

DEVELOPMENT PROPOSAL

This proposal comprises 77 market rental residential units over a total of 6 storeys, with retail units and townhouses at ground level. The project currently requires a total of 81 parking stalls over two levels of underground parking, with the parking and loading access being located at the lane. At the corner of Adanac and Renfrew Street, a Public Bike Share (Mobi) has been integrated into the design, while maintaining the existing trees on that corner. Care has been taken throughout the design process to retain these existing magnolia trees, and to minimize the potential shadowing effects of the building mass on adjacent residences.

The project area is currently 76,364 sf, resulting in an FSR of 2.96. Currently, the unit mix of this concept is comprised of 8% townhouses, 73% 1 bedroom, 12% 2 bedroom, and 15% 3 bedroom units, resulting in 27% of family units. The form of development we are proposing is a stepped building, which recognizes the critical opportunities and challenges afforded by the steep grade at Adanac and Georgia, and which is sensitive to adjacent development while maximizing the opportunities of this unique spatial condition.

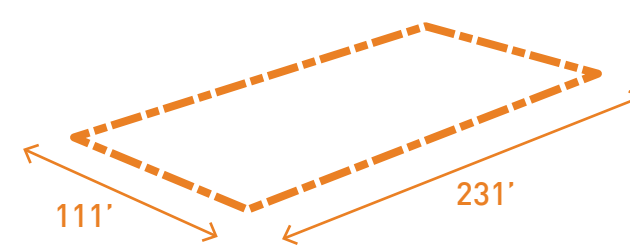
FORM & MASSING

Our concept proposes typical setbacks for Mixed-Use buildings in the City of Vancouver, with appropriate stepping from the lane in consideration of existing dwellings. The commercial uses are setback 2'0" from Renfrew Street, and the townhouses are setback 7'0" from Georgia Street. We designed a 12'0" setback from the lane to the townhouses comprised entirely of landscaped terraces which will significantly improve the current condition of the lane.

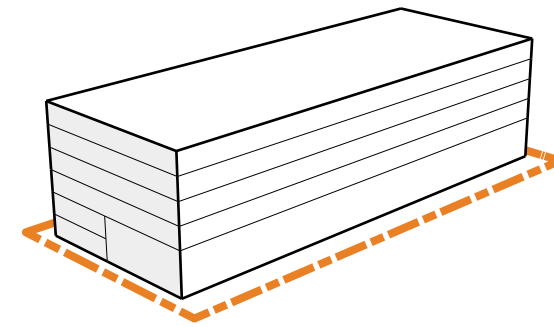
At the third and fourth storeys, the building maintains a 25'-0" setback from the lane, which increases to 40'0" at L5-6. Above L4, we have setback the residential uses 2.5m from the property line, and created street facing patios for residents.

On Level 5, a common rooftop patio amenity has been proposed for residents of the building. We have taken steps to address privacy and overlook issues at the shared amenity, while providing a welcoming and pleasant space for residents. The rooftop is partially occupied with urban agriculture, taking advantage of the solar exposure to provide a practical and sustainable amenity for residents.

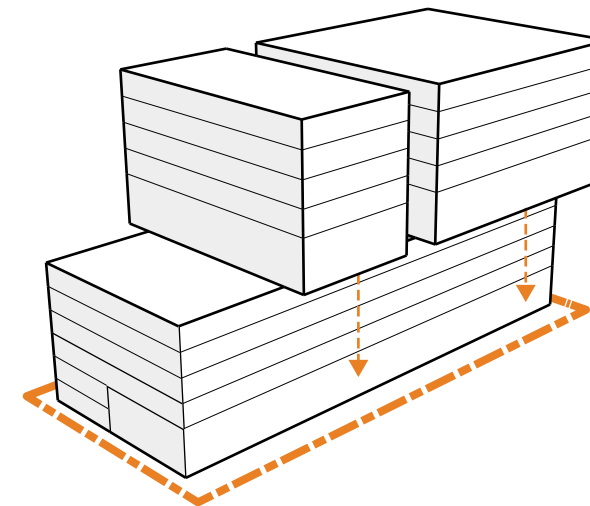
A large consideration to the form and massing of the building was the form factor to achieve Passive House Certification. As a Passive House Design, it is critical to reduce the number of heated horizontal planes, which has resulted in a regular volumetric mass with a reduced number of steps or breaks in the massing. Furthermore, the decision to retain the mature magnolia trees at Adanac and Renfrew Street significantly drove the design considerations at that corner.



1 SITE
The site presents significant grade challenges along all frontages. Specific design considerations have been integrated to overcome both the considerable grades and length of the site.



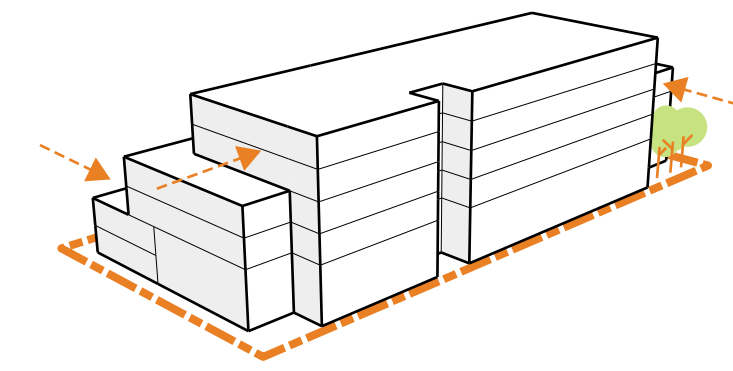
2 MASSING
The proposal responds to the site by presenting a long frontage along Renfrew Street, and by creating a cascading architectural condition toward the lane.



3 VOLUMES
In order to break up the mass and provide visual interest, the initial mass was broken into two proportional volumes which are inset into the longer narrow volume.

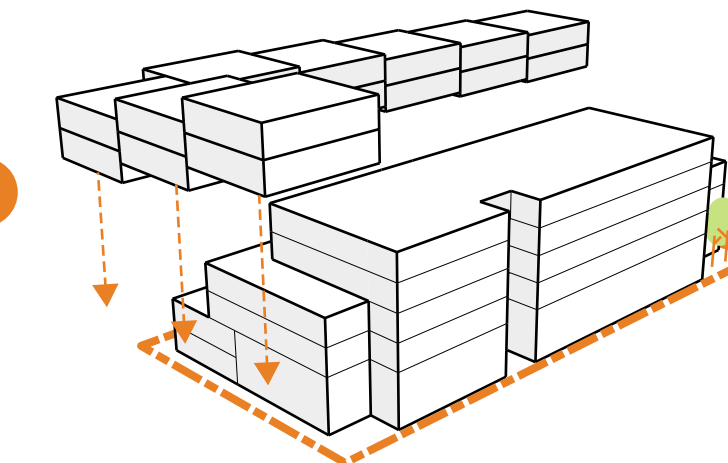
STEPBACKS 4

The built form is strategically articulated to recess the building away from adjacent residential areas, and to communicate a volumetric appearance, while encouraging a high form factor conducive to Passive House design and incorporating the mature magnolia trees at Adanac.



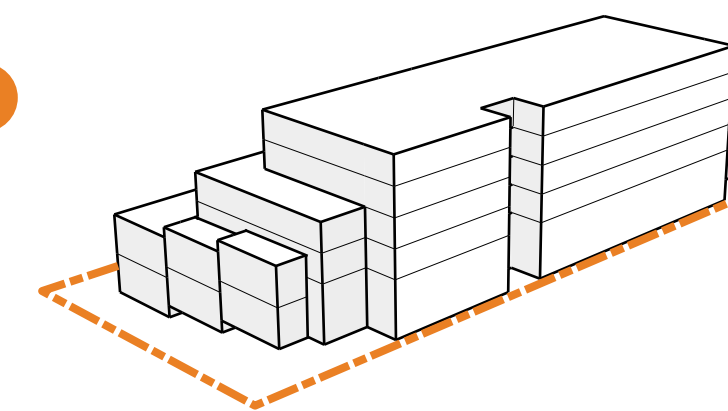
TOWNHOUSES 5

Townhomes are wrapped around the resulting mass, and consequently cascade downwards towards the lane as they meet the street at grade.



PROPOSED FORM 6

The proposed form is a carefully considered massing which is sensitive to adjacent dwellings, facilitates the permeation of sunlight to the neighbours downhill, and ensures that privacy and overlook issues are minimized.



PASSIVE HOUSE DESIGN

In keeping with the latest Green Buildings Policy for Rezoning, amended by the City of Vancouver in 2017, this building will be designed to Passive House standards. This includes a host of design considerations including, but not limited to, high efficiency insulation, solar shading, heat recovery, and a high level of consideration for airtightness and thermal bridging. Below are a short list of some of the design considerations which will inform our rezoning proposal.

PASSIVE HOUSE DESIGN CRITERIA

1. SPECIFIC ANNUAL HEAT DEMAND (SHD) \leq 15 KW.H/M2.YR OR PEAK SPECIFIC HEATING LOAD \leq 10 W/M2
2. SPECIFIC ANNUAL COOLING DEMAND (SCD) \leq 15 OR EXCESS TEMPERATURE FREQUENCY (ETF) \leq 10%
ETF = TIME AT WHICH ROOM TEMPERATURE \rightarrow 25°C
3. SPECIFIC ANNUAL PRIMARY ENERGY DEMAND (SPD) \leq 120 KW.H/M2.YR OR SPECIFIC ANNUAL PRIMARY ENERGY RENEWABLE \leq 60 KW.H/M2.YR
4. BUILDING AIR TIGHTNESS \leq 0.6 AIR CHANGE PER HOUR (ACH)

URBAN AGRICULTURE

HELPS TO ENHANCE FOOD SECURITY AND REDUCE ECOLOGICAL FOOTPRINT BY ENCOURAGING LOCALLY GROWN FOODS.

RECIRCULATION OF AIR

RECIRCULATING STOVE HOOD AND CONDENSING CLOTHES DRYER

INSULATED PARKADE ROOF

HELPS TO ENHANCE FOOD SECURITY AND REDUCE ECOLOGICAL FOOTPRINT BY ENCOURAGING LOCALLY GROWN FOODS.

VERTICAL EXTERIOR SHADING

PREVENT EXCESS TEMPERATURE FREQUENCY BY PROVIDING VERTICAL EXTERIOR SHADING FOR WEST WINDOWS WHEN NOT SHADED BY OBJECTS SUCH AS BUILDINGS OR DECIDUOUS TREES.

HEAT PUMP + HEAT RECOVERY VENTILATOR

AIR SOURCE HEAT PUMP FOR COMMERCIAL HEATING AND COOLING (OR EQUIVALENT), AND A HIGH EFFICIENCY \rightarrow 85% HEAT RECOVERY VENTILATOR, PASSIVE HOUSE CERTIFIED, OR PROVEN EQUIVALENT.

AIRTIGHTNESS + THERMAL BRIDGING

AIRTIGHT + MINIMIZED THERMAL BRIDGE ENVELOPE, WITH HIGH PERFORMANCE WALL INSULATION.

SUSTAINABILITY RATIONALE

REVISIONS

NO.	DATE	DESCRIPTION
1	DEC 21, 2016	REZONING ENQUIRY
2	SEPT 1, 2017	PRE-APPLICATION SUBMISSION
3	NOV 15, 2017	REZONING APPLICATION

708-796 RENFREW STREET

REZONING APPLICATION

DESIGN + SUSTAINABILITY RATIONALE

DATE 12/13/2017 10:25:26 PM
DRAWN BY Author
CHECKED BY Checker
SCALE

JOB NUMBER 16021

