



City of
**Santa
Monica**

**Bergamot Design Standards Discussion
with
Technical Working Group**

April 18, 2024

Purpose of Today's Working Group

Background

- Preliminary applications have been filed for taller buildings in Bergamot area that are using new provisions in State density bonus law
 - *Note: any new standards will not affect the proposed projects as they are vested into standards in effect at the time of preliminary application*
- Zoning Ordinance does not currently include any standards that address buildings of this scale

Today's Meeting Objectives

1. Introduction of principles for taller buildings
2. Establish design standard objectives for taller building standards
3. Review sample standards from other cities
4. Analyze sun and wind considerations for Bergamot area
5. Discussion

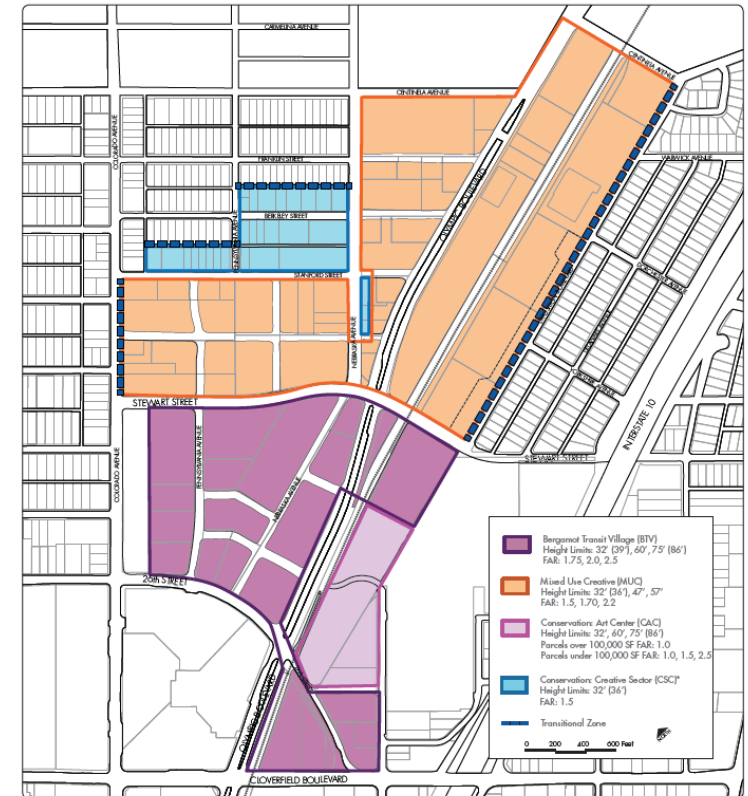
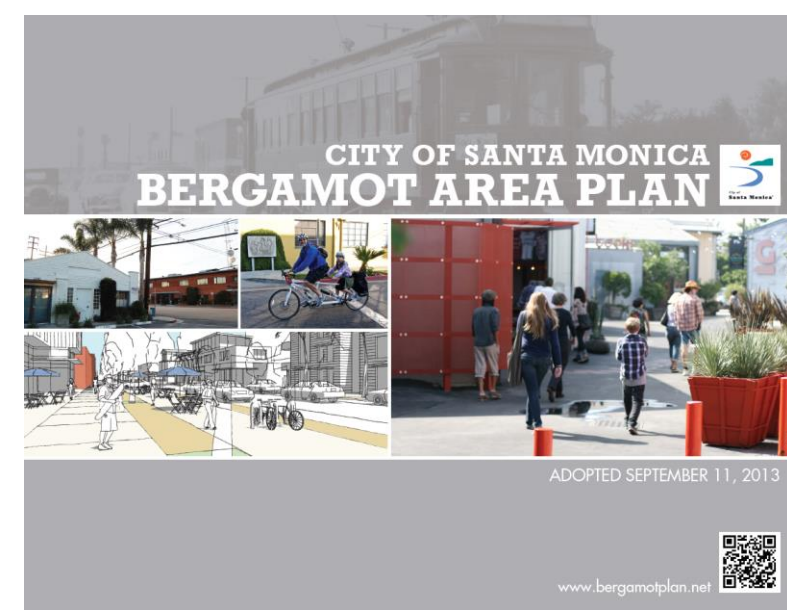
Bergamot Area Plan (BAP) Background

BAP Adopted September 11, 2013

- 140-acre area surrounding the Bergamot Metro Light Rail Station
- Established policies, standards and guidelines intended to encourage compact mixed-use development, affordable/market rate housing linked to Bergamot Station
- The plan has not resulted in the intended transformation for a variety of reasons

Proposed ODS Project: BAP Revisions | Clear Objective Design/Development Standards

- Ground floor use and design
- Street frontage/pedestrian orientation
- Open space
- Building modulation
- Reevaluate BAP 'Street Type' requirements
- Reevaluate BAP general parking requirements
- Develop standards to address taller buildings
- Simplify overall standards and provide clearer user-friendly regulations with greater incentives to build housing



Agenda

Introduction

- **Project background**
- **Design Standard Objectives – High Rise Development**

High rise sample standards from other cities

- **Defining 'high-rise'**
- **Tower Massing**
 - **Sky Exposure Plane**
 - **Height to Width Ratios**
 - **Floor Plate Maximums**
- **Tower Separation + Placement**

- **Façade Design**
- **Podium Massing**
- **Open Space + Pathways**
- **Solar Access**
- **Wind**

Considerations for Bergamot Area Plan

- **Local conditions**
- **Shade/Shadow + Wind considerations**

Design Standard Objectives – High-Rise Development

- **Create objective standards for new residential development that considers the unique aspects of high-rise design with Bergamot context**
- **Shadow & Wind**
 - Analyze shadow and wind impacts on public streets and spaces
- **Cross Ventilation & Sunlight**
 - Maximize cross ventilation and sunlight opportunities in future development
- **Common Open Space**
 - Support the development of successful common open space within new development
- **Ground Floor Open Space & Pedestrian Pathways**
 - Require ground floor open space and pedestrian pathways to support pedestrian mobility and public realm improvements
- **Human-scale, Pedestrian-oriented Design**
 - Support ground floor / podium design consistent with human-scale, pedestrian-oriented design



City of
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High-Rise Sample Standards from Other Cities

Review of Sample Standards

Intent to introduce different approaches from other cities – not recommending any specific standards

➤ **Los Angeles, San Diego, Long Beach, Vancouver, New York, San Jose**

- **Defining 'high-rise'**
- **Tower Massing**
 - Sky Exposure Plane
 - Height to Width Ratios
 - Floor Plate Maximums
- **Tower Separation & Placement**
- **Façade Design**
- **Podium Massing**
- **Open Space + Pathways**
- **Solar Access**
- **Wind**

When should “high-rise” standards apply?

- Separate standards required due to:
 - Different building typologies with different types of impacts that differ from the City’s existing low and mid-rise regulations
 - Prominent visibility in the City, contribute to the City’s skyline
- Several cities have high rise standards, and each define high rise differently

City	Height (ft)	Height (approx. stories)
DTLA	Over 150 ft	14 stories
Long Beach	Over 150 ft	14 stories
San Diego	Over 125 ft	11 stories
San Jose	Over 70 ft	6 stories ('Skyline level')

- Existing max height in Bergamot – approx. 84 feet
- Current local “high-rise” height for Fire Code in SM is 55 feet



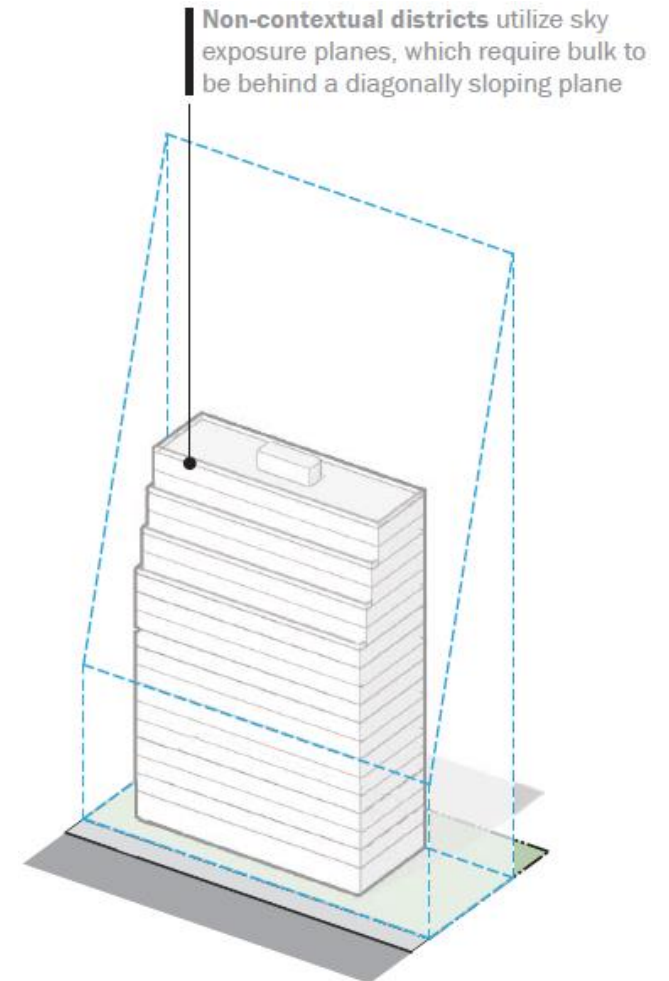
1770 Pendrell St, Vancouver

Tower Massing

The general focus of many existing tower standards are to limit massing at upper levels to support access to light and air, and maintain views of the sky

Sample standards

- Ground floor setbacks
- Upper floor stepbacks
- Sky exposure plane
- Height to width ratios
- Floor plate maximums



Should there be standards that limit massing for taller buildings?

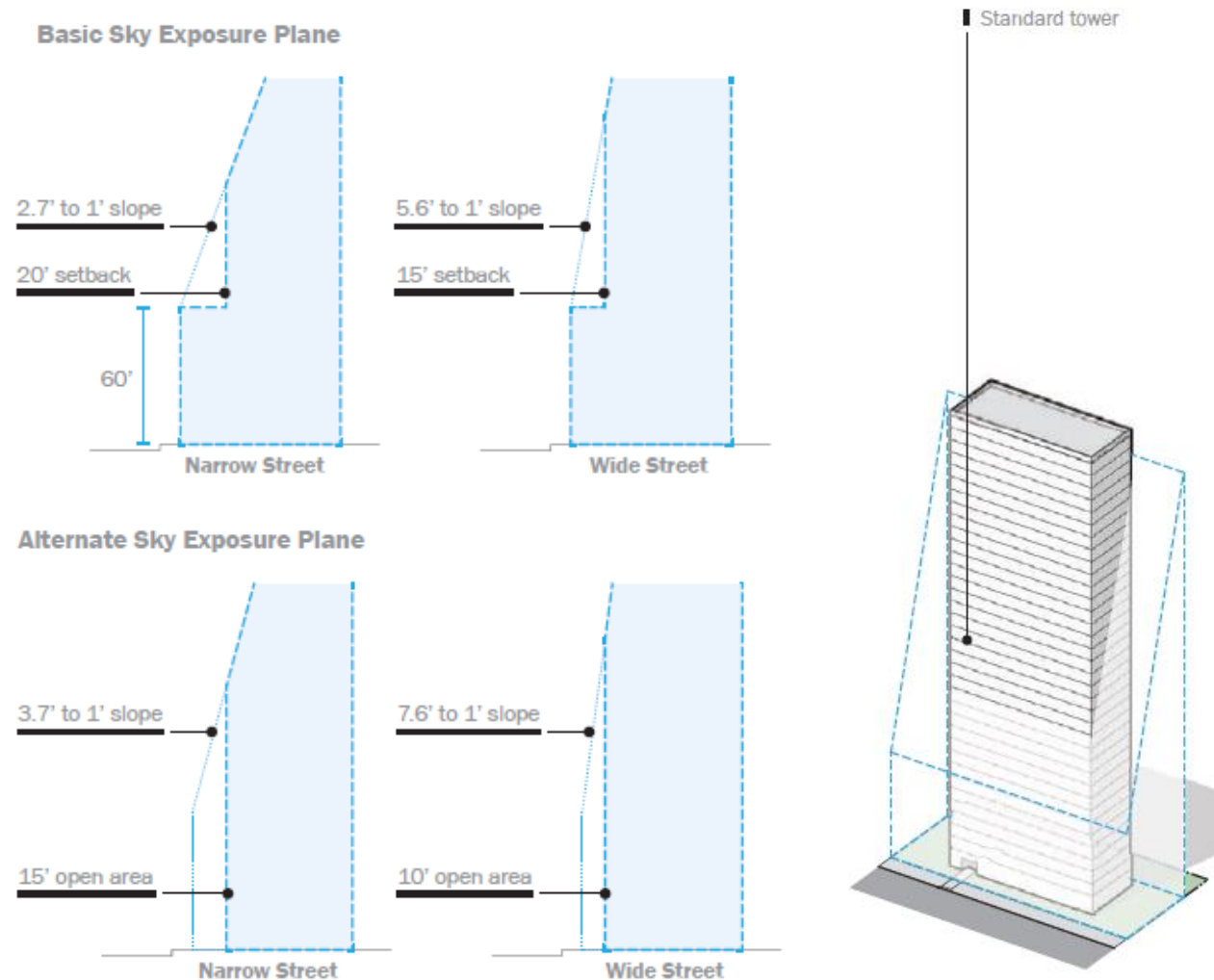
Illustration of New York's sky exposure plane massing regulation.
 Source: NYC Zoning Handbook

Tower Massing: Sky Exposure Plane / Height to Width

Sample standards

- Sky exposure plane (NYC) – intention to get sunlight to the street**
The building or other structure shall not penetrate the sky exposure plane set forth in the table. (exceptions allowed in certain circumstances).
- Height to width ratios (DTLA) – intention to reduce overall massing**
Towers have a ratio of height to width of about 3.5:1, for example, 100 feet wide and 350 feet tall.

Illustrations of New York's sky exposure plane massing regulation.
 Source: NYC Zoning Handbook



Tower Massing: Floor Plate Maximums

Considerations

- Tower floor plates drive external massing
- Tied to project viability

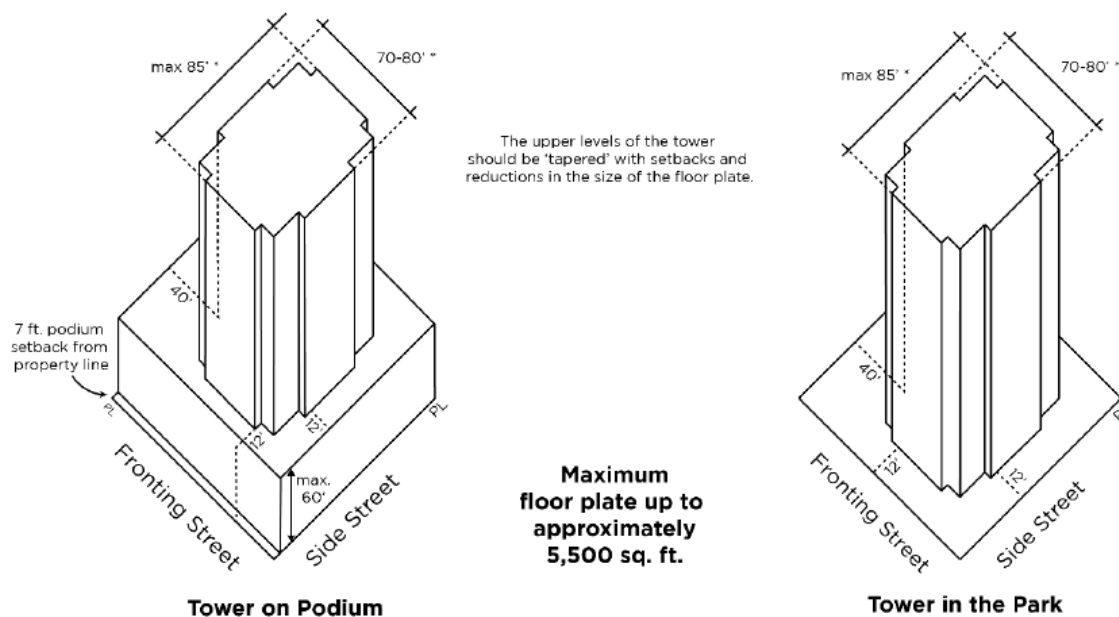
Sample standards

- **Vancouver**
 - *Corner sites with frontages of 130 ft or more:*
 - *Width: maximum 70 ft - 80 ft*
 - *Floor plate: up to 5,500 sq. ft (Vancouver)*
- **San Diego**
 - *Maximum floor plate (includes commercial):*

TABLE 1 OF SECTION 103.1915
MAXIMUM FLOOR PLATES

Building Height	Max. Floor Plate
125-350 feet	21,000 sq. ft.
+350 feet	22,000 sq. ft.

Diagram 3: 132 ft.+ wide corner sites



*Depth and width does not include appurtenances and balconies. Any appurtenances and projecting balconies can extend into the setback up to 6 ft. on each face of the building.

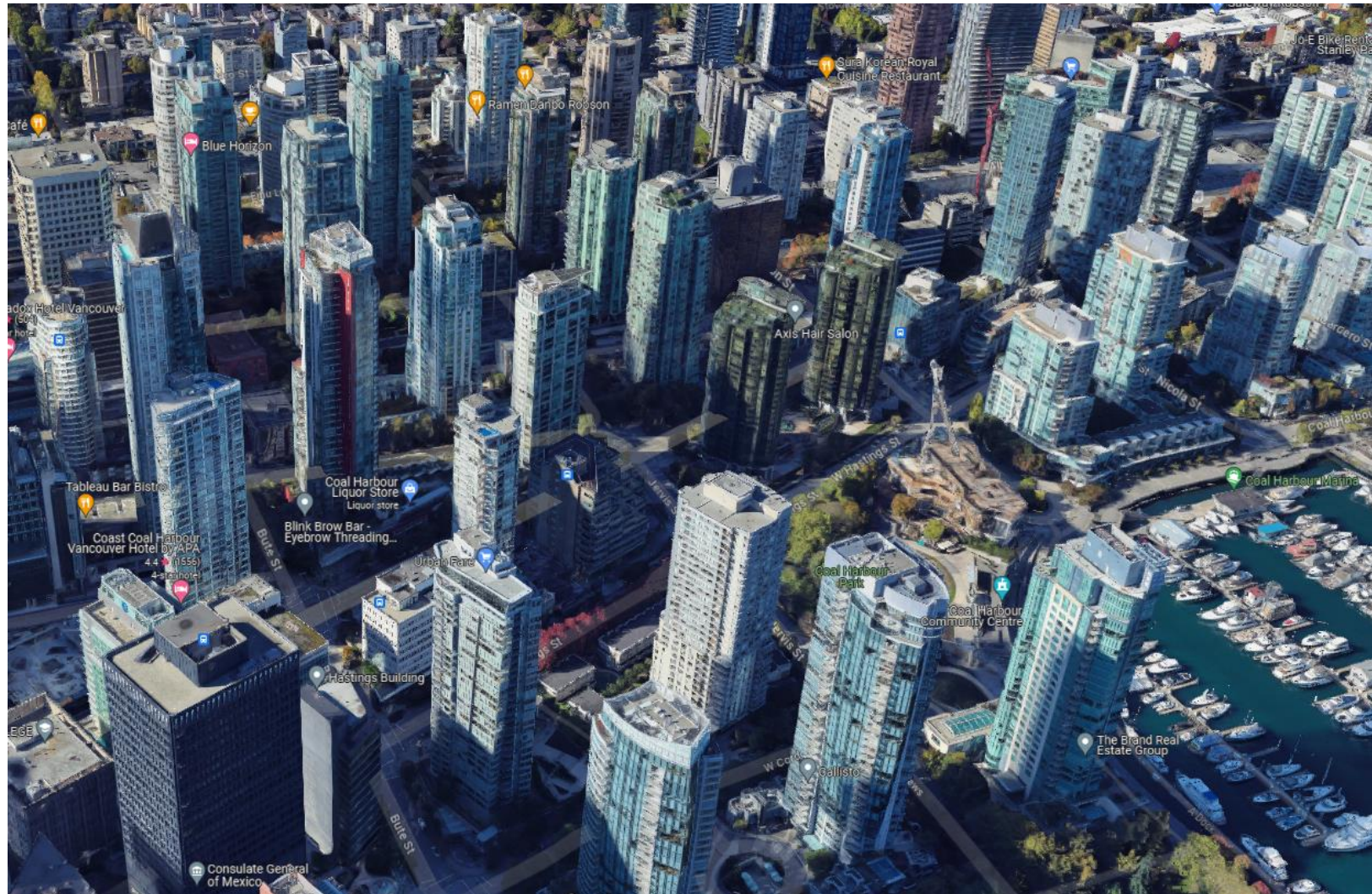
Source: Vancouver West End Tower Form, Siting and Setbacks 2023

Should there be floor plate maximums? Should there be a maximum width, and/ or area?

Floor Plate Maximums

For illustrative purposes

Smaller maximum tower floor plates combined with generous separation of towers in Coal Harbor, Vancouver



Tower Separation + Placement

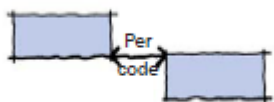
Sample standards

- Intention to allow for light & air between buildings
- DTLA

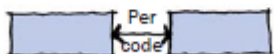
- *The portion of a tower above 150 feet shall be spaced at least 80 feet from all existing or possible future towers in the same block facing the street.*

Exceptions. Towers over 150' in height may vary from the minimums shown in the plan diagram above in the following conditions:

1) Offset Towers

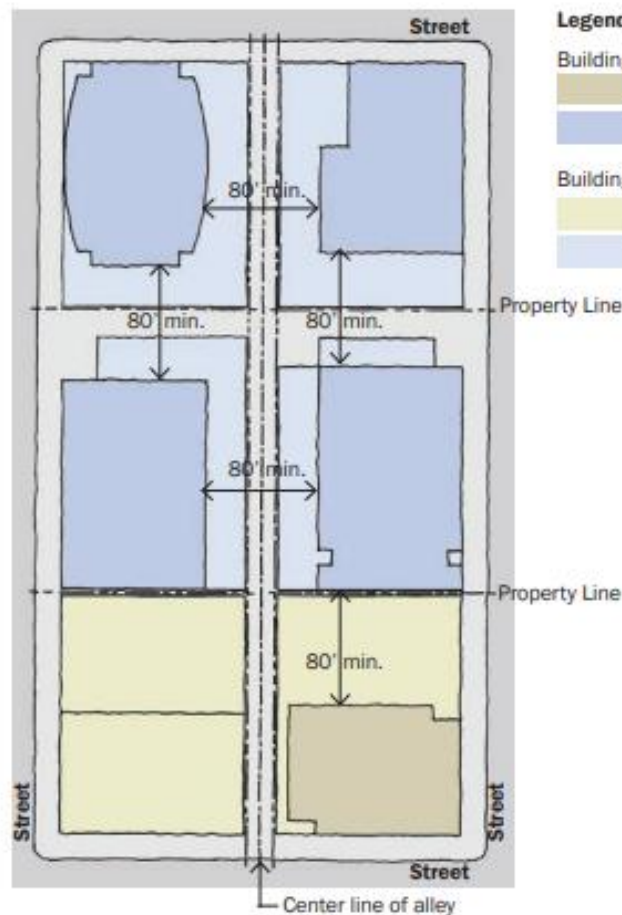
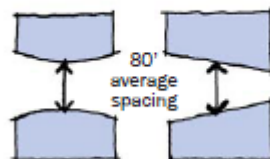


2) Adjacent Towers



if largest windows in primary room (as defined in Table 6-2) are not facing one another

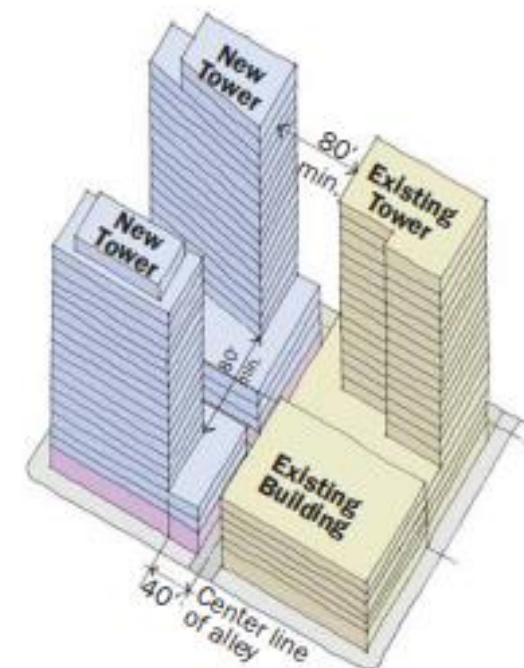
3) Curved or Angled Towers



Legend

Building height greater than 150'
Existing (brown)
New (blue)

Building height 150' or less
Existing (yellow)
New (light blue)



Tower Separation + Placement

Sample standards

- **Long Beach / DTLA / Vancouver**
 - *80 foot minimum to any existing tower on the same site or across the street*
- **NYC**
 - *The required minimum distance between the portion of a building containing dwelling units and any other building shall vary according to the height of such buildings and the presence of legally required windows in facing building walls:*
 - *40ft wall to wall;*
 - *50ft wall to window;*
 - *60ft window to window*



620 First Ave, San Diego

Should there be requirements for tower spacing?

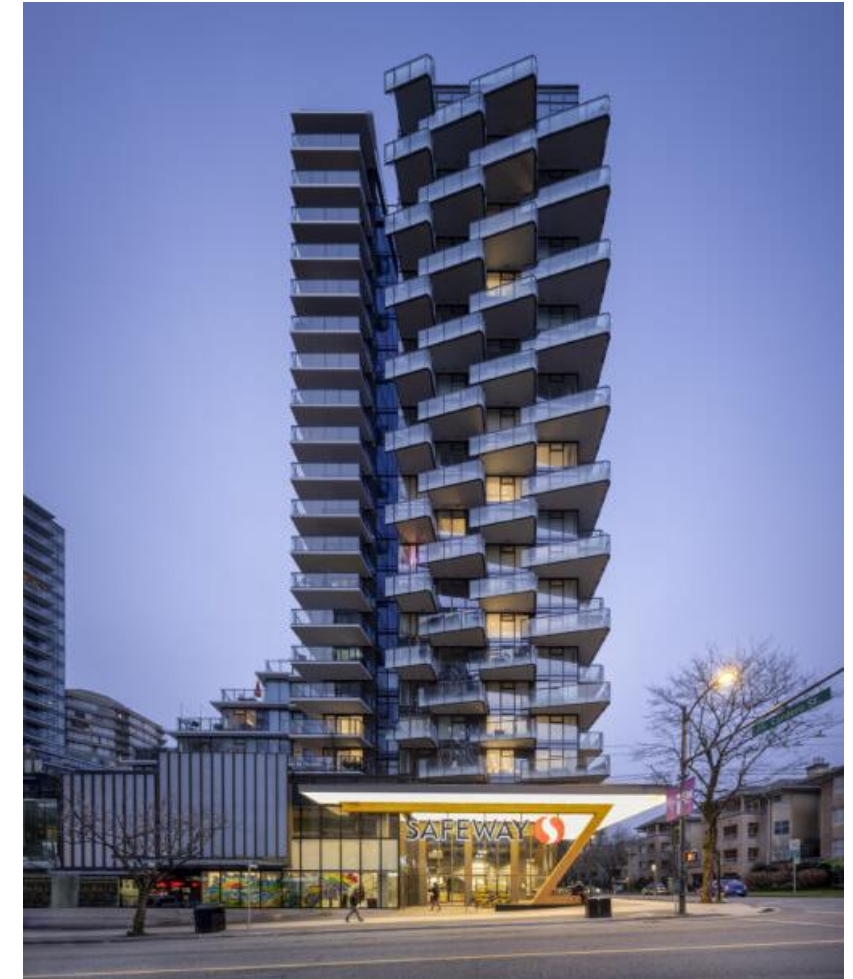
Façade Design

Considerations

- High rise prominence contributes to a City's identity
- Visual Interest

Sample standards

- *Require balconies*
- *Require modulation*
- *Require use of vertical elements, including modulation to complement form, e.g. no more than 15 feet without a feature (San Jose)*



A residential tower with vertical modules and articulated with cantilevering balconies.
1181 Cadboro St, Vancouver

Should there be requirements for façade articulation?

Façade Design



Residential tower renderings showing modulation and articulation using material changes, emphasizing verticality in tower.
2000 South Bell Street, Arlington, VA



Modulated building forms with flat facades.
461 Dean Street, Brooklyn

Façade Design



**A residential tower articulated with balconies
1100 S Hope Street, Los Angeles**



**A single, sculpted building module,
articulated with facade features like
screens and balconies
1568 Alberni Street, Vancouver**



**Modulated building forms using massing
and material variation
South Grand Ave Street, Los Angeles**

Podium Massing

Considerations

- Podium massing can establish or continue a street wall at pedestrian level
- Some podiums cover almost entire lots – may be a need to break up excessively long ground floor massing
- Allowances for open space at street level and pathways through the site
- Podium floor plate maximums or break requirements may be options for limiting lot coverage

The Dime, Brooklyn:
A four story podium provides
common open space above
and activation on the street.



Should there be standards to shape podium massing?

Podium Massing

Considerations

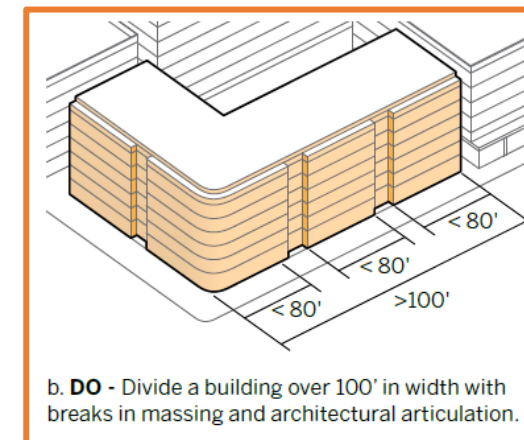
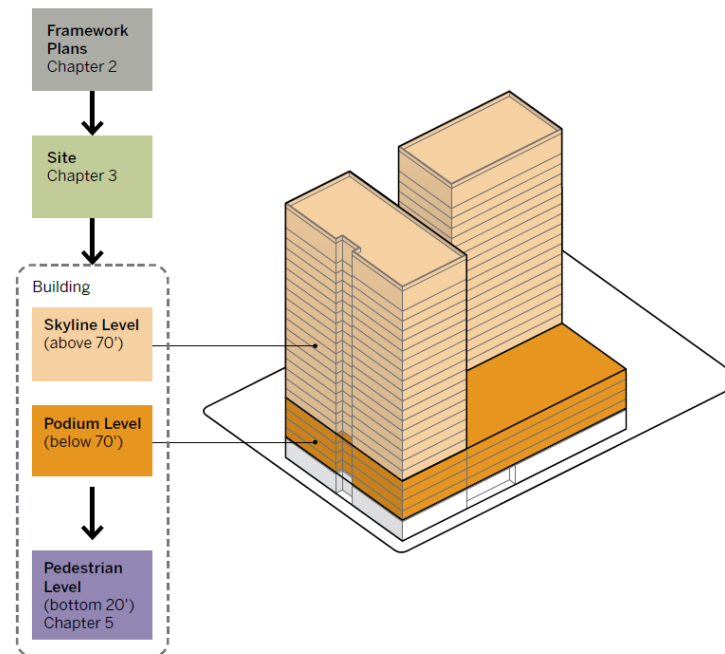
- Similar concept to existing streetwall standards (e.g. Downtown Community Plan)
 - Consider podium standards for above-ground parking
- Placement of tower relative to podium

Sample Standards - San Jose - streetwall

- *Create a Streetwall along a Primary Addressing Street along at least 70% of the property or setback line.*
- *Create a Streetwall along a Secondary Addressing Street along at least 50% of the property or setback line.*

San Jose - podium level massing

- *Divide Podium Level building massing facing Public Space that creates a façade wider than 100 feet into visibly articulated smaller masses no wider than 80 feet using projections and recesses, materials, shadow relief, or other architectural elements.*



Standards may apply specifically to the podium level

Open Space + Pathways

Considerations

- Common open space is likely to occur on podiums, rooftops, or ground level
- Ground floor /podium footprint maximums could help support ground floor open space and pathways



Open space on large podium with no pathways. Rooftop/podium open space. Vancouver, Canada.



Open space on large podium with no pathways through large block. Podium open space. South Park, Los Angeles.



Two towers, not on podium, with ground floor common OS and pathway through block (not public). Upper floor is penthouse, not common OS. San Diego, CA.

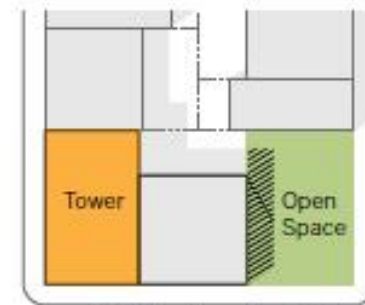
Solar Access

Considerations

- Time of year and time of day to protect spaces
- Maximizing sun in public spaces, especially during Winter hours
- Siting of development and massing

Sample standards

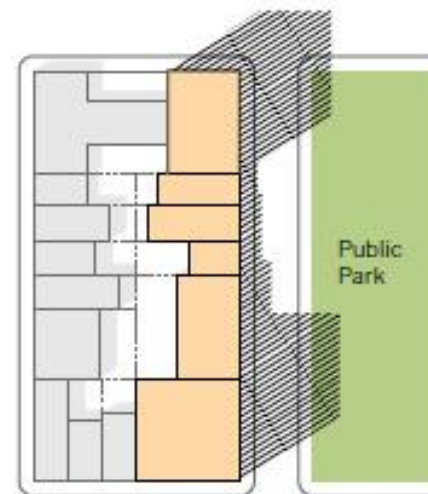
- *(San Diego) The Overlay District must maintain adequate sunlight and air to designated areas of Little Italy during the winter solstice (on or about December 21) between 10:30 a.m. and 1:30 p.m. The Overlay establishes a building envelope, which applies to the whole block.*
- *(Sydney) Identified open spaces must retain a minimum of 3 hours of solar access, to at least 50% of the space, between the hours of 9am and 3pm on December 21.*



a. **DO** - Place tower to minimize shade on open space



b. **DO NOT** - Place tower directly south or west of open space



c. **DO** - Locate and shape towers to minimize shadows on public parks and plazas.



DO NOT - A tower southwest of a plaza may create large areas of shade, reducing the ability of users to choose the amount of shade based on comfort.

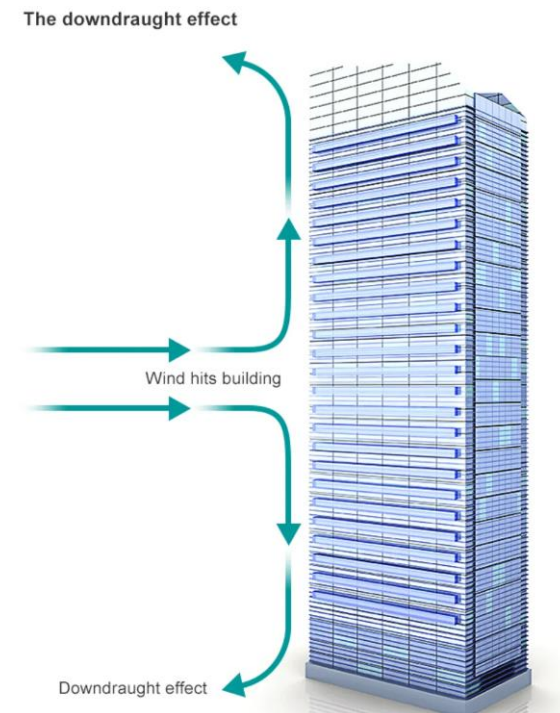
Wind

Considerations

- Maximizing ventilation for residential units
- Preserving wind flow
- Mitigating vertical wind effect, e.g. canopies or horizontal elements
- Mitigating wind effects on public streets & spaces
 - Complexity of requiring wind studies for individual projects

Sample standards (San Jose)

- *Stagger the heights and locations of tall buildings in and between blocks to avoid blocking wind flows.*
- *Create gaps of 15-20 feet width in Podium Level massing in the prevailing wind direction.*
- *Orient the widest Skyline Level building dimension within 30 degrees of the prevailing wind direction.*



Should there be standards for tower placement for solar and wind performance?



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Considerations for Bergamot Solar / Wind Studies

Considerations for Solar/Wind Study

- Study impacts of **building placement and orientation on solar access** for on-site open space and public streets & spaces
- Highlight **impact of wind/breeze** when buildings placed to maximize solar access
 - Identify if building placement and orientation to optimize daylight is also favorable for breeze/passive ventilation
 - Develop understanding of opportunities to use objective standards to minimize downdraft

Local Conditions – Solar + Wind

- Grid pattern about 45 degrees from NS-EW alignment
- Prevailing winds from the SW

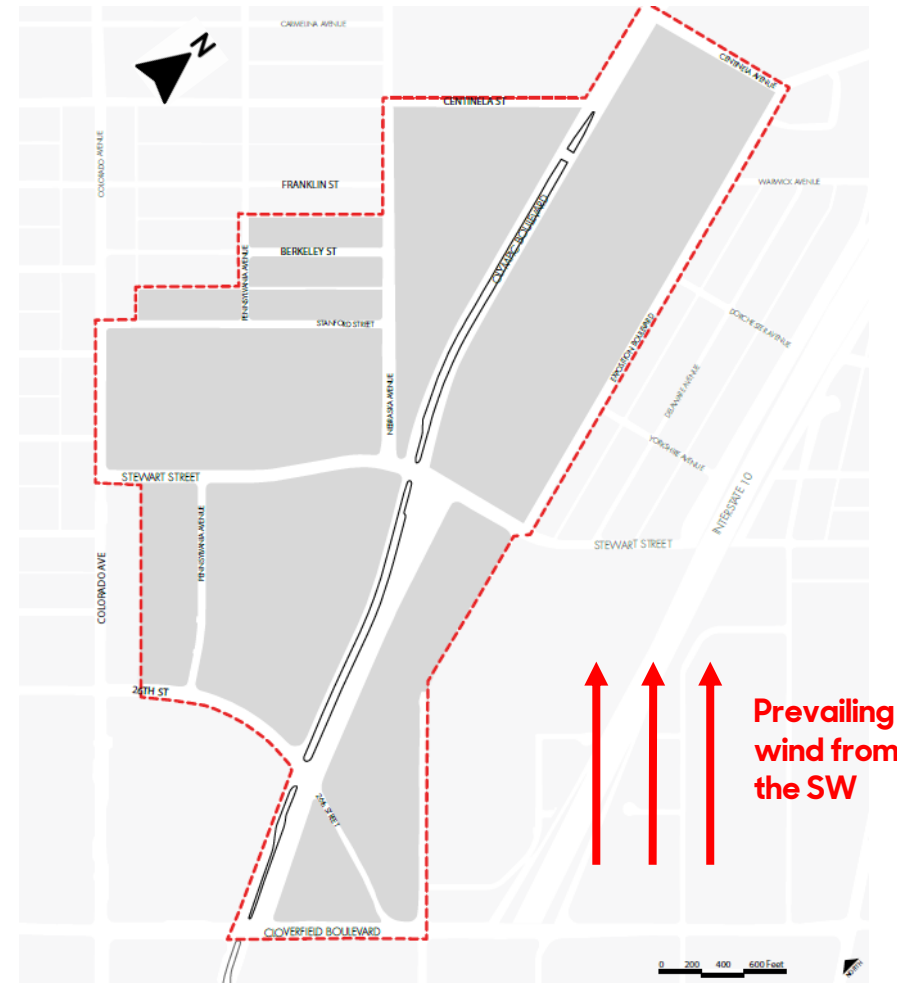
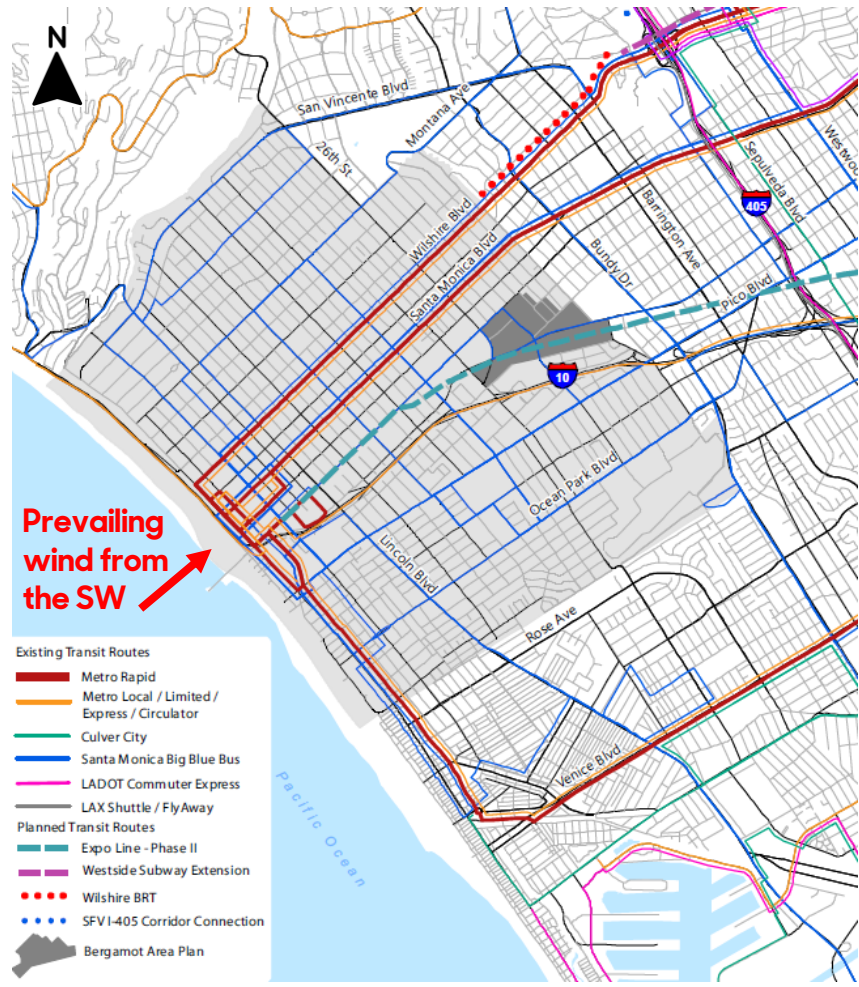
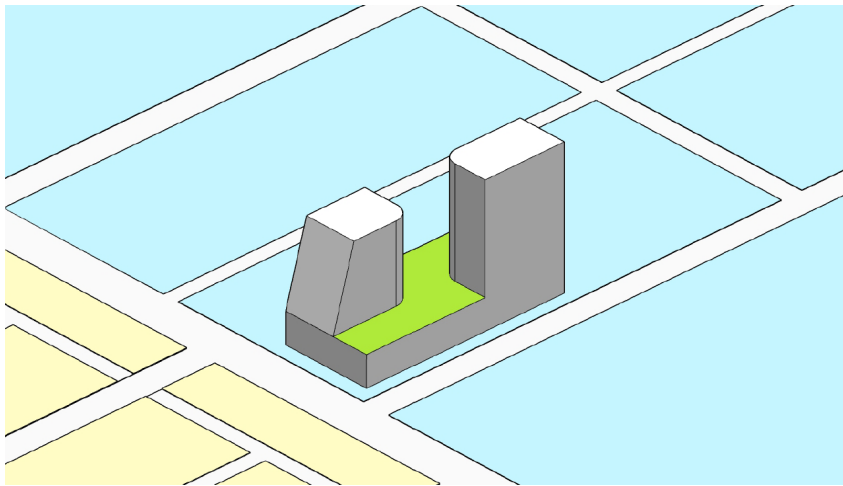
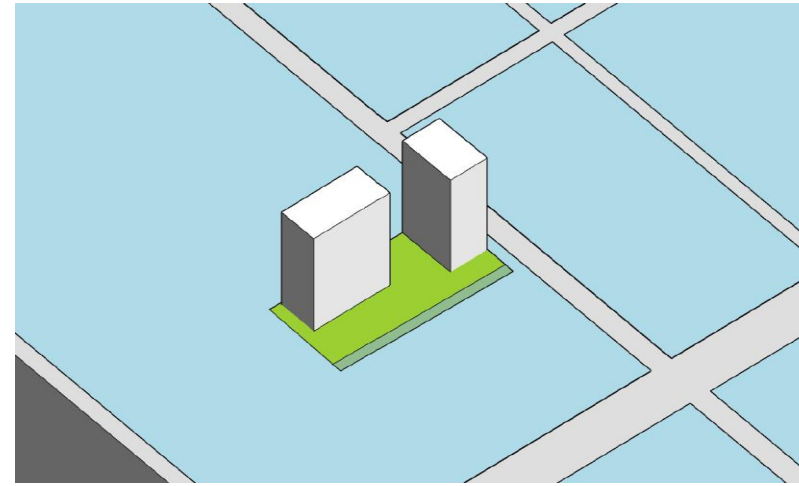


Figure source: Bergamot Area Plan – May 2023

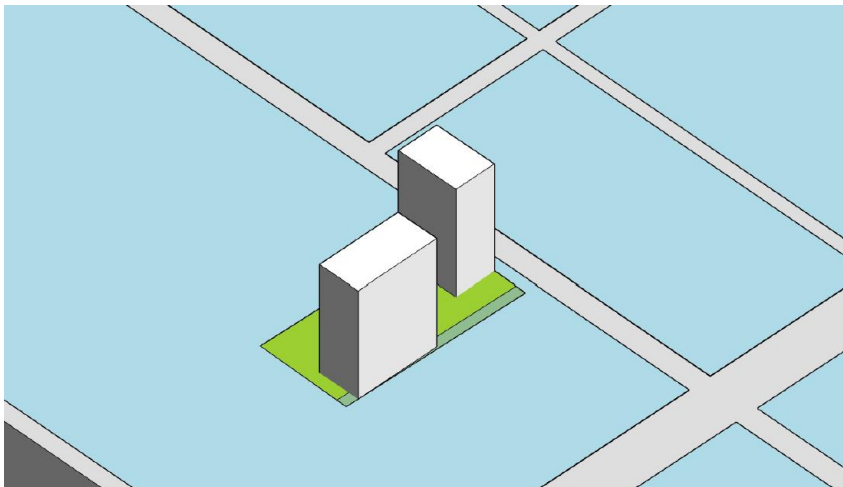
Sites for shade/shadow + wind testing



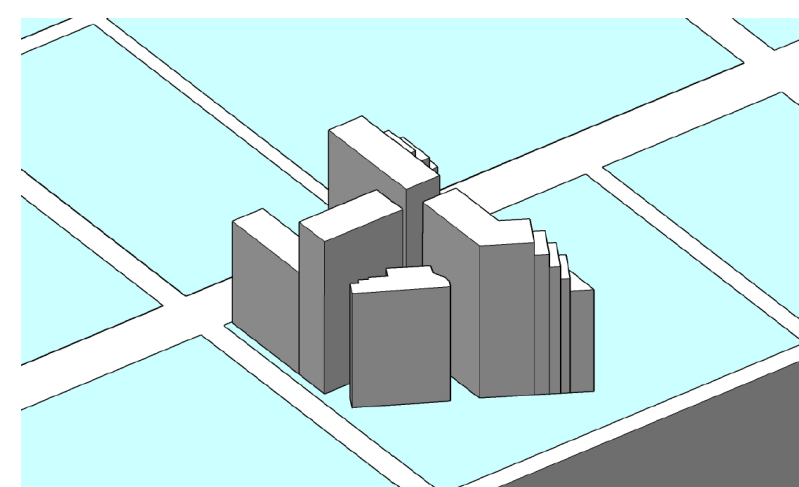
Site 1
A typical site
residing at the
edge between
residential and
commercial
zones



Site 2B
Infill site with
a south facing
open space
and through
block
circulation

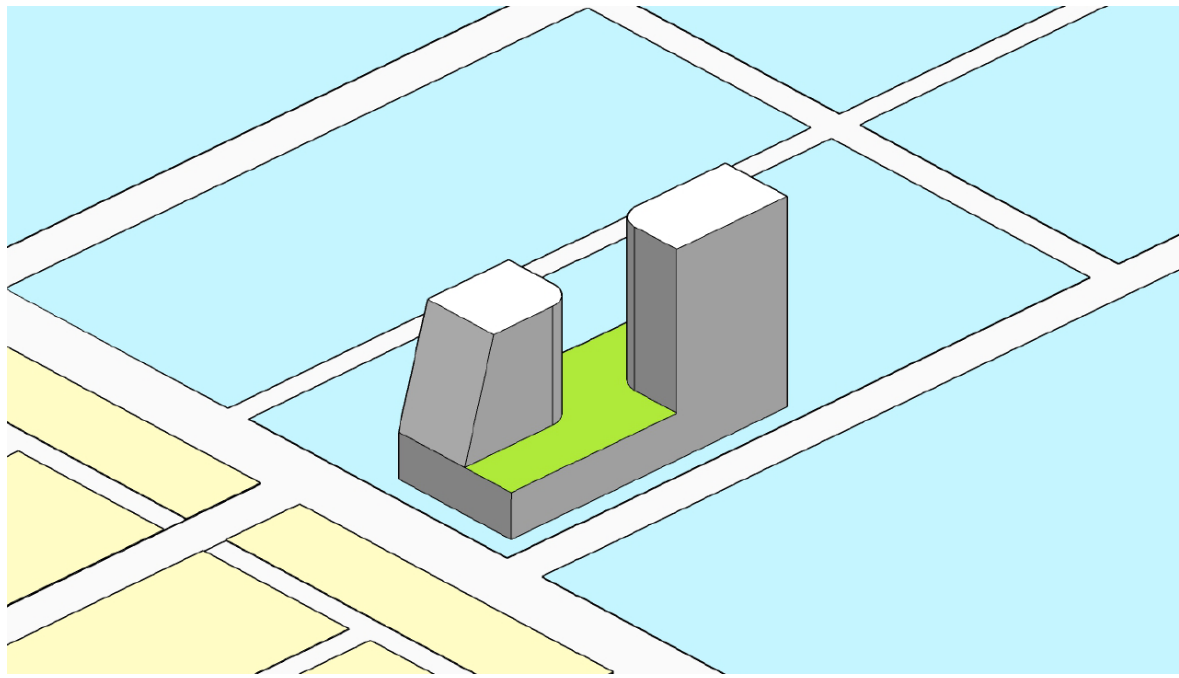


Site 2A
Infill site with a
north facing
open space
and through
block
circulation

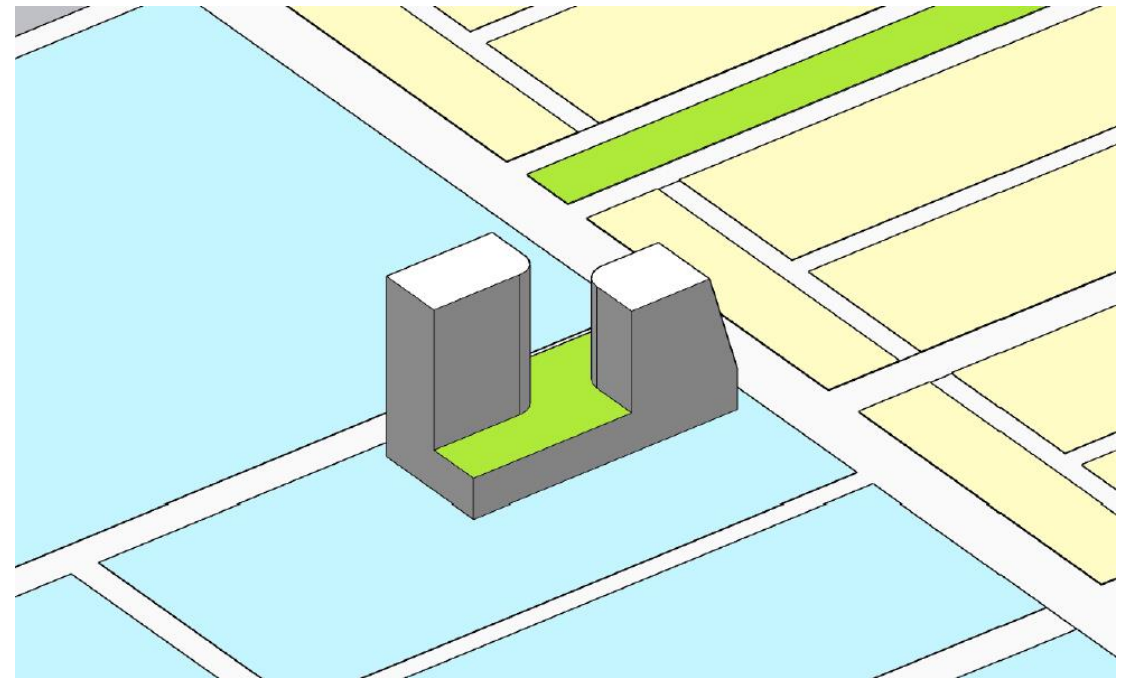


Site 3
A recent
preliminary
application
in the Bergamot
District

Shade / shadow – Site 1

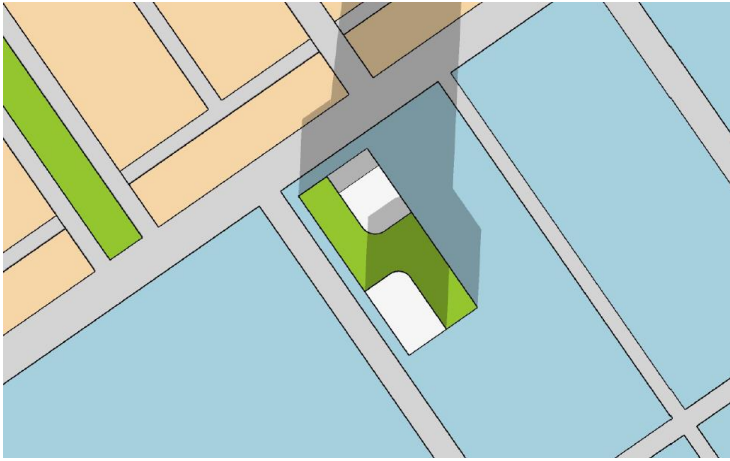


View from Northwest

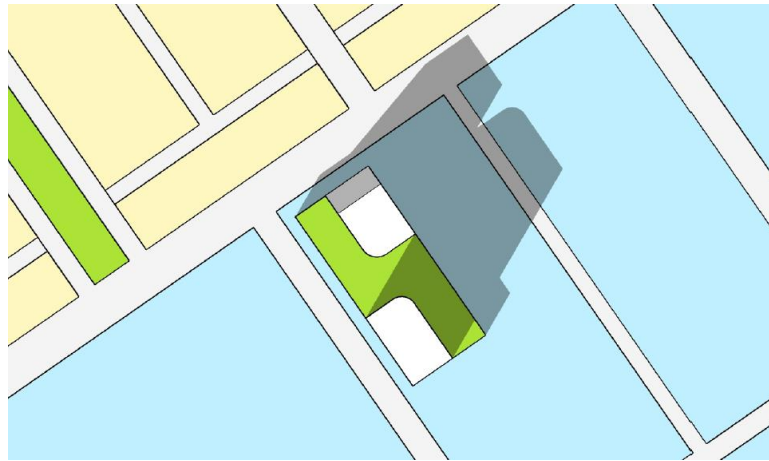


View from Southeast

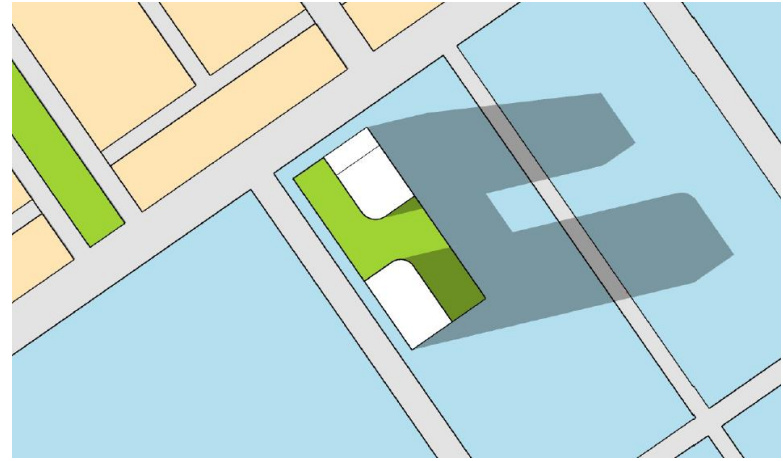
Shade / shadow – Site 1



Dec 21, 10am



Dec 21, noon



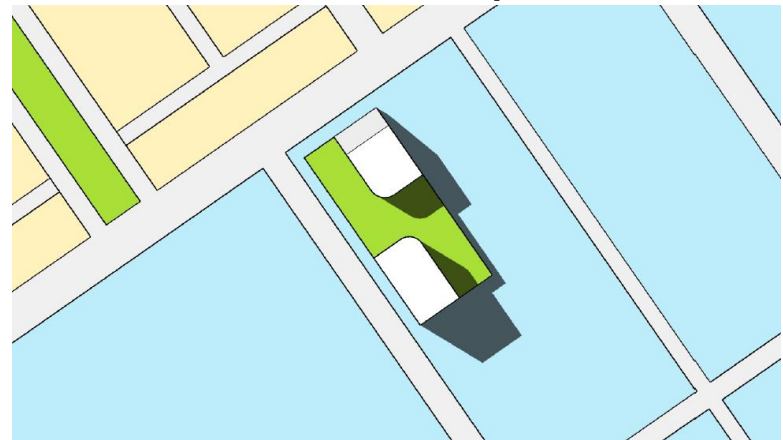
Dec 21, 3pm



June 21, 9am

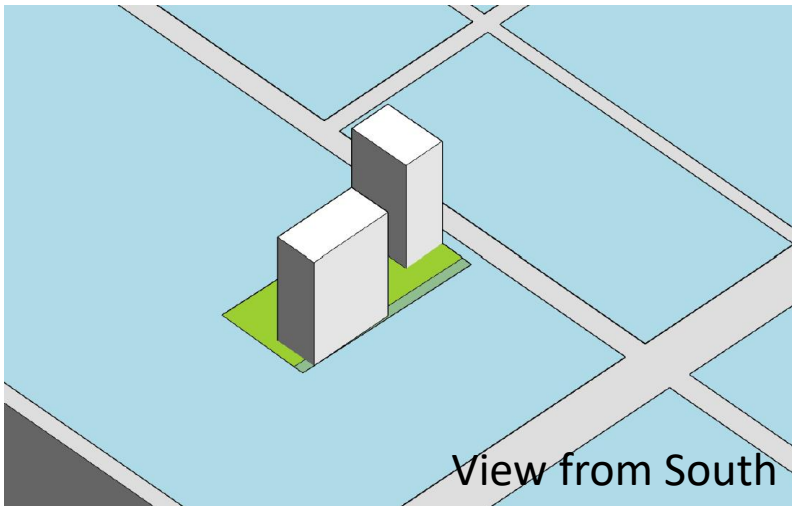


June 21, noon

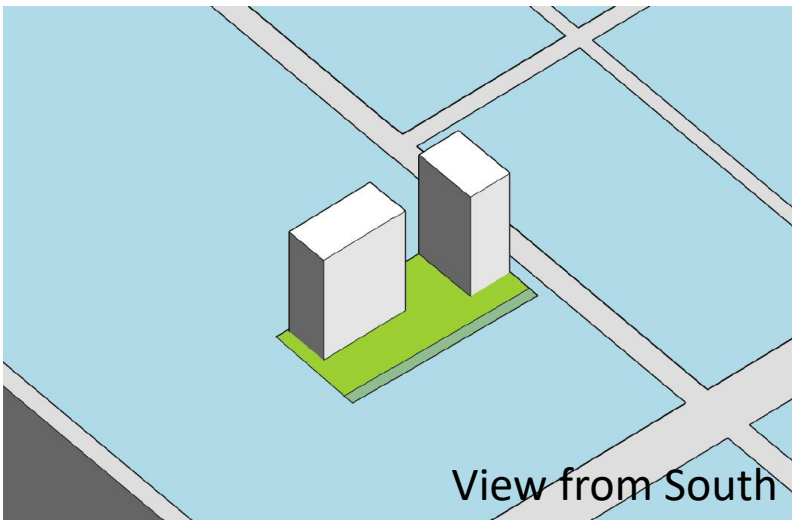
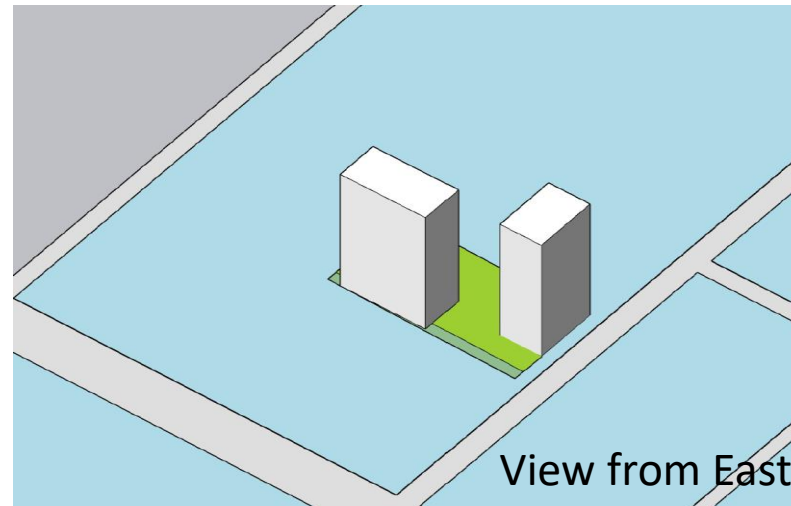


June 21, 3pm

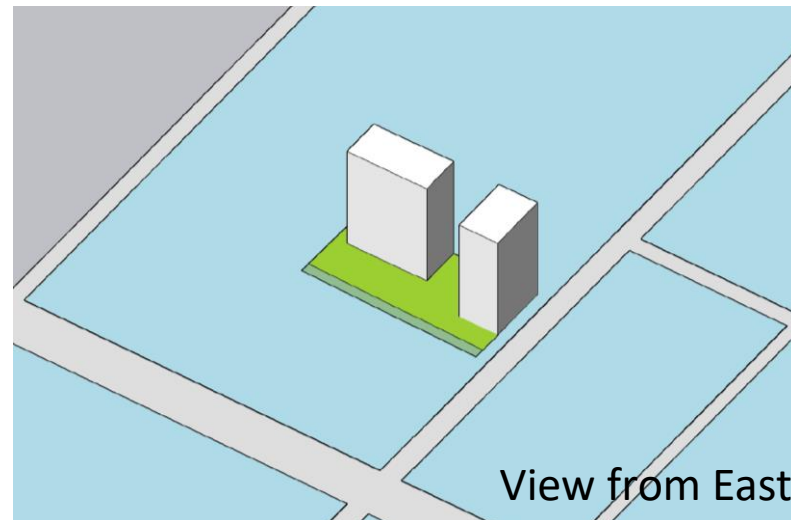
Shade / shadow – Site 2A & 2B



Site 2A



Site 2B



Shade / shadow - Site 2A & 2B

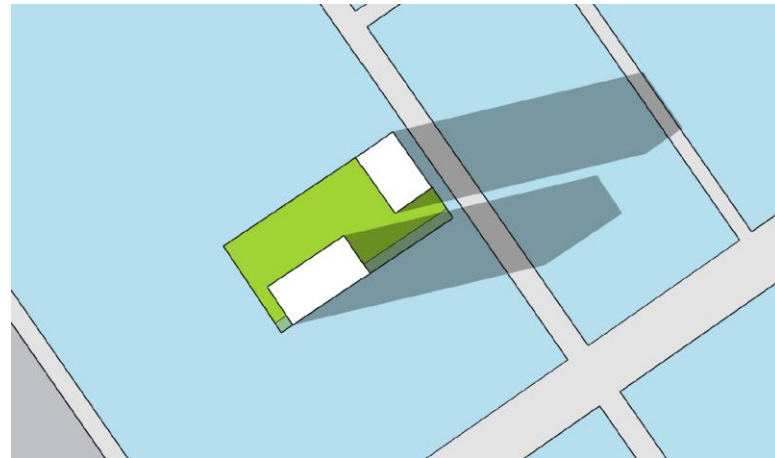
Site 2A



Dec 21, 10am



Dec 21, noon



Dec 21, 3pm

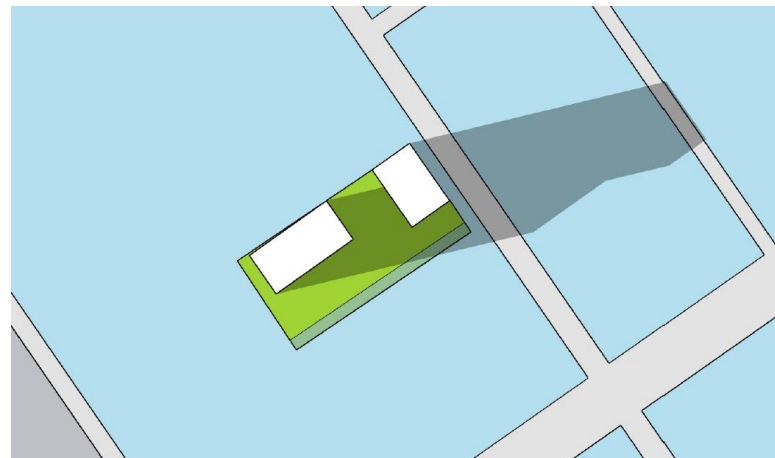
Site 2B



Dec 21, 10am



Dec 21, noon



Dec 21, 3pm

Shade / shadow - Site 2A & 2B

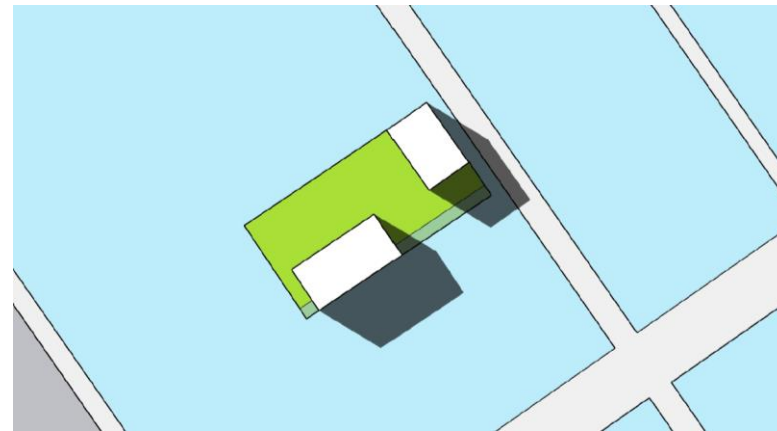
Site 2A



June 21,
10am



June 21,
noon

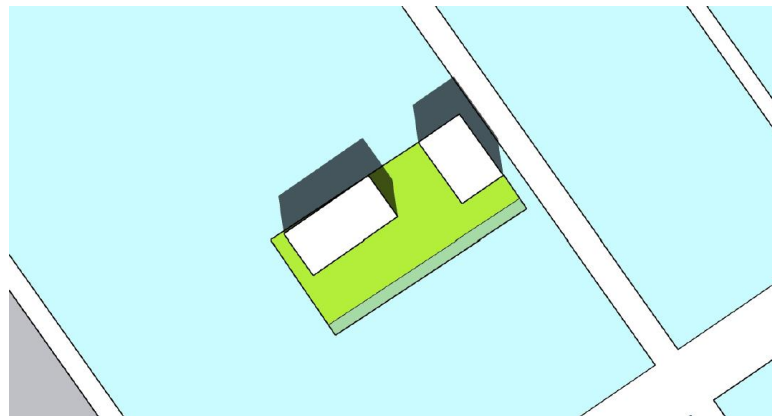


June 21,
3pm

Site 2B



June 21,
10am

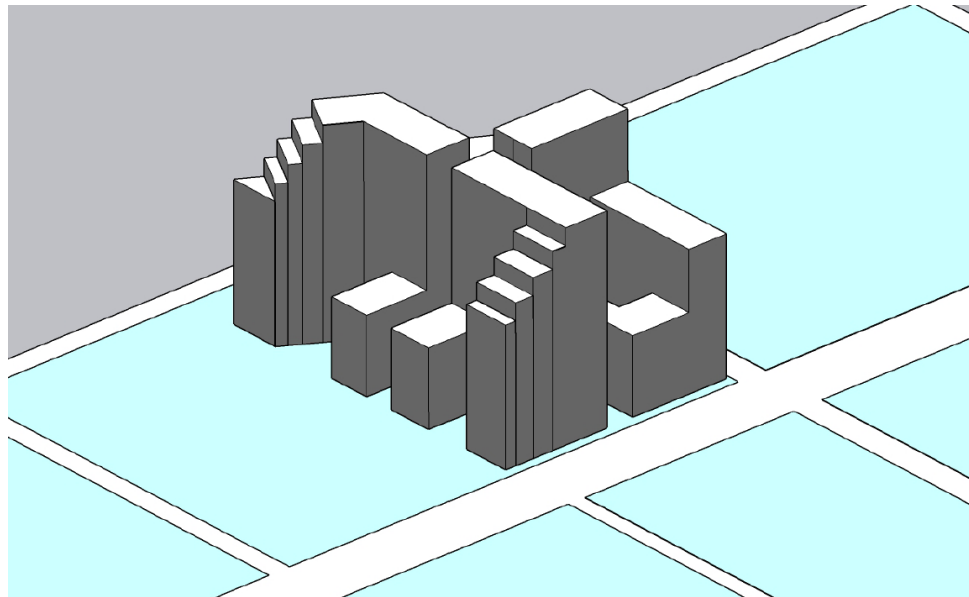
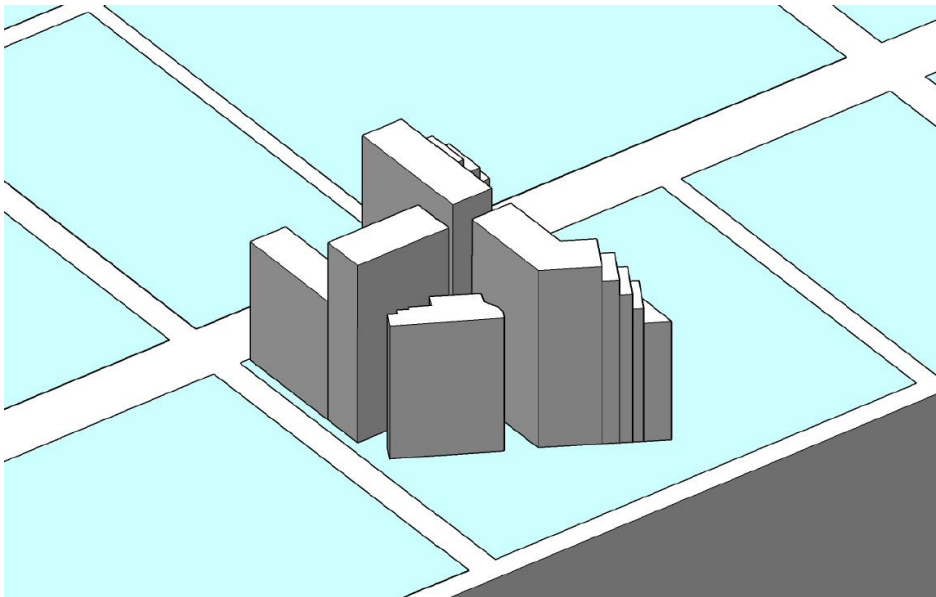


June 21,
noon

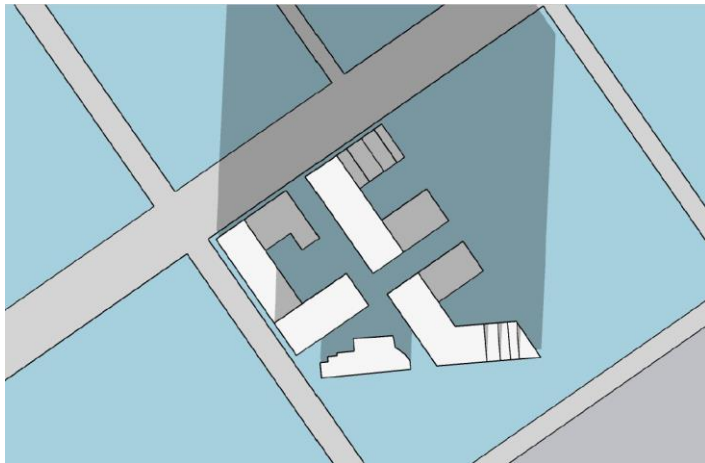


June 21,
3pm

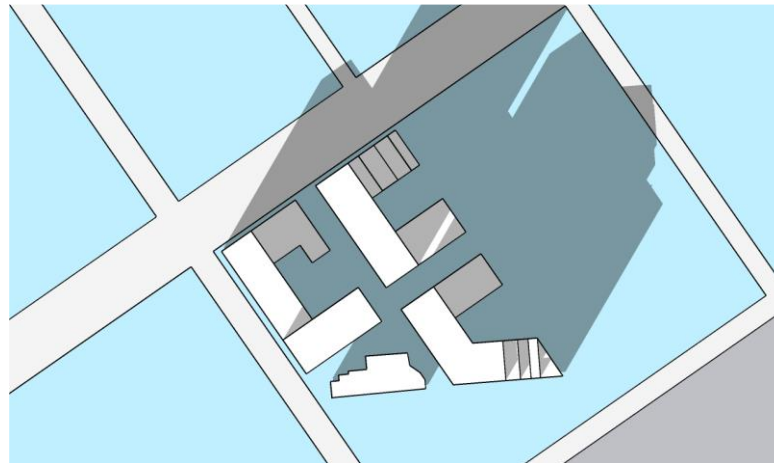
Shade / shadow – Site 3



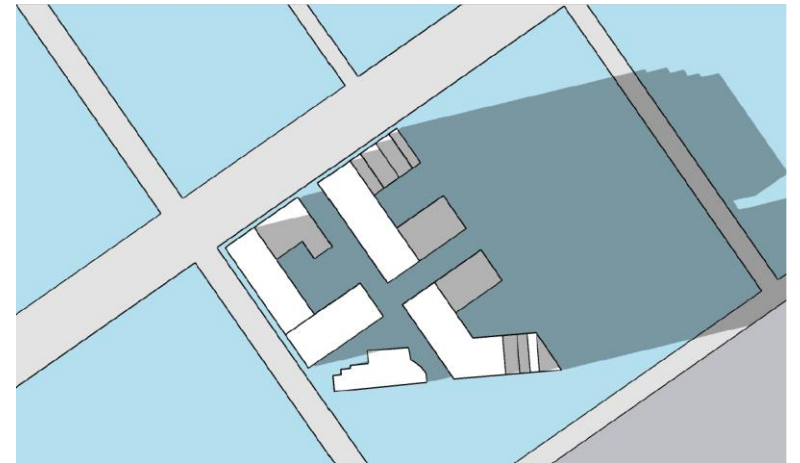
Shade / shadow – Site 3



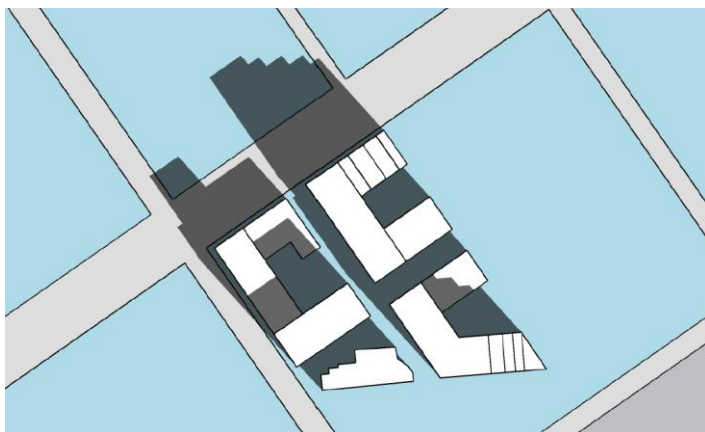
Dec 21, 10am



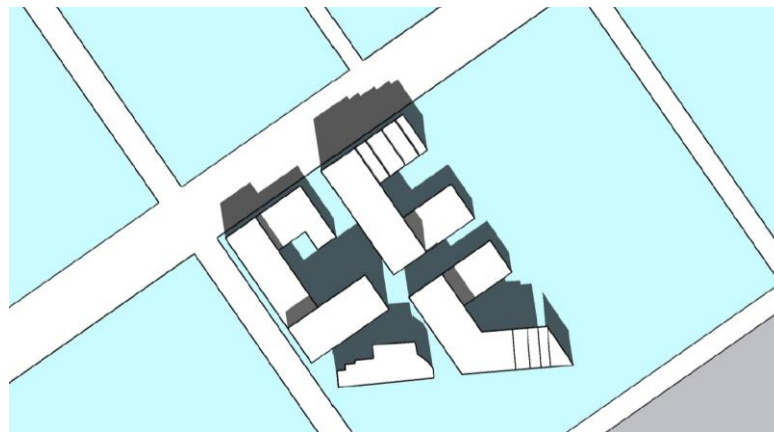
Dec 21, noon



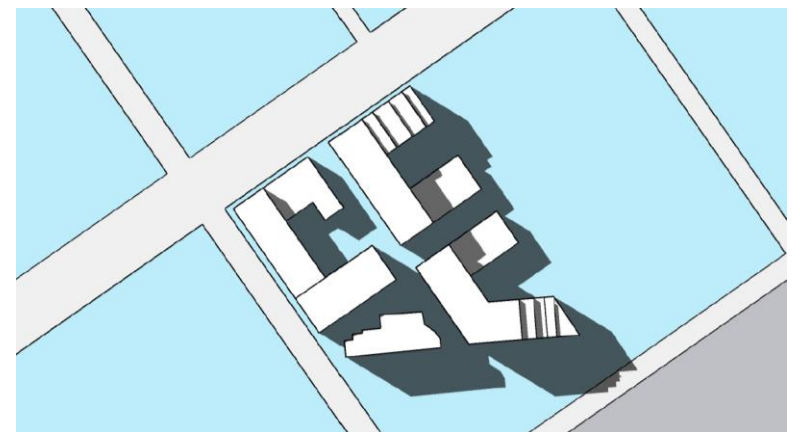
Dec 21, 3pm



June 21, 10am



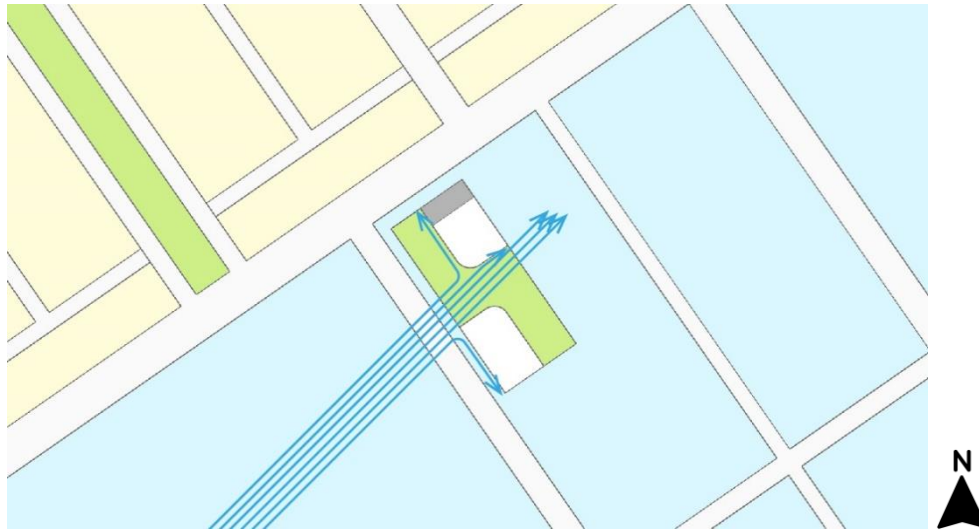
June 21, noon



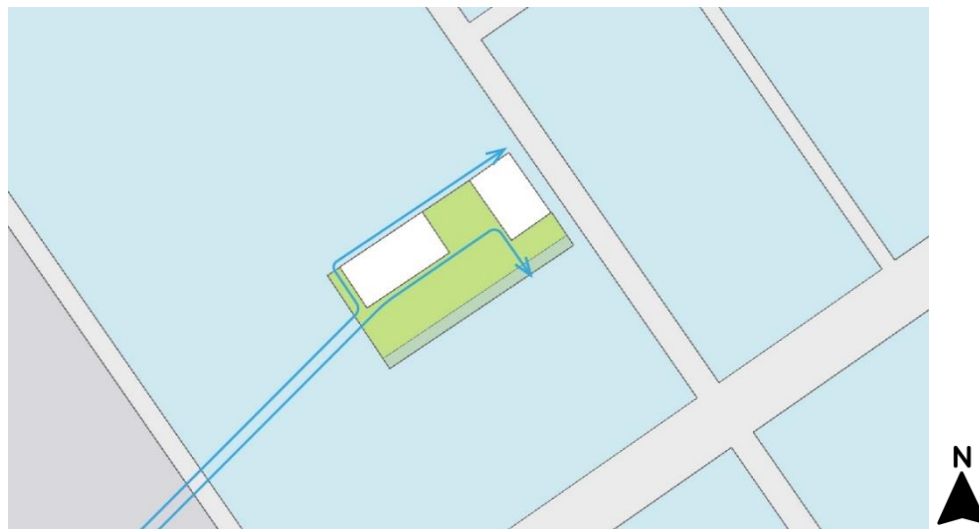
June 21, 3pm

Wind – Site 1, 2A, 2B

Site 1

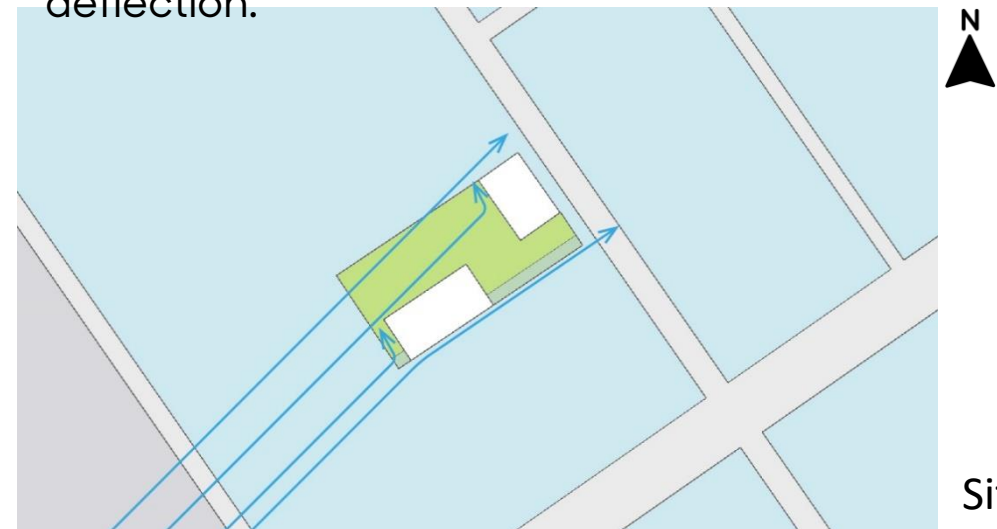


Site 2A



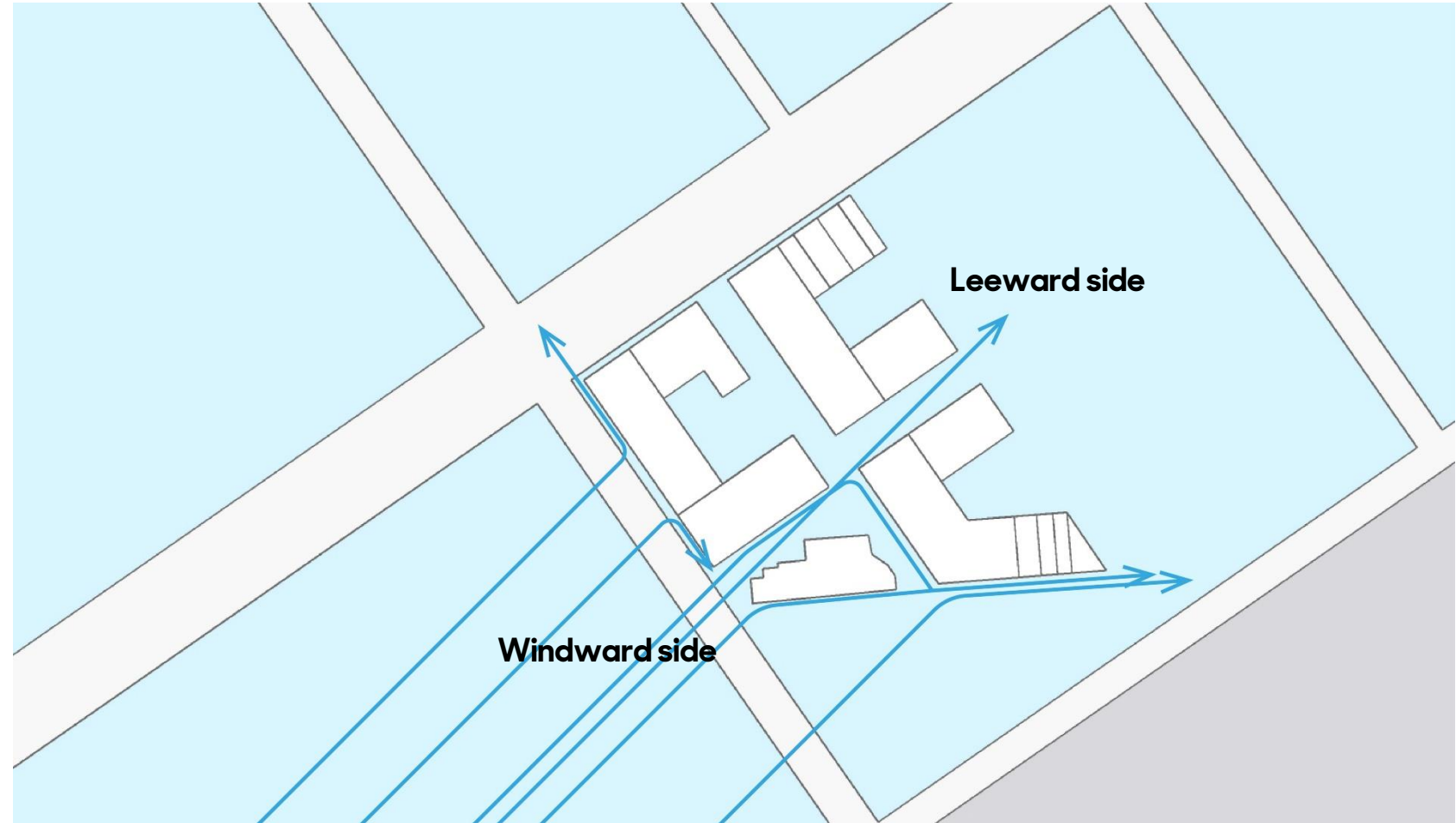
- Wind behavior not as consistent as solar for modelling impacts.
- Depending on orientation, building massing can increase or decrease wind impact.
- The Bergamot grid's parallel orientation to the prevailing wind presents contrasting effects of wind.
- **Site 1** – Tower spacing allows wind to pass through site. Towers need separation to avoid a wind tunnel
- **Site 2A/B** – Less wind passing through, more deflection.

Site 2B



Wind – Site 3

- Very little wind able to pass through site.
- Likely wind tunnel effect through narrow spaces.
- Leeward side (eastern side) potentially turbulent with disrupted airflow.
- Windward side down draught would require mitigation.



Guided Discussion Questions

1. Feedback on design standard objectives
2. When should high-rise standards apply?
3. Feedback on sample standards from other cities
 - A. Should there be standards to limit massing for taller buildings?
 - B. Should there be a maximum floor plate? Dimension? Area?
 - C. Should there be requirements for tower spacing?
 - D. Should there be requirements for façade articulation?
 - E. Should there be additional standards to shape podium massing?
 - F. Should there be standards for tower placement for solar and or wind/ventilation performance?



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Next Steps/ Project Schedule Bergamot Area ODS

What Are the Next Steps?

- ❑ **Technical Working Group** – March 21 & April 18
 - Technical discussion on draft design standards
 - Architects, Affordable Housing Providers, Developers

- ❑ **Study Sessions on Draft Concepts & Standards**
 - Architectural Review Board – April 18
 - Planning Commission – May 8
 - City Council – June 11

- ❑ **PC Recommendation** – July 17
 - PC: Discussion/Final recommendation on revised standards

- ❑ **CC Adoption** – Sept. 24
 - CC: Adoption of BAP Objective Design Standards

BAP Objective Design Standards Project Timeline

Community Outreach

