designed to reflect these

parameters as well.

### IV) Circulation/Parking

a. Locate parking underground to maximize ground level open spaces for landscape elements and treatments.

The parkade is situated underground with the entrance to the south of the site.

b. Encourage underground garage entries to provide an appealing entrance from the streetscape with the use of planters and/or trellis structures.

The parkade entry is underground and integrated with the landscape design.

c. Discourage large expanses of ground level paved parking, particularly when visible from or directly adjacent to a street. Where ground level parking is needed, provide landscape elements such as fencing or planting to visually break up and screen parking from public streets and neighbouring properties, improve natural drainage, and highlight pedestrian routes.

There is no ground level parking included in the project.

d. Design underground residential parking to be readily accessible and easily used by residents.

All parking is located on one level. The core is centrally located so as not to be far from any of the parking stalls. Parking stalls are a mixture of regular stalls and car lifts to provide options for residents. An unreserved accessible stall has been located next to the core.

e. Ensure that site circulation is accessible to persons with disabilities.

The site will provides barrier free access at all shared areas such as the front entry, the resident amenities at ground level and common amenities in the parkade such as storage rooms and garbage/ recycling sorting.

f. Share access/curb cuts between buildings where possible.

Existing curb cuts have been maintained where possible, shared access is not contemplated.

g. Minimize the width of curb cuts where possible.

Curb cuts will follow city engineering guidelines.

h. Design and situate garage doors so that they are not a dominant feature of the streetscape.

Garage doors are located underground in the parkade.

i. Encourage the use of bicycles and the provision of bicycle storage areas.

Bike storage for residents has been provided at street level.



### 4.3 WEST VANCOUVER FOUNDATION - VITAL SIGNS COMPLIANCE

**Vital Signs** is a community check-up led by community foundations and coordinated by Community Foundations of Canada that leverages community knowledge to measure the vitality of our communities, identify significant trends, and support action towards improving our quality of life.

West Vancouver Community Foundation  
Vital Signs Report 2016 (page 4)

Since 1979, the **West Vancouver Community Foundation** has worked to leverage the generosity, talent, and commitment of our residents to build a stronger, more caring and inclusive community. Our vision is a healthy and vibrant West Vancouver, where everyone is valued, contributes, and feels they belong.

West Vancouver Community Foundation  
Vital Signs Report 2016 (page 4)

**VitalSigns**<sup>®</sup>



#### Vital Signs Report 2016

The Vital Signs Report 2016 identified 10 key issue areas that serve as indicators of the community. The goals of the report are to:

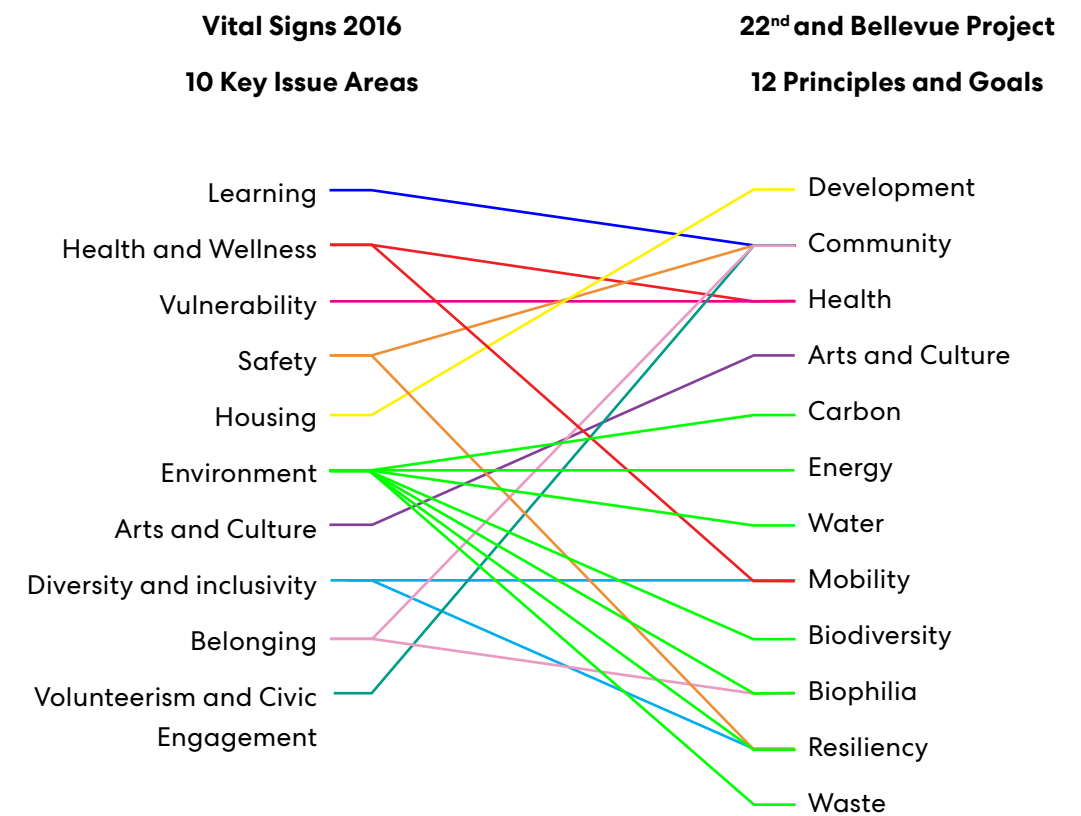
- Highlight areas to encourage further dialogue and response from institutions, public leaders, charitable organization and citizens.
- Encourage cross-sector, holistic thinking on the overall vitality of our community and provide impetus from cross sector initiatives
- Build community capacity through shared knowledge for good decision making.

#### Project Overarching Principles and Goals

At the onset of the project, Delta Group and Perkins and Will held a design charrette to establish a holistic set of principles and goals that would establish the foundation of the project and influence every decision. The intent of setting these principles and goals was to:

- Ensure alignment of values within the project team
- Show leadership to change the local development industry and the way we build.
- Create bold and inspiring architecture with an urgent environmental imperative.

Many of the key issue areas identified in the Vital Signs Report 2016 have a direct relationship and alignment with the principles and goals set out for the project.



## Vital Signs Report 2017

The Vital Signs Report 2017 took a deep dive into one of the 10 Key issues identified in 2016's report - Belonging. The report focused on the topic of belonging by delving into 3 main topics: Belonging and Contribution, Diversity and Inclusion, and Housing Diversity and Attainability. The project adheres to the goals outlined in the report in the following ways.

### I. Belonging and Contribution

Belonging and contributing could be more intentional and supported through designing public spaces for more formal and informal connections. Our library, community centres, schools and the Harmony Arts Festival do this well.

The project proposes to strengthen the public realm by providing a corner pocket garden with integrated seating, serving as a link and moment of pause between the community centre to the north and the Centennial Seawalk trail to the south.

West Vancouver has a high concentration of seniors in a community with low walkability score (43 out of a scale of 100), as well as low transit accessibility. In addition, 26% of our seniors 65 and older live alone. These are some of the factors that limit the ability to maintain independence and social contacts and supports, and increase the risk of social

isolation and its negative effects on health and well-being.

The site is located close to amenities, transit, and the West Vancouver Community and Seniors Centres. Each suite is one level and barrier free which would allow seniors to age in place

### II. Diversity and Inclusion

More generational and socio-economic diversity is needed in our community – many of us can't afford to "age in place" or continue living near our family.

The 2017 Vital Signs Housing Survey highlighted that 29% of respondents considering moving to West Vancouver and 59% of current residents who would consider relocating within West Vancouver would be looking at an apartment condominium as the housing type they would be the most interested in.

Each suite of this project has been designed to be barrier free and adaptable to suit all kinds of changing family circumstances. The net size of each home falls within the size range listed in the survey as being desirable.

Indoor and outdoor public spaces, as well as neighbourhoods, can be designed to encourage connecting and help make people feel included. Libraries, schools, community centres and even shopping centres are valuable venues, and arts, festivals, sports, food, stories, and dialogue

are important activities for creating awareness, building bridges and fostering inclusion.

The outdoor public spaces are intended to provide community connectivity to the larger neighbourhood. The ground level incorporates a multipurpose room and garden areas for social gatherings of residents.

### III. Housing Diversity and Attainability

Increasing density and diversity of housing stock needs to be a priority. More secondary suites, infill or coach houses, multi-family dwellings, purpose-built rentals, and smaller homes should be encouraged through zoning and incentives.

The suites add to housing diversity as they are atypical for apartment buildings with only one home per level. They will appeal to those looking to age in place and downsize, while still keeping the feeling of a single family home.

Development and re-development needs to aim for "20 minute neighbourhoods", where amenities are within a 20 minute walk or bicycle ride from home. Increased density, mixed use developments, public spaces designed for connecting, car sharing, better cycling infrastructure, improved transit, and increasing walkability with more sidewalks would be features of these "community nodes".

The project proposes to add gentle density to a neighbourhood already zoned for multifamily development. As an infill site, the building will be consistent with the form and density of surrounding buildings.

The site's proximity to amenities, community services, and transit make it an ideal spot to add increased density. The project promotes connectivity by providing a ground floor integrated into the larger public realm. The corner pocket garden will strengthen the pedestrian path between the Seawalk and the West Vancouver Community Centre. Resident bike parking will be provided at grade to encourage multiple modes of transportation.

Housing and neighbourhoods need to be designed for better accessibility and mobility, including railings, ramps, more sitting areas, safer street crossings, and other features that make it easier for not just those with walkers, wheelchairs, and baby strollers, but for everyone to get around.

Both the homes and site will be designed to be barrier free and accessible. Different modes of mobility will be encouraged by providing residents bike storage at grade.

33% of West Vancouver residents surveyed expect to move from their home in the next five years, with the key driver being financial and economic reasons (primarily stated by those under 65 years of age). Those anticipating a move in more than

five years primarily cite downsizing and health reasons.

The net size of the units falls within the size range listed on the survey as being desirable.

The 2017 Vital Signs Housing Survey highlighted that when considering a move, current residents most considered proximity to: shops and restaurants (43%), recreation and fitness facilities (43%), parks and trails (43%), and access to transit (20%) as the most important factors when considering a new neighbourhood.

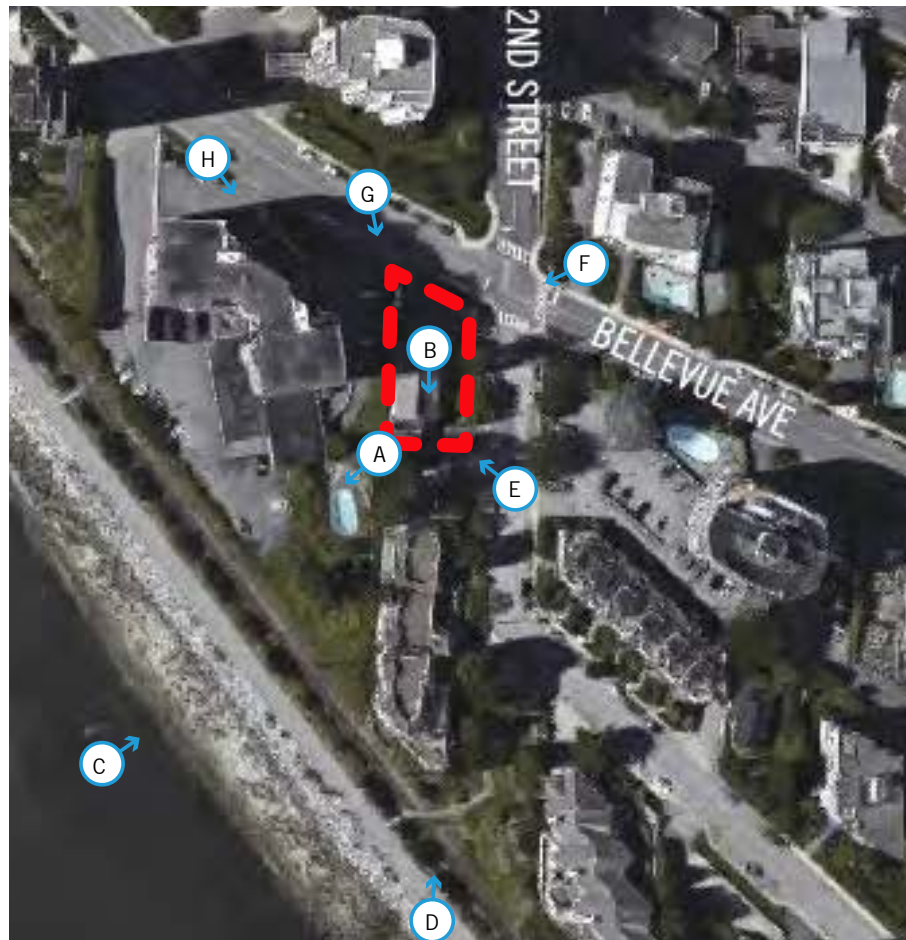
The project is situated close to all of the listed desirable amenities.



# 5.0 Local Context

## 5.1 EXISTING SITE PHOTOS

The Site is located at the corner of 22nd St and Bellevue Ave in Ambleside, West Vancouver.



--- PROPERTY LINE



A) View looking south from south west corner of site.



B) View looking south from middle of site.

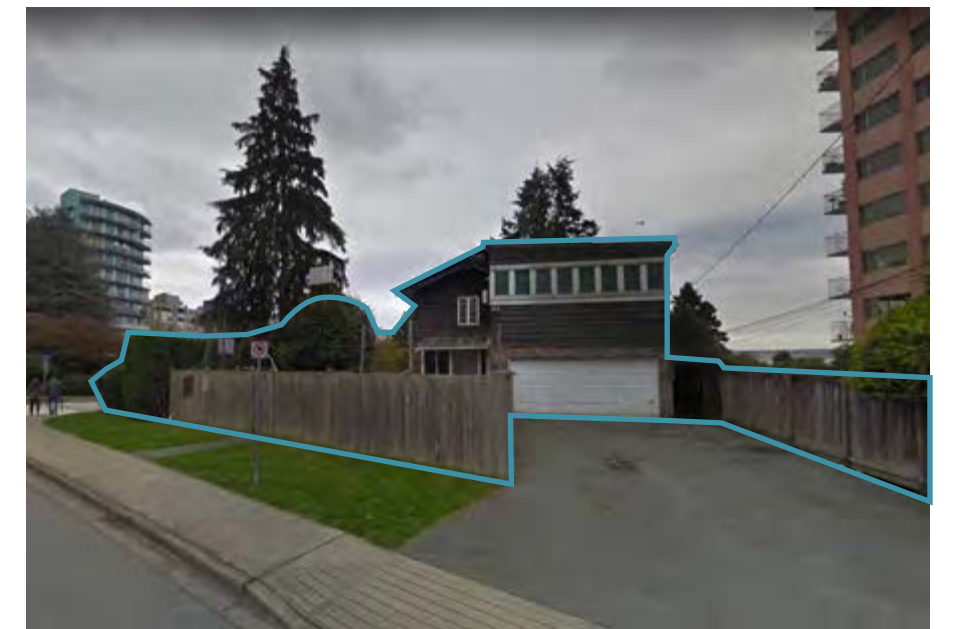




C) View looking north from south west of site



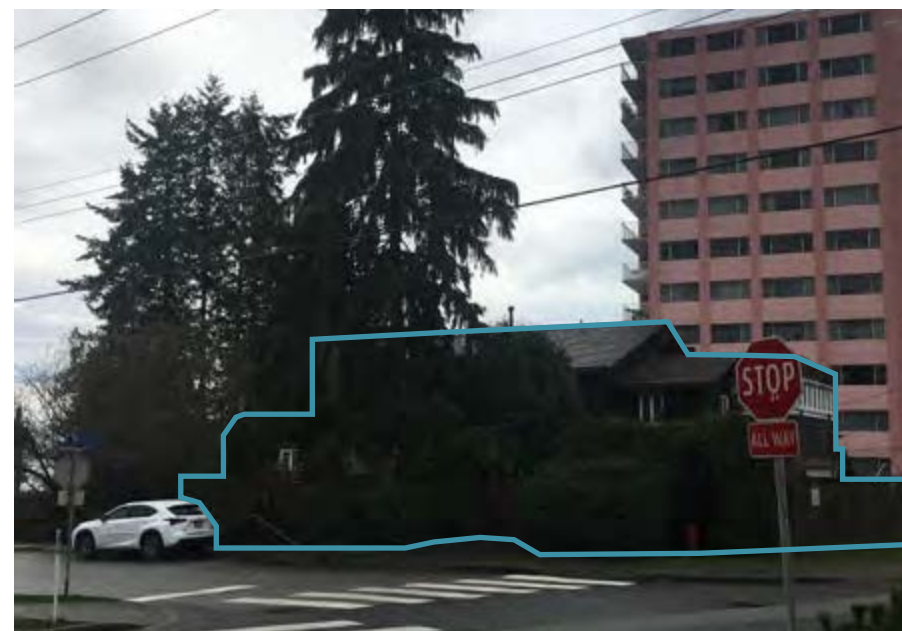
E) View from south east corner of site



G) View north west corner of site



D) View looking north from south of site.



F) View from north east corner of site

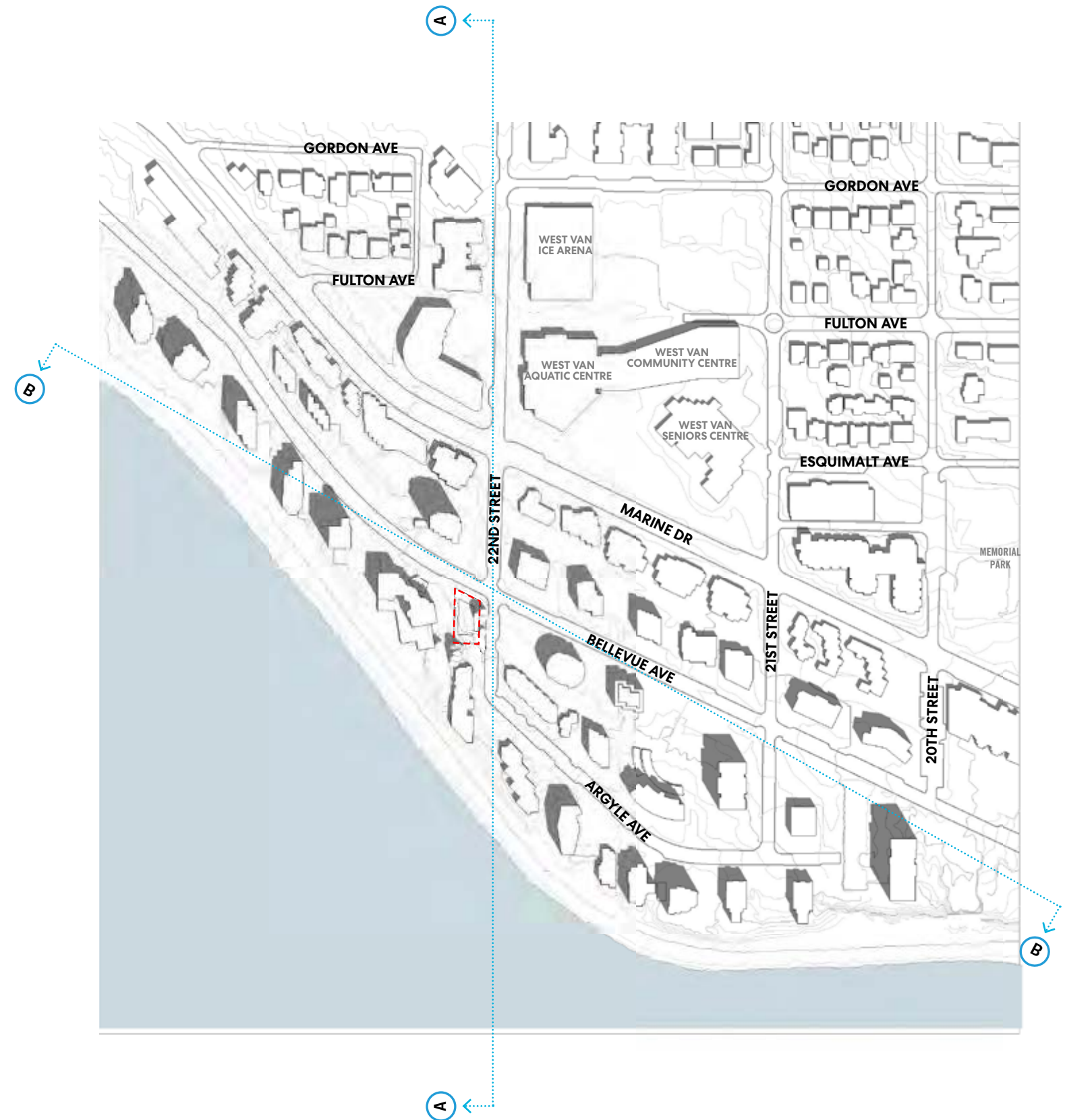


H) View looking east from Bellevue Ave

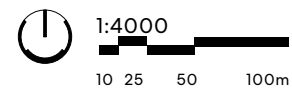


## 5.2 SITE SECTIONS

- The site is located  $\pm 15\text{m}$  above sea level and slopes down towards the water.
- There is a  $\pm 2.7\text{m}$  grade change across the site down 22<sup>nd</sup> Ave in the north-south direction. This will be utilized to position the entry into the parkade.
- In the east-west direction, the site is relatively flat. The entry to the building will be situated along Bellevue to ensure an accessible barrier free entry.

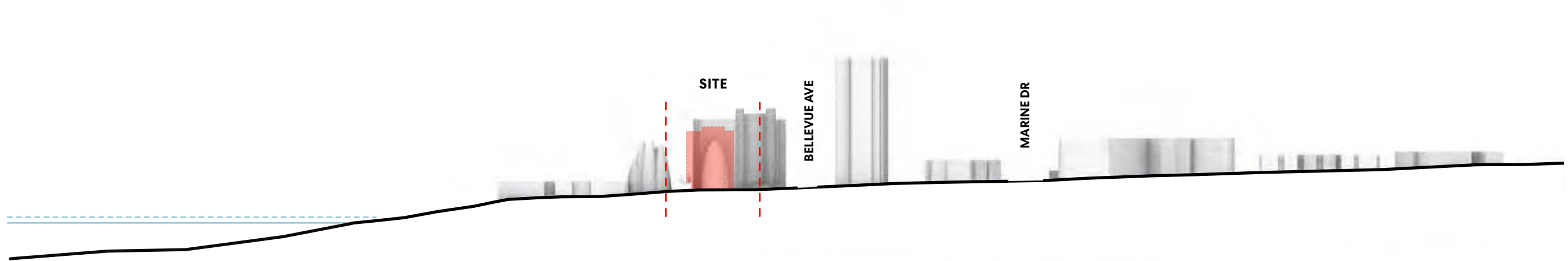
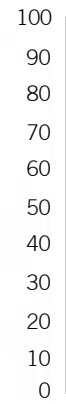


--- PROPERTY LINE



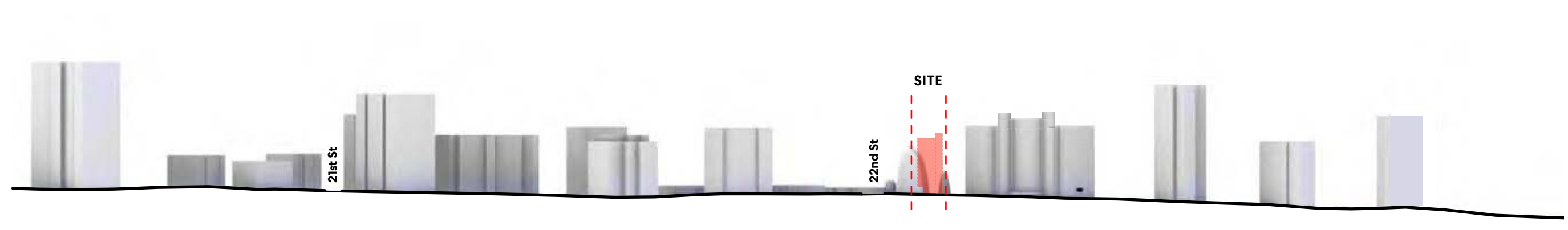
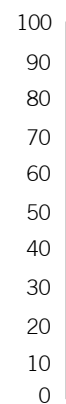
**SECTION A**




ELEVATION (m)



**SECTION B**

ELEVATION (m)



-  PROPERTY LINE
-  CURRENT HIGH TIDE
-  PROJECTED 1M SEA LEVEL RISE

1:2000

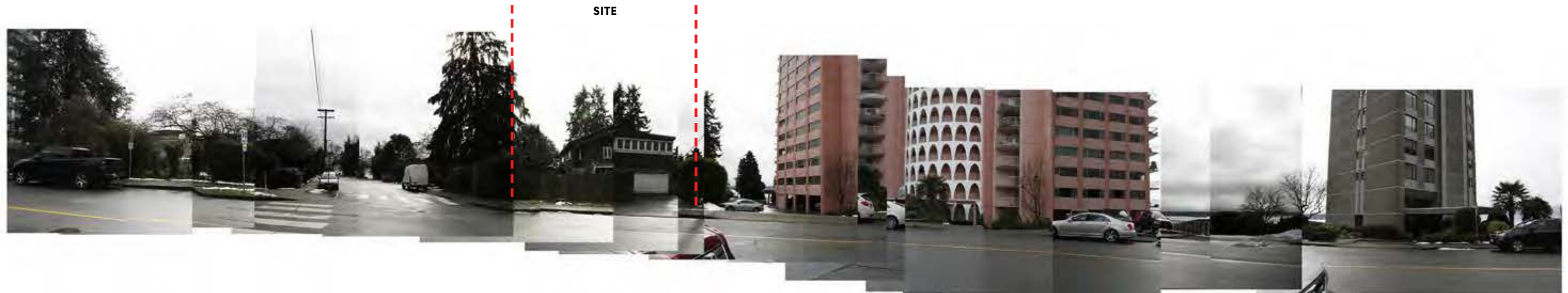




5.3 SITE PHOTO MONTAGE



22nd Street



Bellevue Ave

--- PROPERTY LINE



#### 5.4 SURROUNDING BUILDING TYPES



2187 Bellevue Ave



2167 Bellevue Ave



2145 Bellevue Ave



2190 Bellevue Ave



2222 Bellevue Ave



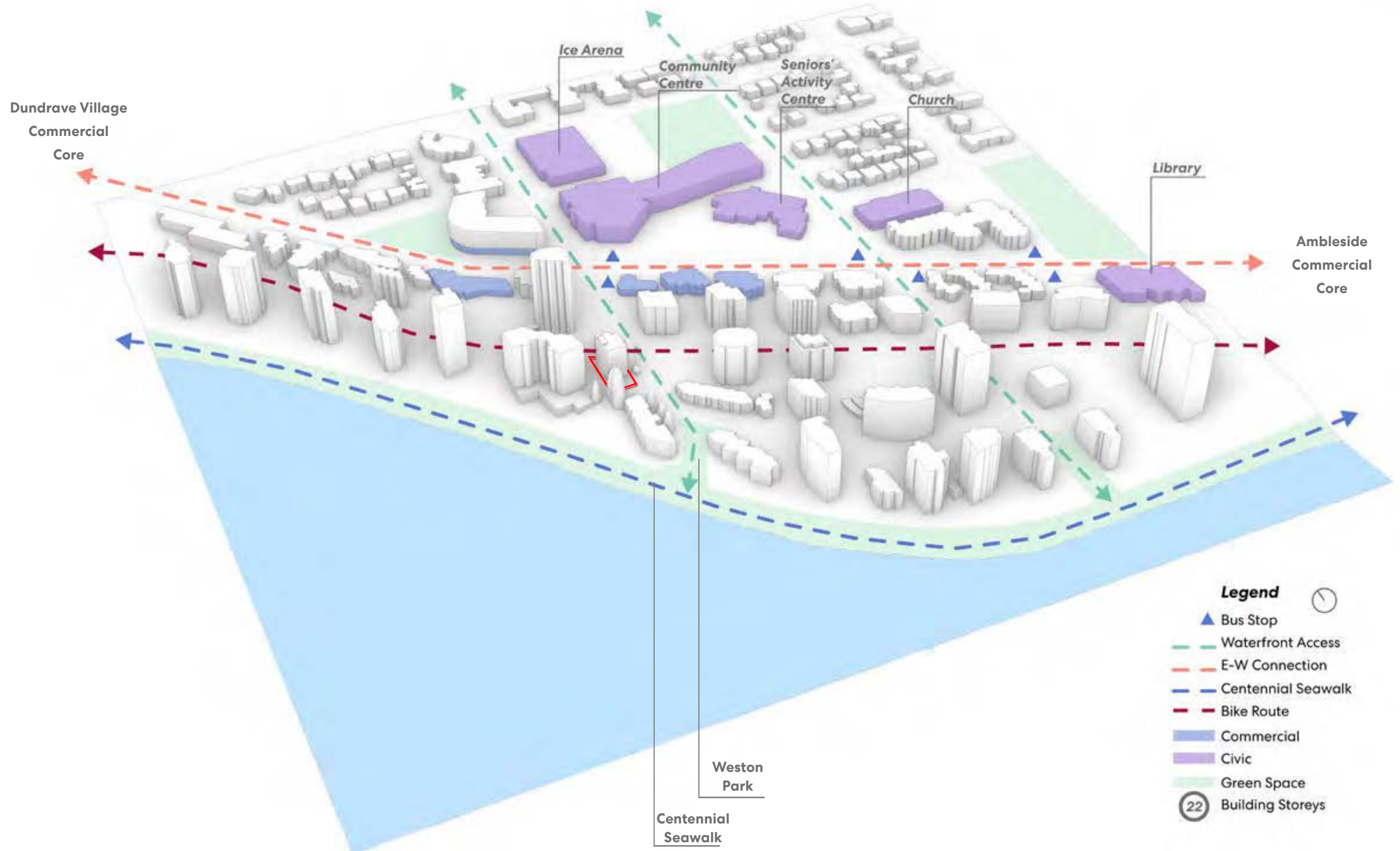
2203 Bellevue Ave



### 5.5 AMENITIES AND SERVICES

The site falls within the boundaries of the Ambleside Town Centre. As such, it has great proximity to nearby civic amenities associated with the West Vancouver Community centre, as well as being located just a few blocks away from both the Ambleside and Dundrave commercial cores.

The site is one block away from the Marine Drive frequent transit corridor and is close to Public access to the Centennial Seawalk Trail through Weston Park



## 5.6 SURROUNDING BUILDING HEIGHTS

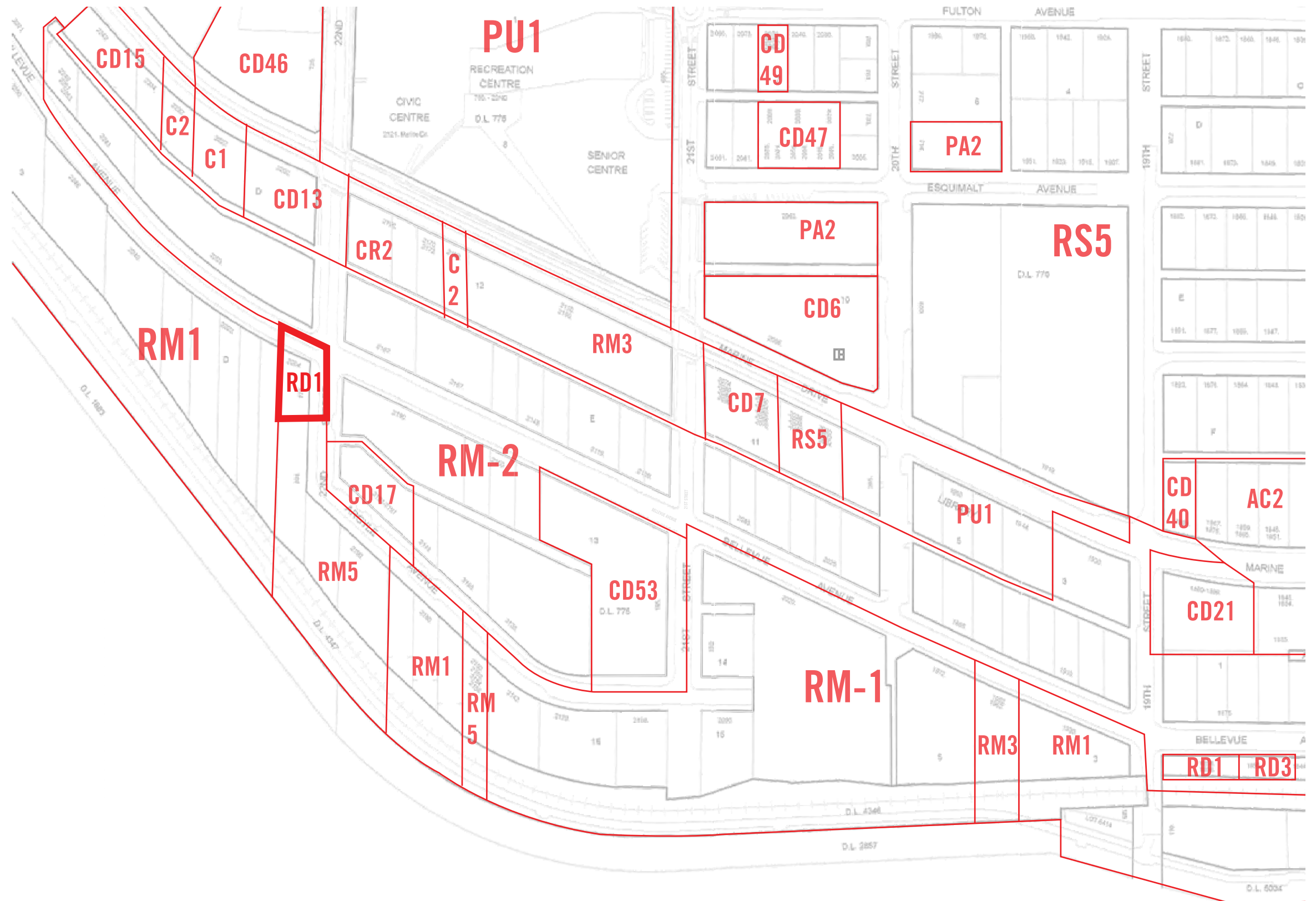
The proposal is for an 8 storey residential apartment. The form, scale, and density fit within the existing fabric of the neighbourhood.





### 5.7 ZONING PLAN

The site is currently zoned as RD1 - Duplex Dwelling Zone. It is the only such zoning in the immediate surroundings, with all neighbouring properties zoned as Multiple Dwelling Zones. As per the Official Community Plan, the site falls within the boundary of the Ambleside Apartment Area as defined under the Built Form Guidelines for Development Permit Area Designations. Guidelines BF-B 4. (See page 11).

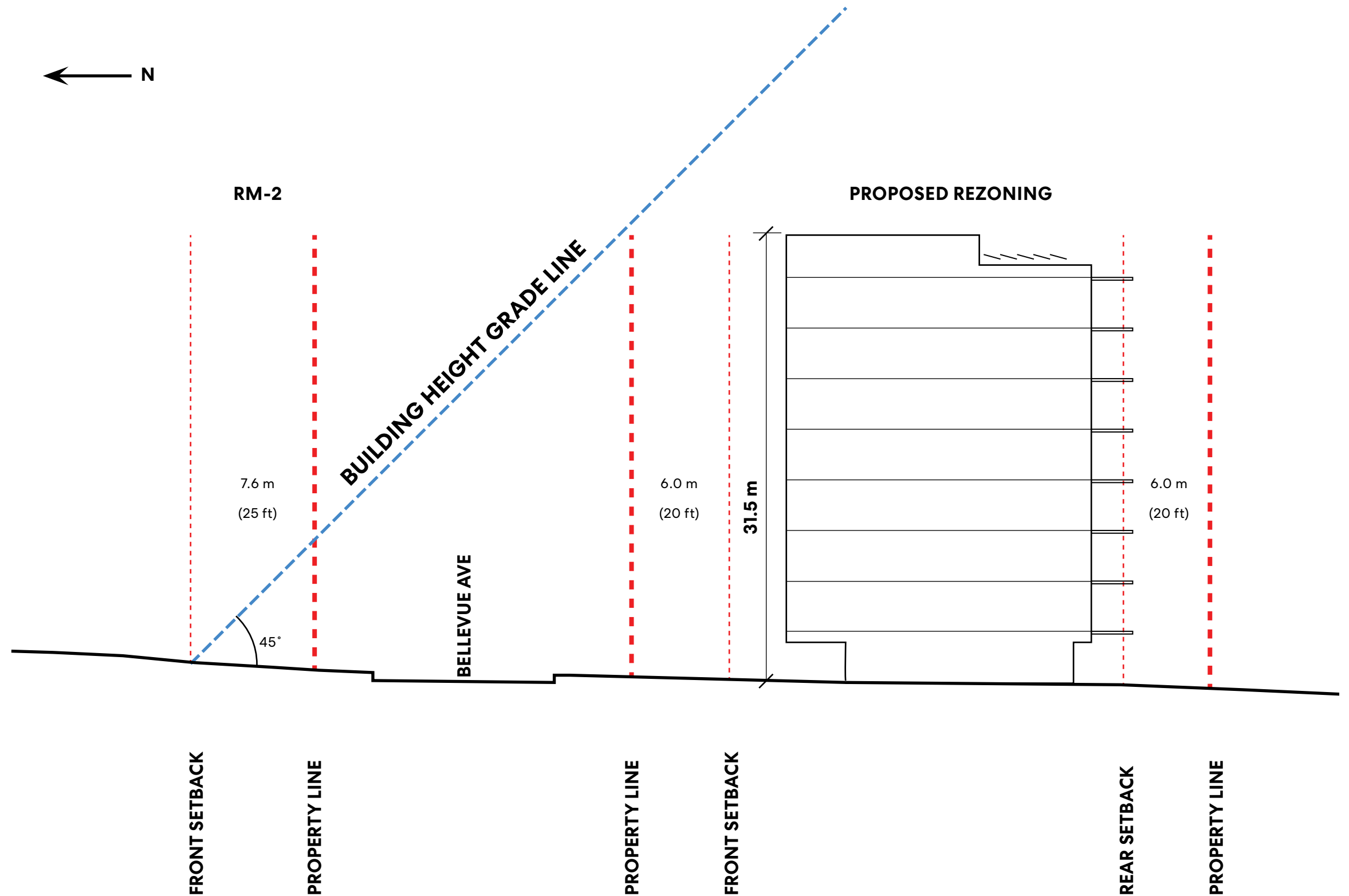


## 5.8 BUILDING HEIGHT

The proposal seeks to rezone the site to a more compatible and appropriate use for the neighbourhood, an 8 storey residential building. As such, the proposal follows the guidelines set out in the bylaws for apartment building height compliance.

Bylaw 120.20 - Apartment Building Height Grade line.

The floor to floor height of the building is higher than a typical tower. This is due to the extra depth of the mass timber floor assembly.

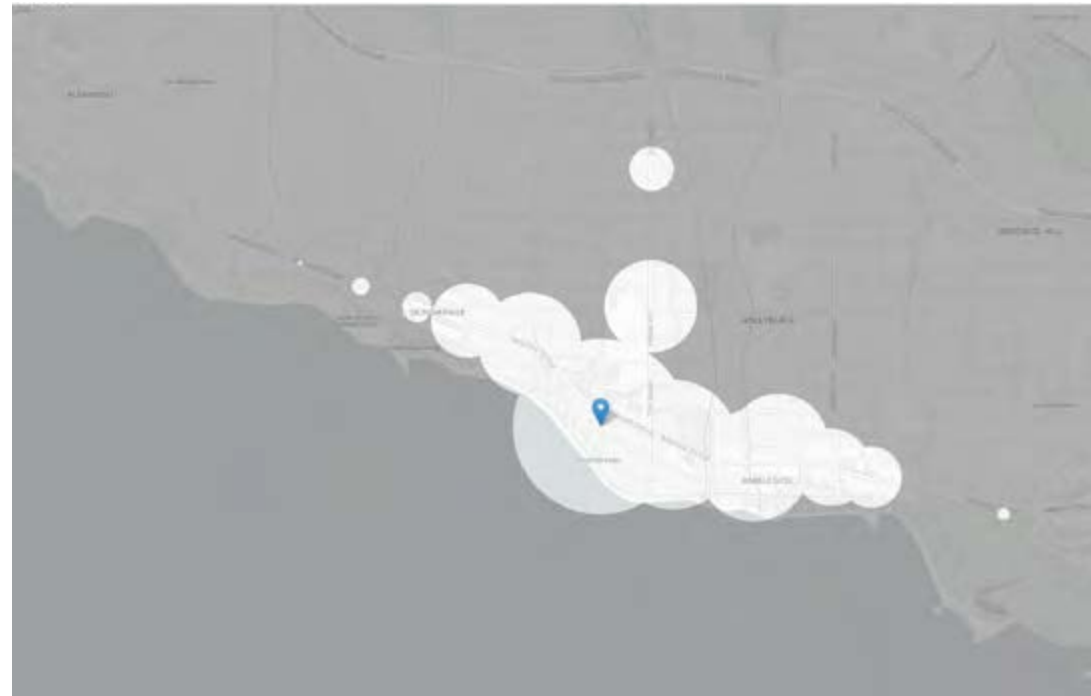


SCALE:1:300



### 5.9 TRANSIT ACCESS

The site is centrally located, close to the West Vancouver Community Centre, the Centennial Seawalk trail and minutes away from Ambleside's commercial core to the east.



5 minute transit shed



10 minute transit shed



15 minute transit shed

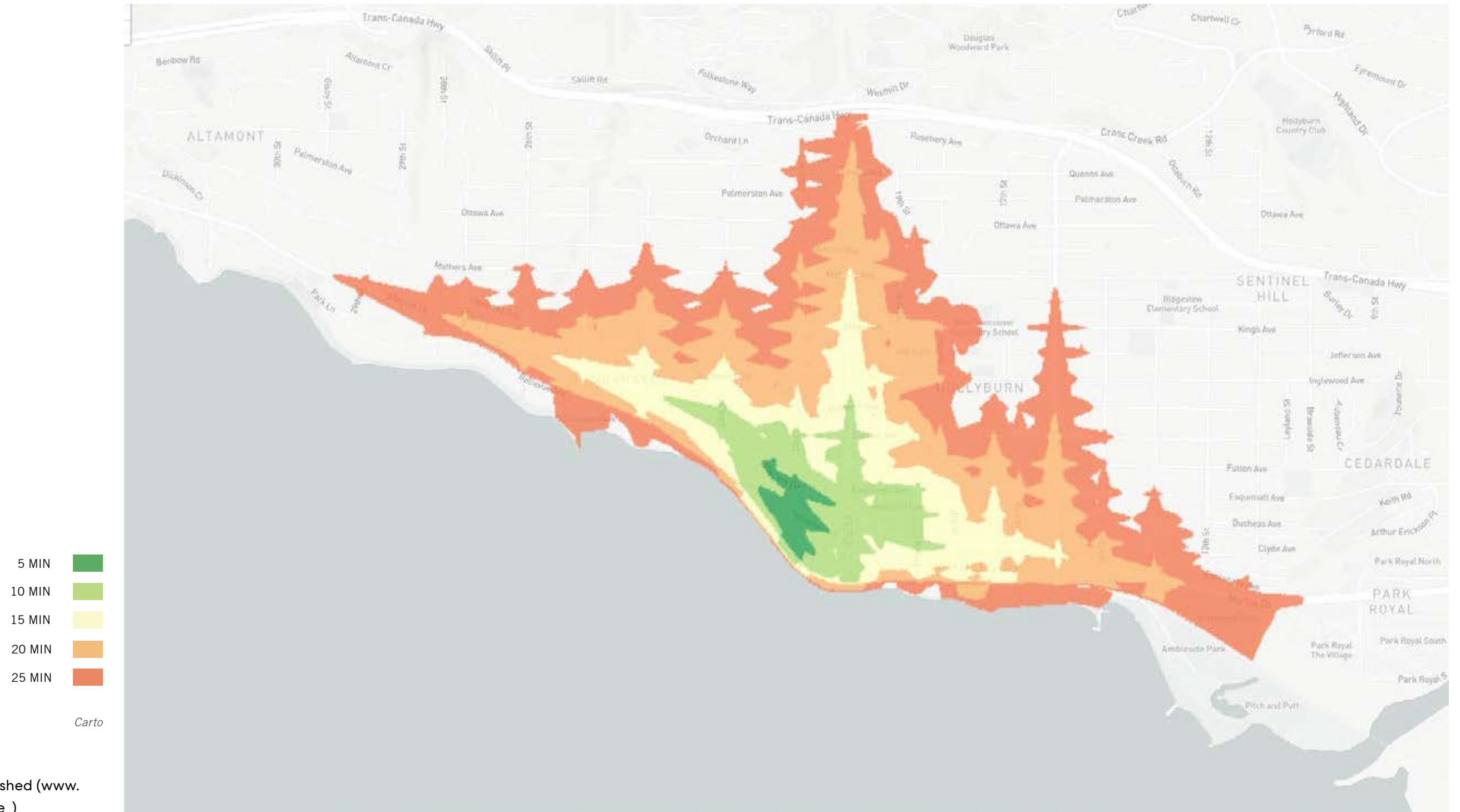


20 minute transit shed



Map source: Mapnificent ([www.mapnificent.net](http://www.mapnificent.net))

## 5.10 WALKABILITY



Map source: Walkshed ([www.github.com/atogle](http://www.github.com/atogle))



## 5.11 WIND AND SUN CHARACTERISTICS

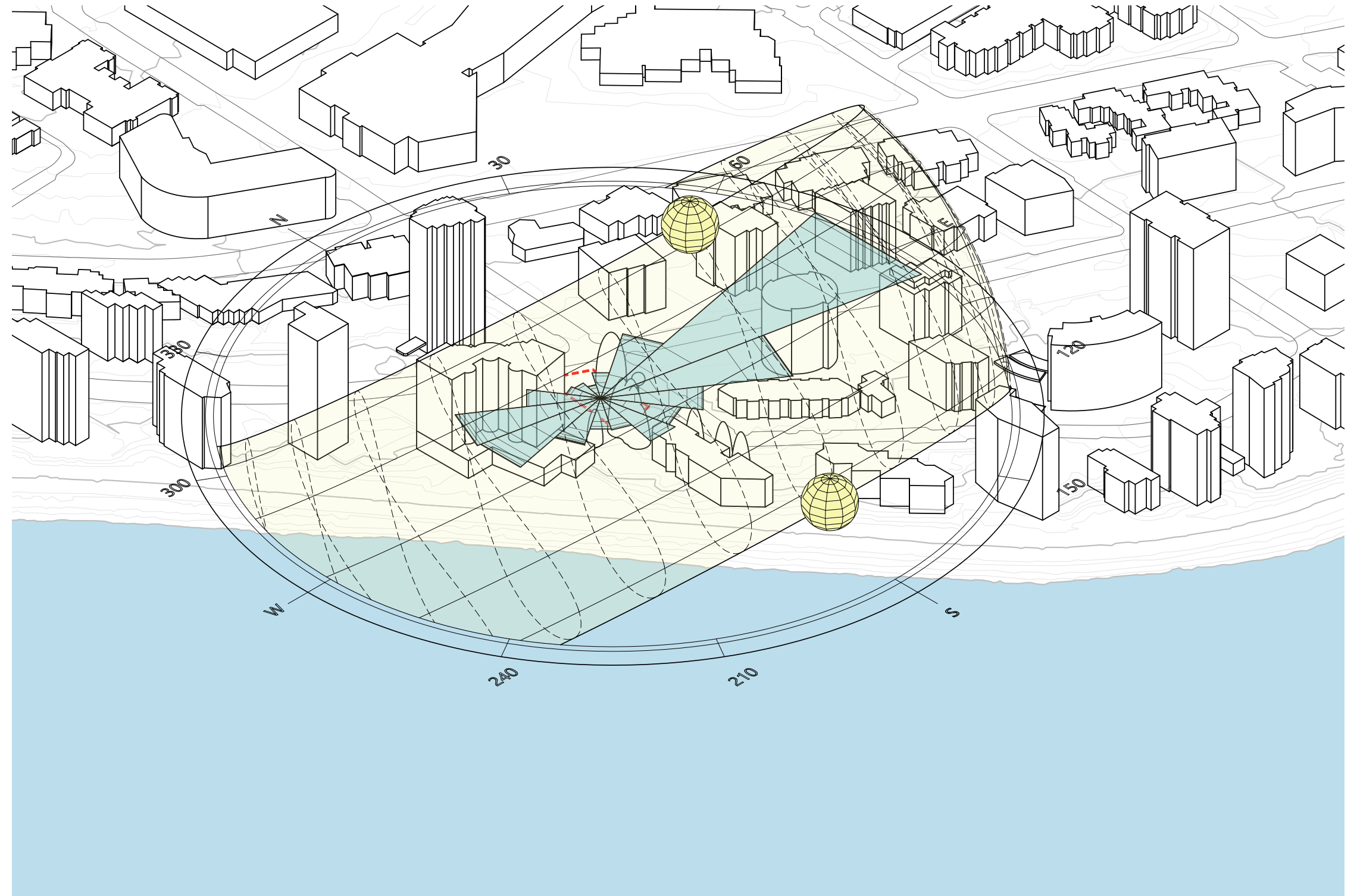
This diagram shows the relative position of the sun throughout the year at hourly intervals. Understanding the solar geometry of the site will allow optimization of the massing to have the greatest positive influence on the site and buildings.


The teal wind rose regions on the ground plane communicate the prevailing winds expected at the site.

Positioning the project in relation to seasonal variations in the sun's path as well as prevailing wind patterns can increase the energy efficiency and make the project more comfortable to live in and less costly to operate.

Winds are based on weather station data from Vancouver. Local effects are expected to differ slightly due to the proximity of the site to the open ocean.

In winter, particularly near the winter solstice, the sun will not rise significantly above the trees to the south. Detailed solar analysis will be required to determine the access to daylight and duration of sun expected.



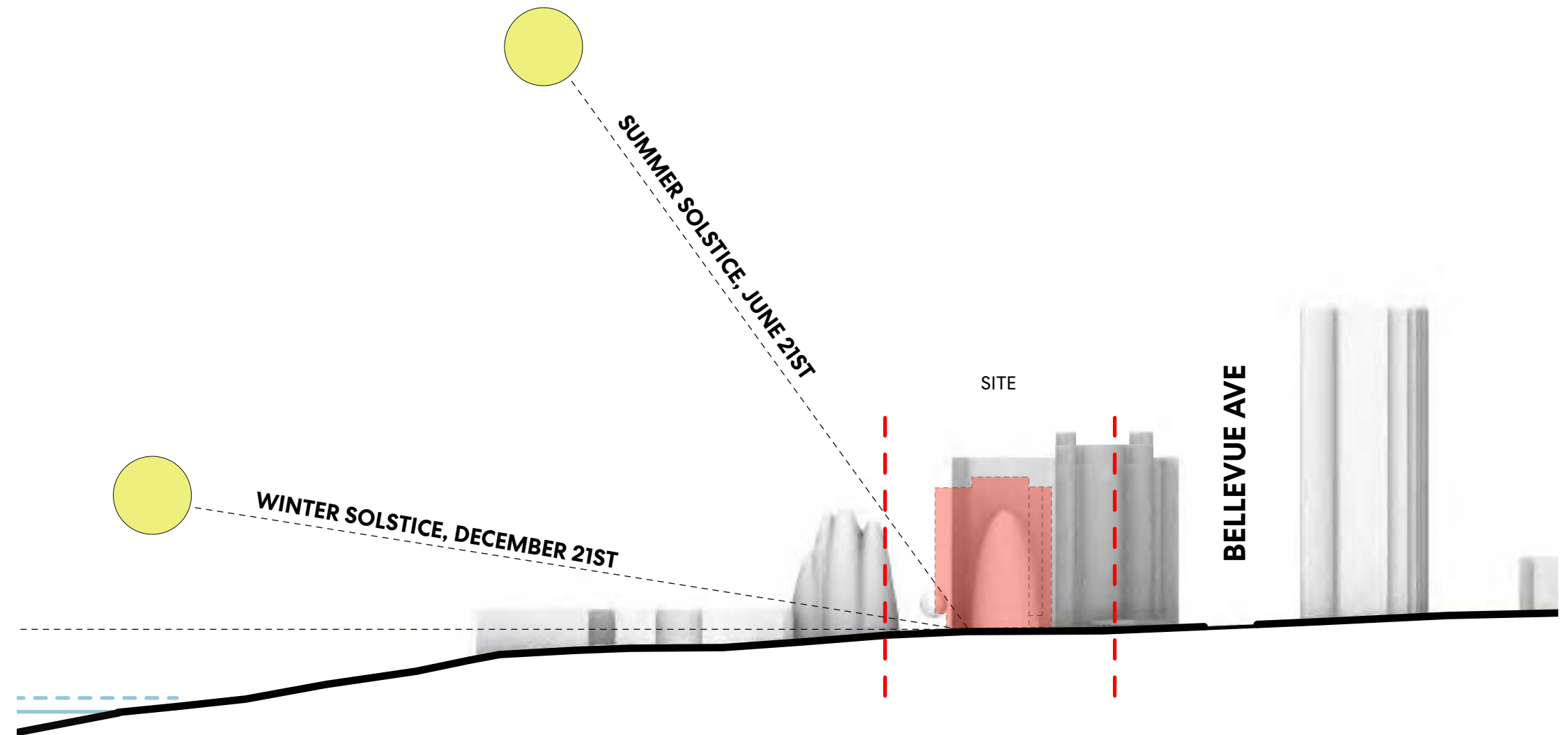
 Sun Path

 Wind Rose

## 5.12 SOLAR ACCESS

Due to the low angle of the sun in winter, PV placement on the building will have to be optimized to allow solar gain year round.

The grove of trees directly to the south of the site as well as shadowing from the building to the west will have the largest impact on where PV panels can be located



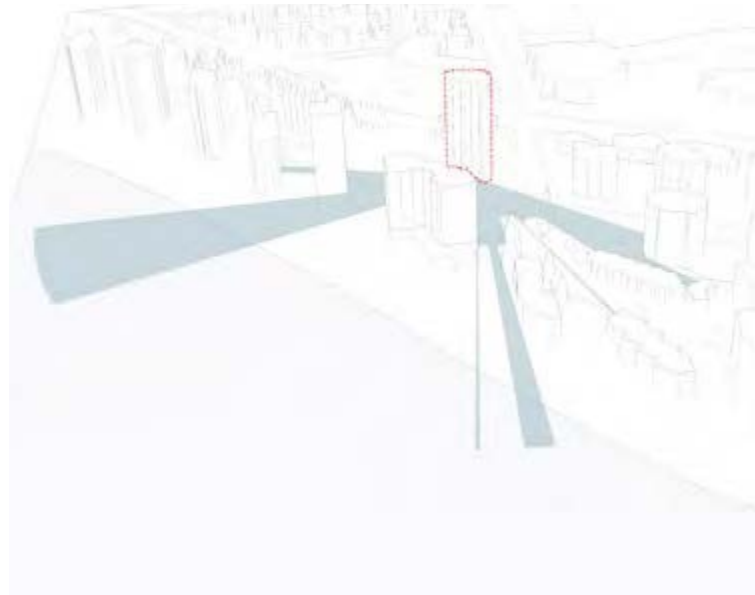
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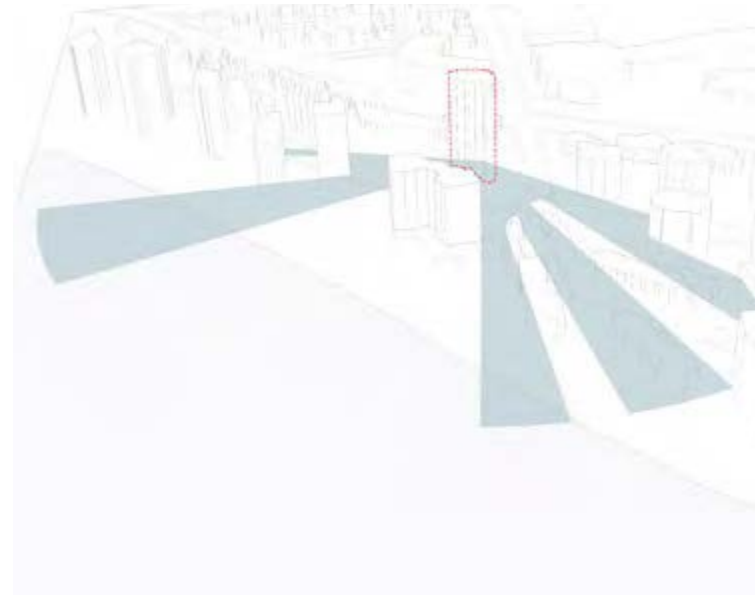


### 5.13 VIEW ANALYSIS

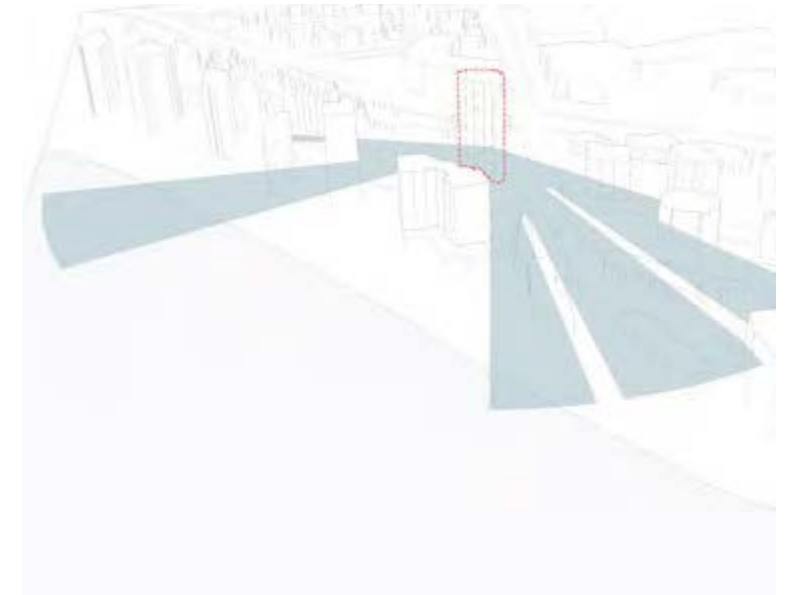
The view analysis is from the living room space of the stated building. The view analysis shows the proposed building's impact on Bellevue Place (2209 Bellevue Ave) compared to the view impact of the existing building and surrounding site trees at the ground level, level 04, and level 07.



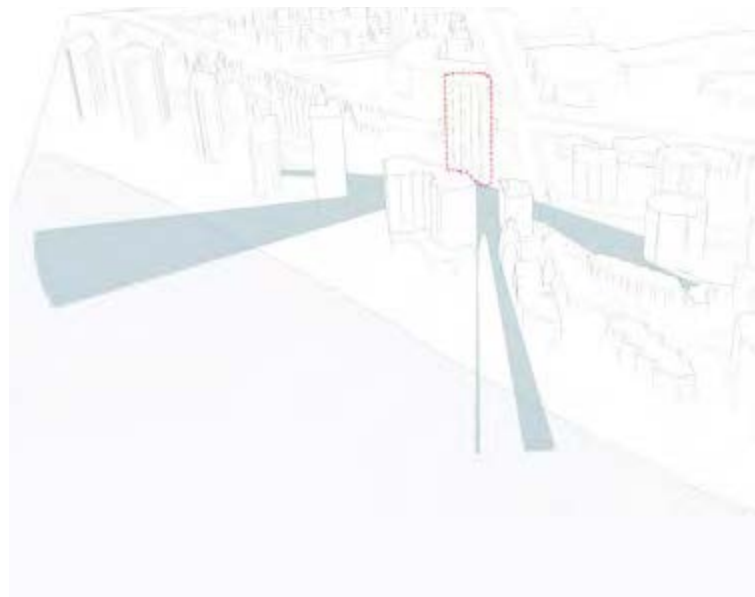
Existing Condition - Ground Level.



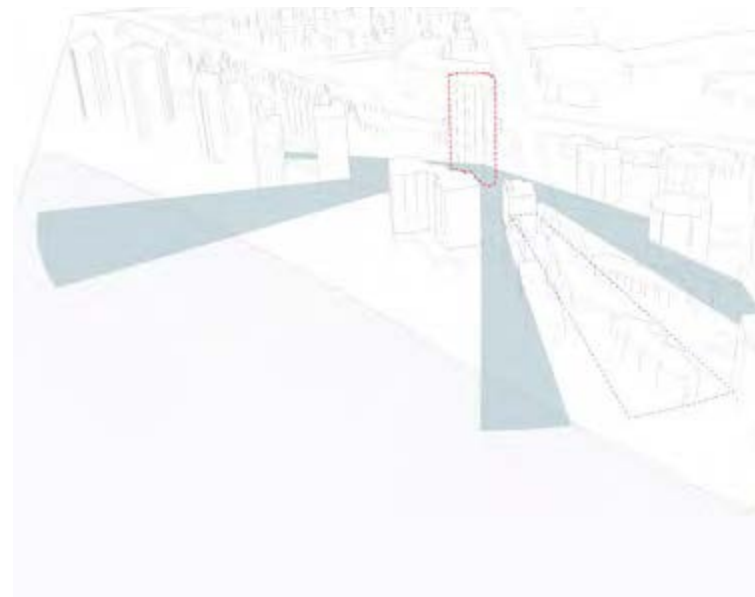
Existing Condition - Level 04



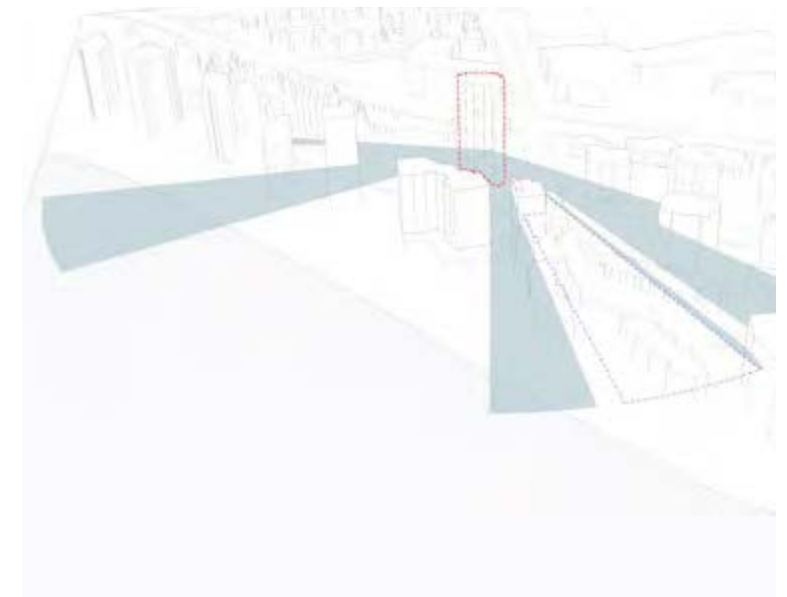
Existing Condition - Level 07



Proposed Building - Ground Level.  
Degree of waterfront view lost 0°

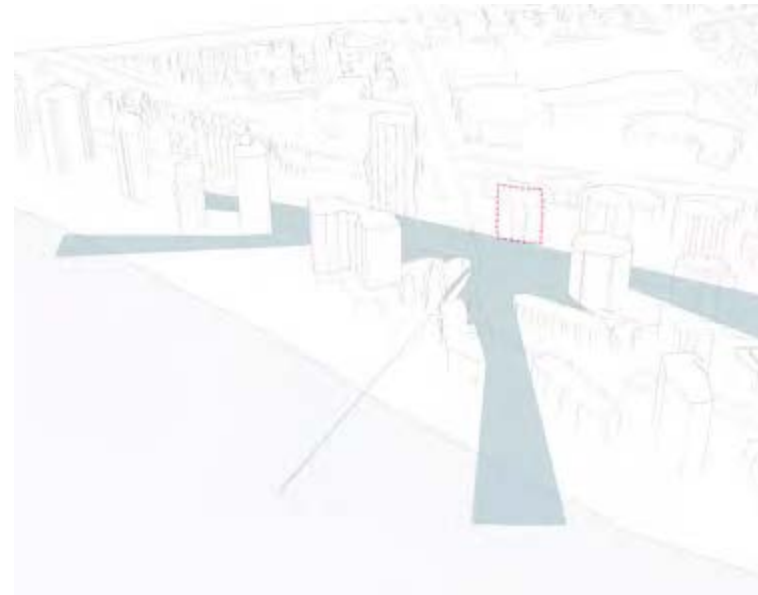


Proposed Building - Level 04  
Degree of waterfront view lost 12°

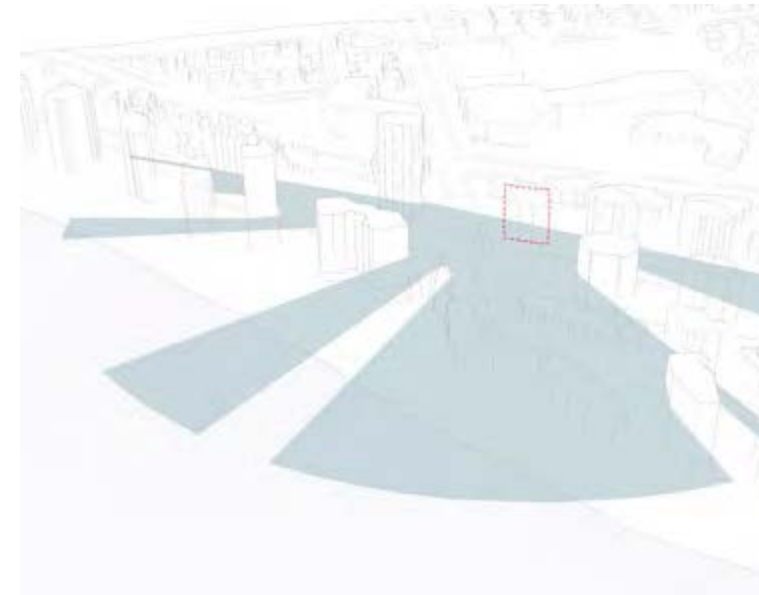


Proposed Building - Level 07  
Degree of waterfront view lost 15°

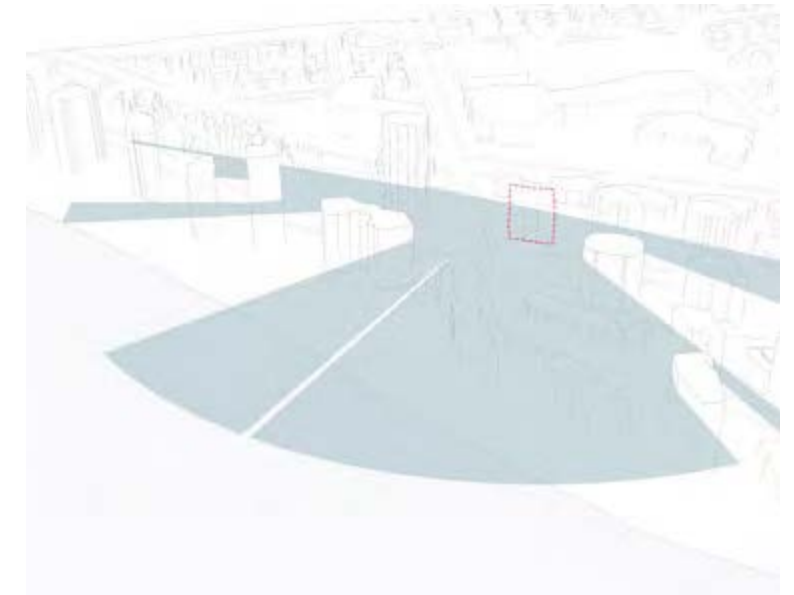
The view analysis is from the living room space of the stated building. The view analysis shows the proposed building's impact on Surfside Towers (2187 Bellevue Ave) compared to the view impact of the existing building and surrounding site tree at the ground level, level 04, and level 07.



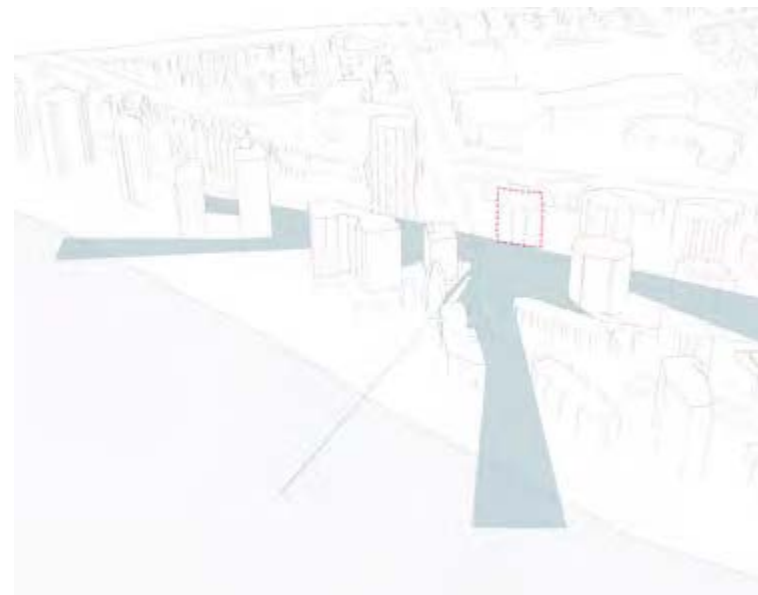
Existing Condition - Ground Level.



Existing Condition - Level 04

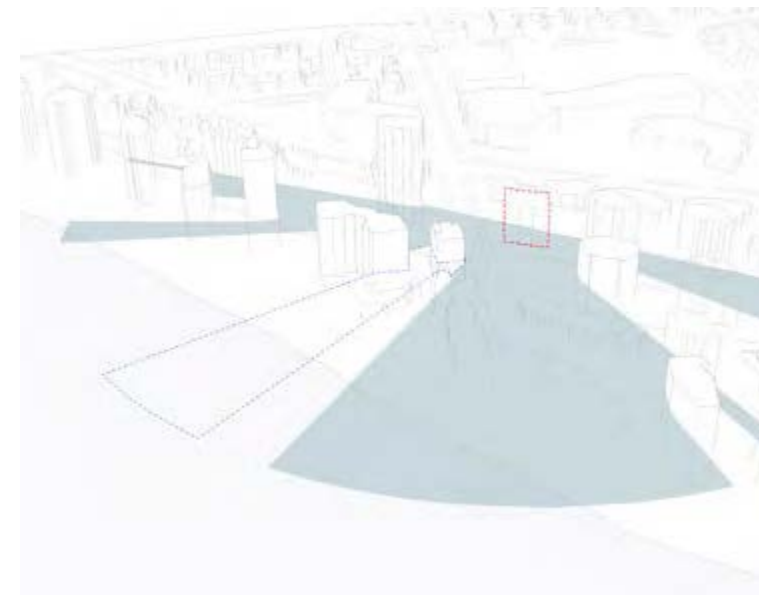


Existing Condition - Level 07



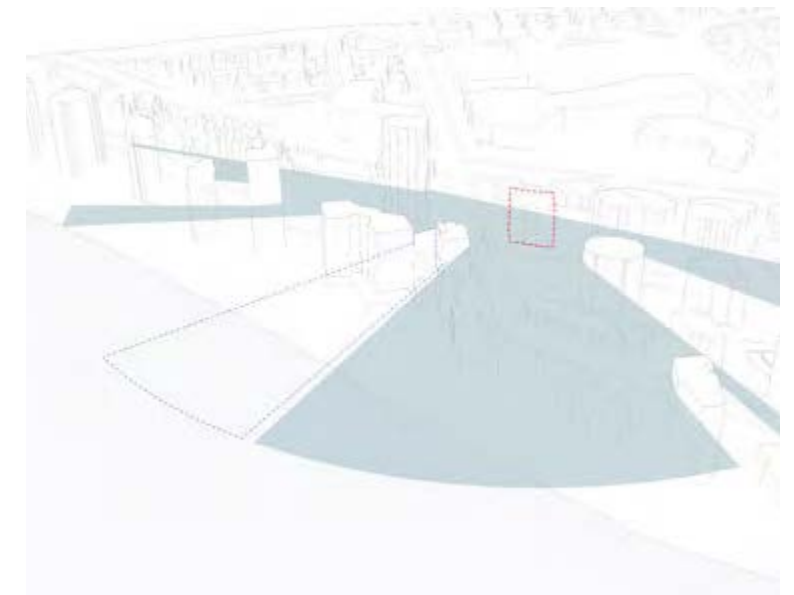
Proposed Building - Ground Level.

Degree of waterfront view lost 0°



Proposed Building - Level 04

Degree of waterfront view lost 16°



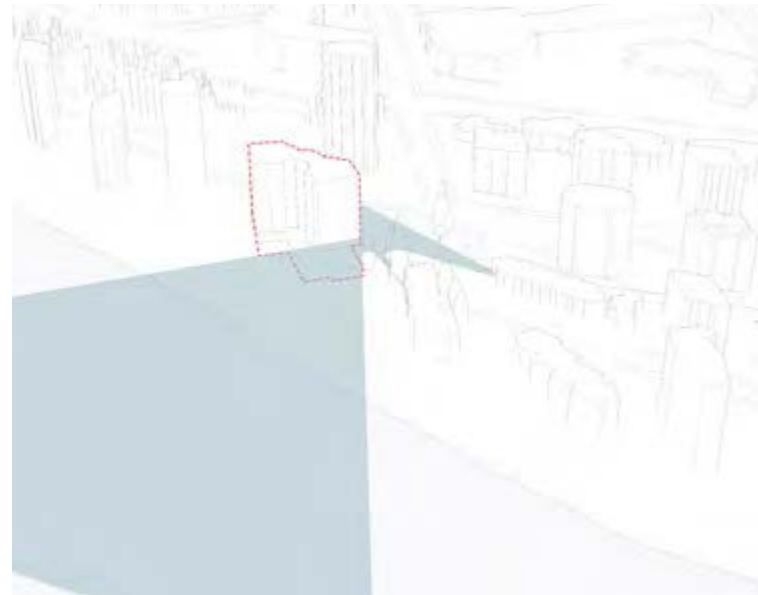
Proposed Building - Level 07

Degree of waterfront view lost 16°

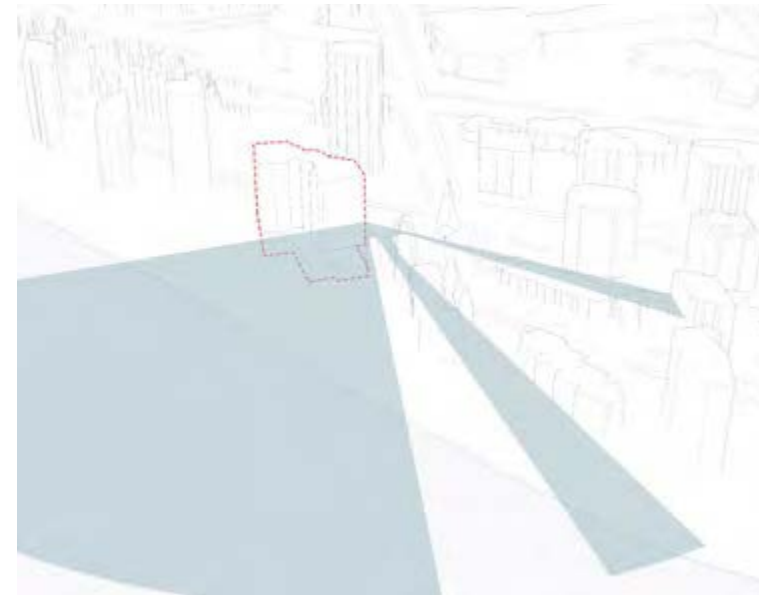


**5.13 VIEW ANALYSIS**

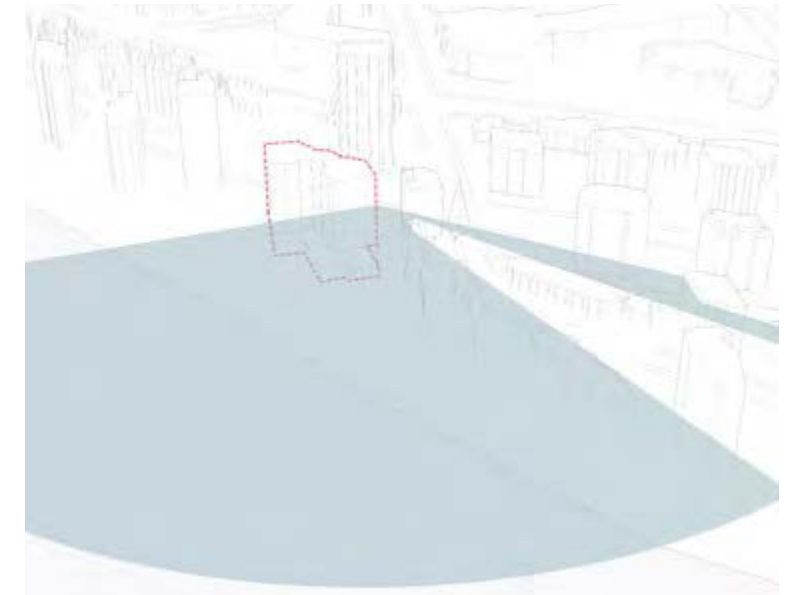
The view analysis is from the living room space of the stated building. The view analysis shows the proposed building's impact on Villa Maris (2222 Bellevue Ave) compared to the view impact of the existing building and surrounding site trees at the ground level, level 04, and level 07.



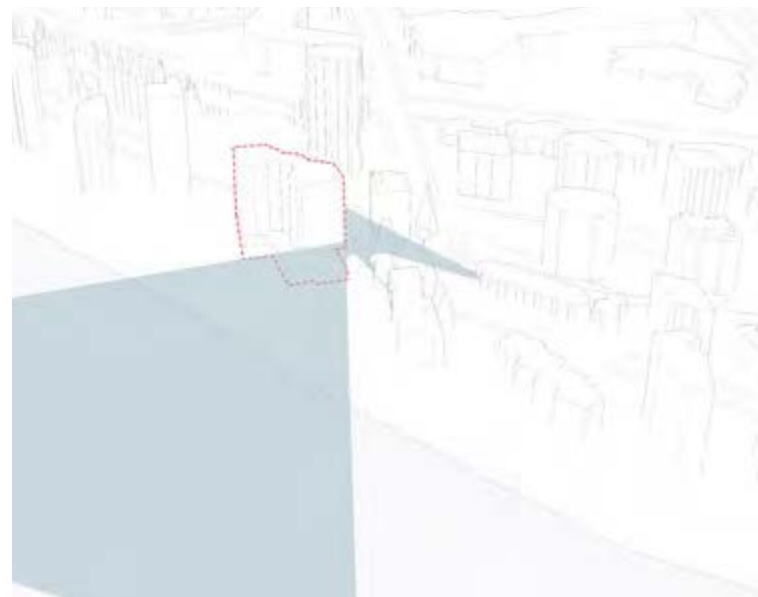
Tower Level 1 - Existing



Tower Level 4 - Existing

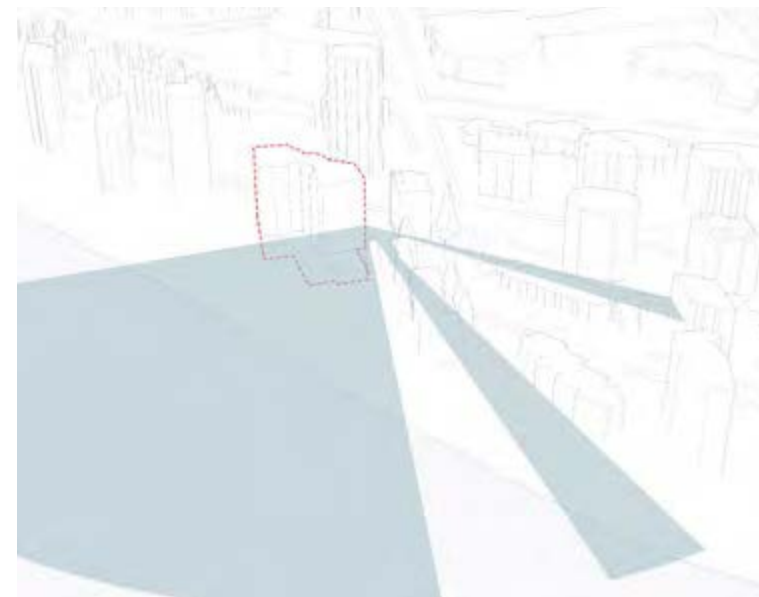


Tower Level 7 - Existing



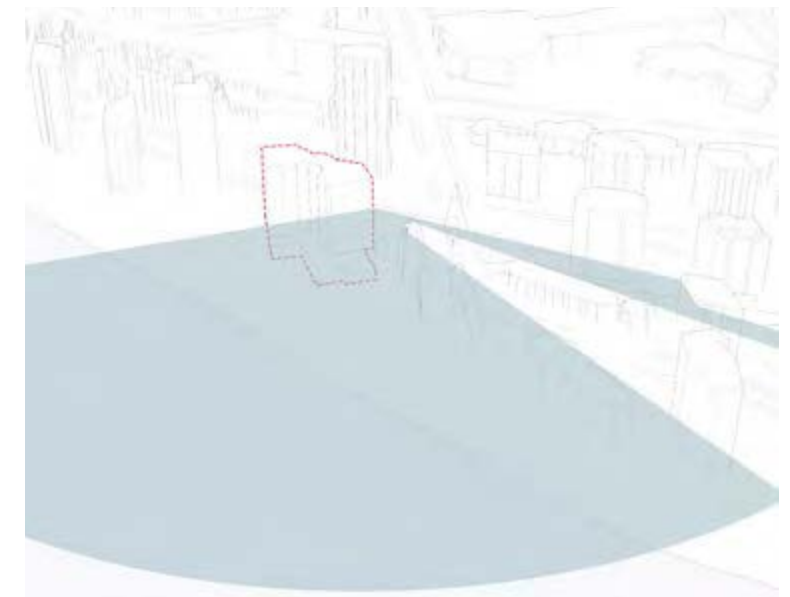
Tower Level 1 - Proposed

Degree of waterfront view lost 0°



Tower Level 4 - Proposed

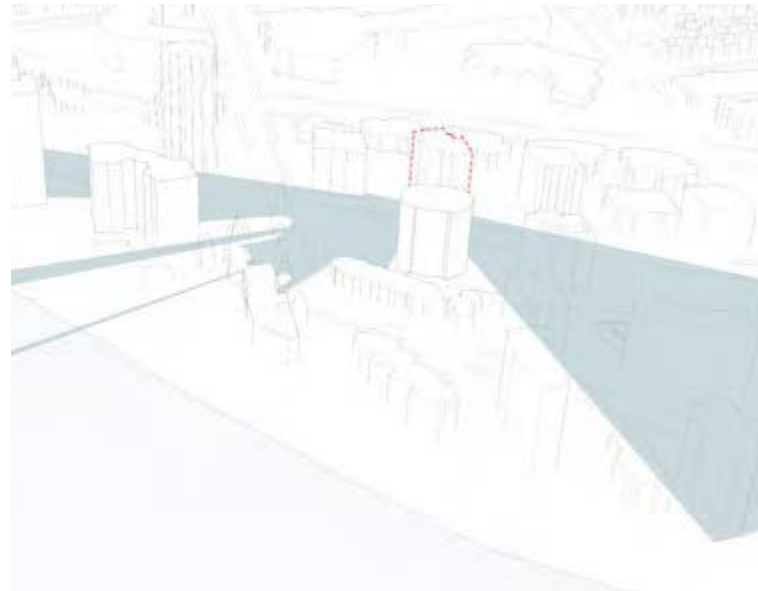
Degree of waterfront view lost 0°



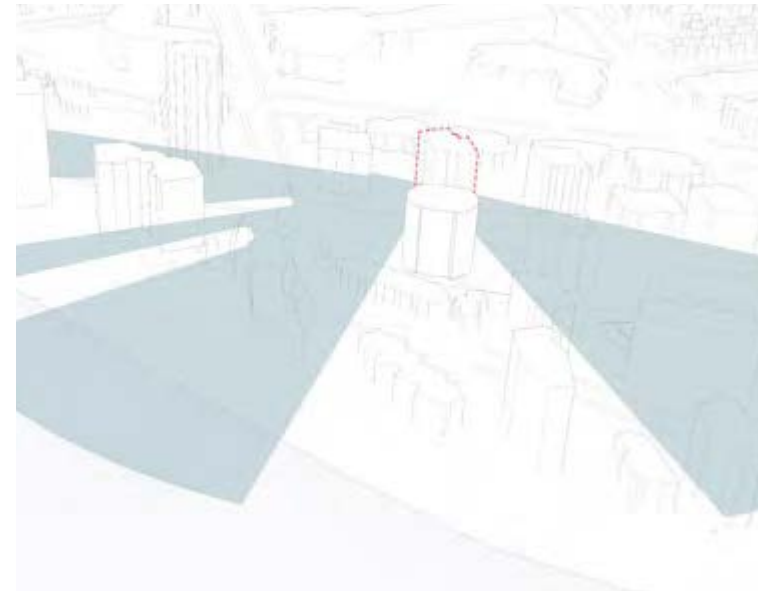
Tower Level 7 - Proposed

Degree of waterfront view lost 0°

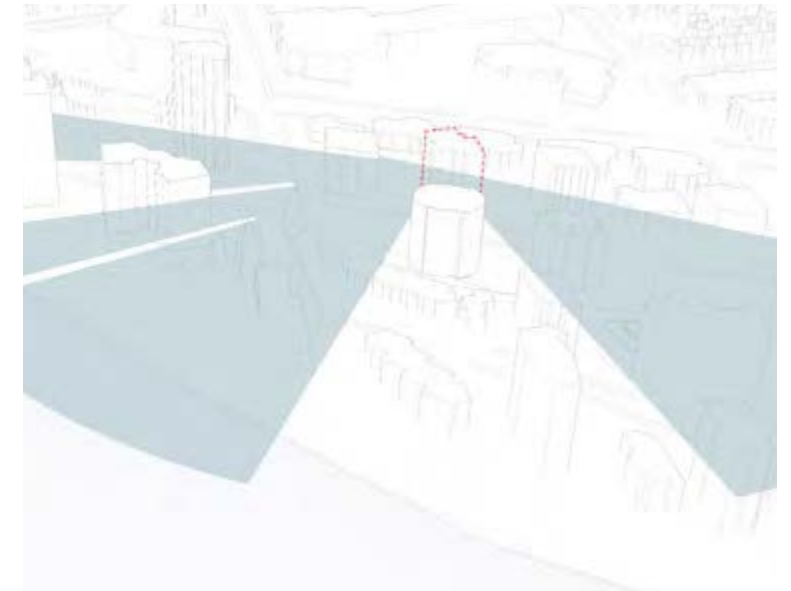
The view analysis is from the living room space of the stated building. The view analysis shows the proposed building's impact on Vandmar West (2167 Bellevue Ave) compared to the view impact of the existing building and surrounding site tree at the ground level, level 04, and level 07.



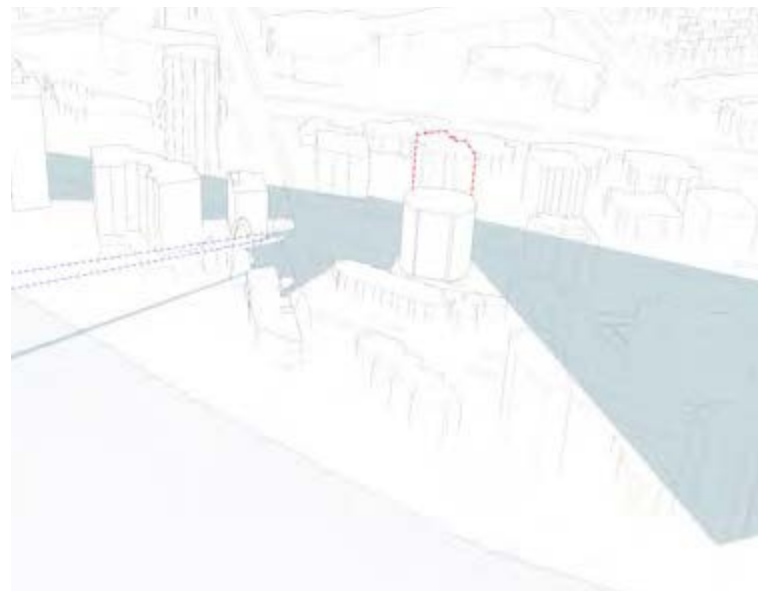
Level 1 - Existing



Level 4 - Existing

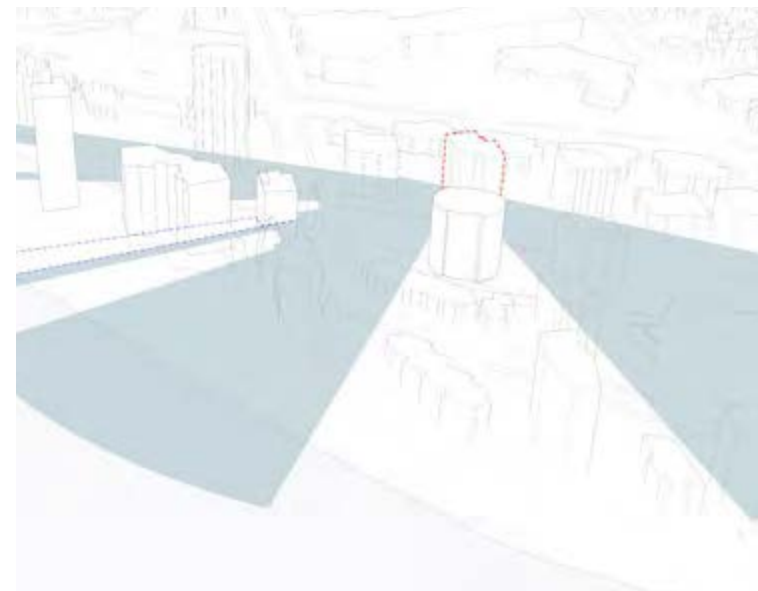


Level 7 - Existing



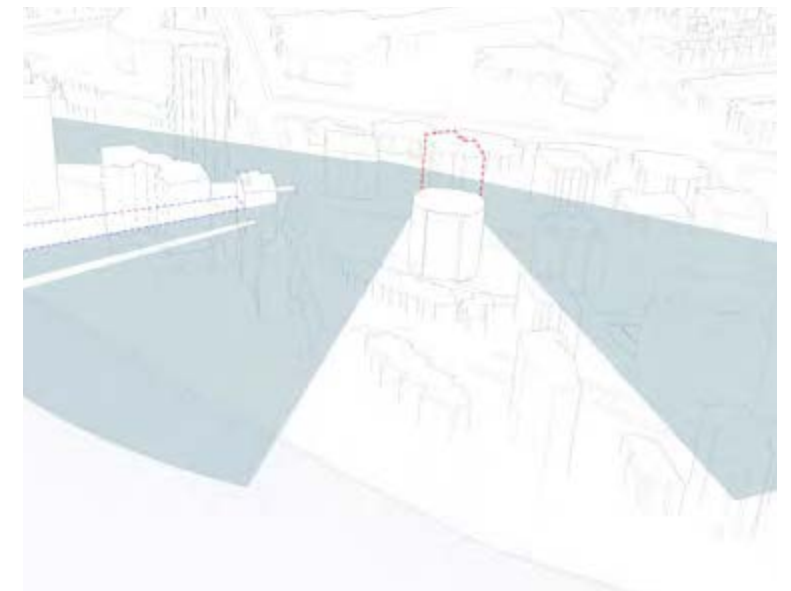
Level 1 - Proposed

Degree of waterfront view lost 4°



Level 4 - Proposed

Degree of waterfront view lost 5°



Level 7 - Proposed

Degree of waterfront view lost 6°

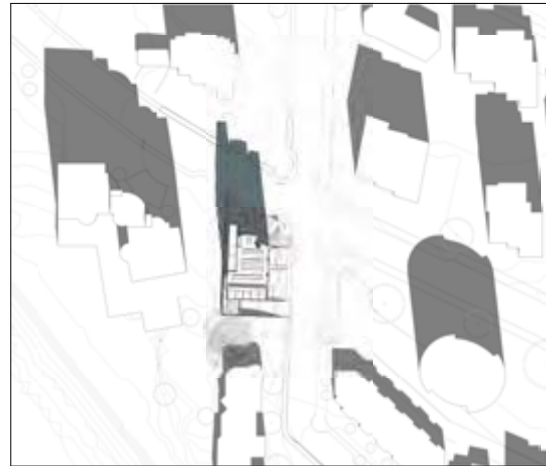


### 5.14 SHADOW ANALYSIS

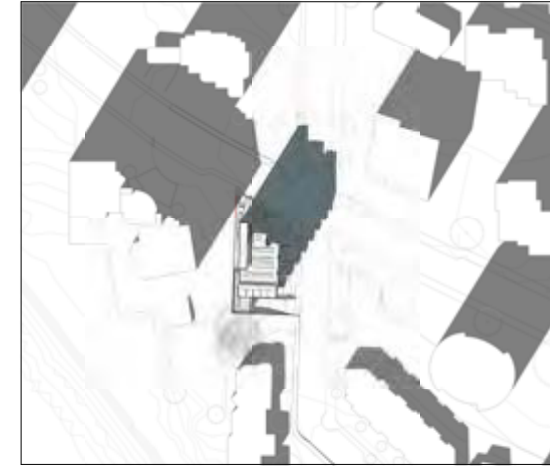
Shadows are shown between 10am and 3pm on the Spring/Fall Equinox, Summer Solstice, and Winter Solstice.



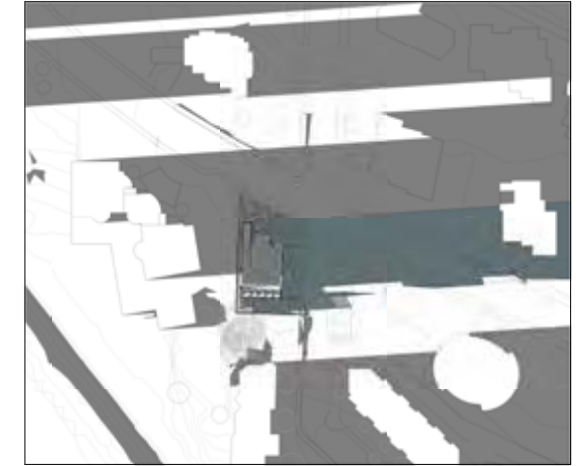
March 21st - 10 am



March 21st - 12 pm



March 21st - 2 pm



March 21st - 6 pm



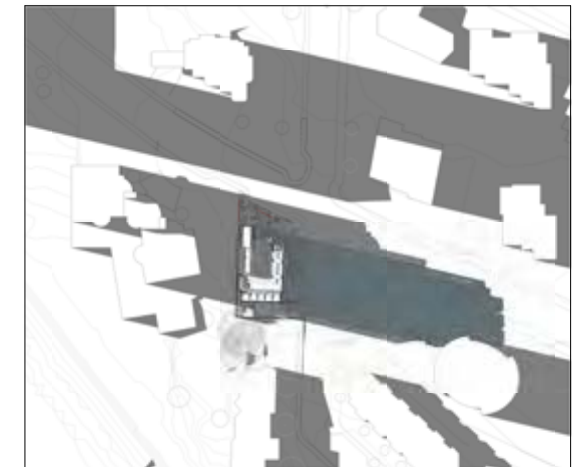
June 21st - 10 am



June 21st - 12 pm



June 21st - 2 pm

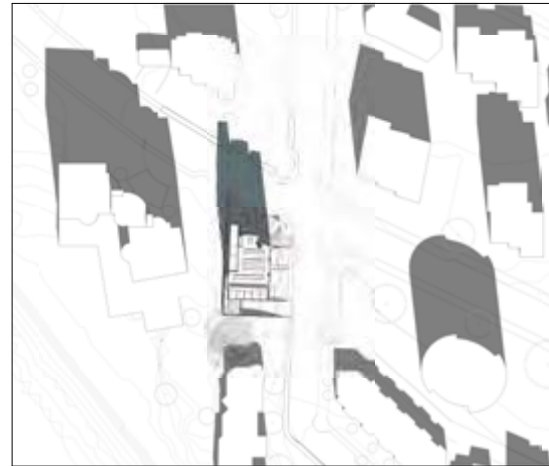


June 21st - 6 pm

Shadows are shown between 10am and 3pm on the Spring/Fall Equinox, Summer Solstice, and Winter Solstice.



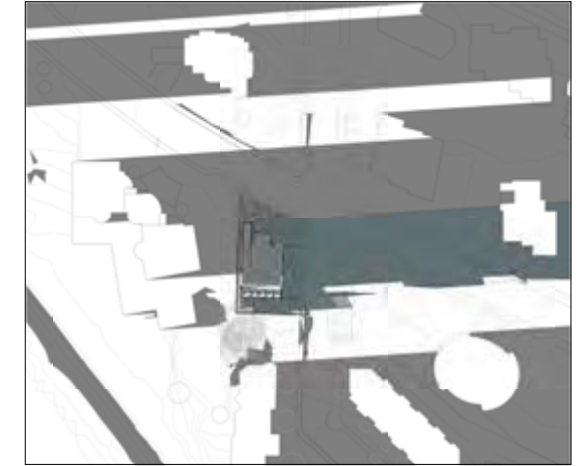
September 21st - 10 am



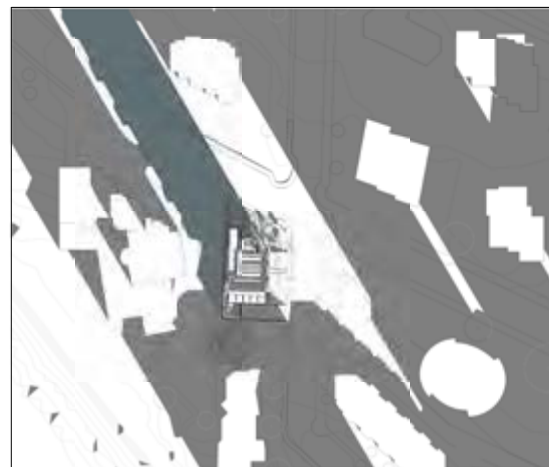
September 21st - 12 pm



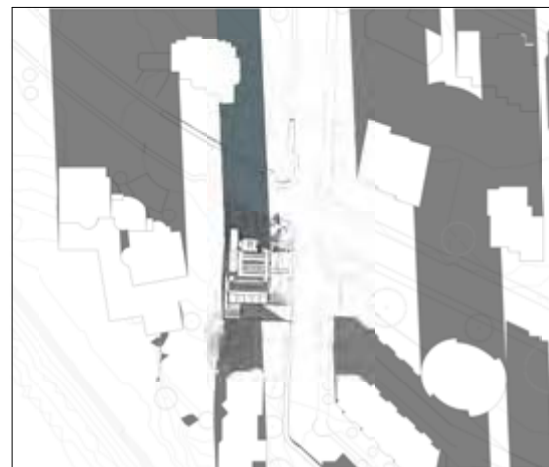
September 21st - 2 pm



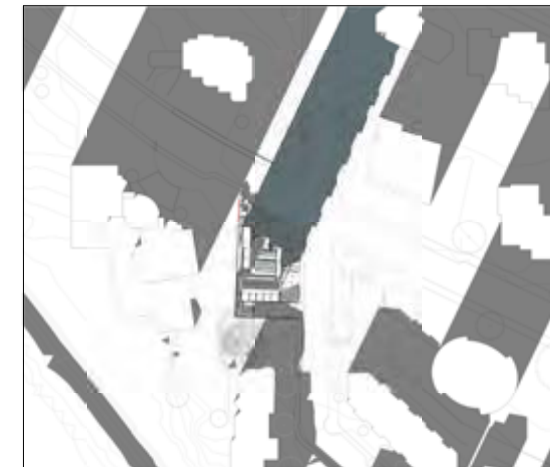
September 21st - 6 pm



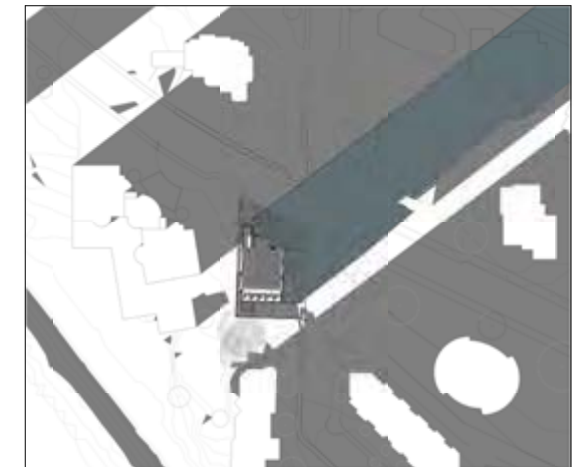
December 21st - 10 am



December 21st - 12 pm



December 21st - 2 pm



December 21st - 6 pm