The Pacific Residence student housing project is one component of a campus-wide program to increase the number of beds available to students enrolled at UBC. The specific mandate of the project is to create approximately 1,000 new beds for upper year students.

Located around the perimeter of the existing Gage Residence precinct, the site is bounded by Student Union Boulevard to the south, Wesbrook Mall to the east, and Walter Gage Road to the north.

**KEY PROJECT DATES:**

- **Construction Start:** June 2019
- **Anticipated Completion:** August 2021

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1. View from Walter Gage looking East
2. View from Wesbrook Boulevard looking South
3. View from Student Union Boulevard looking North
4. View from Wesbrook Boulevard looking West
5. Existing Gage Residence Courtyard

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CONTEXT Plan

Bird’s Eye View of Site
PLANNING PRINCIPLES

The strategy for accommodating the project’s program is to build a consistent form around the south and east perimeter of the existing Walter Gage precinct, where surface parking lots are currently located. This linear arrangement allows for a variety of building heights, located to best fit into the varying neighbourhood context, while accommodating the density of the project within the narrow project site.

KEY PROJECT STATISTICS:

- Number of Beds: 935
- Gross Floor Area: $30,990\text{ m}^2$ (333,575 ft$^2$)
- Below-Grade Parking: 200 spaces
- GHG Reduction: 70% (compared to baseline building)

KEY PROJECT GOALS:

- Ensure that the project respects the context of the neighbourhood, particularly the residential areas of the UEL and the Theology precinct.
- Put “the zipper” on Student Union Boulevard, where development defines and unifies this important campus street.
- Establish a “gateway” at the intersection of Westbrook Mall and Student Union Boulevard, relating to the recent Exchange Residence to the south, and signaling arrival at the campus.
- Provide ground level animation along Student Union Boulevard through the selection and placement of programmatic uses and activities.
- Establish a pedestrian circulation framework that ties into the preferred movement routes both within the Walter Gage precinct and to linkages to the broader campus to the south and west.
- Include underground parking to replace lost surface parking, and to add to the campus inventory for new uses located on site.

Massing and Public Space Sequence
The project is organized in a slender arrangement of buildings which wrap the perimeter of the site. Gaps are introduced between buildings to ensure physical and visual porosity throughout the site, and also relating to existing and desired pedestrian connections. The proposed massing seeks to mediate the density on Wesbrook Mall as a transition from the lower scale residential contexts to the north and east, with the taller scale of the recent Exchange Residence to the south, and the existing Gage Residence towers to the west.

The proposed massing on Student Union Blvd. responds to the 10-storey portion of the Exchange Residence to the south, to create a consistent streetwall condition for this urban public realm.

The proposed massing on Wesbrook Mall seeks to balance with the various neighbourhood adjacencies with a mid-rise residential scale.
This project seeks to create a new architectural addition to the varied typologies found within the Gage Precinct, while also building upon the recent Exchange Residence to the south, and Tallwood Residence to the northwest. Key goals for the project include creating a sense of depth to the facades, through the use of recessed windows, and to also create a sense of variation - through the use of repetition, alternating patterning, and perceived movement. Vertical circulation (staircases) will be made evident on the facade through the use of glazed areas.

A series of initial concepts explored the scale and repetition of the typical window modules. These concepts have tested window sizes, repetition, and patterning.

The preferred design for the facades achieves a unique patterning through an alternating use of faceted metal panels, which appear “carved” from the building faces. These facets angle into the 4 sides of the windows in an alternating pattern, creating a sense of variety and movement to the facades. The faceted window surrounds will be formed in metal, in a finish that is complementary to the facade material tones.
To provide diversity to this large project of five buildings, the buildings are proposed to be clad in two or three tones of masonry brick, creating an alternating pattern between the different buildings. This will help to break up the overall reading of the project, while the detailing and facade expression will tie the buildings together into a cohesive whole.

Masonry (especially white brick) was used extensively at UBC in the mid-to late-20th Century, and more recently, in a number of the contemporary buildings on campus. At the Exchange Residence to the south, a dark grey ironspot brick has also been used in combination with white brick. By applying a consistency of materials such as brick, as part of the design of this complex, greater campus clarity can be achieved.

Ground levels will be predominantly glazed with a high-performance SSG curtain wall system at all entries, program areas and lobbies, to create a sense of transparency and activity at the “base” of the project. This also emphasizes openness and engagement with the streets. These areas also appear “carved” from the building masses, through the use of recessed entries and cantilevers at the ground floor levels. Soffit areas are proposed to be wood.
LEED

Building Certification

The project must follow the UBC LEED Implementation Guide (LEED v4), which aims to align the LEED Building Design + Construction (LEED BD+C) v4 rating systems and UBC campus policy to facilitate a high-performance built environment on campus. It supports the provincial requirement for all publicly funded new construction and major renovation projects to achieve LEED Gold certification.

The design brief also emphasizes the following strategies:

- Smart commissioning and monitoring based commissioning, which aligns with the approach to commissioning in LEED v4.
- Passive design strategies to achieve the energy targets before considering traditional mechanical solutions.
- Design for a well-sealed building, to be verified through airtightness testing (ASTM E779 or USACE Version 3).
- Planning for sewage heat recovery and solar PV.
- Comfort modeling to ensure thermally comfortable spaces.

The brief also identifies priorities and opportunities for water conservation and material resources.

**LEED v4 for BD+C: New Construction and Major Renovation**

| Preliminary LEED Scorecard | Project Name: Gage Student Residence etBb | Date: 17 Dec 2018 |

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**ENERGY**

**Building Performance**

Specific greenhouse gas emission and energy use reduction targets are set for the project in the Design Brief. They may be refined with the project team as the design progresses and must be tracked through to building occupancy.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Definition</th>
<th>Target</th>
<th>Design</th>
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</thead>
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<td>TEUI</td>
<td>Total Energy Use Intensity (Includes all energy end-uses in the building, including all plug-loads and process loads).</td>
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<td>110</td>
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<tr>
<td>TEDI</td>
<td>Thermal Energy Demand Intensity (Including envelope heat loss and ventilation load).</td>
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<td>DHW</td>
<td>Domestic Hot Water (maximum DHW use).</td>
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<td>16</td>
</tr>
<tr>
<td>Plug Loads</td>
<td>Plug Loads (maximum plug-load energy).</td>
<td>30</td>
<td>12</td>
</tr>
</tbody>
</table>

Units: kWh/m²

**THERMAL COMFORT**

- Operation temperature: 20°C
- Study Room: Comfort (22°C-25°C)
- Bedding: 22°C

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**TRANSPORTATION/ RECYCLING**

**Bike Parking**

The majority of bike parking will be provided within student bedrooms with a wall-mounted bike hook. At Building 1, due to its hotel function during summer months, bikes will not be stored within individual rooms, therefore secure bike spaces will be provided in the basement. Short-term bike parking will be provided at all building entrances and at the café location.

**Car Parking**

Approximately 200 car parking spaces will be provided in a two-storey underground parkade.

**Garbage/Recycling**

Students will bring waste from their rooms to storage locations below-grade in each building. Waste will be moved by staff to centralized garbage rooms, adjacent to receiving areas on the north side of the Building 1 and Building 5.

**Deliveries/Loading**

Deliveries, including linen for summer hotel operation, will be made to the receiving areas located on the north side of the Building 1 and Building 5. Supplies will be transferred to P1 via freight elevator, where they will be distributed through the parkade to the buildings. Connections to the existing West Coast Suites and Walter Gage Apartments will be made below-grade.