



BOSA4RENT

Rezoning Application April 2021

THURLOW + HARWOOD

RENTAL HOUSING



1066 + 1078 Harwood Street

Executive Summary



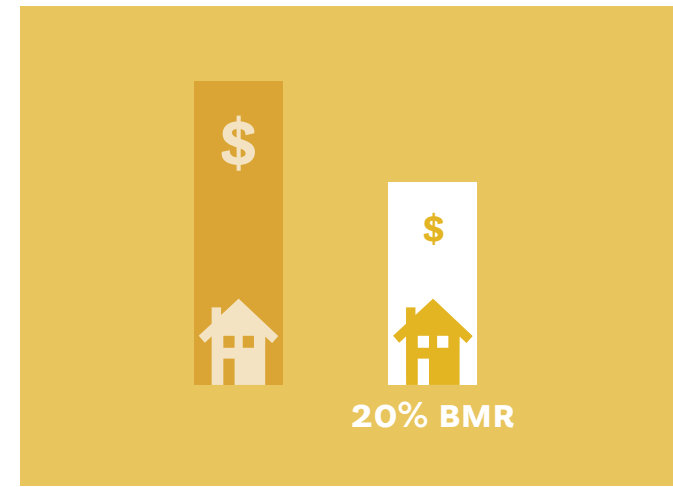
Supporting Growth

The project aligns with the goals of the West End Community Plan and addresses growth by focusing development opportunities along the Corridors.



100% Rental Housing

All 287 residential units will be secured rental housing, providing much needed rental housing in support of the City's *Housing Vancouver Strategy*.



20% Below Market Rental

The proposed development helps address housing affordability by providing 57 units of Below-Market Rental housing.



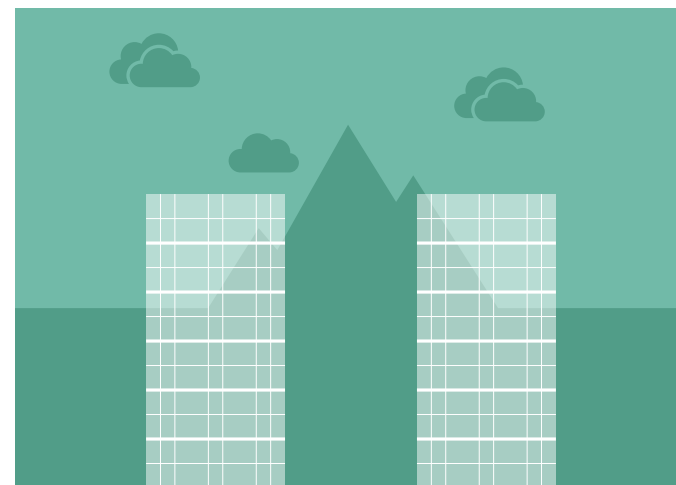
Tower in the Park

The design and expressions of the tower is inspired by the West End character, the tree-lined streets and the public spaces, gardens and parks that define the West End.



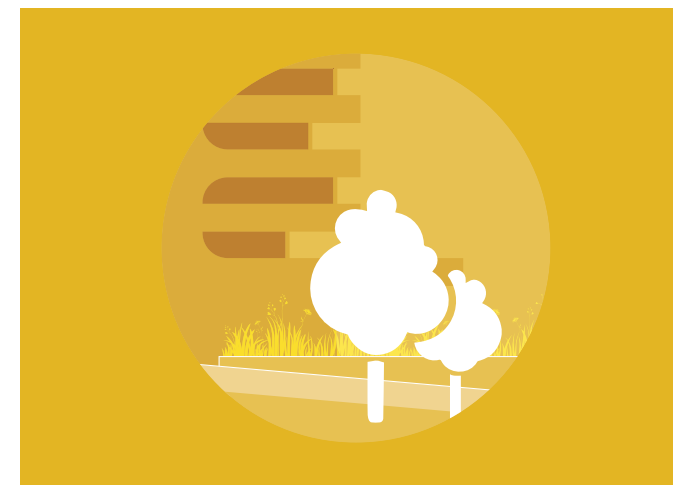
Inclusivity

The proposed tower has been designed for inclusivity, with no distinction between market and below-market residents, and includes a single shared lobby and amenity provisions for all residents.



Privacy & Views

The residential tower has been sculpted to be respectful of the surrounding neighbourhood and to minimize the impact to existing private views.



West End Character

Particular attention has been paid to incorporate common West End architectural elements, to create a building that is respectful and highly contextualized within the existing West End context.



Sustainability Goals

The project is aligned with Vancouver's goal to be the greenest city in the world and to meet the City's Green Buildings Policy for Rezoning and Zero Emissions Building Plan.

Project Team



Bosa4Rent Homes Inc.

At Bosa4Rent, we believe that a home is more than just four walls. It's more than a space, it's the place – and the people. That's why choosing the right address is so important to us, whether in Vancouver, Coquitlam, or Victoria.

Bosa4Rent is a proud member of the Bosa Family of Companies. For over 50 years, the Bosa family has created some of the Lower Mainland's most livable communities. Decades in the business have taught us how to create homes that are timeless in design, universal in their appeal, and comfortable at every stage of life. Each home is more intelligent than the last.



Henriquez Partners Architects

Henriquez Partners believe that socially responsible community development and environmental stewardship are the foundation of good design. The firm has consistently demonstrated the ability to manage projects from design through to construction, and the technical expertise to create structures that stand the test of time. Henriquez Partners' buildings have received numerous awards for design excellence, including multiple Governor General's Medals in Architecture and Lieutenant Governor Awards.

In addition to many unique civic structures, the firm's experience features the inclusive, \$330-million Woodward's Redevelopment and a ground-breaking experiment in affordable ownership, 60 West Cordova. Their experience also includes an array of LEED certified projects such as the award-winning, LEED Gold BC Cancer Research Centre and TELUS Garden, bringing the first LEED Platinum office tower to Vancouver. Henriquez Partners operates on the philosophy that no building is too small if it contributes to the community in a meaningful way.



PFS Studio

PFS Studio is a leading Canadian planning, urban design and landscape architecture firm offering consulting services nationally and internationally. The firm has been in practice for over two decades and has a professional staff of over 35. Their award winning portfolio demonstrates their success on a wide range of projects, many that have faced a high degree of complexity in terms of process and approval.

PFS Studio continually undertakes many of the most high profile projects in Canada and abroad. Their practice operates from their Vancouver office and they are proud of their contributions to the City's successful reputation as one of the most livable cities on the globe. At the same time, they are also comfortable and capable of working on projects throughout the world, proving this time and again through successfully delivered projects.

Site Context

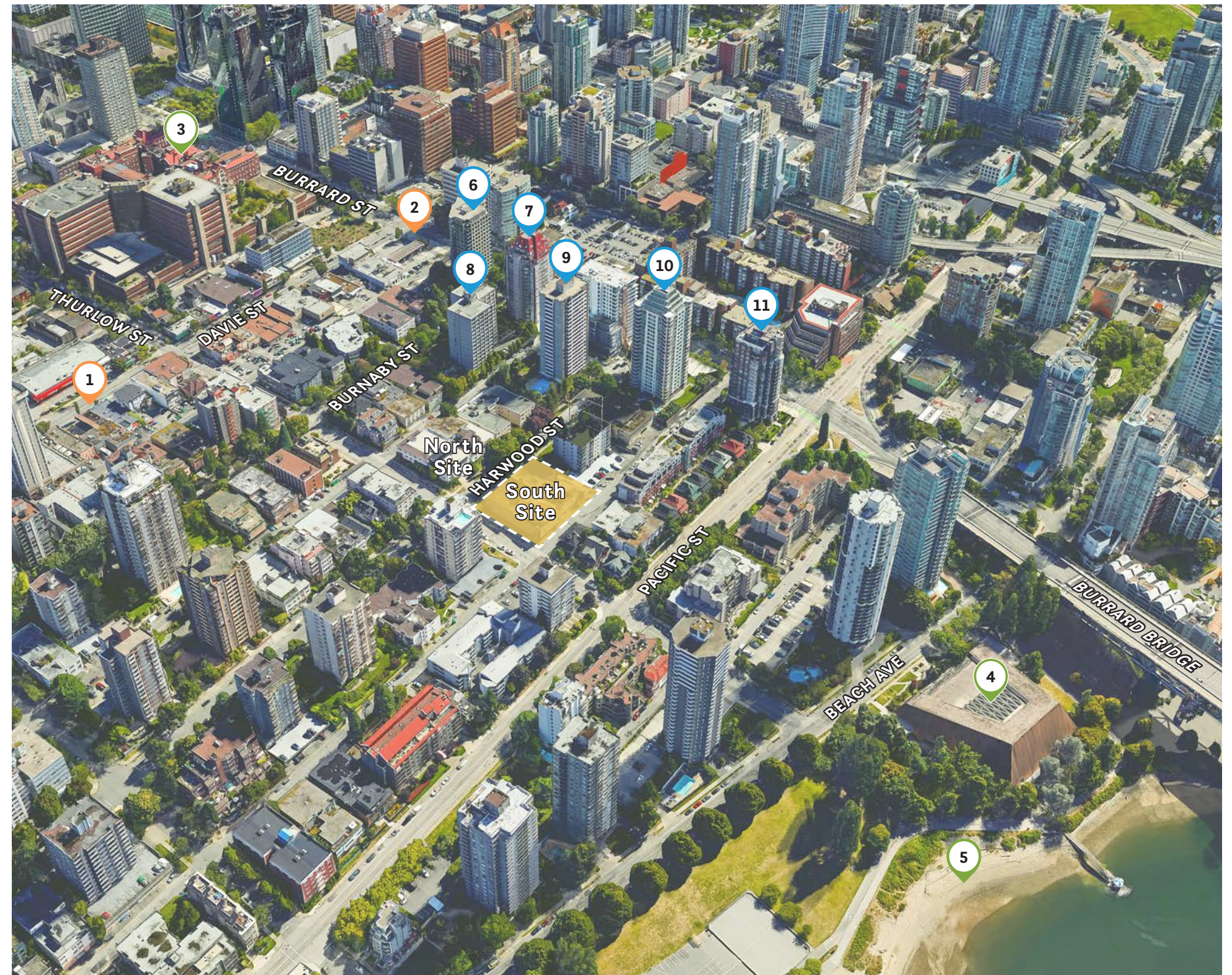
The proposed development is located on a steeply sloping site at the southeast corner of Thurlow and Harwood streets.

Two aging 60-year-old rental buildings currently occupy the site, providing 50 units of rental housing. The residential units in the two existing buildings are primarily one bedroom units. Only two of the 50 units provide two or more bedrooms suitable for families with children.

The site is located two blocks south of Davie Village and one block west of Burrard Street. Public transit is readily available on Davie, Burrard and Pacific Streets. The neighbourhood consists of buildings ranging from two storey heritage homes to 30 storey rental and condominium towers.

Located nearby are St. Paul's Hospital, several churches, the Vancouver Aquatic Centre, beaches along False Creek and water taxis to Granville Island. Downtown is also within easy walking distance.

- | | |
|--------------------------------------------------------|-----------------------------------------------|
| 1 Davie Village | 6 Milano
1003 Burnaby Street |
| 2 Burrard Corridor | 7 The Ellington
1010 Burnaby Street |
| 3 St. Paul's Hospital
1081 Burrard Street | 8 Twin Arms
1030 Burnaby Street |
| 4 Vancouver Aquatic Centre
1050 Beach Avenue | 9 Carlton Court
1021 Harwood Street |
| 5 Sunset Beach | 10 Crystallis
1020 Harwood Street |
| | 11 SeaStar
1003 Pacific Street |

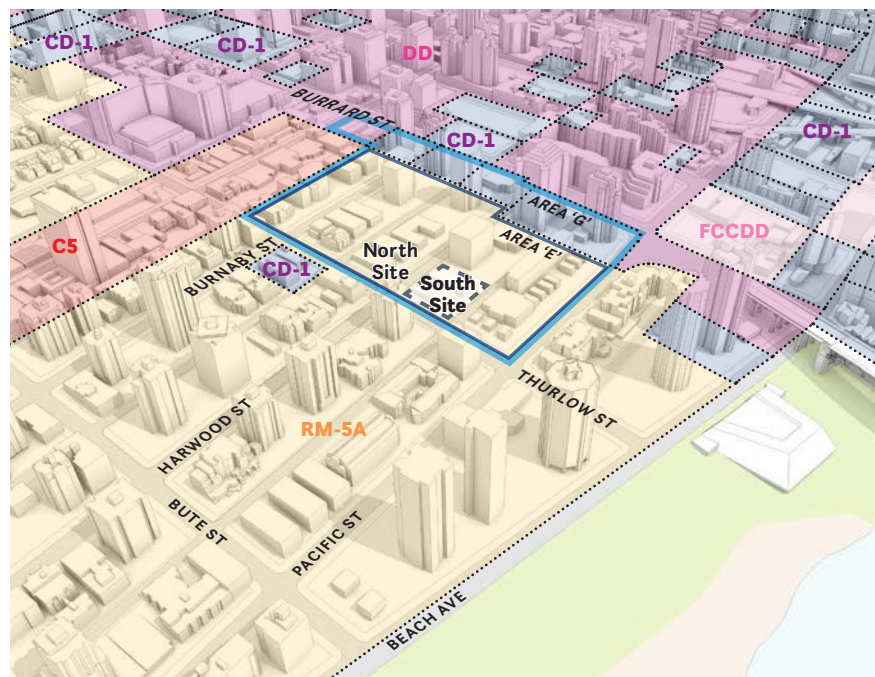


Zoning Summary

The site is located in the RM-5A zoning district, Area ‘G’ of the *West End Community Plan*, and Area ‘E’ of the Rezoning Policy of the West End.

The site is proposed to be rezoned from RM-5A to a site specific CD-1 to allow additional height and density in coordination with City policy, including “Guiding Criteria for Consideration of Rezoning for 100% Rental Housing with Below-Market Rental Housing in the Burrard Corridor of the West End Community Plan as an Alternative Option to Inclusionary Social Housing” and the “Below-Market Rental Housing Policy for Rezoning”.

Our proposal includes 100% secured market rental housing with a minimum of 20% of the residential floor area as secured below-market rental. The resulting number of below-market rental units far exceeds the rental replacement requirements on the site. Our form of development proposes additional height and density to achieve a maximum 20% additional floor area beyond what is enabled by the *West End Community Plan* and by the *West End Tower Form, Siting and Setbacks* Administrative Bulletin. Additional density is achieved by increasing typical floor plate sizes by 20% and by increasing building height by one storey.



ZONING RM-5A	PERMITTED – RM-5A	WEST END COMMUNITY PLAN & WEST END – TOWER FORM, SITING AND SETBACKS	PROPOSED – CD-1
			SOUTH SITE
Uses	<p>Outright Cultural and Recreational Institutional Service Dwelling</p> <p>Conditional Office Parking Retail Utility and Communication</p>	Rezoning considered for applications that include Residential uses.	<p>Dwelling</p> <p>100% Secured Rental Housing</p> <p>80% Maximum Residential FSR, Market Rental Housing</p> <p>20% Minimum Residential FSR, Below-Market Rental Housing</p>
Site Area	Not Applicable	Not Applicable	1,606.90 m ² (17,296 ft ²)
Frontage	Not Applicable	Minimum 39.6 m (130 ft)	40.228 m (132 ft)
Height	Outright: 18.3 m (60 ft) Discretionary: 58 m (190 ft)	91.4 m (300 ft)	96.32 m (316 ft); 36 storeys
Setbacks	Thurlo: 6.0 m (20 ft) Front Yard: 3.7 m (12 ft) Side Yard: 2.1 m (7 ft) Rear Yard: 2.1 m (7 ft)	Thurlo: 3.7 m (12 ft) Harwood: 3.7 m (12 ft) Side Yard: 12.2 m (40 ft) Rear Yard: 3.7 m (12 ft)	Thurlo: 3.7 m (12 ft) Harwood: 3.7 m (12 ft) Side Yard: 12.2 m (40 ft) Rear Yard: 3.7 m (12 ft)
FSR	Outright: 1.00 Discretionary: 2.20	Established through rezoning	13.10
Floor Plate	Not Applicable	Tower: 511 m ² (5,500 ft ²) Base: 588 m ² (6,325 ft ²)	Tower: 613 m ² (6,600 ft ²) Base: 706 m ² (7,590 ft ²)
Horizontal Angle of Daylight	One angle of 50 degrees over 24.0 m or Two angles with sum of 70 degrees	Not Applicable	Provided (40 ft setback from East P/L)



Rezoning Policies & Guidelines

The *Rezoning Policy for the West End (2017)* provides guidance for the intensification of the West End and requires that new development be focused in specific areas identified in the *West End Community Plan*.

The rezoning policy further subdivides the West End into 6 areas, each with its own rezoning requirements. Our sites is located within Area 'E' of the policy.

Rezoning applications are considered for increased density in Area 'E' for market residential, for sites with a minimum frontage of 130', and where applications include at least 25% of the total floor area as social housing, or one-for-one replacement of existing market rental with social housing.

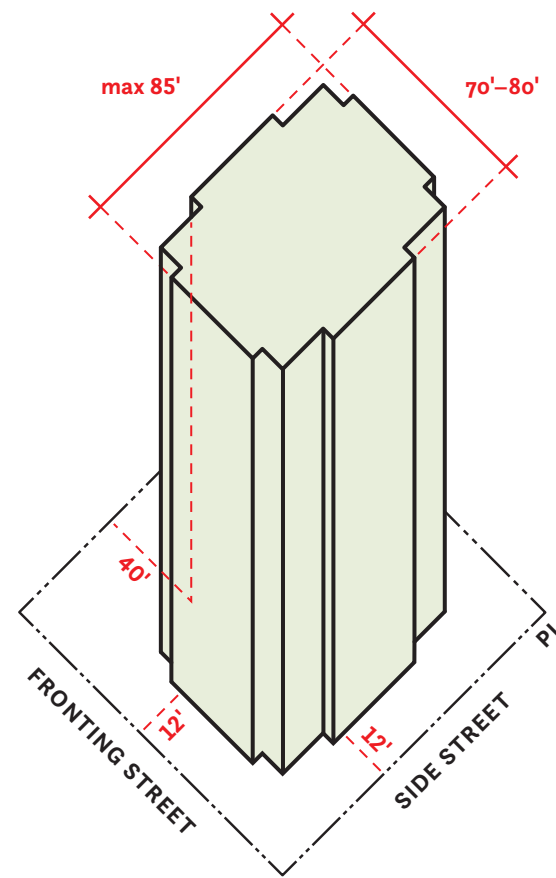
In November 2020, City Council approved *Criteria for 100% Secured Rental and Below-Market Housing as an Alternative to Inclusionary Social Housing in the Burrard Corridor of the West End Community Plan (2020)*. This new policy applies to Areas 'D' and 'E' of the Rezoning Policy for the West End. The policy allows rezoning proposals with 100% secured rental housing, where a minimum of 20% of the residential floor area is secured Below-Market Rental (BMR). The policy also allows a maximum of 20% additional floor area beyond what is enabled in the *West End Community Plan* and by the *West End – Tower Form, Siting and Setbacks Administrative Bulletin*. While the policy does not provide specific guidance on how to modify the form of development to accommodate the additional density, it notes that proposals will be evaluated on an application and site-specific basis to maintain the overall objectives of the plan in terms of livability, high quality urban design and public realm.



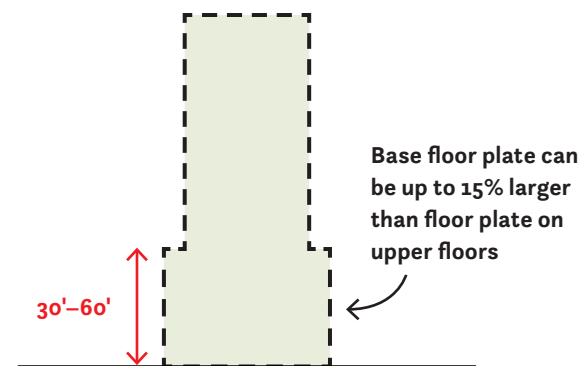
Form of Development

In 2019, City Council approved the *Below-Market Rental Housing Policy for Rezonings*, to allow modest increases in height and density for projects that include 100% secured rental housing with a minimum of 20% of the residential floor area as secured Below-Market Rental (BMR).

Our form of development is also guided by the *West End – Tower Form, Siting and Setback Administrative Bulletin* (2020). Our “Tower in the Park” is designed to meet maximum floor plate dimensions of 85' facing the Thurlow side street, and no more than 80' facing the Harwood fronting street. These maximum dimensions will accommodate floor plate sizes that are 20% larger to accommodate the additional density, while also maintaining required setbacks. Additional height has also been reviewed to ensure shadows are minimized on parks and open spaces, and to ensure no shadows are cast on the north sidewalk of Davie Street between 10:00 am and 4:00 pm at the equinoxes.



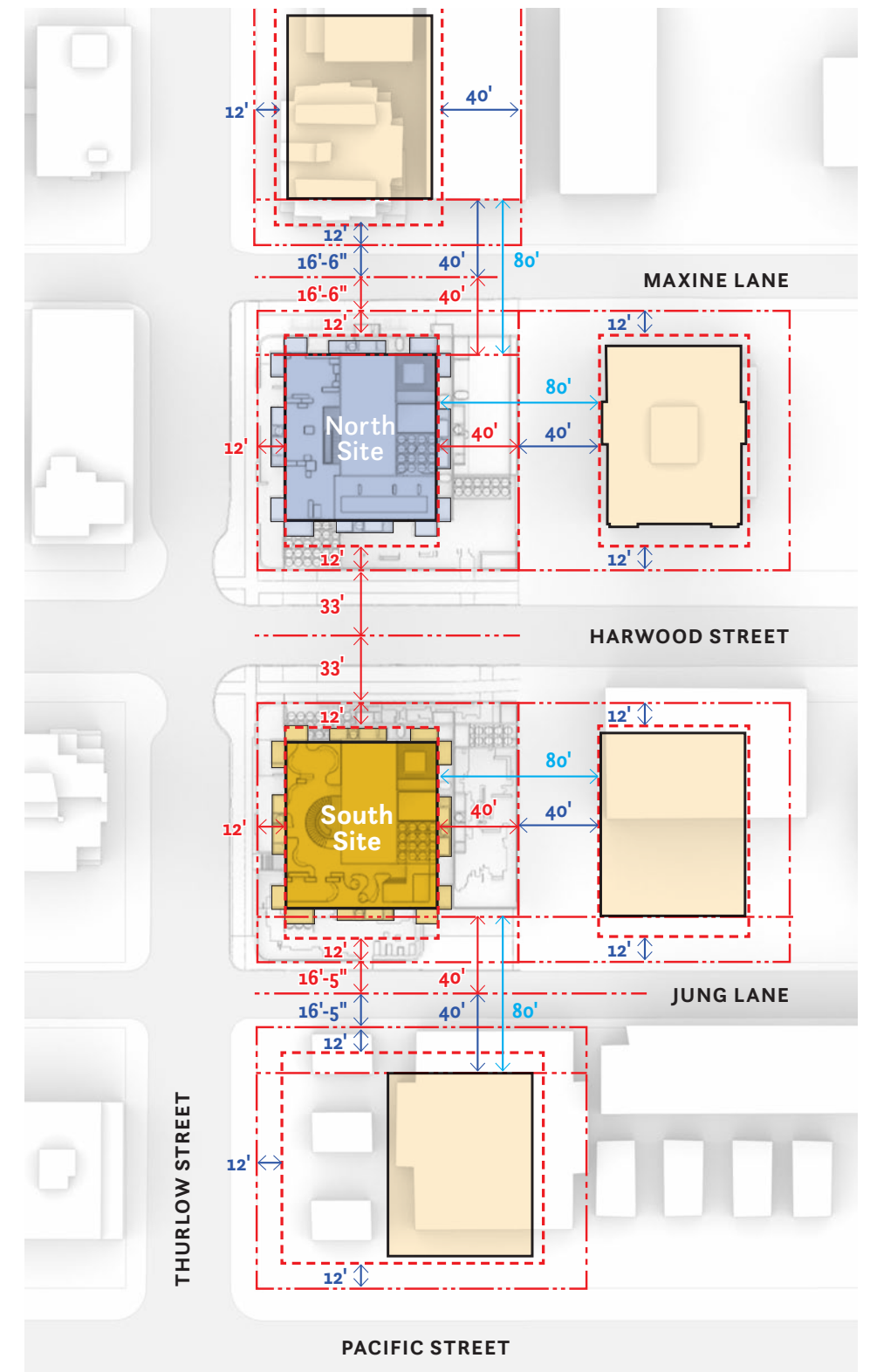
Tower in the Park



Tower in the Park

- Proposed Tower
- Future Development

- Proposed Tower – Separate Rezoning Application



100% Rental Housing

Our proposal is aligned with new policy that allows 100% secured rental housing with a minimum of 20% secured Below-Market Rental (BMR) housing.

This new approach supports the goals of the Housing Vancouver Strategy by enabling market rental and below-market rental housing that achieves similar affordability targets set by existing policy. This approach only applies to Areas 'D' and 'E' of the Rezoning Policy for the West End and is a time limited pilot project ending on December 31, 2022.

Bosa4Rent is proposing a rental structure for the below-market rental units similar to social housing projects in the West End where 30% of Below Market Rental units will be offered at deep affordability rates of CMHC less 50% targeting single persons and families with incomes ranging from \$26,000 to \$74,000 per year, and where 70% of below-market rental units will be offered at low end of market rates of CMHC less 20% targeting single persons and families with incomes ranging from \$42,500 to \$118,500 per year.

The below-market rental units and rates would be secured as part of the secured rental agreement and would be owned and operated by Bosa4Rent. The single ownership will allow a single door with shared lobby, elevators, and amenities often complicated on other projects with shared ownership.

A total of 287 units of secured rental housing are proposed, including 56 units of below-market rental which exceeds the one-for-one rental replacement of the 50 units currently on the site.

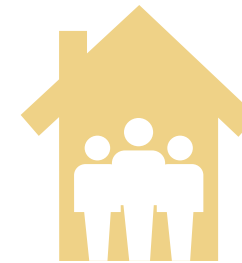
+ 100% Secured Rental Housing

100% of all residential units will be secured rental housing. Contributing much needed rental housing in support of the City's 10-year housing goal to provide 12,000 units of social, supportive and Co-op housing, and 20,000 units of purpose-built market rental.



+ True Affordability

30% of Below-Market Rental units will be offered at 50% of CMHC rates for incomes ranging from \$26,000 to \$74,000. The remaining 70% of BMR units will be offered at 20% of CMHC rates for incomes ranging from \$42,000 to \$118,000 per year.



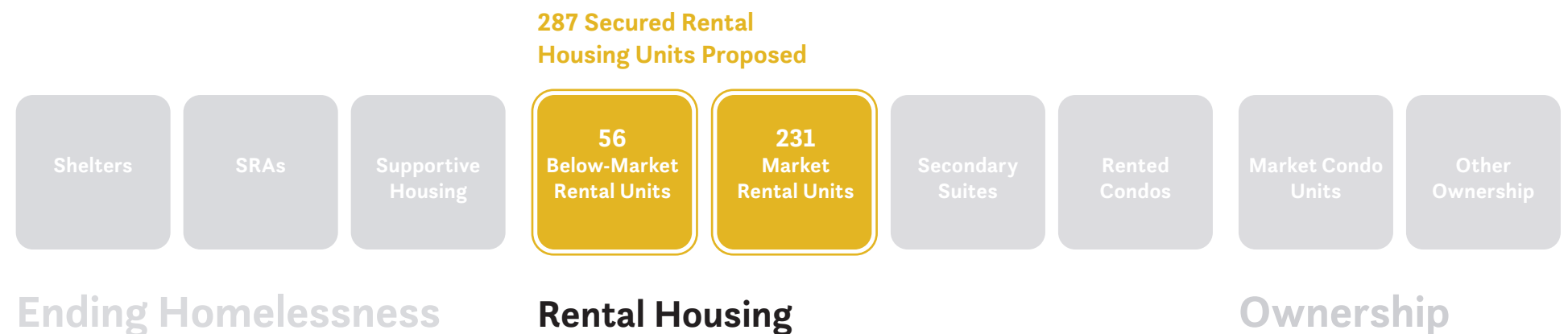
+ 20% at Below-Market Rates

A minimum of 20% of the secured rental housing FSR area will be provided as secured Below-Market Rental housing. The BMR units will be owned and operated by Bosa4Rent.

+ 35% Family Units

A minimum of 35% of all secured rental housing units, including those at Below-Market Rental rates, will be two bedrooms or larger and suitable for families with children, including a minimum of 10% of BMR units that will be three bedroom or larger.

Housing Continuum



Sustainability Strategy

The project is aligned with Vancouver’s goal to be the greenest city in the world and is designed to meet the City’s Green Buildings Policy for Rezoning.

The City of Vancouver has signalled a shift in their Green Buildings Rezoning Policy, moving away from energy savings over code and towards absolute energy targets. In coordination with the requirements of the Green Buildings Policy for Rezoning, the project will target the Path B – Low Emissions Green Buildings, as the pathway for compliance.

To meet the City’s green building policy requirements the project will be designed to meet the following strategies and targets.

Low Carbon Energy System

The project will reduce greenhouse gas emissions and will be designed to connect to a user-owned on-site Low Carbon Energy System (LCES). Each tower will provide an air source heat pump on the roof as a City-recognized LCES. Suites will be provided with four pipe fan coil units connected to the LCES.

Performance Limits

The project will meet performance limits for high-rise buildings connected to a City-recognized Low Carbon Energy System and to meet the following performance limits:

Thermal Energy Demand Intensity (TEDI)	40 kWh/m ²
Thermal Energy Use Intensity (TEUI)	130 kWh/m ²
Greenhouse Gas Emissions Intensity (GHGI)	4 kgCO ₂ e/m ²

Airtightness Testing

Airtightness is critical to reducing heat loss through the building envelope. The project will be designed and tested to meet a minimum of 2.0 L/s m² @ 75 Pa for the overall building and 1.2 L/s m² @ 50 Pa for suites.

Enhanced Commissioning

In addition to high performance system design, the project energy systems will be commissioned, ensuring the ongoing performance targets of the project are met and to identify areas for further improvement.

Metering & Reporting

Each utility will be metered for the whole building and sub-metered for each major use. This will allow an accounting of energy use and reporting that will provide accountability to building operators and users, and provide information to the City to inform future policy.

Embodied Carbon Emissions

The project will limit embodied carbon emissions where possible and will prepare a whole-building life-cycle assessment (LCA) to determine embodied carbon in kgCO₂e/m² to inform future city policy.

Reduced Thermal Bridging

The project will use good building practices to minimize thermal bridging, which is critical to maintaining building envelope performance and reducing operational energy requirements.

High Performance Building Envelope

The building envelope will be designed to meet or exceed the project’s performance limits and to reduce heating and cooling energy demand. This will be achieved by increasing the area and insulation value of opaque wall and roof assemblies and by using high performance window systems.

Verified Direct Ventilation

Outdoor air ventilation will be provided to all occupiable indoor spaces and will be designed to ASHRAE 62.1 to reduce occupant exposure to indoor pollutants by ventilating with appropriate flows of outdoor air.

Ventilation Heat Recovery

The project will utilize Energy Recovery Ventilators (ERVs) with greater than 75% performance to meet fresh air and ventilation requirements.

Low-Emitting Materials

To further improve indoor air quality within the building, healthier material options for interior finishes and coatings will be selected to limit the quantities of harmful volatile organic compounds (VOCs) which would be off-gassed after installation.

Indoor Air Quality Testing

To ensure the quality of the indoor environment prior to occupancy, testing will be conducted for formaldehyde, particulates, ozone, total volatile organic compounds and carbon monoxide. Results will be shared with the City of Vancouver upon application for Occupancy Permit. Testing airborne pollutant levels will confirm that source control strategies have been effectively implemented, and demonstrate spaces are suitable for occupancy.

Integrated Rainwater Management

On-site rainwater management has become and increasingly important sustainability feature in urban areas with the associated climate change issues. The project will meet the requirements of the ‘Rainwater Management Bulletin’ to capture 24 mm of rainfall in 24-hours (or 70% of the average annual rainfall volume) from rooftops, paved and landscape areas. The project will employ Tier 1, Tier 2 and Tier 3 measure to achieve these targets, including: green roofs, landscape and soil retention, permeable paving, water detention and Jellyfish treatment system.

Energy Efficiency

Operational energy requirements will be reduced by using high performance domestic hot water heating and LED lighting throughout the project.

Project Description

The development at Thurlow + Harwood is proposed to be revised from 75% market condos with 25% social housing to 100% secured rental housing, including 20% of the residential floor area at below-market rental rates in support of new policy enacted by City Council in November of 2020.

The tower has been designed to celebrate the character of the older West End towers and embrace the lush landscaping of the garden neighbourhood. The materials and character of the existing West End towers have informed our design, including the option of brick for the exterior cladding.

The proposed 36 storey tower will provide 288 units of secured rental housing, including 57 units of below-market rental which exceeds the one-for-one rental replacement of the 48 units currently on the site. A shared lobby provides access to all residential units with no distinction between residents of the market or below-market units. Residential units will occupy 32 floors of the tower, from levels 3 to 34, with a number of floors sharing a mix of market and below-market units.

Indoor amenities are located at the base of the tower, providing a range of amenities that will be shared amongst all residents of both towers. Outdoor amenity areas at the base and roof of the tower will be shared between towers and offer private gardens with lush landscaping for all residents and include children's play, opportunities for urban agriculture, and communal outdoor gathering spaces with adjacent indoor amenity spaces unique to each tower.

Public Benefits

- Provision of 100% Secured Rental Housing
- A total of 287 rental units to replace the 50 existing apartments
- 20% of residential area as secured Below-Market Rental units
- Affordability with 30% of BMR units at 50% CMHC rates and 70% at 20% of CMHC
- 35% of units suitable for families with children
- Enhanced amenities, public realm and landscaping



View from Harwood Street looking South

Building Program & Statistics

PROJECT DATA SUMMARY	SOUTH SITE	
Site Area	1,606.90 m ² (17,296 ft ²)	
Floor Space Ratio	13.10 FSR	
Areas		
Total Gross Area	30,965.65 m ² (333,311 ft ²)	
Total Balcony Area	2,686.13 m ² (28,913 ft ²)	
Total Exclusions	12,602.47 m ² (135,652 ft ²)	
FSR Area	21,049.30 m ² (226,573 ft ²)	
Amenity	458.11 m (4,931 ft ²)	
Balcony Area (permitted)	2,389.29 m ² (25,718 ft ²)	12%
Balcony Area (proposed)	2,686.13 m ² (28,913 ft ²)	13.49%
Building Height	96.32 m (316 ft); 36 storeys	

AREA SUMMARY	SOUTH SITE	
	Market Rental	Below Market Rental
Gross Area	16,668.41 m ² (179,417 ft ²)	4,084.06 m ² (43,961 ft ²)
Area %	80%	20%
Units	231	56

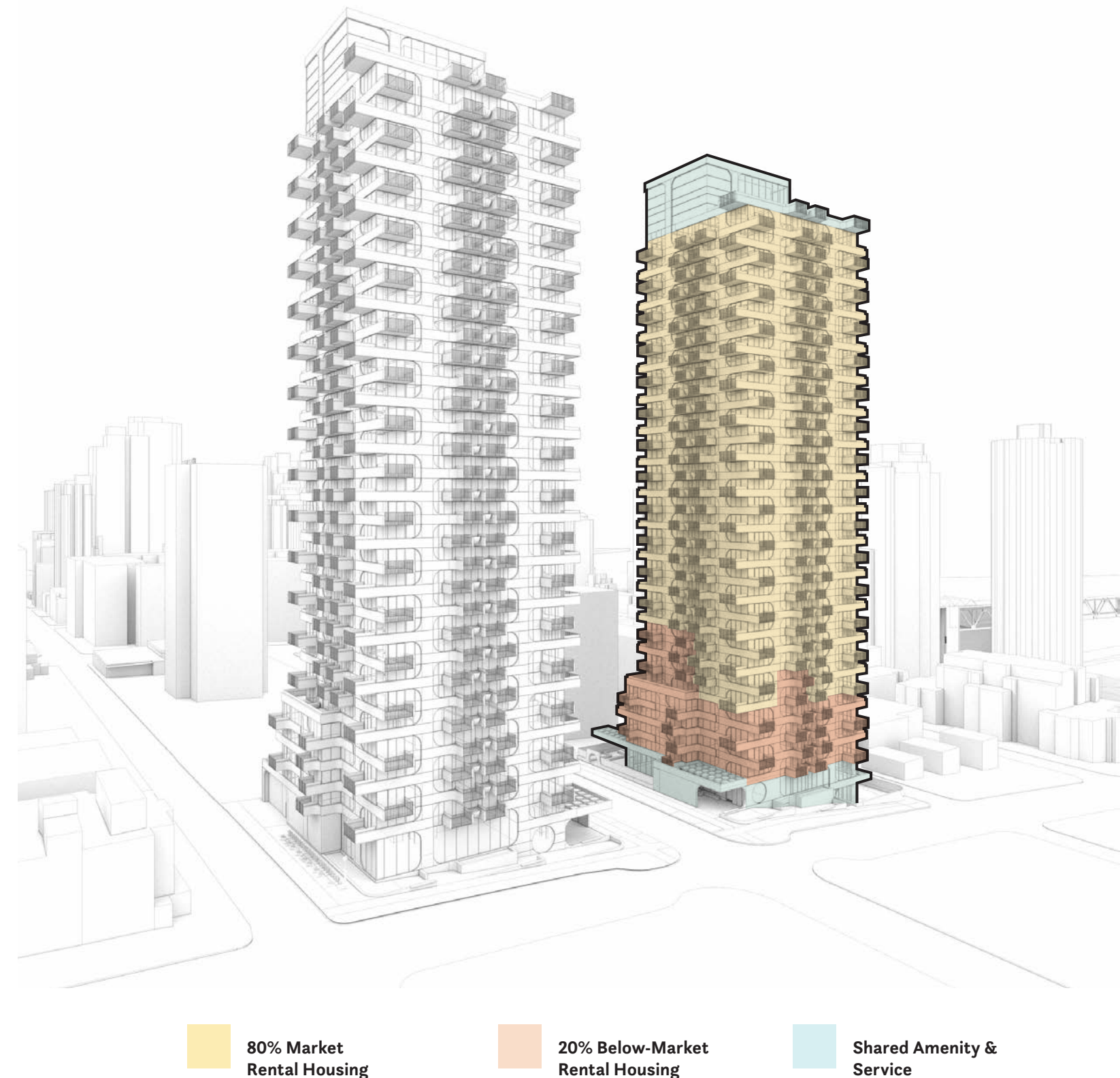
UNIT SUMMARY	SOUTH SITE	
	Market Rental ³	Below Market Rental ⁴
Studio	48 (21%)	8 (14%)
1 Bedroom	102 (44%)	28 (50%)
2 Bedrooms	81 (35%)	14 (25%)
3 Bedrooms	0 (0%)	6 (11%)
Total Units	231 (100%)	56 (100%)

³ 35% Family Units ⁴ 36% Family Units

CAR PARKING SUMMARY	REQUIRED (MIN)	ADJUSTED REQ.	PROPOSED
SOUTH SITE – TOTAL	155	140	146

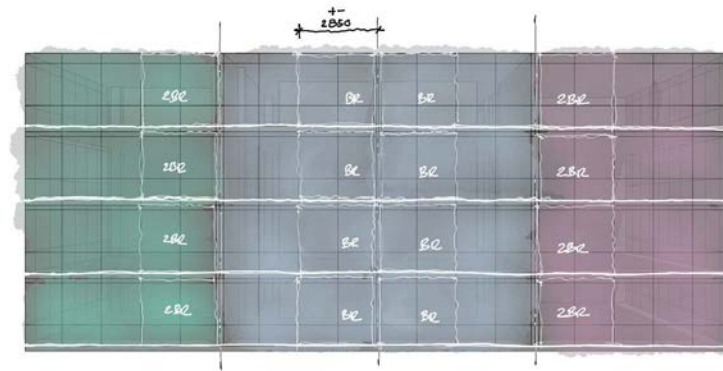
BICYCLE PARKING SUMMARY	NUMBER OF UNITS	REQUIRED (MIN.)		PROPOSED	
		CLASS A	CLASS B	CLASS A	CLASS B
SOUTH SITE – TOTAL	287 Units	532	15	532	15

LOADING SUMMARY	REQUIRED			PROPOSED		
	CLASS A	CLASS B	CLASS C	CLASS A	CLASS B	CLASS C
Total	2	1	0	2	1	0

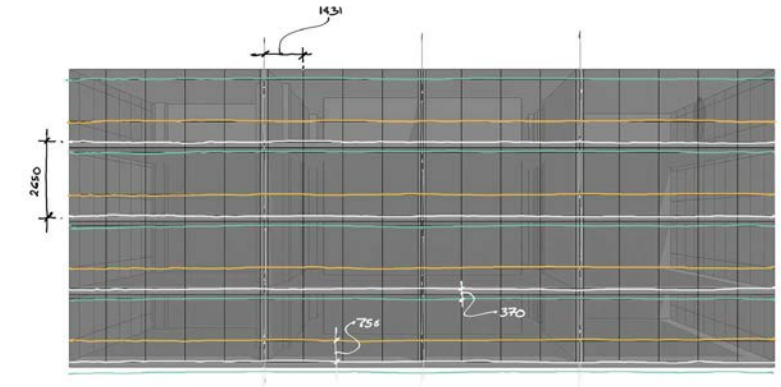


Design Narrative

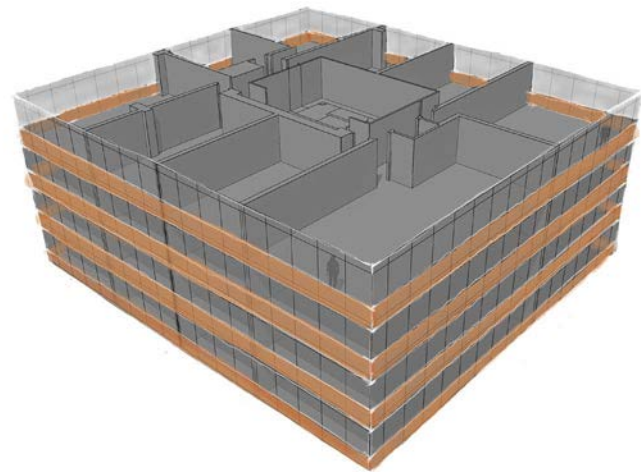
Livability and response to its context are at the essence of the tower's design rationale. The Thurlow and Harwood tower design borrows from the unique West End surrounding architectural typologies in a proposal that seeks to maximize visibility and light while providing maximum furnishing and layout flexibility.



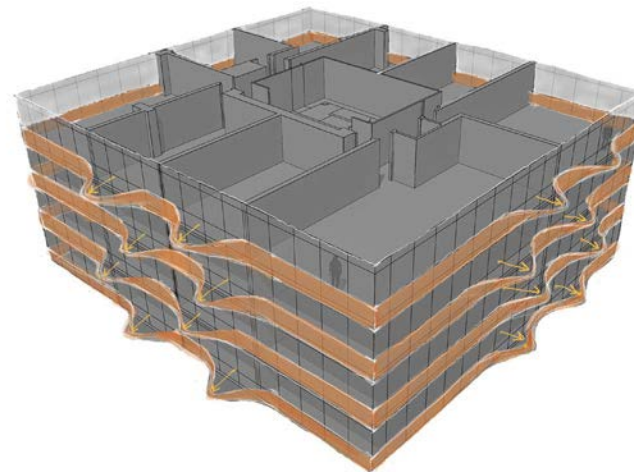
- 1 Unit stacking and layout distribution**
Unit Stacking and distribution provide an efficient use of space, structural integrity, and effective systems distribution.



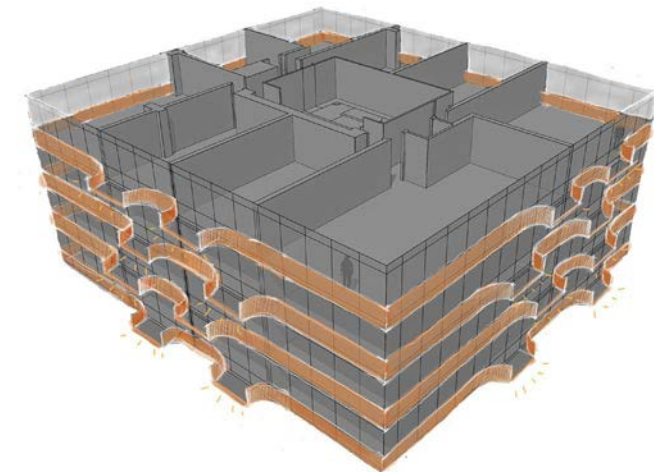
- 2 Definition of upstand and downstand datums**
Taking inspiration from the surrounding West End buildings, window and wall ratios are defined by horizontal datums.



- 3 Horizontal band definition**
Horizontal bands provide a higher solid wall ratio that allows for increased energy performance while maximizing light and visibility and flexibility for furniture to be distributed along the perimeter.



- 4 Metaphorical articulation**
Balconies metaphorically push and stretch the horizontal bands.



- 5 Balcony space is defined**
The horizontal bands metaphorically "break" and open the balconies to views and light.



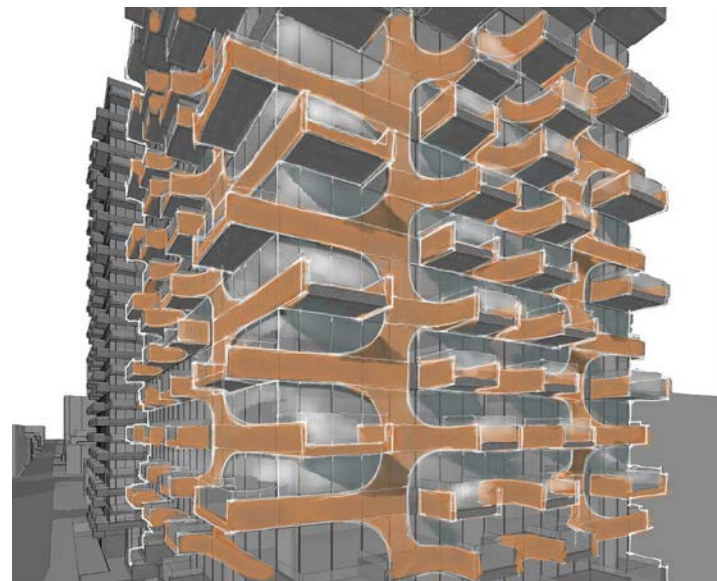
6 Horizontal bands run along the Tower
Horizontal expression is applied to the tower.



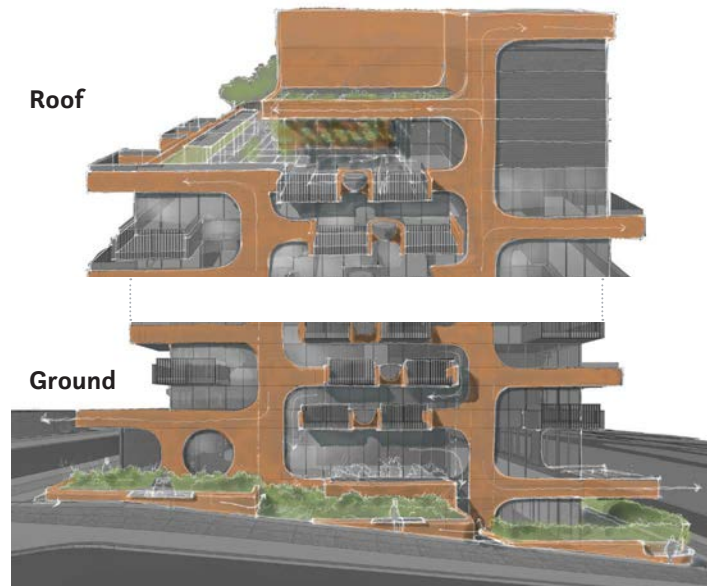
7 Verticals bands are introduced
Vertical bands are introduced to break the dominant horizontal expression and ground the tower to the site.



8 Horizontal and verticals are weaved
Horizontal and verticals bands are weaved to articulate windows and walls and to provide texture and scale to the tower.



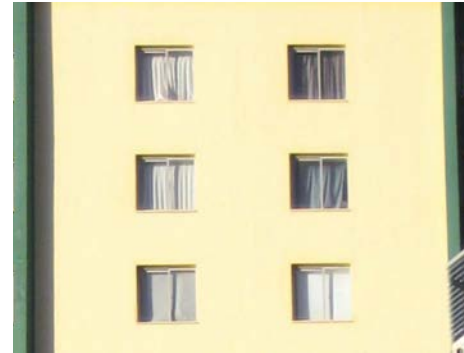
9 Interlocking modular expression is achieved
The modular interlocking design creates a dynamic expression at the corners and overall facade of the tower.



10 Modular expression extends and adapts to roof and ground floor
The design language extends to ground plane through planters and canopies and up the roof to articulate the mechanical penthouse and canopies at outdoor roof amenity areas.

West End Character

The proposed development will respect the West End's special character by incorporating architectural elements such as brick, punched windows, sculptural balconies, landscaped setbacks and gardens.



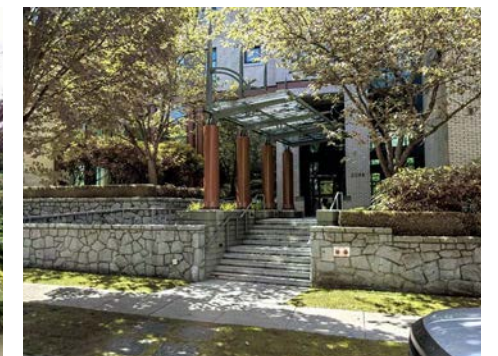
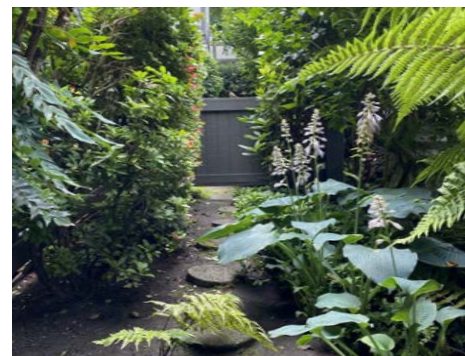
Punched Windows

Sculptural Balconies with Picket Railings



Brick and Precast Concrete Panels

Landscaped Setbacks



Lush Gardens

Inviting Building Entries

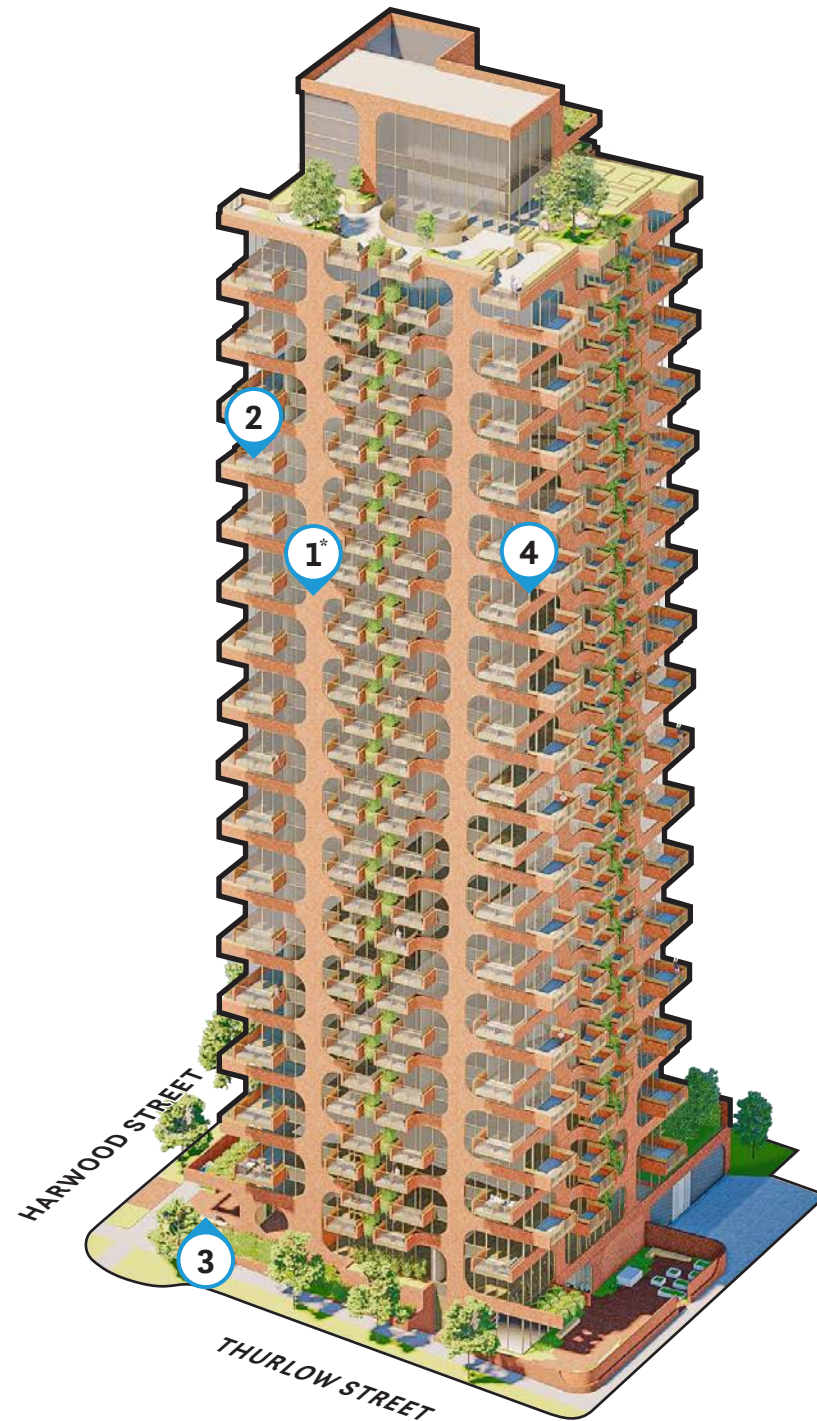
Materiality

The project will employ a refined palette of materials that draws inspiration from the rich historical context of the West End.

High quality building materials will be used throughout the project in a refined palette that integrates with the rich historical context of its surroundings. The solid walls of the building will be clad with durable materials. Insulated precast concrete panels with a thin brick veneer or with a form lined texture are being explored as possible options for a durable and timeless character. The solid walls will help highlight the building's unique interlocking vocabulary, expressed by the balconies that are sculpted out of the horizontal bands. The open ends of the balconies are framed by bronze picket railings. The open ends of the balconies are framed by bronze picket railings.

The bronze finish is expressed throughout the details of the building including the bronze anodized window mullions, metal panels, suspended planters, and landscape materials. The building entries will integrate warm and welcoming materials, including large wood entry doors, benches and finishes that complement the bronze and solid wall materials on the building and extend into the private gardens.

**Brick as a material option is being reviewed. Other high quality materials are being considered with like durability and finish.*



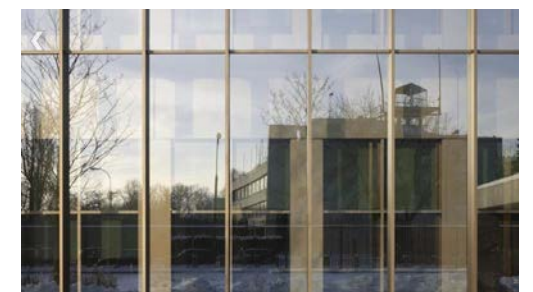
1 Brick or Precast Concrete Exterior Wall Panels*



2 Bronze Railings



3 Wood Details



4 Glass with Bronze Anodized Mullions

Renderings



View from Harwood Street looking South

Renderings



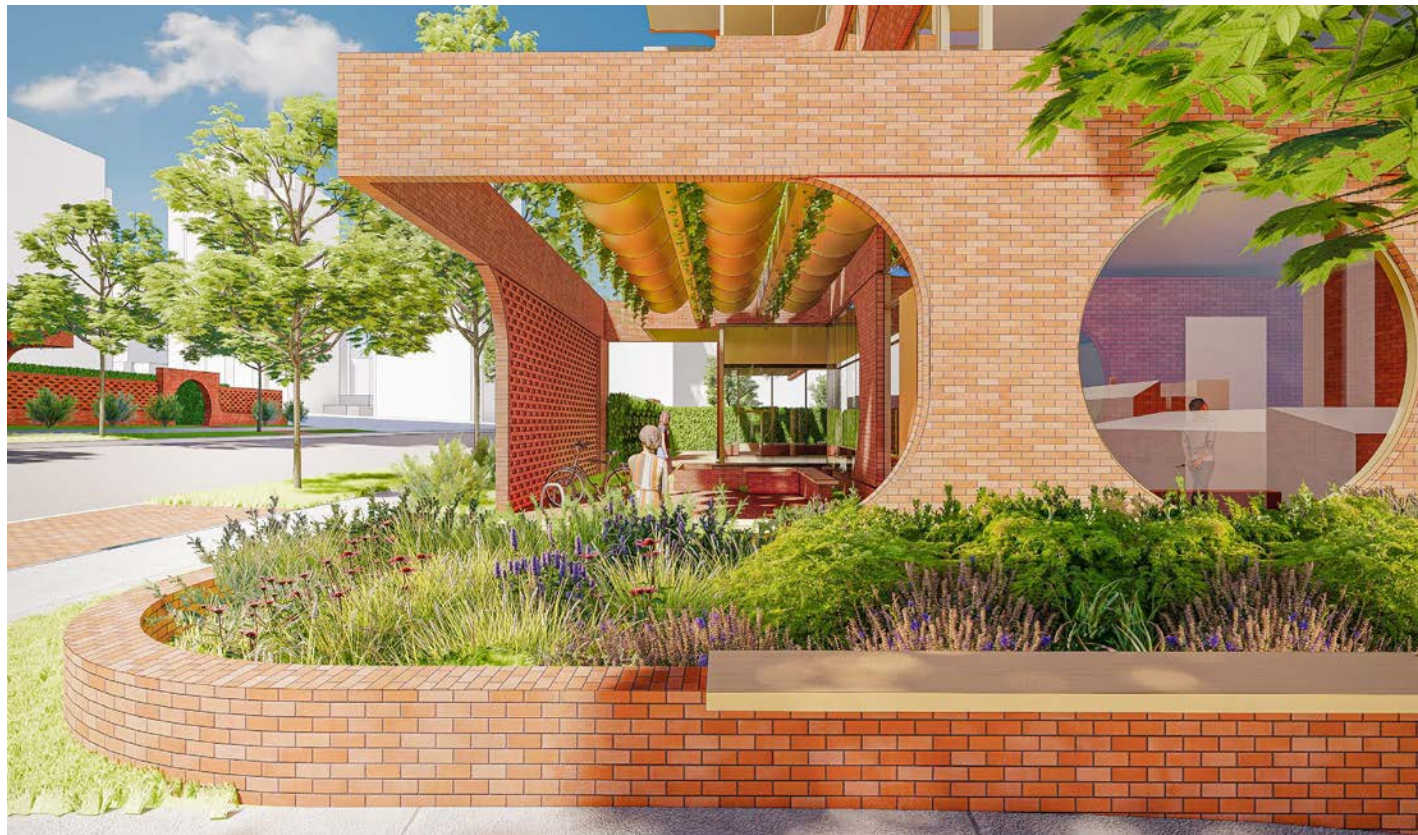
SOUTH SITE – View from Thurlow Street looking East



SOUTH SITE – View of Main Entry



Renderings



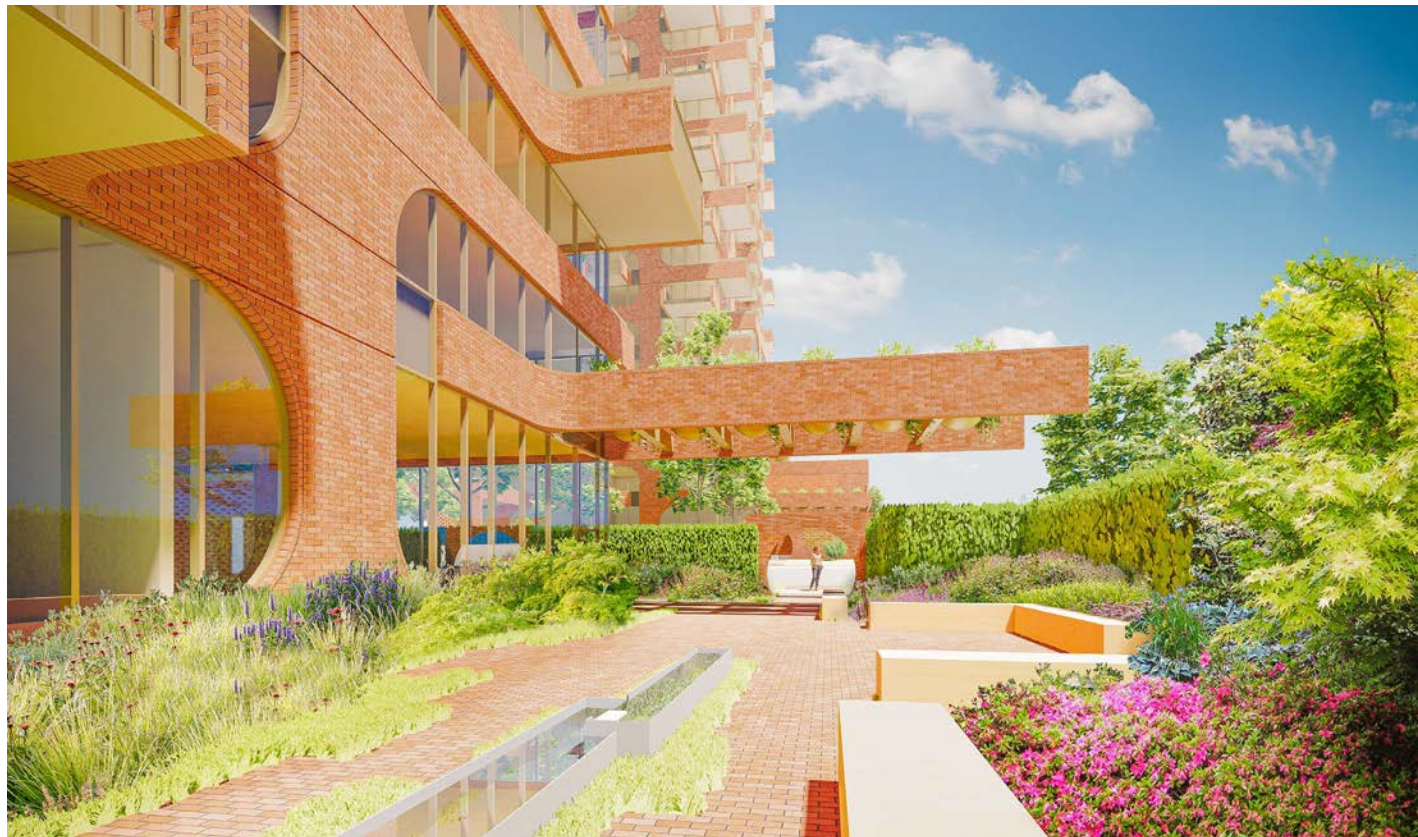
SOUTH SITE – View of Entry Garden



SOUTH SITE – View of Garden Entry



Renderings



SOUTH SITE – View of Garden



SOUTH SITE – Aerial View of Garden



Landscape Narrative

The landscape design concept responds to the unique context of the site, which is at the crossroads between the Downtown Core (Burrard Corridor) and West End (Beach Neighbourhood) character areas.

By taking advantage of the generous West End setbacks at the ground level, a green base is created for the two towers allowing them to seamlessly connect to the neighbourhood to the west and be sited in a park-like setting. From that solid, green base, intimate garden rooms are carved out (see Concept Diagram).

Mature trees along the south boulevard of Harwood Street are being preserved. The design also proposes the creation of a large rain garden along the east boulevard of Thurlow. This stepped and sloping garden manages stormwater runoff while utilizing low brick walls to provide resting benches for pedestrians as they walk along this steep section of Thurlow.

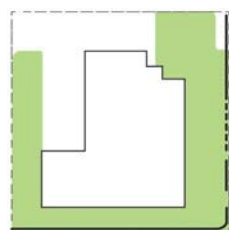
The two towers' lobby entries are augmented with a careful choice of materials and planting to create an inviting arrival experience. The use of water features at the outdoor lobby spaces allows for gentle sounds and a dynamic experience for people sitting outside. Outdoor lobbies facing each other across Harwood Street combined with curving brick site walls create an inviting gateway into the block.

A small urban agriculture area at grade and larger areas at the roof of each tower provide several raised beds for the cultivation of vegetables and permanent, in-ground gardening space for edible perennials and plants that provide bird and pollinator habitat.

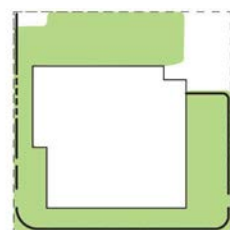
Amenity terraces designed as intimate gardens are created for both towers. Located strategically to take the most advantage of a free flowing indoor / outdoor relationship, they include amenities such as outdoor BBQ areas, informal seating and dining spaces, and tropical-inspired planting.

The idea of the garden-scape is extended to the rest of the tower mass with the inclusion of planters that add a layer of green to the tower facades. These will be planted with a combination of low growing evergreen and deciduous plants to create low maintenance and visually attractive green pockets.

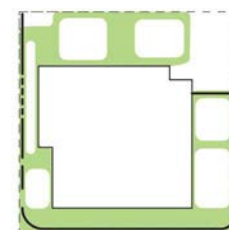
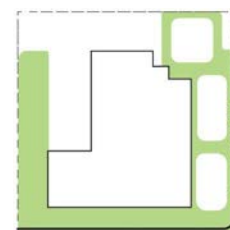
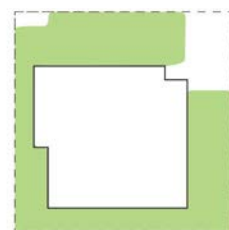
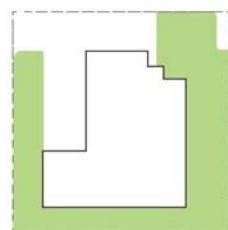
1. Green



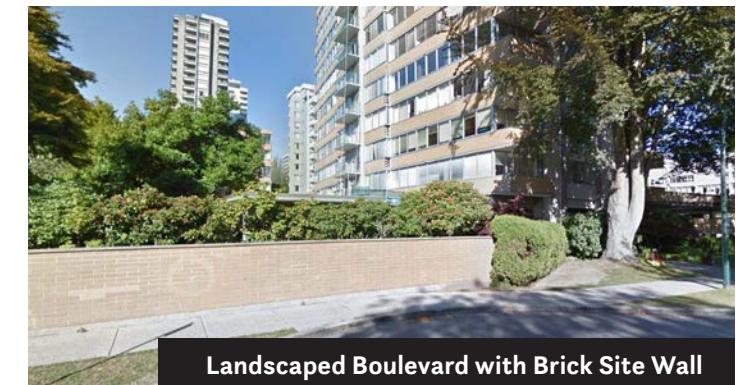
2. Enclosure



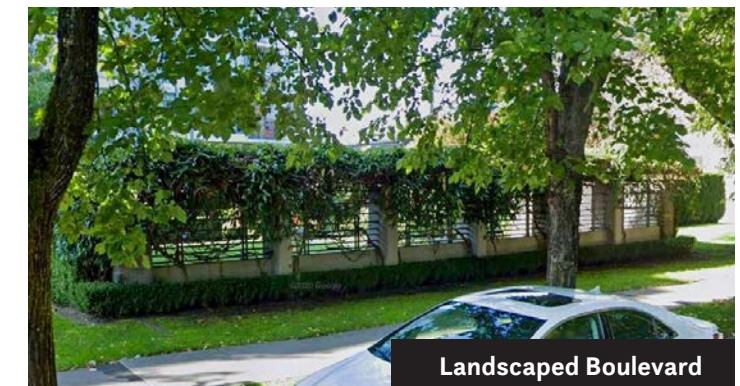
3. Carved-out Garden Rooms



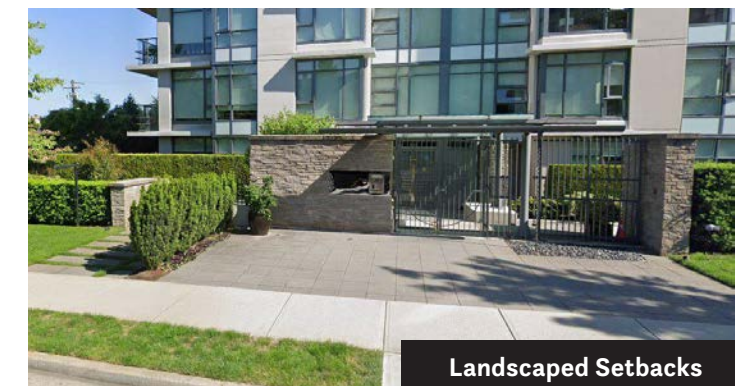
Concept Diagram



Landscaped Boulevard with Brick Site Wall



Landscaped Boulevard

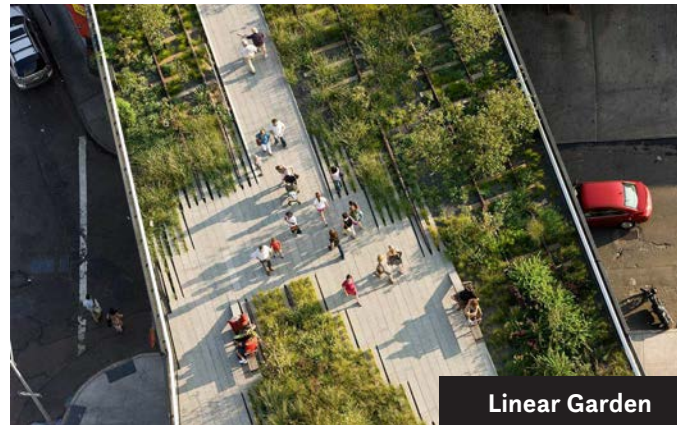


Landscaped Setbacks

West End Landscape Precedents

Landscape Narrative

The design is a balance between intimately scaled gardens and a strong green border at the ground level with a organic palette of materials and finishes. A biodiverse planting palette creates lush gardens that reach up from the ground and weave together with architectural elements.



Linear Garden



Low Brick Wall with Resting & Water Feature



Perforated Brick Screen



Wild Ground Level Planting



Green Roof Overhead



Weathered Steel Planting



Wild Ground Level Planting



Outdoor Dining Area



Outdoor Seating

Ground Level Planting Precedents

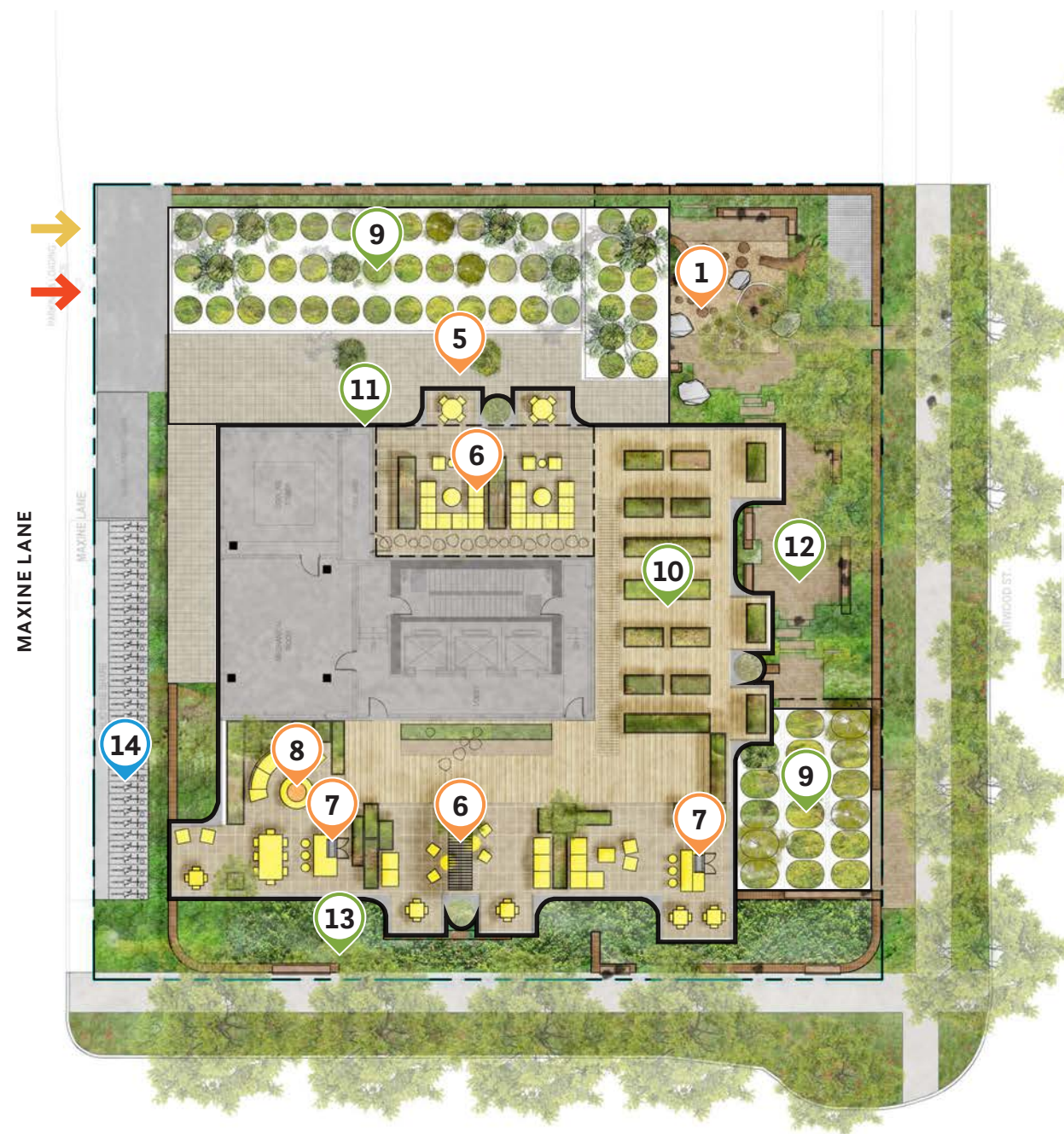
Overhang Planting Precedents

Roof Top Garden Precedents

Materials & Character

Landscaping

- 1 Children's Play Area
- 2 Working Area
- 3 Exercise
- 4 "The Yard"
- 5 Patio Space
- 6 Social Areas
- 7 BBQ
- 8 Fire Pit
- 9 Roof Planters
- 10 Urban Agriculture
- 11 Green Roof Overhead
- 12 Linear Garden
- 13 Stormwater Garden
- 14 Bike Share
- ➔ Parking Entrance
- ➔ Loading Entrance

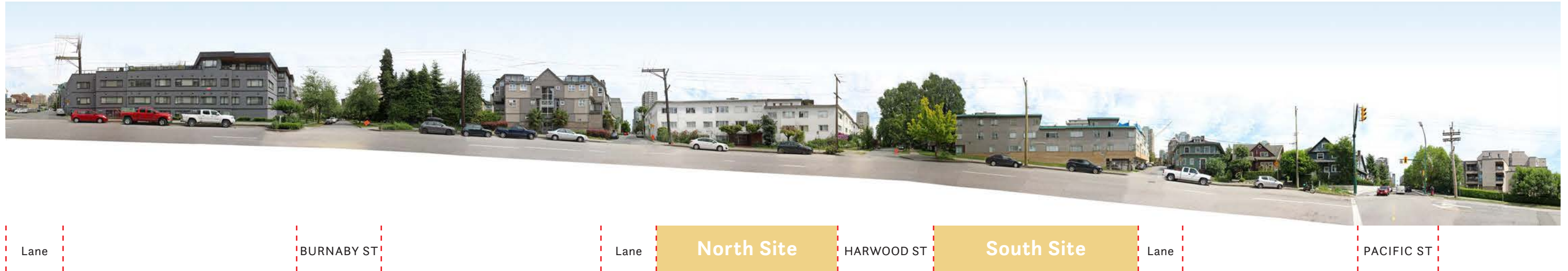


NORTH SITE – Landscape Plan

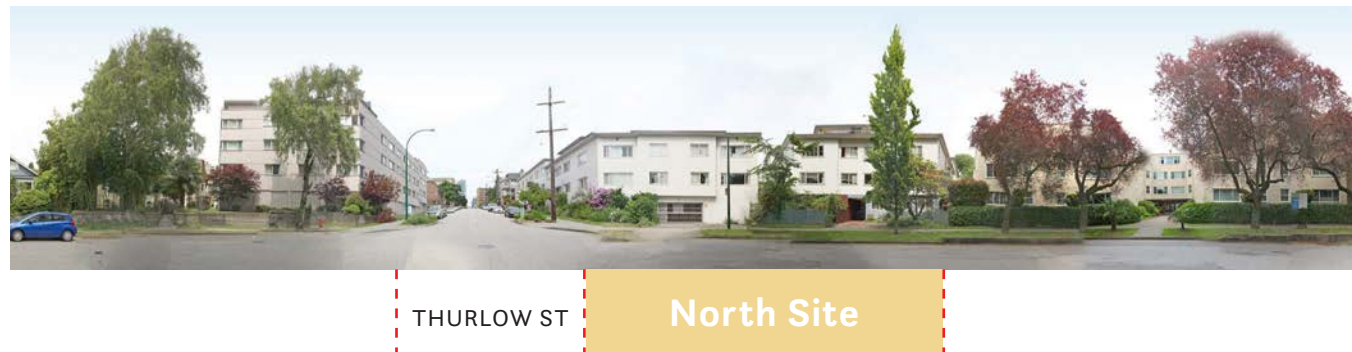


SOUTH SITE – Landscape Plan

Streetscapes



Thurlow Street looking East



Harwood Street looking North



Harwood Street looking South

Existing Building Unit Summary

A total of 98 rental units are found in the four existing buildings on the north and south sites.

NORTH SITE

ADDRESS	STUDIO	1 BEDROOM	2 BEDROOM	TOTALS
1065 Harwood	11	12	1	24
1332 Thurlow	0	23	1	24
Totals	11	35	2	48

SOUTH SITE

ADDRESS	STUDIO	1 BEDROOM	2 BEDROOM	TOTALS
1066 Harwood	0	22	1	23
1078 Harwood	6	20	1	27
Totals	6	42	2	50

NORTH SITE



1065 Harwood Street

SOUTH SITE



1066 Harwood Street



1332 Thurlow Street



1078 Harwood Street

View Analysis

The form of the proposed development has been guided by the built form guidelines of the *West End Community Plan*, the materials and character of the existing West End towers, and reinforces the city's dome-shaped skyline.

Livability and neighbourliness were key to the development of the West End Built Form Guidelines, which uses a principled approach to shape how and where growth / development occurs, and the appropriate built form.

The robust expression of the proposed towers are a sharp departure from the lighter expression of the predominantly glass towers of newer development and a welcome complement to the materials and character of the existing West End towers in support of the principles in the West End Built Form Guidelines.



View from Vanier Park



View from Burrard & Harwood



View from Beach & Thurlow



View from Davie & Thurlow

Privacy & Setbacks

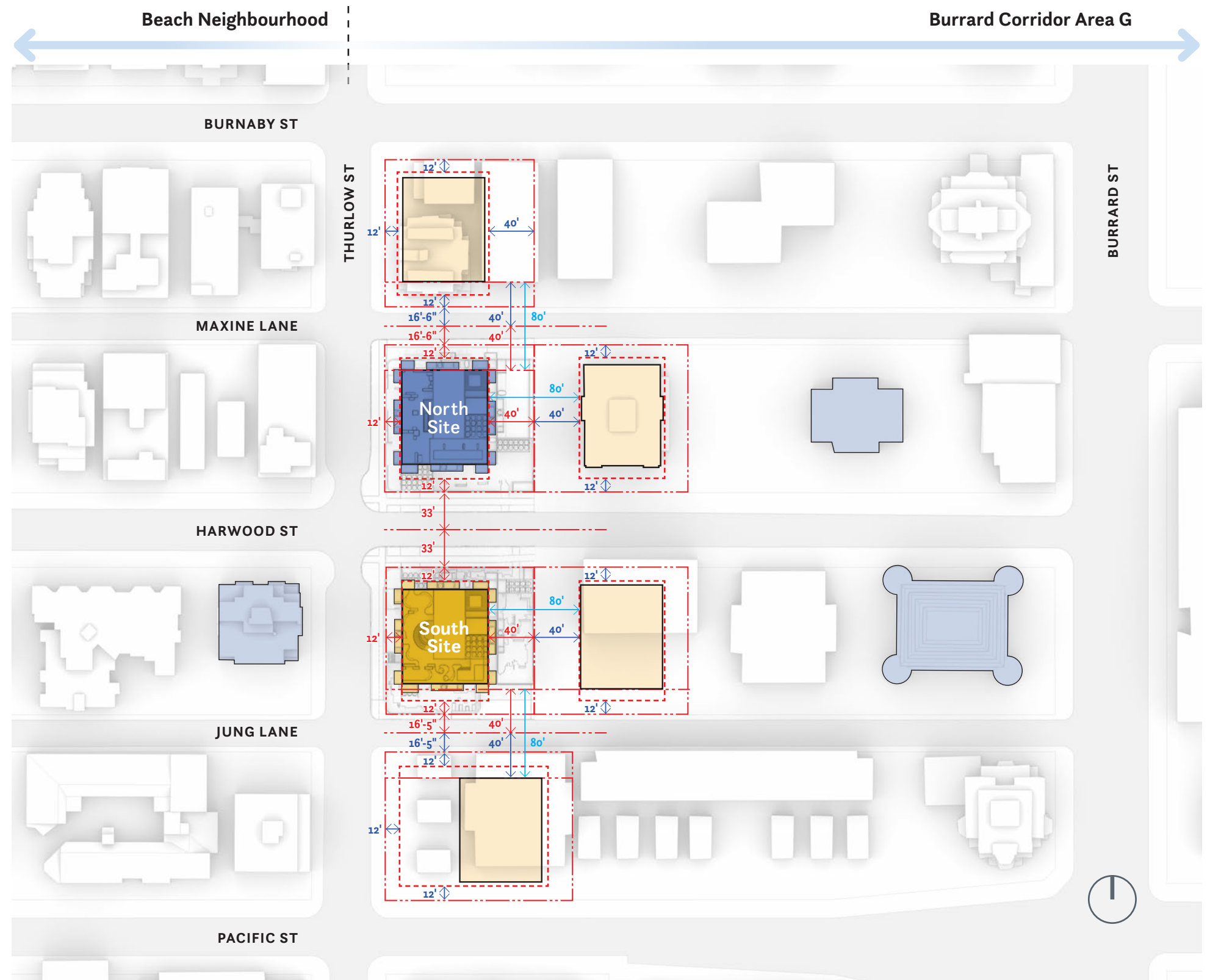
In the context of the *West End Plan* and within corridors designated for future growth, relationships to existing and future towers are key considerations for the livability of the neighbourhood.

Separations to neighbours in response to the *West End – Tower Form, Siting and Setbacks* requirements directly inform the siting of the proposed towers. These separation distances ensure that residents of the proposed and neighbouring buildings are provided a sense of privacy.

The location and shapes of our proposed towers are constrained by the size of the properties, the required setbacks, and the maximum width, depth and area of the floor plates.

The 12' setbacks facing Thurlow and Harwood streets, along with the width of the street right of way, ensures towers are spaced in excess of 80' (24 m) to existing and future development. Along the lanes, our towers are proposed to be setback a minimum of 40' from the center line of the lanes. Our towers are also proposed to be setback 40' from the east property lines. Future development to the north, south and east would need to provide similar 40' setbacks to ensure a minimum of 80' (24 m) is maintained between towers.

- Proposed Tower
- Proposed Tower – Separate Rezoning Application
- Future Development
- Existing Residential Towers



Built Form Fit

As one of the most densely populated areas in North America, the built form of the West End is characterized by tall, closely spaced residential towers.

Adequate tower separations are essential to protect privacy and views, allow access to daylight, and ensure the livability of residential units for all residents.

The *West End – Tower Form, Siting and Setbacks* administrative bulletin provides clear direction for the placement of new towers and establishes that the minimum distance between towers shall be 24.4 m (80 ft). The proposed development has been sited to allow a minimum of 40' to the east property line in order to meet these requirements.

View Cones

The site is at a rare location on the downtown peninsula not impacted by any existing view cone. Building heights are therefore not limited by view cones and are defined in the context of existing policy, public realm impacts, urban design considerations and public benefits.



Building Height

The height of the south tower is proposed to be increased by one floor to maximize the 20% additional density and to provide 9 additional secured rental housing units.

Building heights are proposed to be increased by one floor in coordination with City policy that permits a 20% increase in density for projects that include 100% secured rental housing with a minimum of 20% of the residential floor area as secured below-market rental. Additional density is evaluated alongside public realm impacts and urban design considerations, and measured against the proposed public benefits.

The additional height has been designed to minimize any adverse impact to the surrounding neighbourhood and is proposed as a public benefit that provides 9 additional units of secured rental housing, including 20% of the residential floor area as below-market rental.

Views

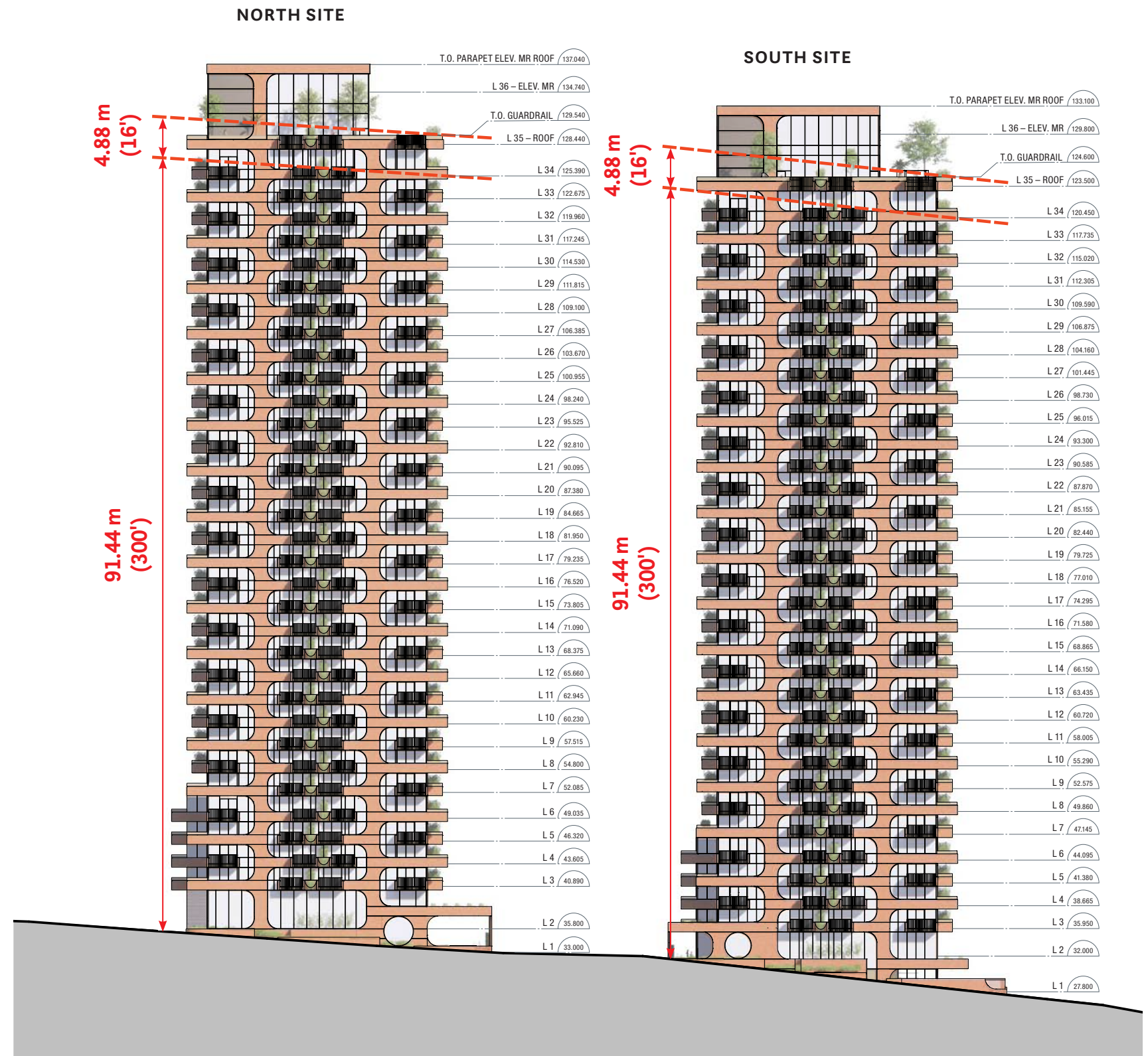
The height of existing neighbouring towers are lower than the proposed development. Existing views would be equally impacted by a 35 or 36 storey tower. The additional floor therefore does not increase view blockage.

Shadows

The incremental impact of shadows from the additional floor has been illustrated on our shadow studies and shown to not impact public open spaces, and in particular it does not impact the north sidewalk of Davie Street from 10:00 am to 4:00 pm at the equinoxes.

Public Benefit



The additional floor allows the project to maximize rental housing, including 9 additional rental units with 20% of the additional density for the below-market rental. The building height also provides the headroom required for amenity and service areas at grade and modest floor to floor heights for residential floors.

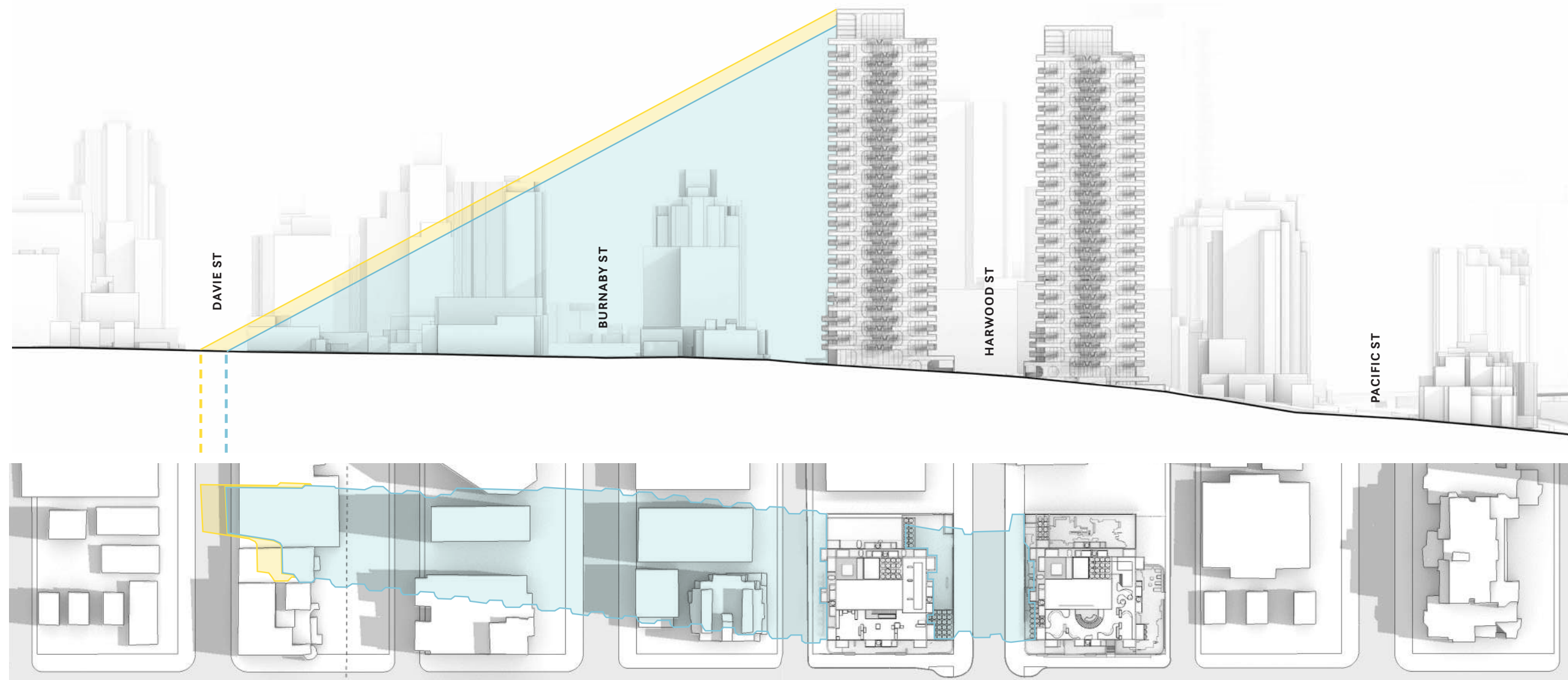


Shadow Studies

Shadows created by the proposed development do not impact the north sidewalk on Davie Street at the equinoxes.

A section through Thurlow Street looking east at 4:00 pm on the autumnal equinox shows that shadows created by the proposed development do not reach the north sidewalk on Davie Street. The shadow cast by the proposed additional residential floor has been highlighted in yellow on the section and plans, and shows that the additional 4.88 m (16') building height has minimal impact on the surrounding neighbourhood.

-  Proposed Incremental Ground Plane Shadows
-  Proposed Incremental Ground Plane Shadows from Addition Floor



Thurlow Street Plan & Elevation Looking East

Shadow Studies – NORTH & SOUTH TOWERS

Shadow studies have been prepared in order to understand the impact of shadows on the existing neighbourhood.

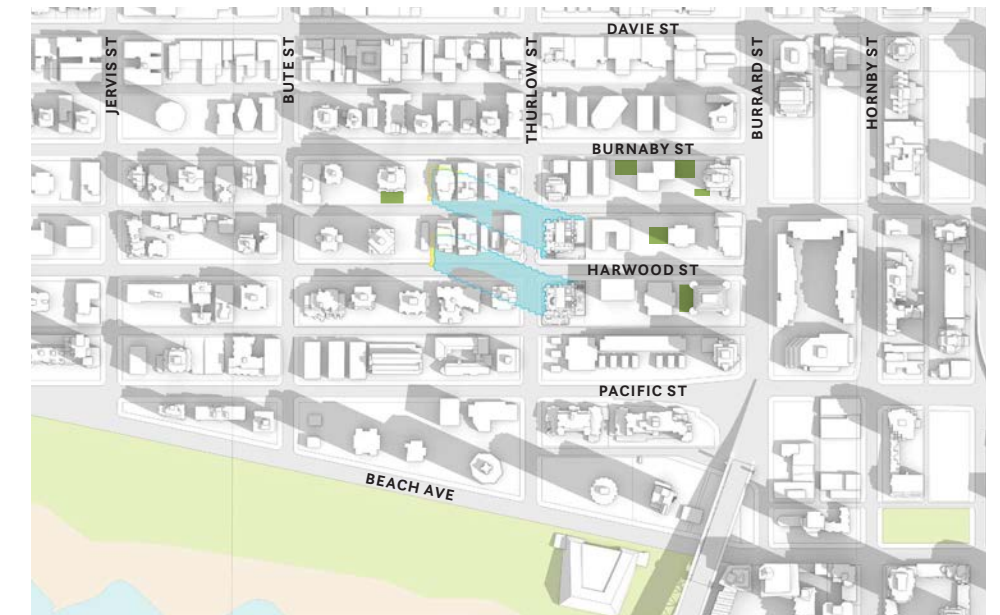
In response to the requirements of the *West End – Tower Form, Siting, and Setbacks* guideline, shadows were reviewed to ensure impacts are minimized on Parks, public open spaces, and West End Villages, as well as minimized on semi-private open spaces, and private open spaces. In particular, the shadow impact on the north sidewalk of Davie Street was reviewed to ensure there are no shadows created by the proposed buildings between the hours of 10:00 am and 4:00 pm PDT (UTC-7) at the equinoxes.

The shadow studies included in this report demonstrate that no shadows are created on the north sidewalk of Davie Street between the hours of 10:00 am and 4:00 pm PDT at the equinoxes and do not impact public or private open spaces.

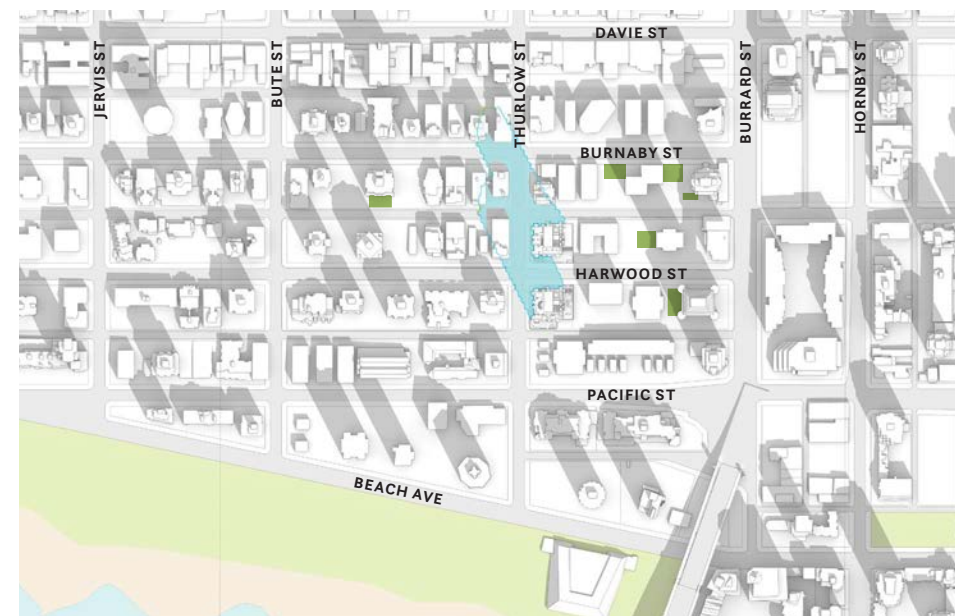
Autumnal Equinox – September 22



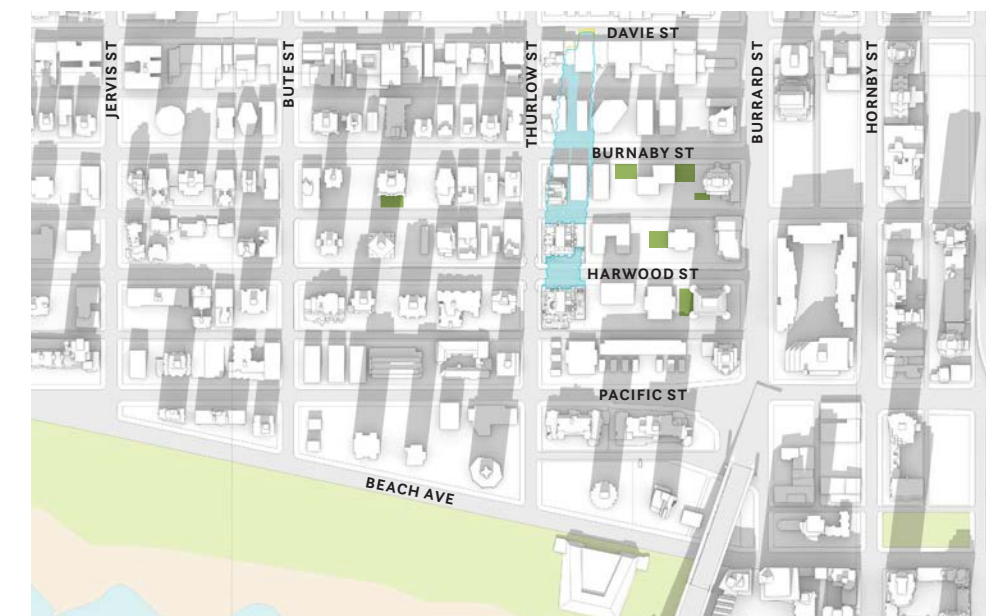
10:00 AM



12:00 PM



2:00 PM

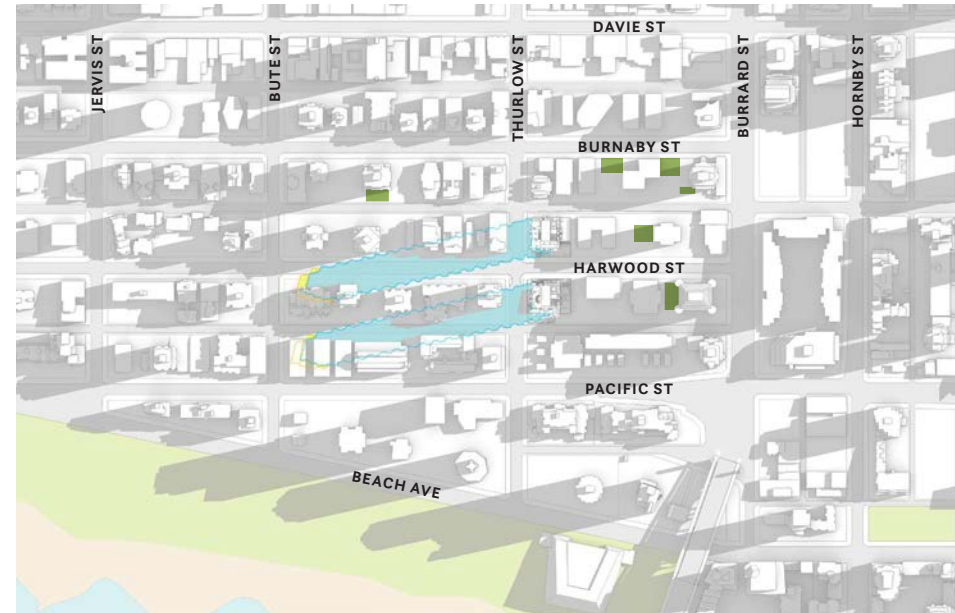


4:00 PM

- Existing Shadows
- Proposed Incremental Ground Plane Shadows
- Proposed Incremental Ground Plane Shadows from Additional Floor
- Existing Parks & Public Open Space
- Private Outdoor Areas

Shadow Studies – NORTH & SOUTH TOWERS

Vernal Equinox – March 20



10:00 AM








12:00 PM



2:00 PM



4:00 PM

-  Existing Shadows
-  Proposed Incremental Ground Plane Shadows
-  Proposed Incremental Ground Plane Shadows from Additional Floor
-  Existing Parks & Public Open Space
-  Private Outdoor Areas

View Studies – NORTH & SOUTH TOWERS

Carlton Court, 1021 Harwood Street

View Height: 22nd Storey (top floor)

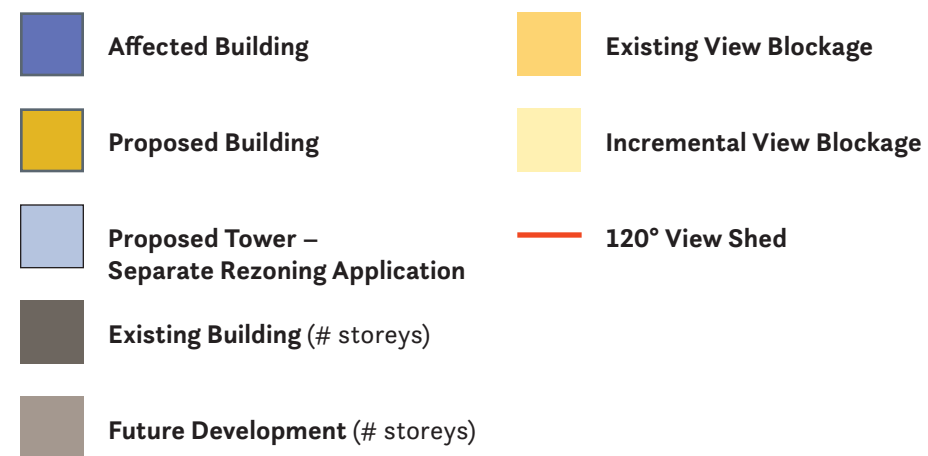
Incremental View Impact: 8.9°

93% View Maintained

The view towards the west from the Carlton Court tower will primarily be obstructed by the tower proposed at 1055 Harwood Street, and will conceal the view of the proposed north tower.

The primary city and mountain view towards the northwest will be maintained.

Partial view blockage will occur towards the southwest as a result of the proposed tower on the south site. A small portion of the view to Sunset Beach will remain.



View Studies – NORTH & SOUTH TOWERS

Carlton Court, 1021 Harwood Street

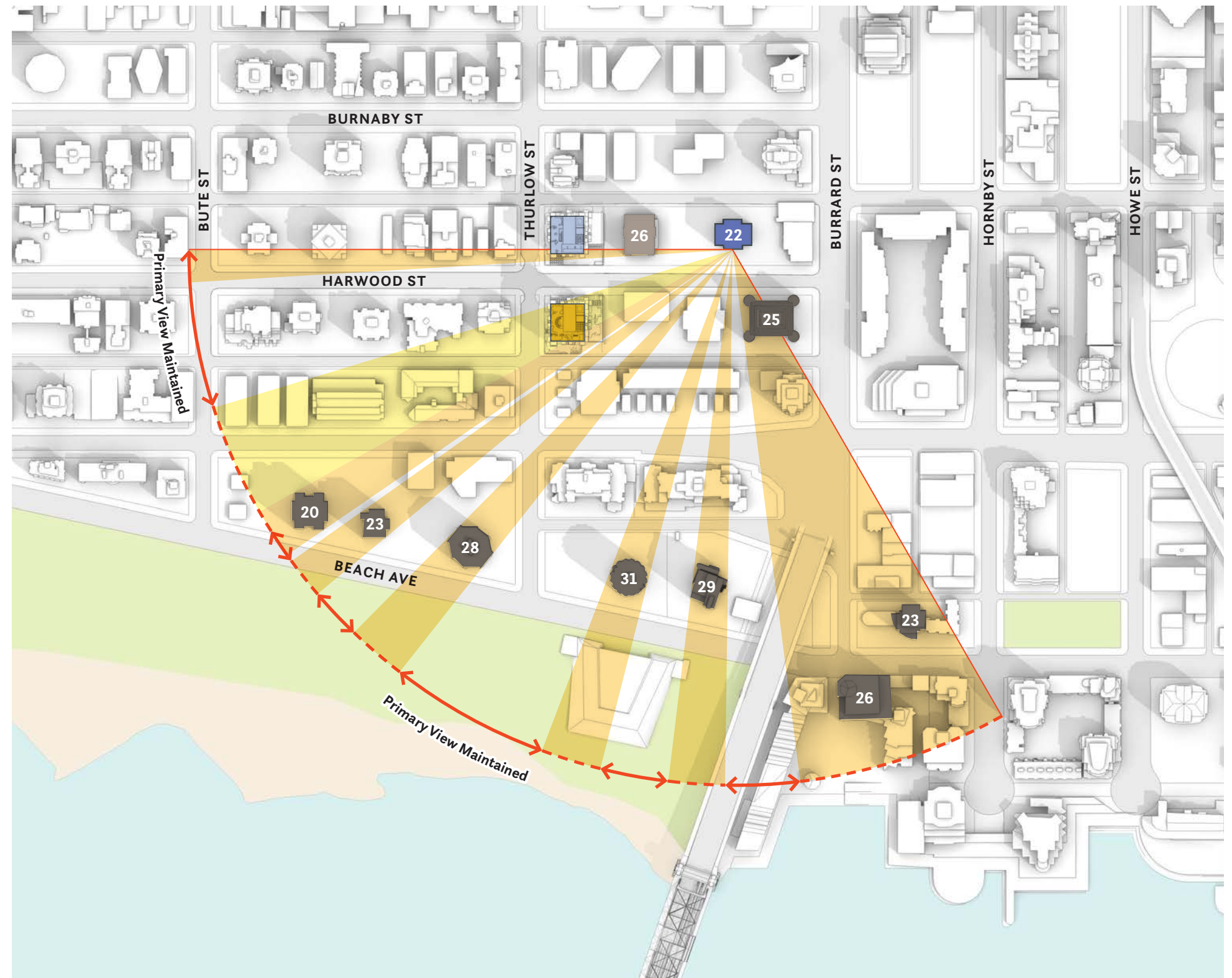
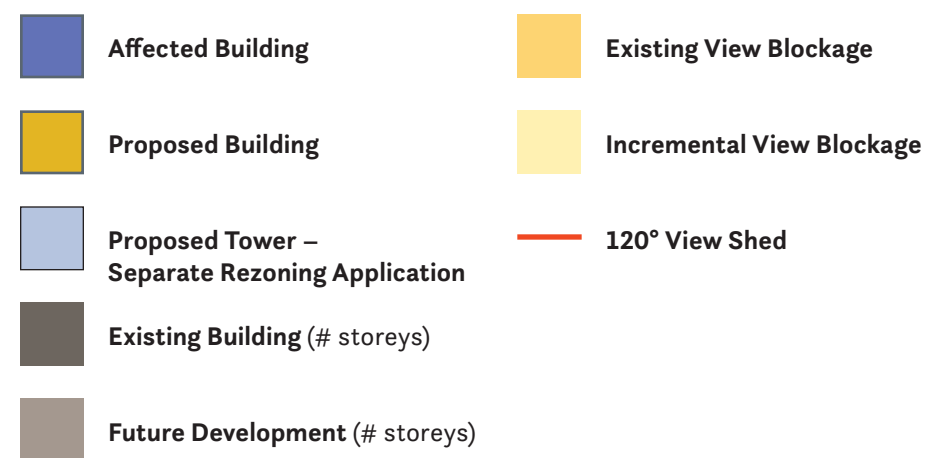
View Height: 22nd Storey (top floor)

Incremental View Impact: 12°

90% View Maintained

The primary view of Vanier Park and the HR MacMillan Space Centre to the south will be maintained.

Partial view blockage will occur towards the southwest as a result of the proposed tower on the south site. A portion of the view towards the west and Sunset Beach will remain.



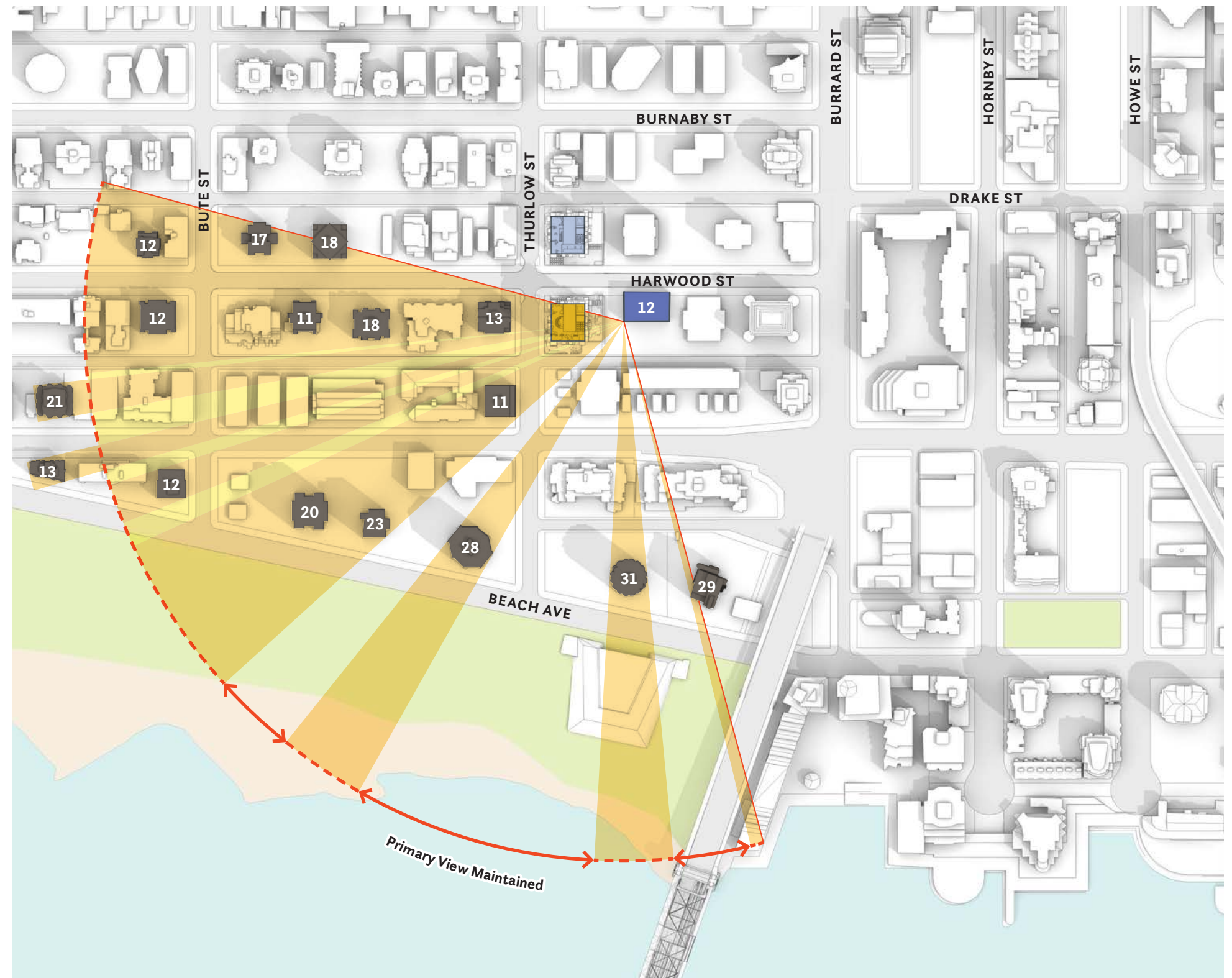
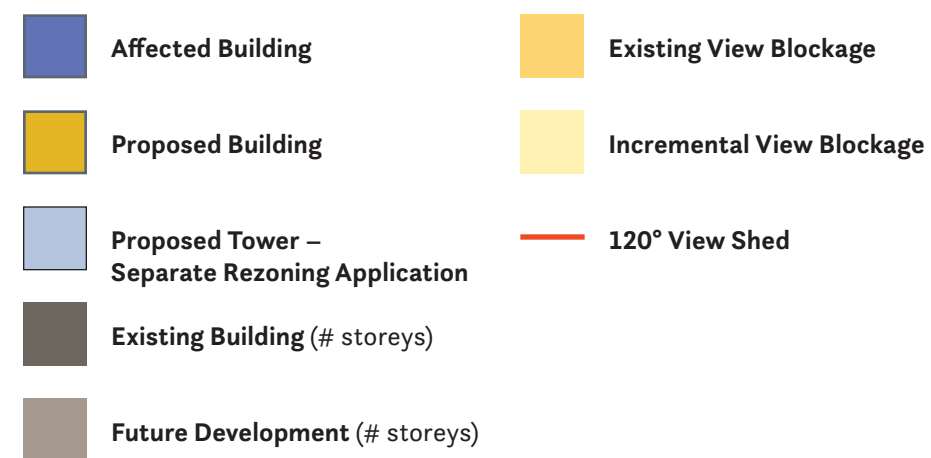
View Studies – NORTH & SOUTH TOWERS

The Regent, 1050 Harwood Street

View Height: 12th Storey (top floor)

Incremental View Impact: 8.6°

93% View Maintained



View Studies – NORTH & SOUTH TOWERS

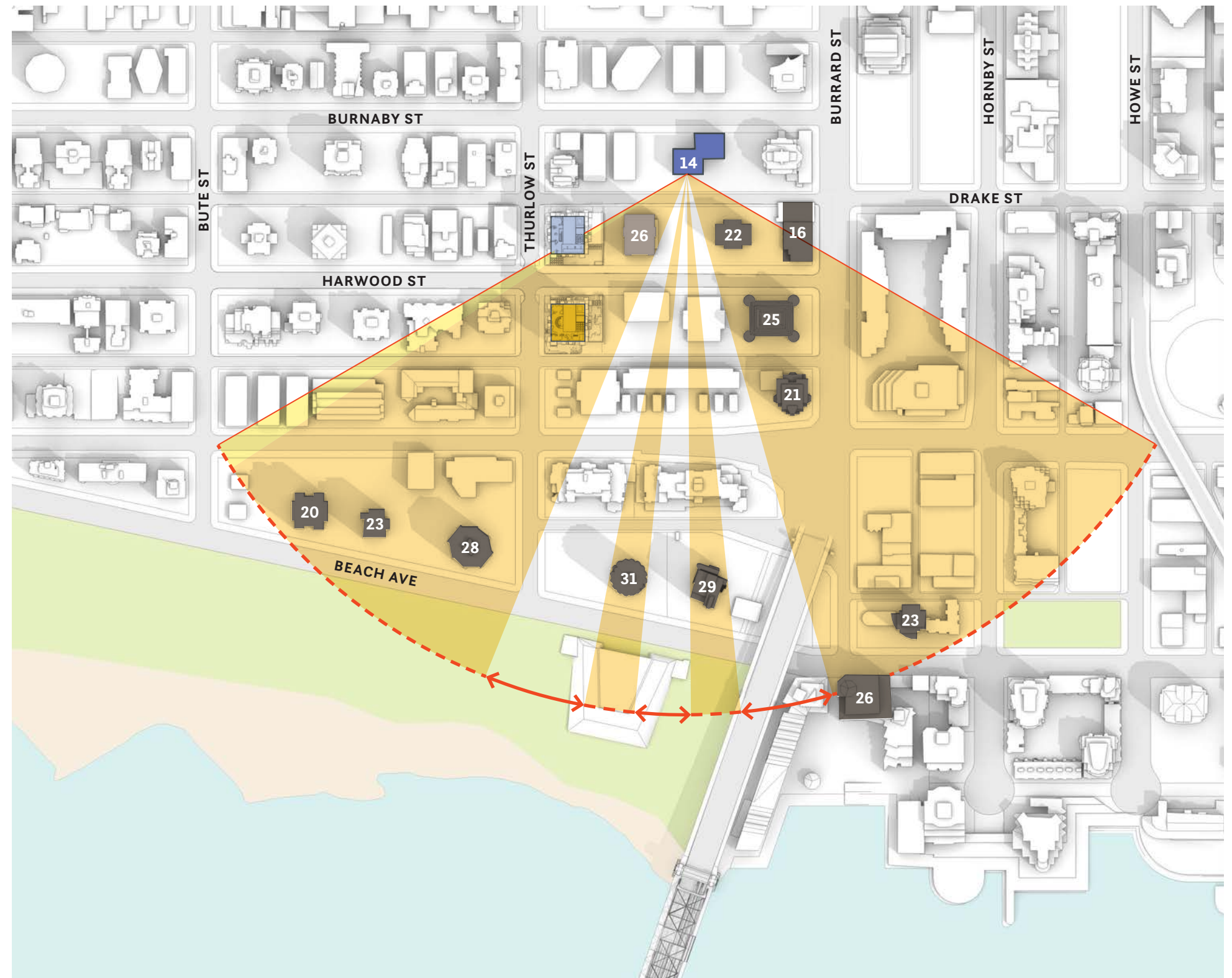
Twin Arms, 1030 Burnaby Street

View Height: 14th Storey (top floor)

Incremental View Impact: 2.9°

98% View Maintained

- Affected Building
- Existing View Blockage
- Proposed Building
- Incremental View Blockage
- Proposed Tower – Separate Rezoning Application
- Existing Building (# storeys)
- Future Development (# storeys)
- 120° View Shed



View Studies – NORTH & SOUTH TOWERS

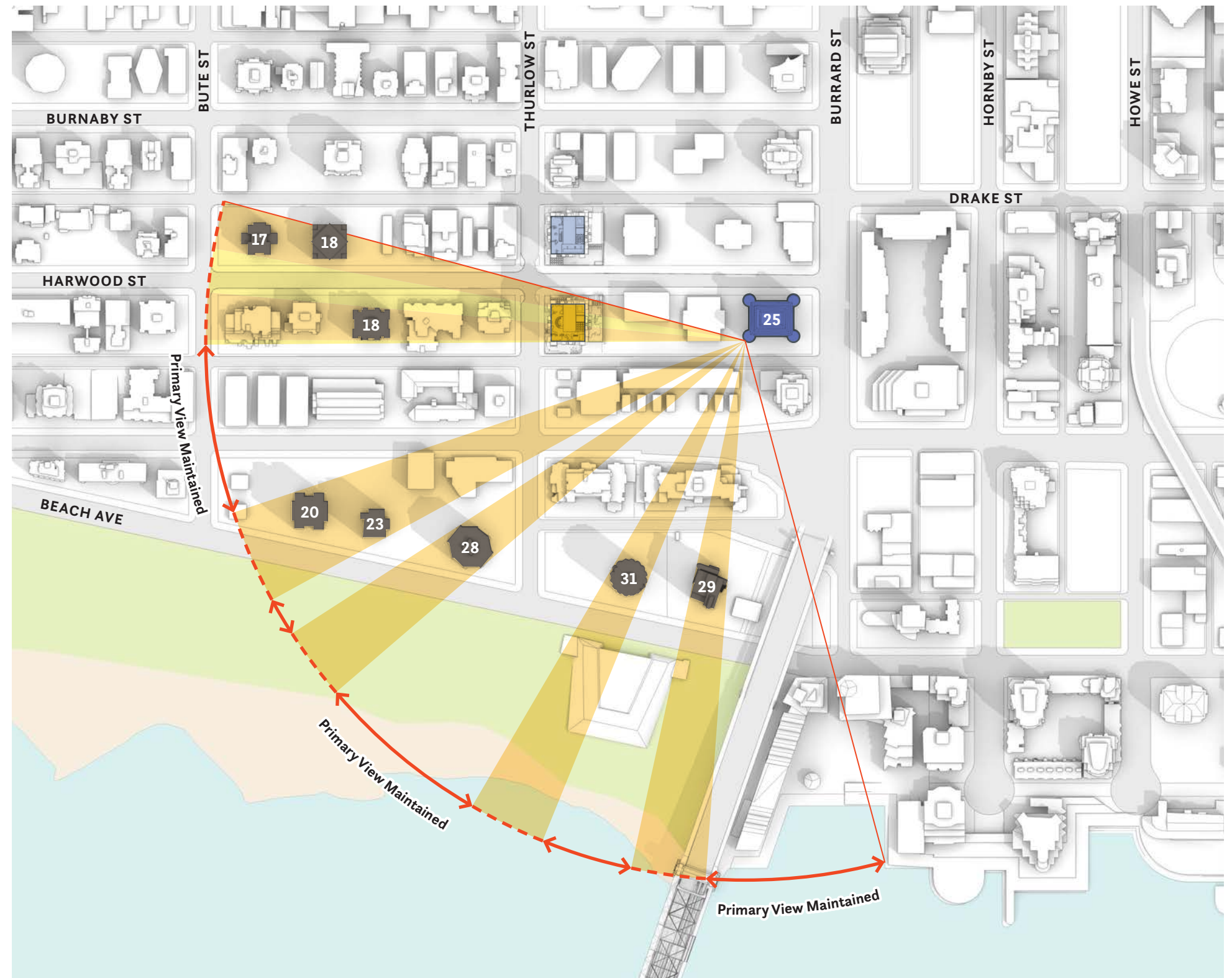
Crystallis, 1020 Harwood Street

View Height: 25th Storey (top floor)

Incremental View Impact: 6.8°

94% View Maintained

- Affected Building
- Existing View Blockage
- Proposed Building
- Incremental View Blockage
- Proposed Tower – Separate Rezoning Application
- Existing Building (# storeys)
- Future Development (# storeys)
- 120° View Shed



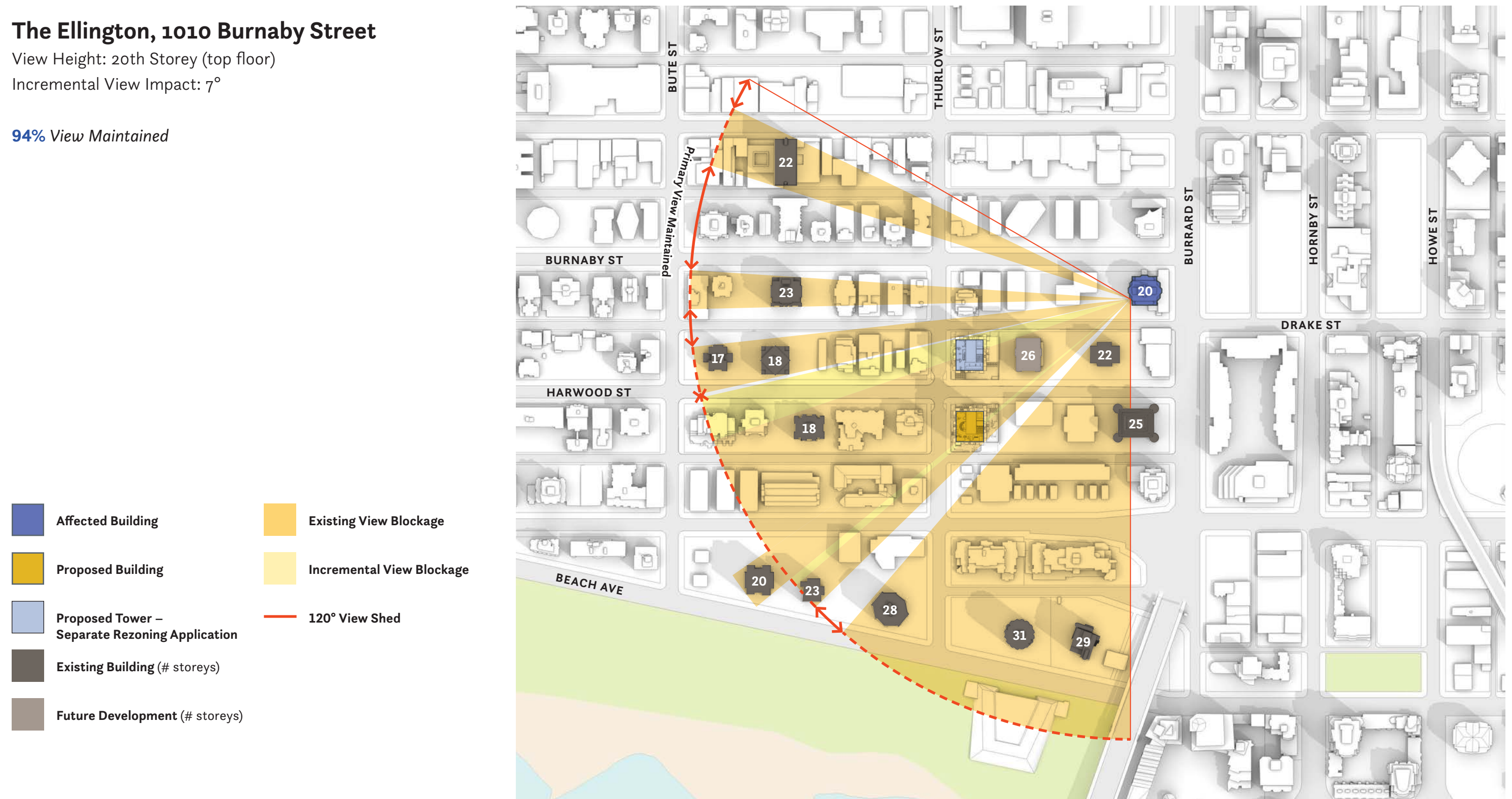
View Studies – NORTH & SOUTH TOWERS

The Ellington, 1010 Burnaby Street

View Height: 20th Storey (top floor)

Incremental View Impact: 7°

94% View Maintained

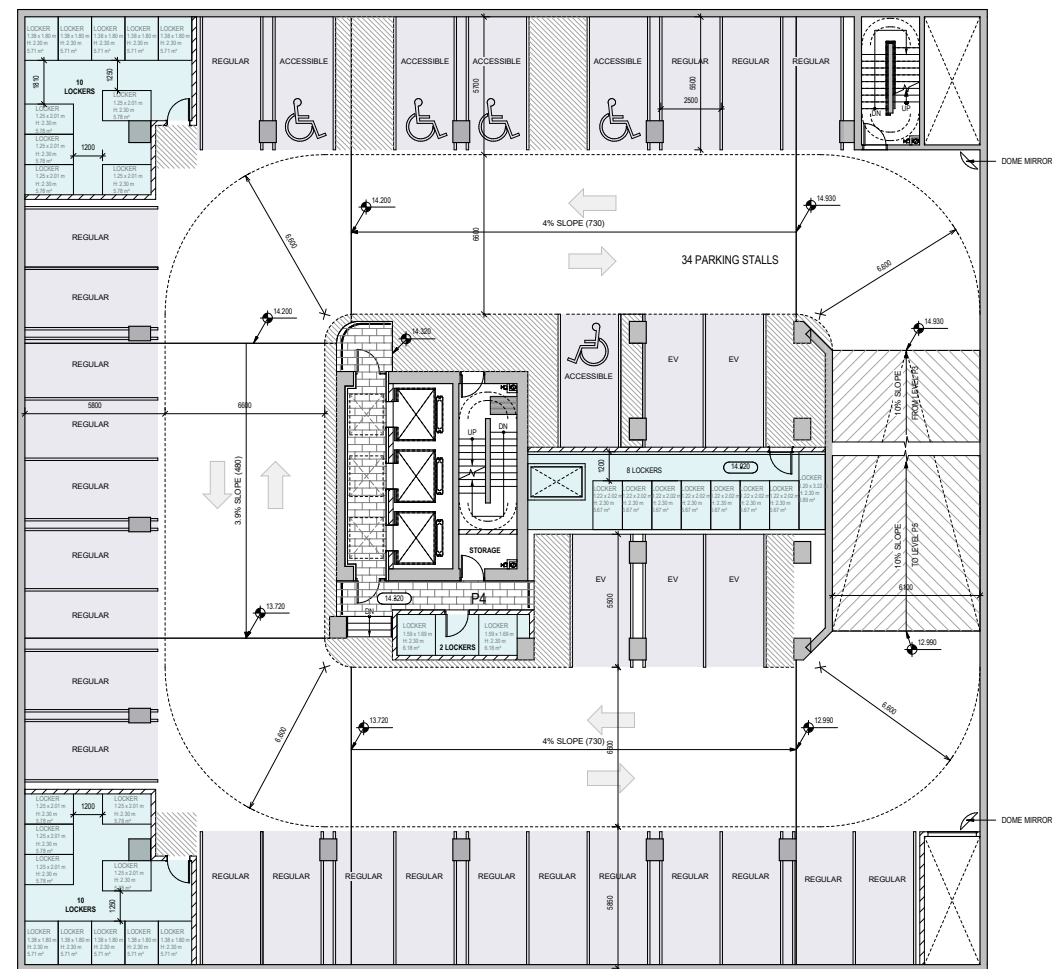


Floor Plans – SOUTH SITE

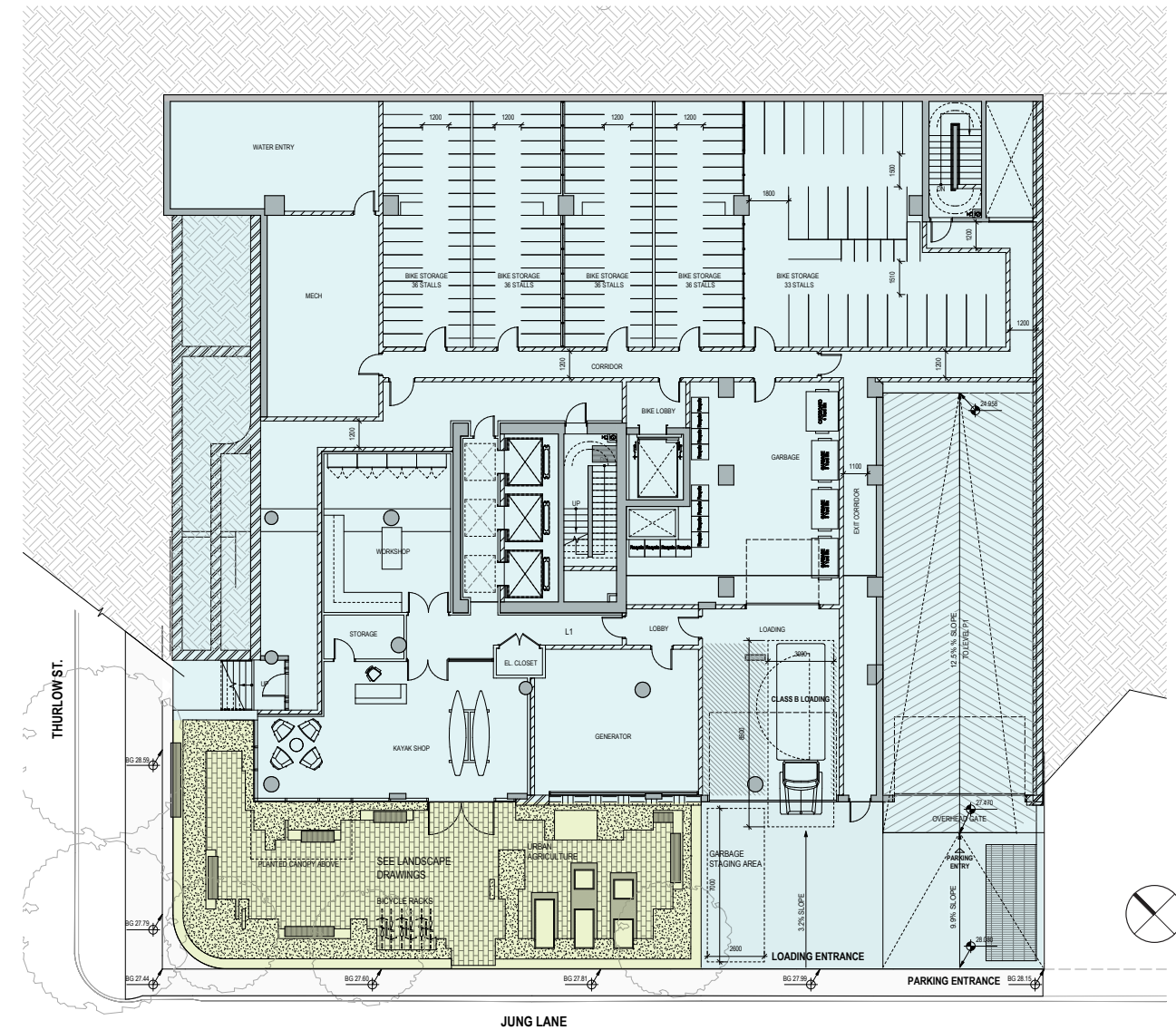
 Parking

 Shared Indoor Amenity & Service

 Shared Landscape Amenity




Typical Parking Plan



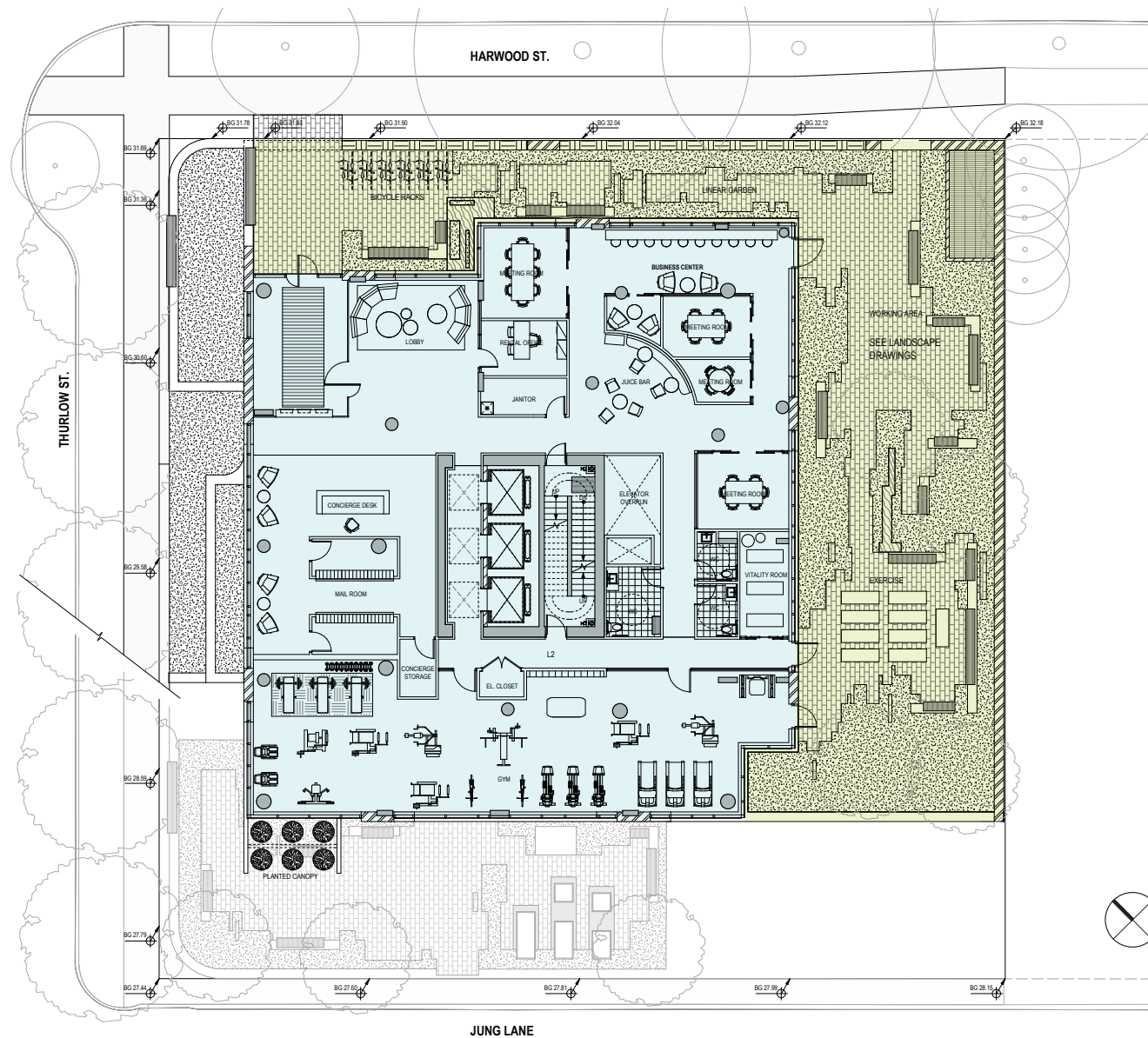
Level 1 – Lower Ground Floor Plan

Floor Plans – SOUTH SITE

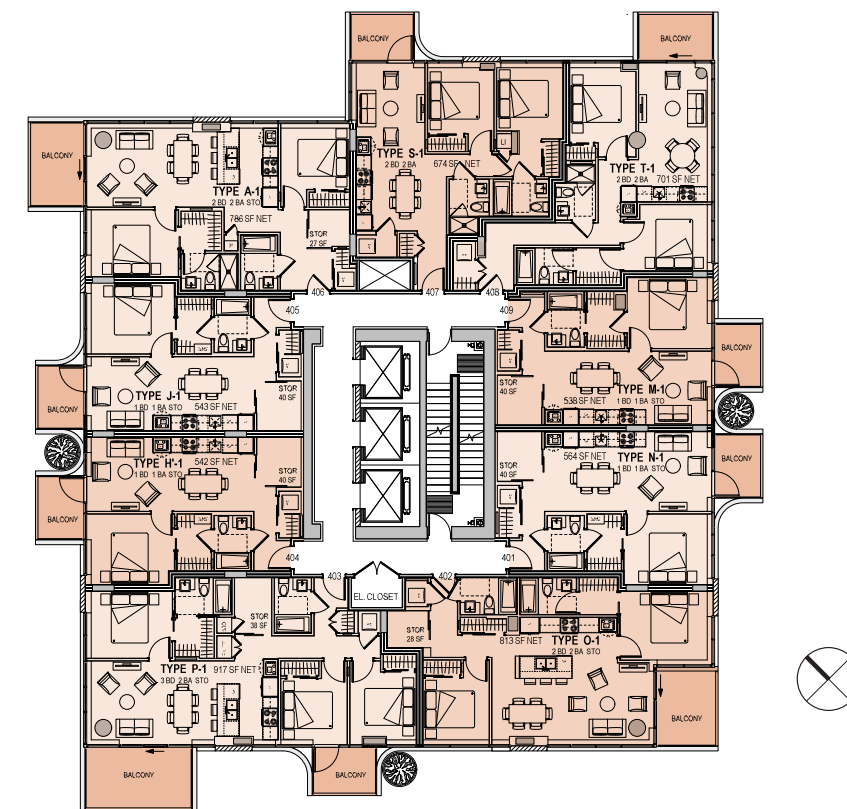
 Below-Market Rental Housing

 Shared Indoor Amenity & Service

 Shared Landscape Amenity



Level 2 – Upper Ground Floor Plan



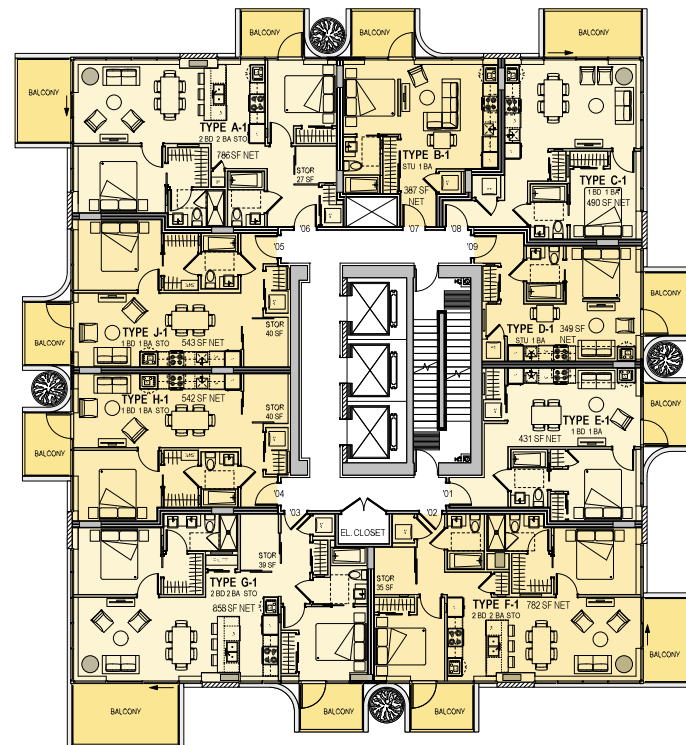
Typical Podium Plan

Floor Plans – SOUTH SITE

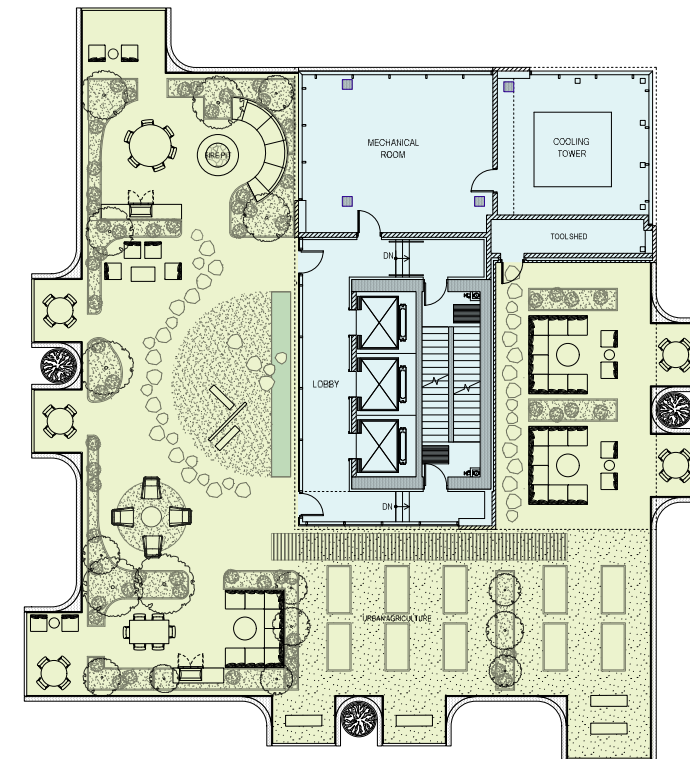
Market Rental Housing

Shared Indoor Amenity & Service

Shared Landscape Amenity



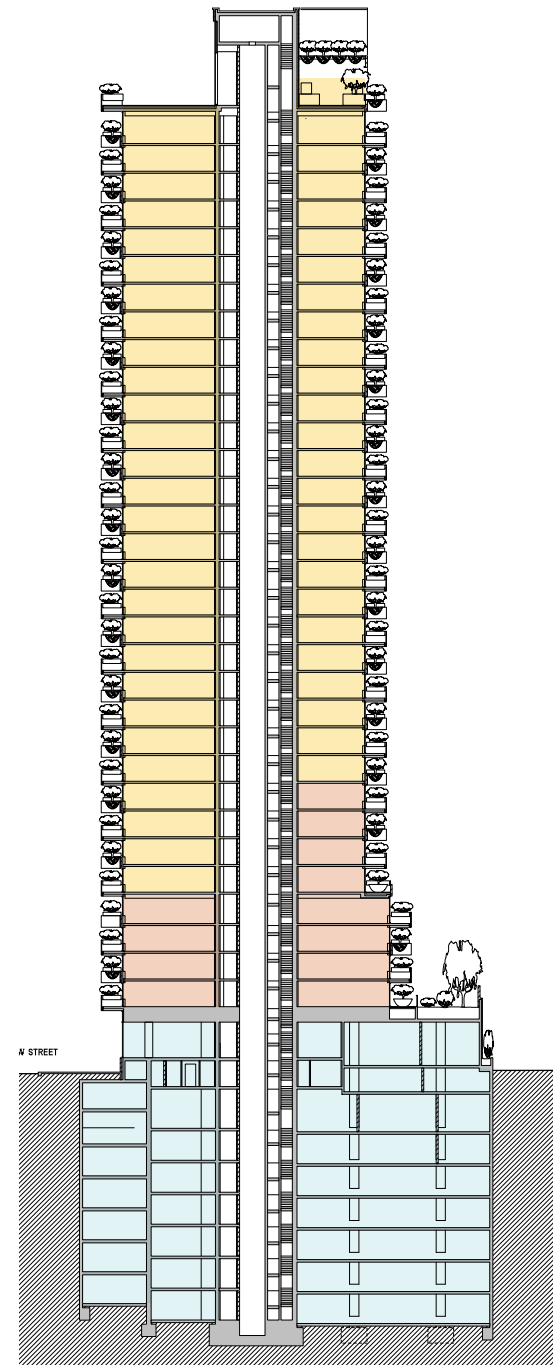
Typical Tower Plan



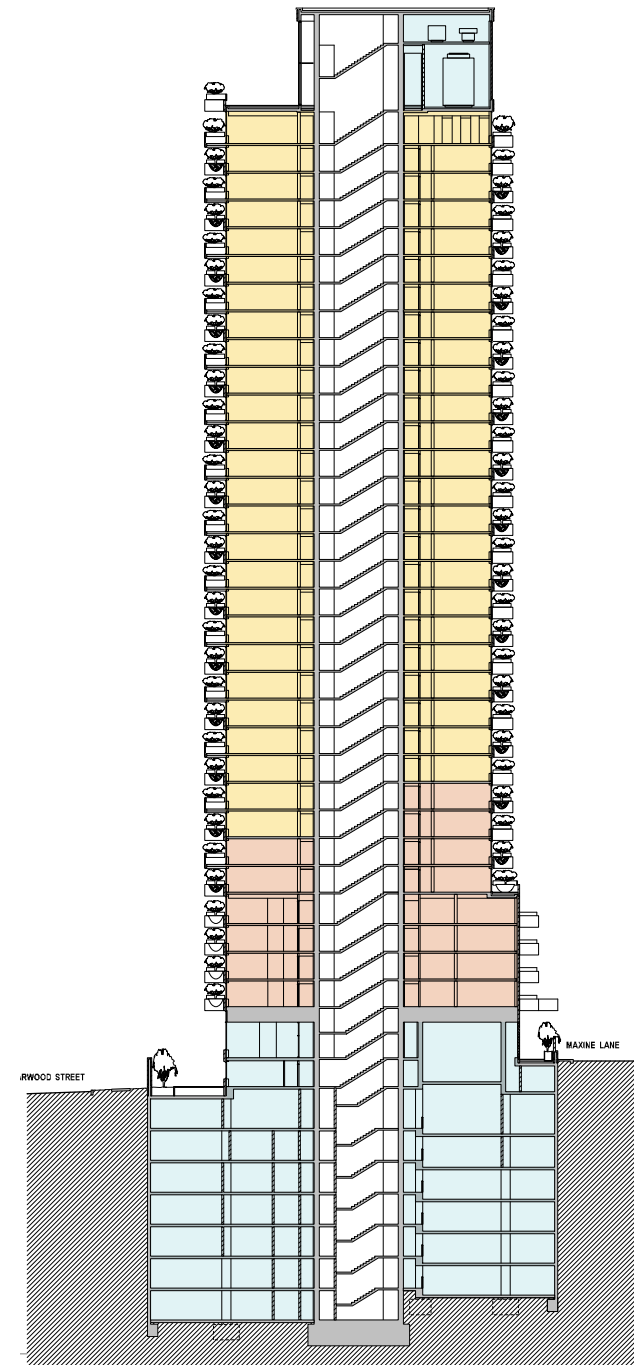
Roof Plan

Sections – SOUTH SITE

- Market Rental Housing
- Below-Market Rental Housing
- Shared Indoor Amenity & Service

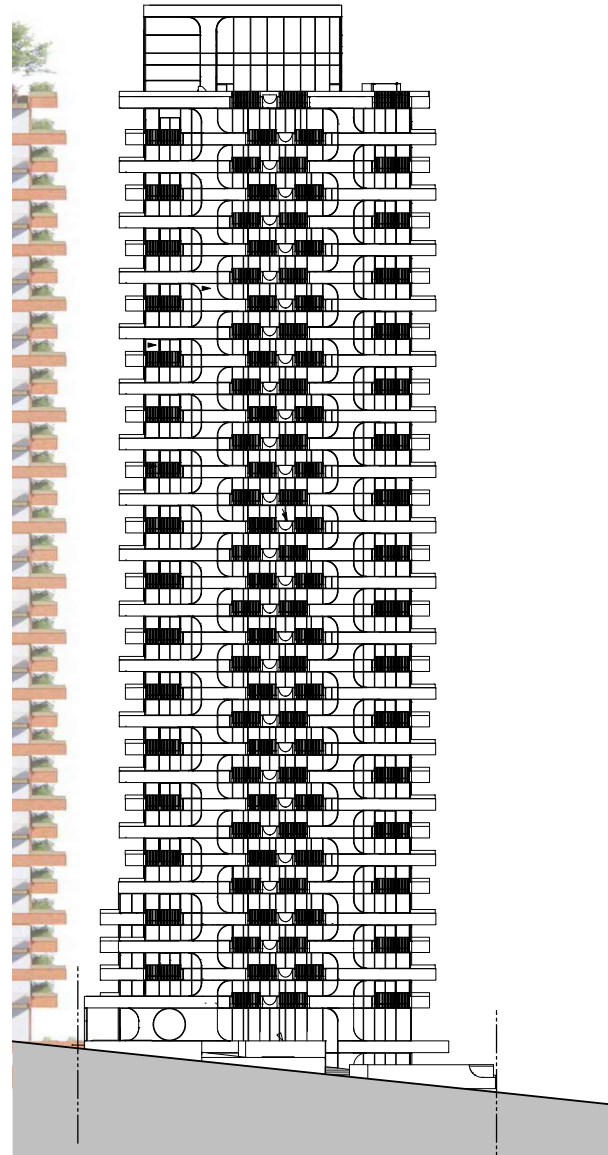


East-West Section

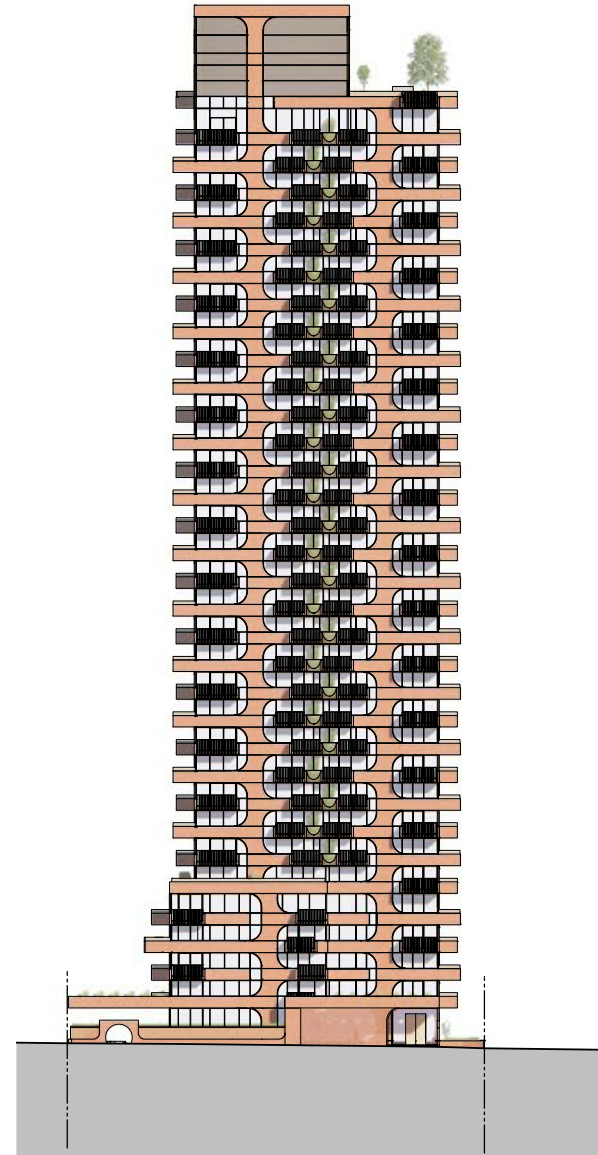


North-South Section

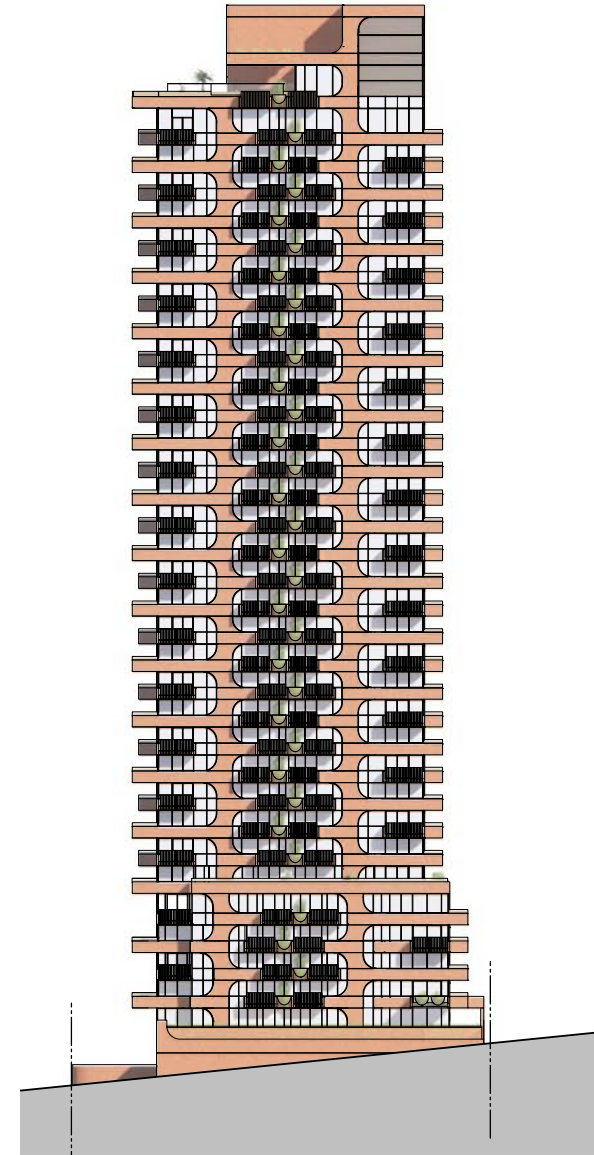
Elevations – SOUTH SITE



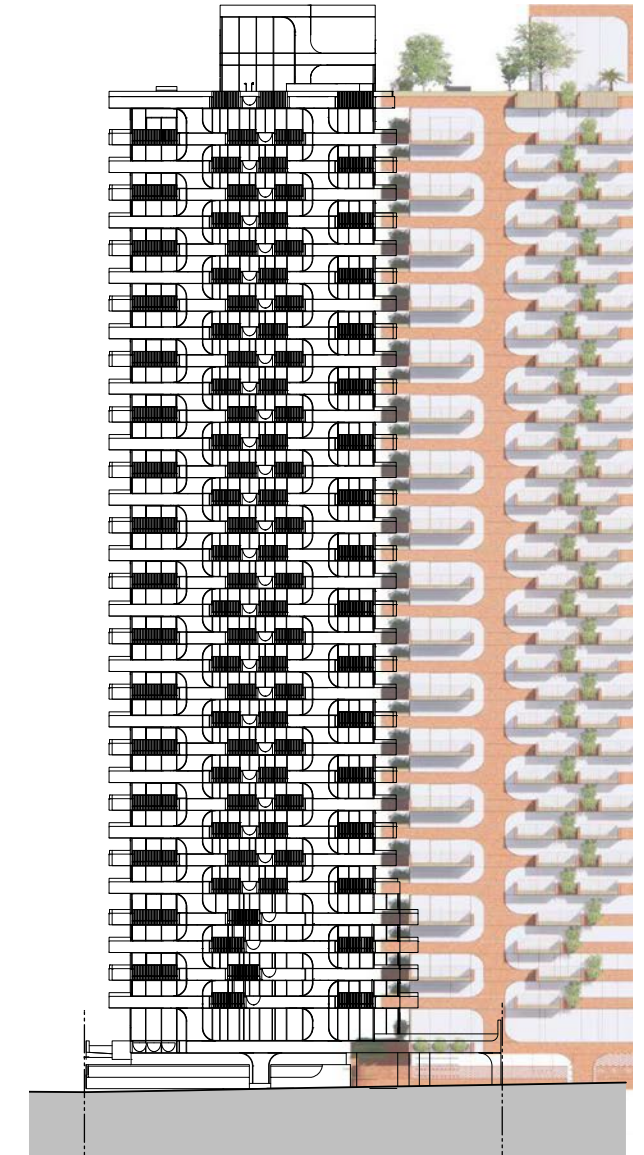
West Elevation



North Elevation



East Elevation



South Elevation



BOSA4RENT