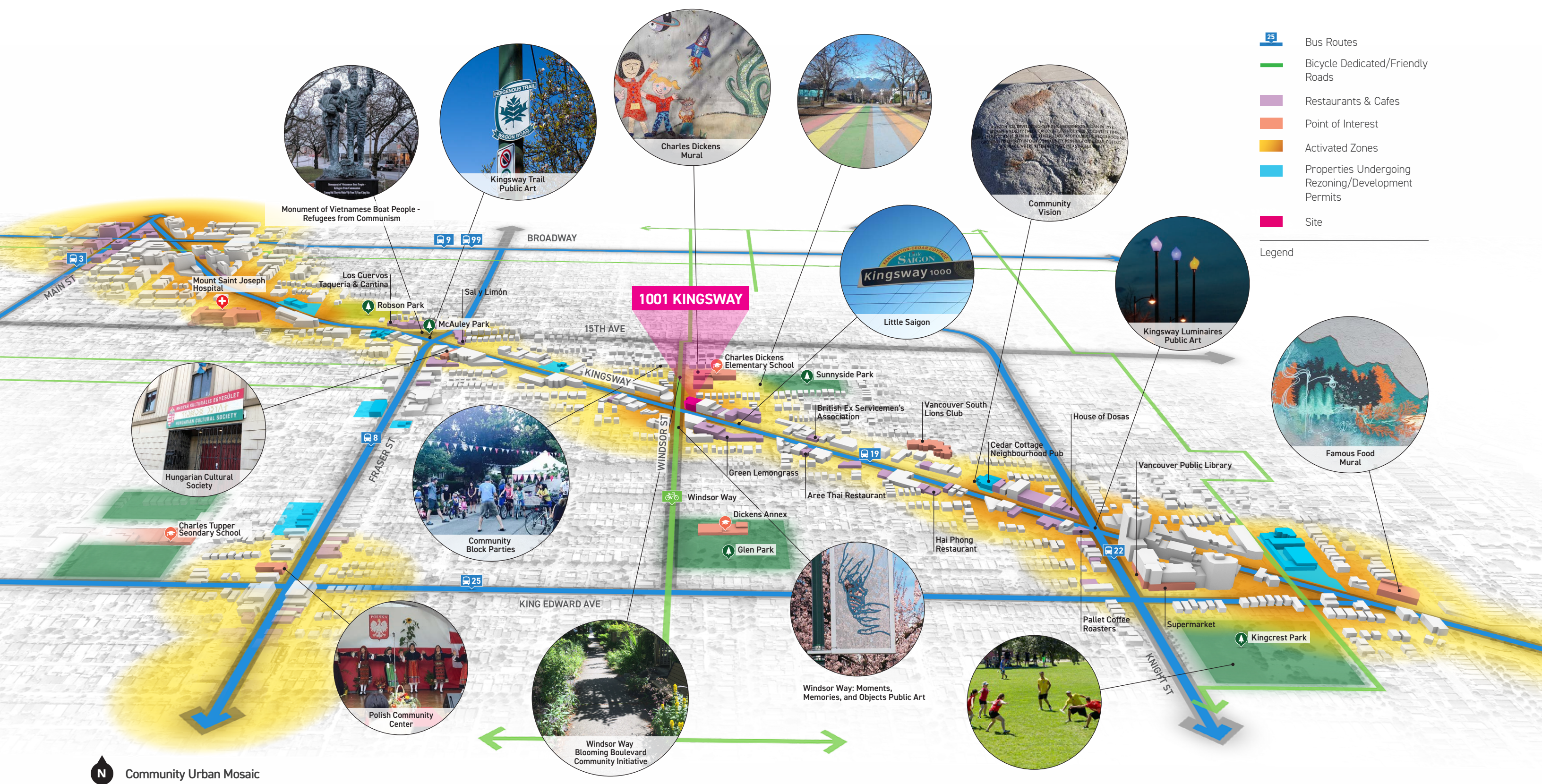


05 DESIGN



Community Urban Mosaic

Community Intersection

Located at the intersection of Kingsway and Windsor Street, multiple diverse communities overlap here, creating a rich urban mosaic. The project offers the potential to build a new community hub that acknowledges both the bike and pedestrian oriented Windsor Street and the urban nature of Kingsway.

Kingsway

Kingsway existed as an ancient Salish subsistence foot trail, stretching for more than 12km from the Fraser River (where New Westminster is now) to what used to be a creek at Main Street and 7th Avenue. In 1860 the Royal Engineers turned this route into a wagon trail to facilitate movement of troops between the colony at New Westminster and the burgeoning new settlement at Gastown.

With the arrival of the Interurban in 1897, which ran parallel to Kingsway, providing fast connection between Downtown Vancouver and New Westminster, the area began to be settled. Kingsway was paved and officially reopened on September 30, 1913. In the 1930s the road was widened to its current six lane configuration and became part of the Trans-Canada Highway until 1964. For the second half of the twentieth century it served as a main commuter route for residents of Vancouver, Burnaby and New Westminster, celebrating the car with dealerships, drive-thru diners and motels.

Over the past few decades, the automotive focus of Kingsway has shifted towards infill developments providing more housing and retail choices bringing with it a more activated pedestrian realm.

Windsor Street, also known as Windsor Way

Windsor Way emerged as community-led grass roots initiative in the early 2000s. Residents along Windsor Street began the Blooming Boulevards Project, taking it on themselves to garden the city owned boulevards in front their homes. The installation by public Artist Karen Kazmer called "Windsor Way-Moments, Memories and Objects" then followed.

Windsor Way tracks the north-south bike route along Windsor Street from Great Northern Way to 43rd Avenue connecting the Off-Broadway, 10th Avenue and Midtown/Ridgeway east-west bike routes. The 4.3km long route links four parks and three elementary schools. Residents along the route took it upon themselves to create the Blooming Boulevard project, gardening the city-owned boulevards in front of their homes. The success of the Blooming Boulevards project led to the formal designation of Windsor Street as a bike route in 2003.

Since then community book swap libraries have sprung up along Windsor Way and across the neighbourhood. The streets have been further activated with communal herb gardens and regular block parties.

Community Reflected in Art

Karen Kazmer's *Windsor Way-Moments, Memories and Objects* celebrates the culture and community of Windsor Way in a series of aluminum banners mounted on street-light poles. The banners outline the hands of members of the community reinforcing the neighbourhood identity. David MacWilliam's 2009 *Kingsway Luminaires* are experienced by Kingsway commuters as they wait to cross the Knight Street intersection. Intentionally ambiguous, they evoke memories and ideas of Kingsway. While Sonny Assu's 2012 *Kingsway Trail* street markers project acknowledged both the ancient and the new, from indigenous foot trail, to the early European settlers' wagons and modern scenic car drive.

Neighbourhoods

Neighbourhoods that overlap the site include Kensington-Cedar Cottage, Dickens School Community, Kingsway, and Little Saigon, Windsor Way Greenway and Kingsway. One block off Kingsway the neighbourhood is comprised of predominantly single-family dwellings, while more intensive developments, twelve-storeys and above, line Kingsway.

The Kensington-Cedar Cottage Community Vision, approved in 1998, acknowledged the need for more intensive development along the Kingsway corridor. It recognized the neighbourhood is comprised of a diverse, growing population, made up of 'many different backgrounds, languages, and income levels.' It identified the following priorities:

- community involvement,
- crime prevention,
- cleaner and greener neighbourhoods,
- taming of arterial traffic,
- transit improvements,
- better access to greenways and bike routes,
- maintaining the character of single-family neighbourhoods,
- three neighbourhood centres, and,
- providing more housing choices.

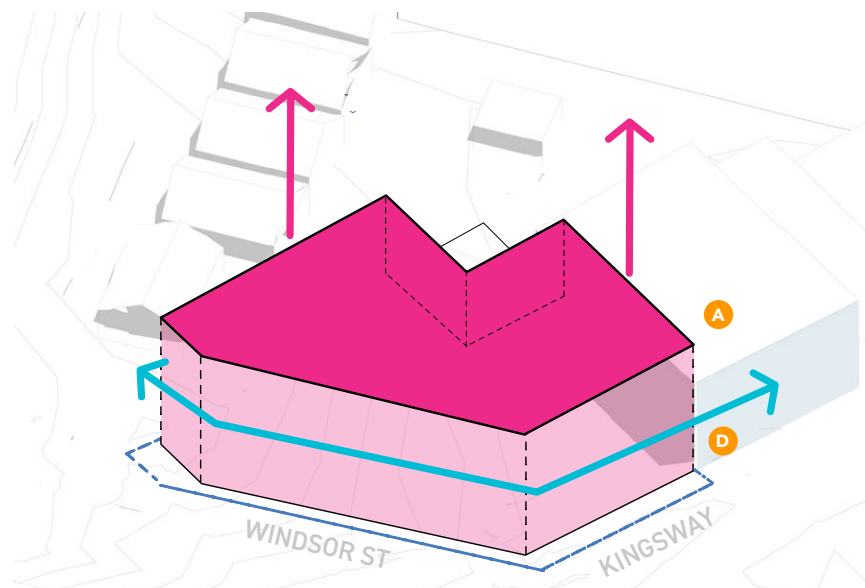
The 1001 Kingsway development responds to many of these priorities. Secured affordable rental accommodations provide more housing choices. Opportunities for social interaction and facilitation of community initiatives within the cooperative framework are maximized. Overlook and street activation are intended to assist with crime prevention. The incorporation of multiple landscaped roof terraces and landscaped site edges promote cleaner and greener streets. The development promotes bike usage with extensive provision of storage and a maintenance shop for bikes.

The development responds to the dense urban arterial of Kingsway, while terracing on the north side help to transition to the less intensively developed neighbourhood along Windsor Street and at the lane.

Design Rationale: The Building

Massing

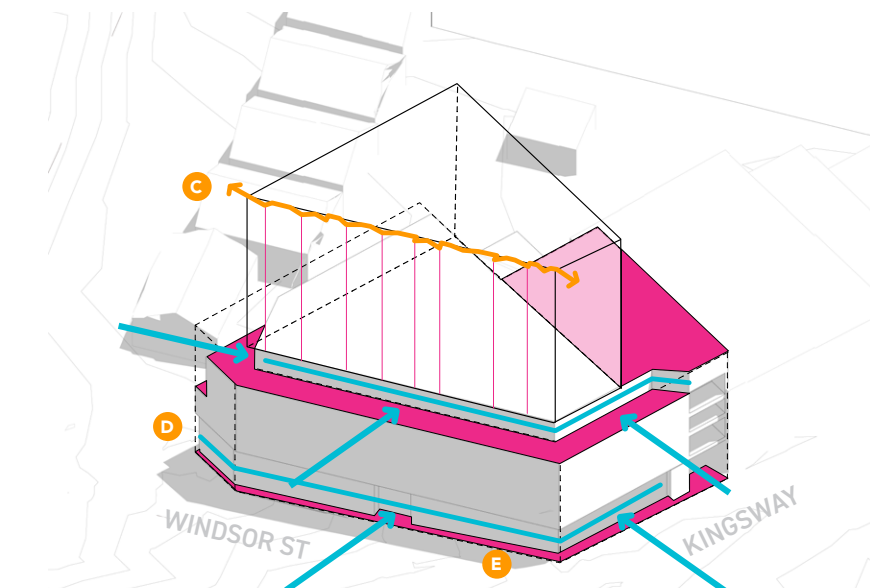
- A** The building is conceived as a 6 story podium mass and a 6 story tower that responds to its context while maintaining recommended setbacks. The lower podium is further broken down at the backside to provide an abundance of outdoor patio spaces that are envisioned to strengthen the connection to the single family residential neighbourhood to the north of the site.
- B** Wrapping outdoor gardens along the podium to the Kingsway elevation the mass creates to larger setbacks at the ground level and Level 5 to create a strong podium/tower expression.
- C** The Tower facade expression is inspired by the articulated typology along Windsor street that is created from the overlapping geometries of the street grid.



Activate: Site Area for Podium and Street Wall.

Street Presence

- D** The site is flanked by a highly active route to the west, a busy vehicular and retail street along the south and a lane to the north. Having a continuous podium expression along these streets connects the building to the streets while providing a smaller scale to the adjacent residential neighborhood.
- E** Two main entrances are envisioned on the project. The residential lobby is proposed to be oriented to Windsor street while the main CRU space and parking access for below grade will be oriented to Kingsway. This gives the building a highly activated street frontage that is inspired by the current uses and activity of the site.



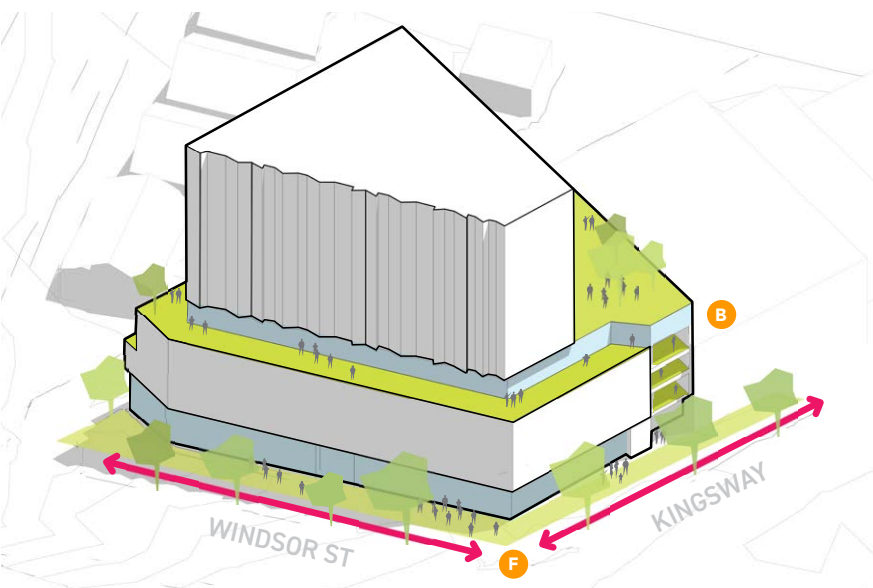
Modulate: Break down scale.

Outdoor Gardens

Taking advantage of the recommended setbacks, the building is envisioned as a series of connected gardens. **F** Starting on Level 1 with activated street frontages and planting areas, the vegetation is carried up to the Level 6 amenity space. Setbacks at the lane and lower garden space take advantage of the late morning sunsets strengthening the buildings internal spaces with activated facades and patios.

The Level 6 and Level 2 amenity spaces are connected to each other via an exterior spiral stair bringing users up from the garden to the daylight upper terrace that places the main interior amenity and children's play area. (Refer to Page 35)

Breaking down the scale of the building with exterior "people" spaces allow the building form to fit well within its context that helps soften the taller form.



Integrate: Building outdoor space to strengthen existing residential community.

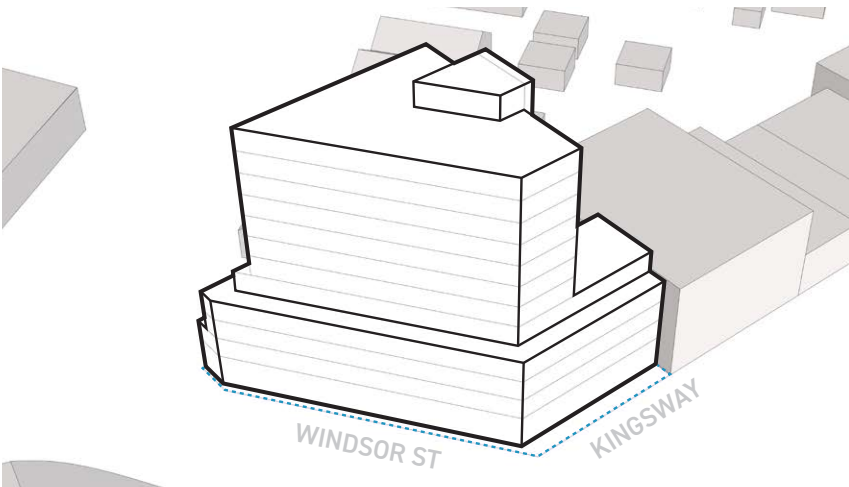
Kensington-Cedar Cottage Community Vision, Zoning and Proposed.

The view from the west of the site, 1 on Kingsway looking north east showing the difference between the proposed city-supported massing (right) and the massing allowed under current C-2 zoning.

The mass along Kingsway and Windsor is aligned to have a setback along the building height of the adjacent site. This mass is separated to the tower portion of the project to enhance the street presence and pedestrian scale of the area.

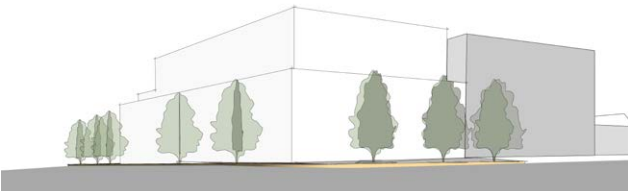
The view from the rear lane to the north of the site, 2 showing the difference between the proposed massing (right) and the massing allowed by the current applicable guidelines.

The high face of the zoning massing is broken down to indicate a transition from the tower overhead down to the residential community to the north, this aligns with the zoning guidelines of a stepped mass while providing multiple exterior space for residents.



City Suggested Massing.

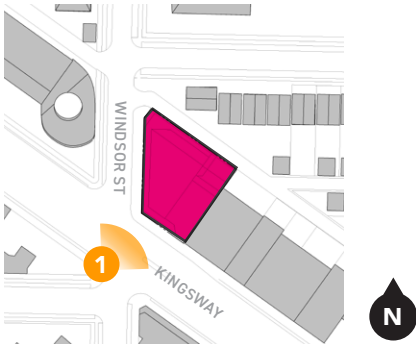
1 View from Kingsway looking north east



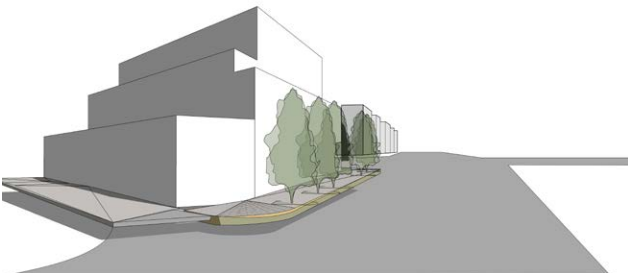
Based on Kensington-Cedar Cottage Community Vision and Zoning.



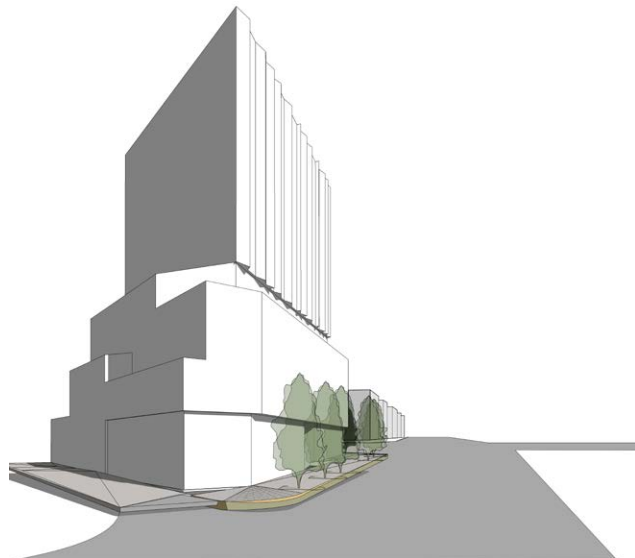
Proposed CD-1 building mass.



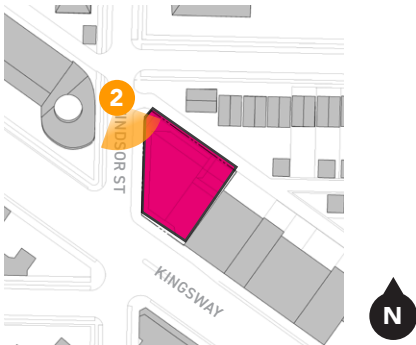
2 View from Windsor looking SouthEast



Based on Kensington-Cedar Cottage Community Vision and Zoning.

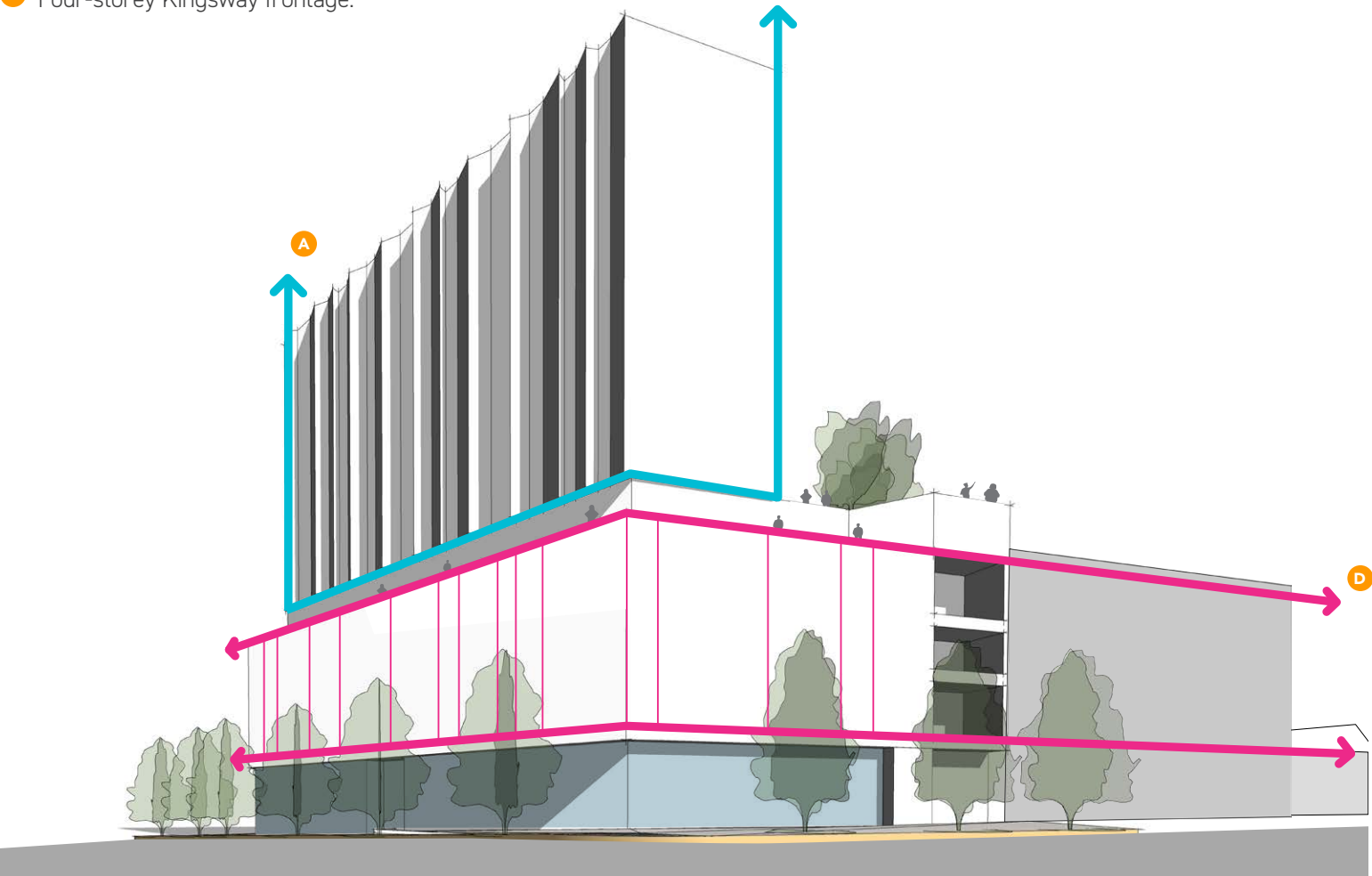


Proposed CD-1 building mass.

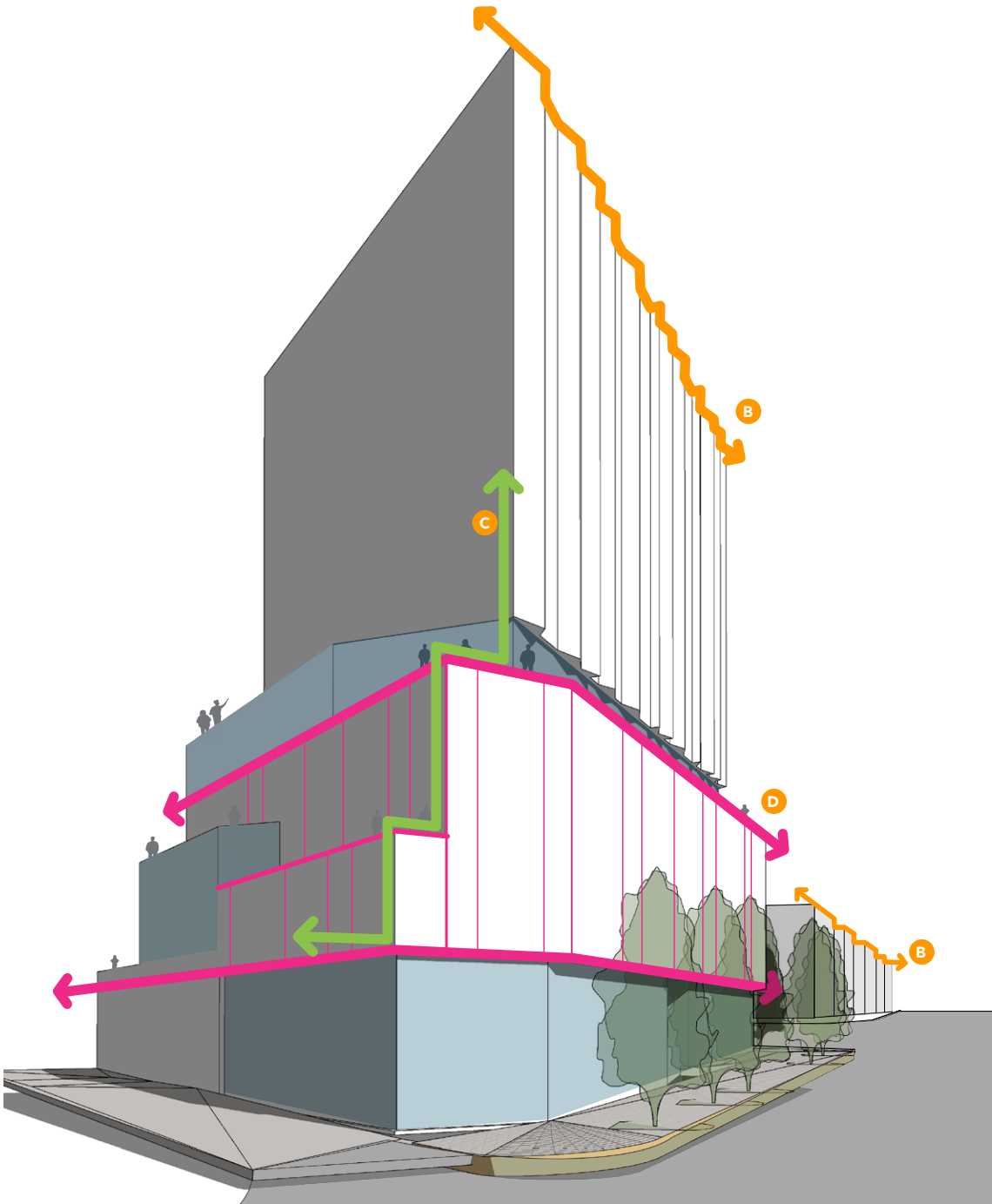


Public Realm

- A** The building adds to the developing podium and setback character along Kingsway with the addition of a more vertical floating tower expression. The project places the tower 40' away from neighbouring building as to allow for future potential.
- B** Inspired by the overlapping street grid the project utilizes an articulated facade and interlocking setbacks on the street to strengthen its connection with existing context.
- C** The mass steps down along lane at Windsor to transition to the neighbourhood to the north.
- D** Four-storey Kingsway frontage.



Public Realm Perspective - Kingsway and Windsor Street.



Public Realm Perspective - Windsor Street at Lane.

Outdoor Amenity

Outdoor spaces are maximized with a courtyard connected to the main indoor amenity space on Level 6 while having an exterior connection to a lower indoor level amenity space that is oriented to a lower outdoor space.

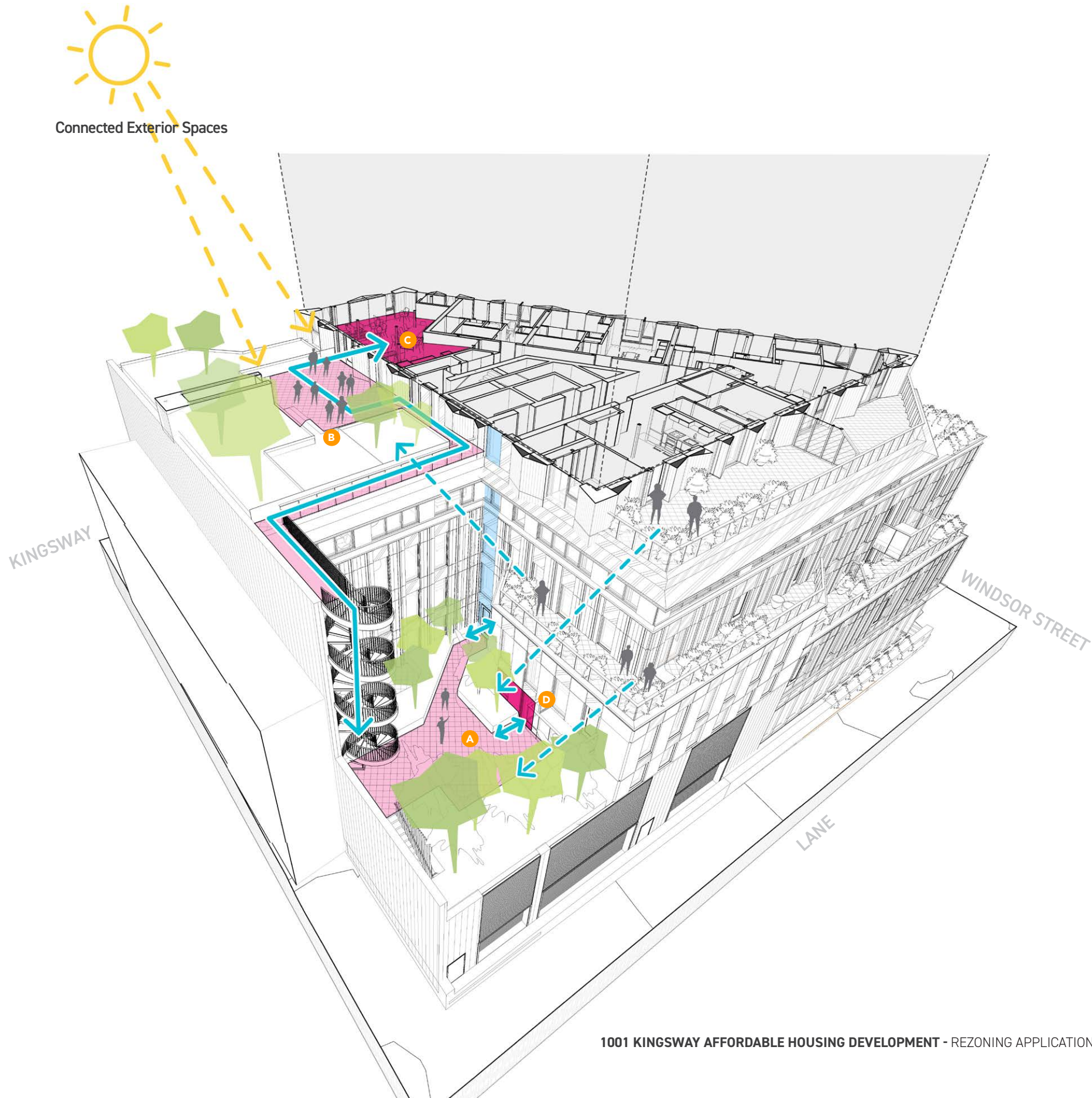
A The Level 2 garden is shaded thus offers a hardscaped area and dense planting area for a quiet escape from the busy Kingsway commercial street.

B The Level 6 outdoor amenity space is accessed directly from the indoor amenity space located on this floor. It can also be accessed from the external stairs linking it to the level 2 outdoor space. The podium rooftop space at Level 6 will capture sun throughout the day and is envisaged as an edible garden with planters, communal seating and space for BBQs, as well as the main children's play area. The edges of the building are further broken down by providing patios to the building occupants that have a strong connection to these outdoor amenity spaces supporting community connection, exterior connection and access to nature.

Indoor Amenity

C The Indoor amenity space provided in this building exceed the City's Housing Design and Technical guidelines. The larger indoor amenity space is located on Level 6 and has direct access to the adjoining outdoor amenity space with ample daylight.

D A smaller indoor amenity space is located on Level 2. It is intended to serve the lower garden and give the building occupants an opportunity to use multiple spaces for a variety of uses.



Access to Nature

The bike and foot path on Windsor links with the larger BC bike network. They provide easy access to nature with local parks and providing access to open spaces such as Glen Park and Sunnyside Park which are within a five-minute walk, and the seawall and Olympic Village only a short bike commute away.

Materiality

At street level the retail and residential lobby are transparent, creating an activated street frontage. A three-storey mass floats over the retail, finished with warm articulated metal panels punctuated with vertical fenestration. The mass steps back at Level 5 with floor-ceiling glazing and smooth metal walls separating the tower above. The tower is proposed to be light coloured aluminum panels to reflect against the sky. These are articulated to assist with solar shading and to provide texture to the tower. The windows of the tower are recessed in charcoal gray vertical slots which span the full height of the tower facade.

Location of windows has been as strategic as possible in order to reduce solar heat gain while maximizing daylight and views. Profiled metal shading devices on the windows will be required to minimize solar heat gain. Exterior operable blinds are proposed for the west elevation to minimize solar heat gain from late afternoon sun. These combine with glass balconies to articulate and add texture to the elevations.

Componentized Construction

Although the use of panelized and mass timber construction creates a uniformity and efficiency in structure and standardized construction methods, the playfulness of facade materials and fenestration placement creates variation within a monotonous technology.

Prefabrication leverages the controlled manufacturing environment resulting in efficiencies and control of the quality. The design team is working closely with manufacturers to harmonize the elevations and to advance approaches to prefabrication. The choice of ribbed and profiled metal panels accommodates the joints between panels, allowing for more continuity in the elevation. The use of mass timber is intended to develop, transform and then sustain the local wood industry by facilitating an approach to cross laminated timber technology that can be successfully replicated. The use of mass timber, sourced from sustainably managed (FSC certified) local forests lock in carbon. This sink can sequester CO₂ at more than 1.5 times its weight.

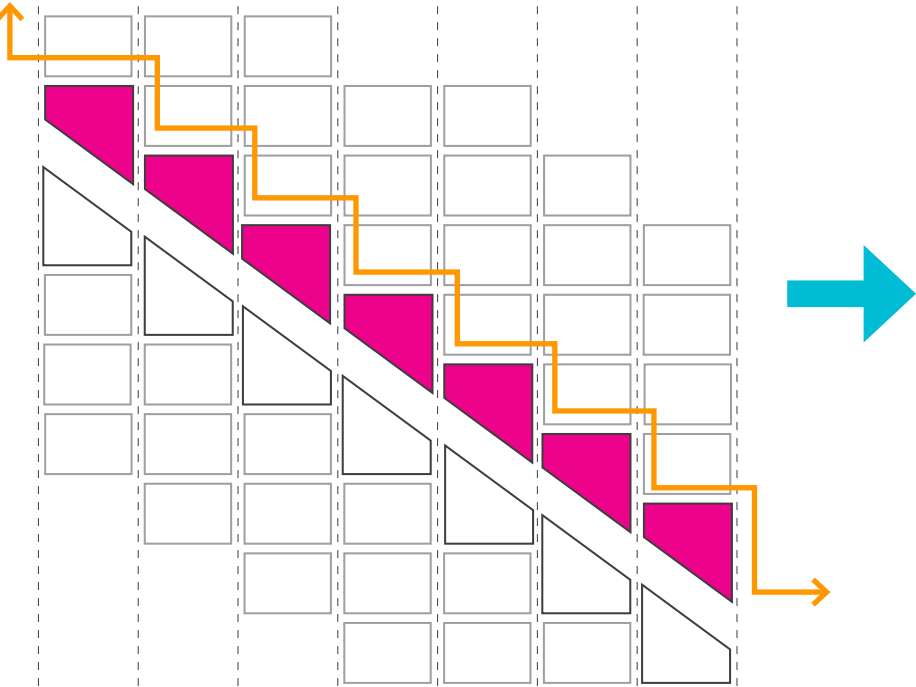


Componentized Construction: Strategic use of materials.

Design Rationale: The Envelope

Urban Scale

The project site sits within the Kensington-Cedar Cottage area of The City of Vancouver, distinguished by the overlap of the strong diagonal of Kingsway cutting through the more orthogonal north-south street grid. This creates city blocks that are triangular and struggle with orientation to Kingsway vs their adjacent streets. Rather than wrestling with the diagonal, the project acknowledges this overlap in both its building mass and architectural expression.



Kingsway Sawtooth: Plan at Urban Scale.

Building Scale - Existing Typology

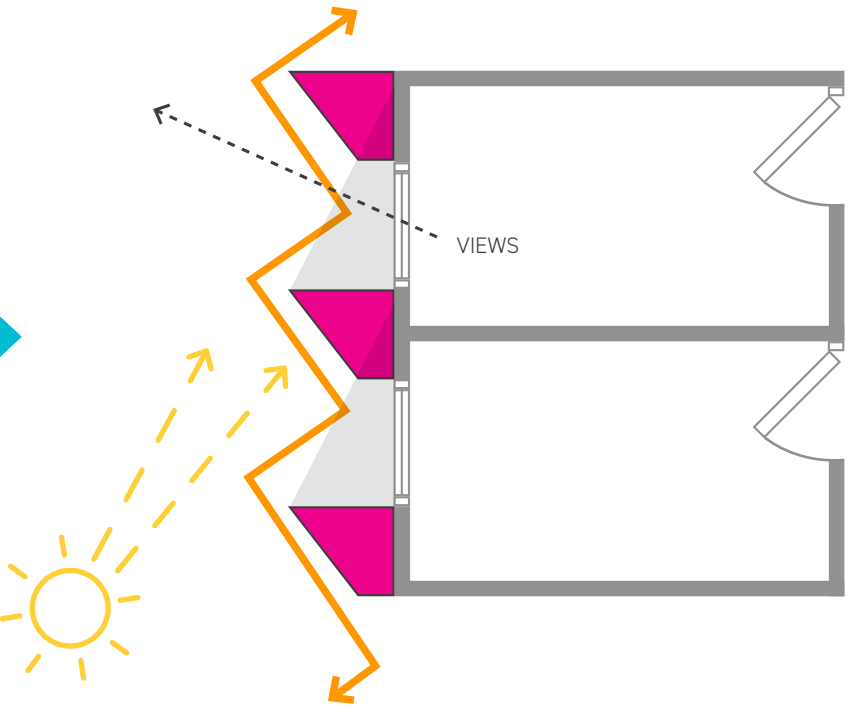
Currently along this commercial spine, buildings have been developed that juxtaposed a more orthogonal form with a triangular. This creates large steps in the buildings that are sometimes carried through to grade, but others form upper level terraces and balconies. This form inspires the proposed building with a sawtooth shape in its expression.



Kingsway Sawtooth: Facade at Building Scale (Existing Typology).

Facade Scale - Performance

The building's longest face is oriented due west and will receive high solar exposure on summer afternoons. The facade is made up of vertical projections, which protect against this exposure while opening up views north to the mountains. This balance of views and solar exposure, combined with operable exterior blinds and opening windows, intends to help the building mitigate overheating during hot summer months and create a balanced interior environment for building occupants, while maintaining a strong connection to the outdoors.



Kingsway Sawtooth: Plan at Facade Scale (Proposed Facade Strategy).

Design Rationale: Transitions

Public Realm

Large, clear glazing wraps both Windsor and Kingsway Streets with an elevated horizontal band that provides signage opportunities for retail units, while separating the public realm from the residential podium above. A framed residential entry projects from the glazed plane and carries through to the interior to provide residents a warm, inviting entry. Strips of native and adaptive planting are provided along the street as well as on the terraces facing the lane to enhance the open space and incorporate urban ecology into the public realm.



Podium to Tower

The project offers a large, Level 5 setback, breaking the podium from the tower expression and providing a generous outdoor terrace. A dark coloured, formed panel provides a cap to the podium expression, while a horizontal projection creates a base for the tower as well as solar shading below.

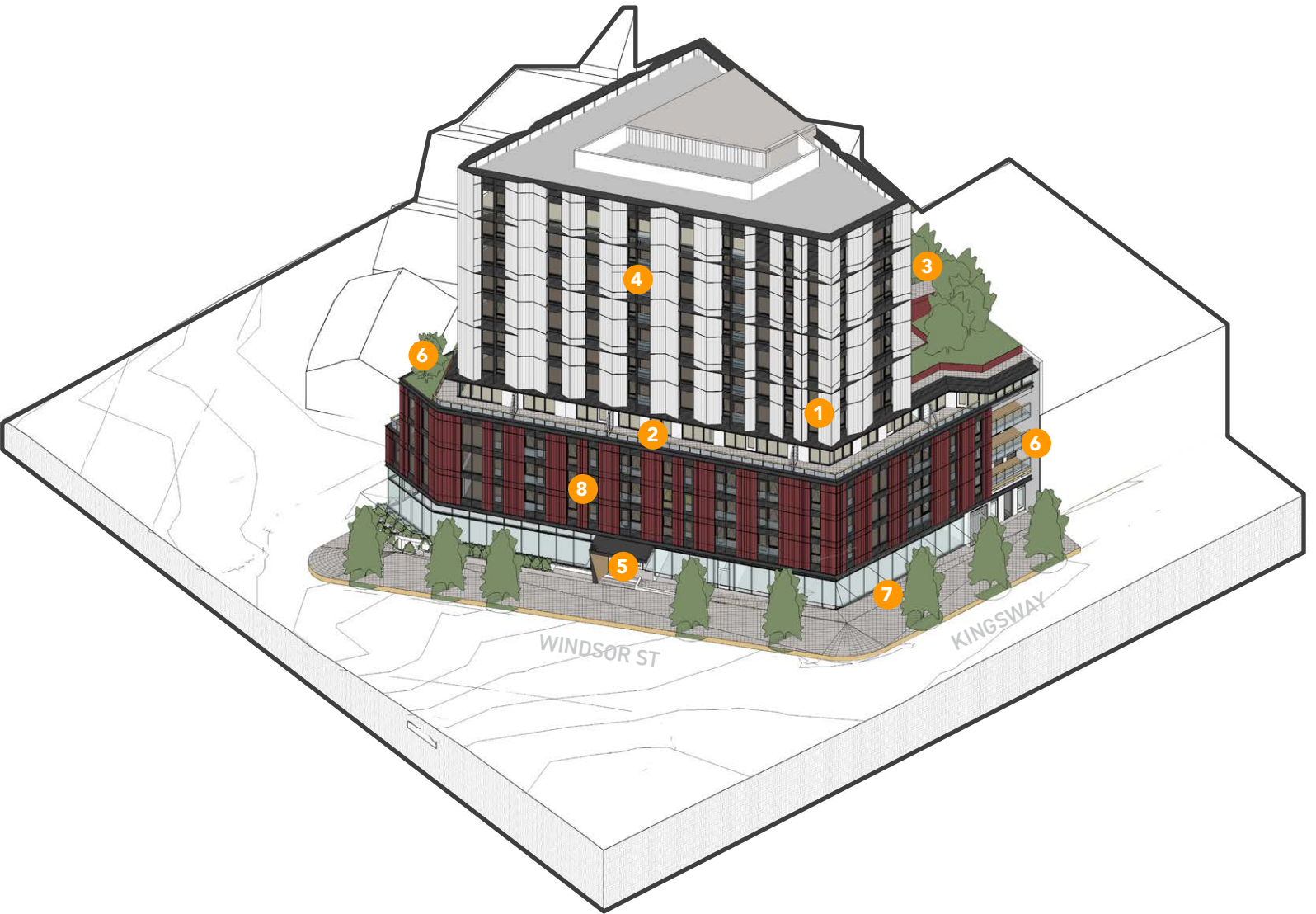


Design Rationale Summary

- 1 Transitional Scale**
Massing is broken down to indicate a transition from the adjacent mixed-use podium to the tower.
- 2 Variation in Height**
Multiple setbacks break down mass in relation to both the commercial and residential adjacencies.
- 3 Building Form**
Building form responds to City recommendation to propose a tower expression along Kingsway, while maintaining a 40' tower separation from adjacent properties. This results in an outdoor space on the podium roof.
- 4 Activated Facade**
Juliet and projected balconies with operable windows provide constant activation and eyes on the street for a safer and more connected community environment.
- 5 Place-making**
Expressed entries and canopies help orient building users to activated uses.
- 6 Contextual Transition**
Massing steps down towards the residential community to the north.

Multiple exterior patios and green spaces provide green buffers to existing community and strengthen lane frontages.

Kingsway balcony expression provides covered entry and visual break of form to adjacent structures.
- 7 Revitalization of Street**
Building face setback, clear glazing at grade, and planted areas allow for active frontage on all sides of the building.
- 8 Materials**
Facade materials on exterior wall have been chosen to be sympathetic to the neighbourhood character.



Sustainable Design Strategy

1001 Kingsway is following Path A through the City of Vancouver's *Green Buildings Policy for Rezoning - Process and Requirements* (Amended June 14th, 2019) targeting **Passive House Certification** and providing metering and low-VOC materials.

A - Net Zero Emissions Buildings

A.1 - Near Zero Emissions Building Standard

RDH consulting has been retained as the Passive House Consultant (Appendix 9) and have provided design advice throughout schematic design and design development.

A.2 - Energy Sub-Metering and Reporting

Community Land Trust and New Commons Development have provided a commitment (Appendix 9) to meet the requirements to separate master metering for each energy utility, sub-metering of major energy end uses and/or spaces uses within the building. The EnergyStar Portfolio Manager account will be set up for the project and a qualified service provider will be retained to support in yearly reports to the City for 3 years after occupancy.

A.3 - Low-Emitting Materials

Community Land Trust and New Commons Development have provided a commitment (Appendix 9) to design and construct with low emitting materials in line with *Green Buildings Policy for Rezoning - Process and Requirements* (Amended June 14th, 2019).

Overview

A number of strategies are under development to meet the building performance goals of the project including:

- Low window-to-wall ratio and orientating glazing to maximize daylight and minimize solar heat gain,
- Triple-glazed (Passive House certified) windows,
- Super insulated wall and roof assemblies,
- Repeated high performing details to minimize thermal bridging and air leakage,
- LED lighting throughout,
- Low-flow fixtures throughout,
- Fully electrical building systems, eliminating gas-fired appliances and mechanical equipment,
- Operable exterior shading on the west elevation,
- System-level mechanical cooling.

