Ottawa Community Housing

Geyser Place - Site Plan City Application

Urban Design Brief

LemayMichaud

2025-05-01

Ottawa Community Housing
Logement communautaire d'Ottawa

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Project Description

01.1 Design Intent Brief

The following report outlines the work of the consultant team for the OCH Geyser Place Site Plan City application.

The project is located on Phase 2 of a site at 3380 Jockvale Road. Phase 1, also developed by OCH, is currently under construction.

This Phase 2 project includes a new 9-storey, 99-unit residential apartment and 3.5 storey stacked townhouses including 18 units. The two buildings are located at the heart of a site that will be fully developed and landscaped. The project is designed to take full advantage of the site's prime location, which is surrounded by low-density development, a network of streets and public transportation, and generous green spaces. It aims to maximize connectivity with the surrounding context, including planned links such as the future multi-use pathway (MUP).

The architectural approach for both buildings is intentionally simple and refined, with a compact design that meets Passive House standards. Traditional features such as balconies and projections have been deliberately minimized. Material selections are thoughtfully aligned with the existing built environment, avoiding strong contrasts. Light, warm-toned clay bricks are paired with charcoal-grey metal panels, creating a subtle and cohesive aesthetic.

The project's objectives are primarily focused on energy performance and accessibility. However proper integration into its surrounding plays an important part in the composition.

1. Energy Efficiency : The building will be designed and built to Passive House Standards without seeking formal certification. The building is seeking funding under the CMHC Affordable Housing Program and will exceed the energy and GHG performance requirements of the program.

2. Accessibility : 20% of the units will meet the CAN CSA B651 standard of accessibility, with the remainder of the units meeting the visitability standards found in 6.13 of the City of Ottawa's Accessible Design Standards. Common areas will be designed to be Barrier-Free, per CAN CSA B651.

3. Connection to Phase 1 : The implementation of a program as dense as this one requires a sensitive approach. The team considered the impact of shadows, scale and privacy in relation to Phase 1 when planning the volumetry of the project in order to enhance the connection with its neighbor. The mid-rise is broken down into two segments which are differentiated in height, color and materiality, projecting an image of an assembly of volumes as opposed to one overpowering structure that the team felt would not benefit the overall site. The lower 4-storey volume is then positioned adjacent to Phase 1, which helps create a more relatable scale between the two projects.

4. Concept : The mid-rise's facade, with its rigid grid-like structure, shows a playful side integrating varying widths of metal panel infills which give a sense of movement around the perimeter of the volume, adding yet another layer of interest and scale to the composition. The townhomes, following the material and color palette of the mid-rise, integrates a play of volumes, heights and subtile tonality of bricks to further enhance the variety and visual interest on the site.

The team met with City of Ottawa personnel for an informal preconsultation. Some of their initial feedback on the site layout and tower position was incorporated into the development of the final tower footprint.

01.2 Project Statistics

ZONING COMPLIANCE TABLE & PROJECT INFORMATION		
PROJECT: OCH - GEYSER PLACE		
ADDRESS: 3380 JOCKVALE RD		
ZONING: R4Z(2465)		
PROPERTY IDENTIFICATION NUMBER: PART OF LOT 13, CONCESSION 2 (RIDEAU FRONT) PLAN 4R-34672		
	REQUIRED	PROVIDED
PROPERTY USE	PLANNED UNIT DEVELOPMENT; STACKED DWELLING	STACKED DWELLING ; MID-RISE APARTMENT
LOT WIDTH	18 m	48.165 m
LOT AREA	1,400 m^2	5,967 m^2
PROPERTY SETBACKS		
FRONT YARD MIN.	3 m	3 m
FRONT YARD MAX.	5 m	6 m
INTERIOR SIDE YARD	3 m	3 m
REAR YARD	3 m	3 m
TOTAL % LANDSCAPED AREA (30%)		
	-	-
% OF LANDSCAPING IN PARKING LOT		
	-	-
AMENITY AREA		
ALL AMENITY SPACE PROVIDED IS COMMUNAL AND EXCEEDS 54 m^2	6 m^2 / DWELLING	1141 m^2 EXT.
		193 m^2 INT.
	702 m^2 TOTAL	1334 m^2 TOTAL
GFA / FLOOR		
MID-RISE APARTMENT		
LEVEL 1	1 121 m^2	
LEVEL 2-4	1218 m^2 x 3 = 3 654 m^2	
LEVEL 5-7	923 m^2 x 3 = 2769 m^2	
LEVEL 8	913 m^2	
LEVEL 9	911 m^2	
	9 368 m^2 TOTAL GFA	
STACKED TOWNHOMES		
LEVEL 1-3	590 m^2 x 3	
	1 770 m^2 TOTAL GFA	

VEHICLE PARKING REQUIREMENTS		
VISITOR		8 STANDARD
		1 AODA TYPE A
	0.2 x 117 UNITS = 23.9	**9 TOTAL**
RESIDENTIAL (4 E.V. STALLS IN INTERIOR PARKING LEVEL)		1 AODA TYPE A
		4 COMPACT CAR
		16 STANDARD
	0.5 x 117 UNITS = 59	**21 TOTAL**
TOTAL PARKING SPACES (INCL. BARRIER FREE)	**83 GRAND TOTAL**	**30 GRAND TOTAL**
BIKE PARKING REQUIREMENTS		
RESIDENTIAL	0.5 / DWELING UNIT	53 INDOOR
		6 EXTERIOR
	0.5 x 117 UNITS = 59	**59 TOTAL**
WASTE COLLECTION		
TOWER: 99 UNITS		
GARBAGE	0.110 YARDS / UNIT = 12 YARDS	12 YARDS
RECYCLING - FIBER	0.038 YARDS / UNIT (INCL. FIBER) = 4 YARDS	2 YARDS
RECYCLING - GLASS		2 YARDS
ORGANICS	240 L / 50 UNITS = 3 - 240L BINS	3 - 240L BINS
TOWNHOUSES: 18 UNITS		
GARBAGE	0.231 YARDS / UNIT = 4 YARDS	
RECYCLING - FIBER	360 L CART / 6 UNITS = 3 - 360L BINS	
RECYCLING - GLASS	360 L CART / 6 UNITS = 3 - 360L BINS	
ORGANICS	240 L / 50 UNITS = 1 - 240L BIN	

01.3 Rendering - Mid-rise

South - View from the futur MUP

01.3 Rendering - Mid-rise

South-West - View from the futur MUP &Promenade Longfields

01.3 Rendering - Mid-rise

North-East - View from Phase one / Main facade

01.3 Rendering - Mid-rise

North - View from Jockvale & Promenade Longfields

01.3 Rendering - TownHouses

West - View from Branch street

01.3 Rendering - TownHouses

West - View from Branch street / Main facade

01.3 Rendering - TownHouses

South - View from the future MUP - landscape and buildings connections

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Design Directive(s)

The subject property is designated a “Hub” with an “Evolving Neighbourhood Overlay,” within the Suburban Transect Area on Schedule B6 – Suburban (Southwest) of the City of Ottawa's Official Plan.

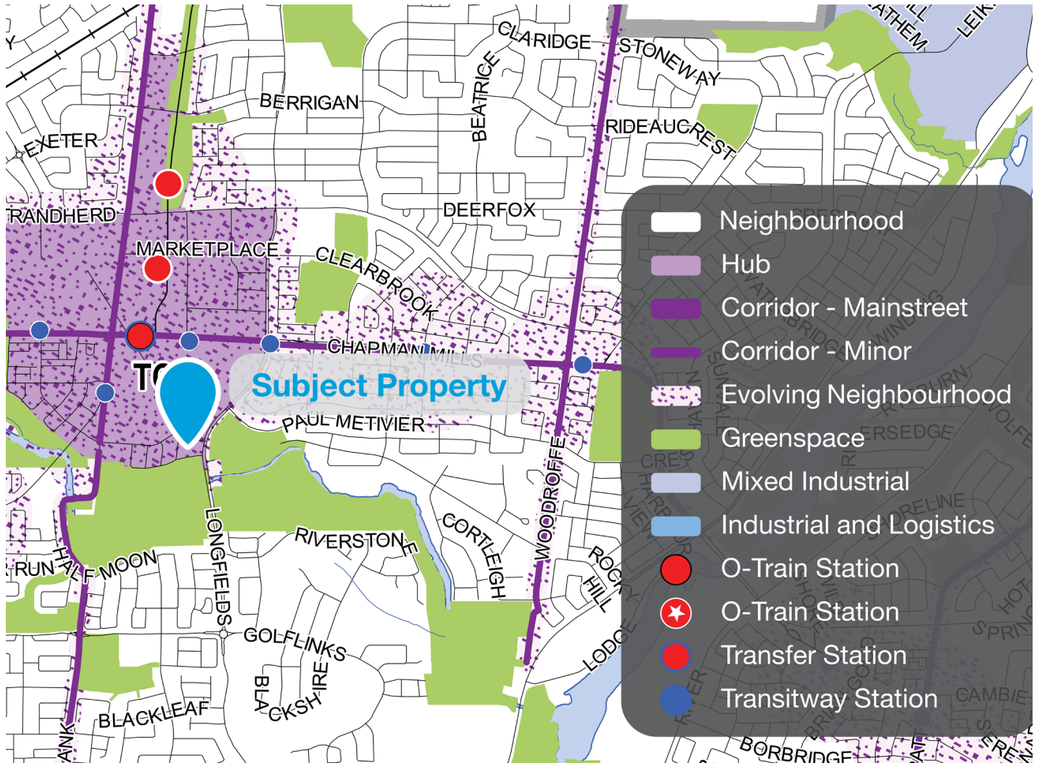
The Suburban Transect comprises of neighbourhoods within the urban boundary located outside the Greenbelt and reflect a conventional suburban model of development.

Hubs are areas centred on planned or existing rapid transit stations or frequent street transit stops. Their planned function is to concentrate diversity of functions, higher density of development, a greater degree of mixed uses and a higher level of public transit connectivity than the areas abutting and surrounding the Hub. Hubs are also identified as Protected Major Transit Station Areas (PMTSAs) for the purpose of the Provincial Policy Statement.

Hubs are generally located on lands located within 600 metres radius or 800 metres walking distance from existing or planned tansit station or major frequent street transit stops. Their purpose is to focus residential and non-residential origins and destinations including employment within easy walking discess from rapid transit stations and integrate with Corridors to establish a network of residential, commercial, employment and institutional uses that allow residents of all income levels to live work and play easily without the need for an automobile.

Hubs within the Suburban Transect consider low to high-rise built-form with a maximum building height of 40 storeys (Table 7). More specifically, Hubs within the Suburban Transect will allow Mid-rise building heights on sites that are within 800 metres of a rapid transit station (S. 5.4.1.2.d.ii). The Plan supports multi-unit dwellings in Hubs.

The Evolving Overlay applies to areas in close proximity to Hubs and Corridors to signal gradual evolution over tim that will see a change in character to support intensification, including guidance for a change in character from suburban to urban to allow new built forms and more diverse functions of the lands.



Excerpt of Schedule B6 - Suburban (Southwest) Transect from the City of Ottawa Official Plan.

As illustrated in the image to the right, Schedule C7-A - Design Priority Areas - Urban from the City of Ottawa Official Plan, the subject property is located in a Design Priority Area. As a designated Hub outside of the Downtown Core, the property is a Tier 3 Design Priority Area which define the city's image at a local level in the present or in future.

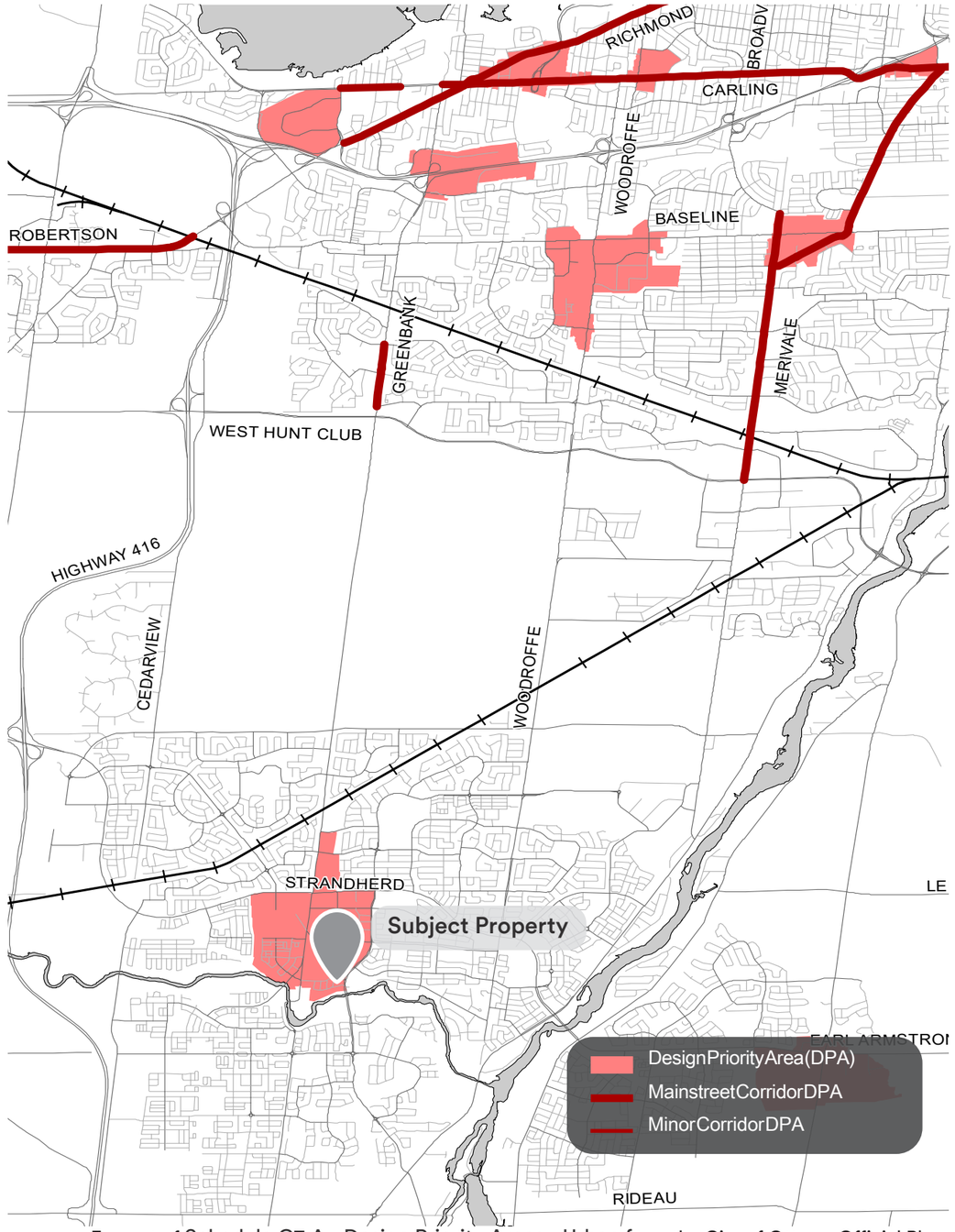
Responding to Policy 4.6.1.5, soft landscaping is proposed across the subject property to mitigate micro-climate impacts of extreme heat conditions in the summer and in the winter season. Street furniture and surface treatments were selected that consider four season comfort.

The proposed development frames the abutting street, multi-use pathways and greenspace, responding to Suburban Transect and Hub policies, which conforms with Policy 4.6.5.2.

Responding to Policy 4.6.5.3 the proposed vehicle access is combined with the abutting Phase 1 development, minimizing conflict with pedestrians and reducing interruptions along the sidewalk. The limited surface parking is screened from the public ROW with planting and building arrangement.

Conforming with Policy 4.6.6.4, the proposed amenity space and setbacks are design with ample soft landscaping and tree planting including a community garden.

The low-rise stacked townhouse and mid-rise apartment building respond to the surrounding built context and transect policies which conforms with Policy 4.6.6.6 and Policy 4.6.6.7 of the Official Plan.



Excerpt of Schedule C7-A - Design Priority Areas - Urban from the City of Ottawa Official Plan.

The subject property is designated as “Neighbourhood” within the Barrhaven Downtown Secondary Plan.

The Plan envisions mixed-use community with several integrated land-designations policy areas connected by convenient network of streets, paths and parks. It locates greatest densities around the Transitway and the O-Train lines.

South of Chapman Mills Drive, the planning area is more residential in character, therefore within Neighbourhood Designations diverse housing options will be provided that are appropriate to the suburban planning area context in proximity to amenities and transit (S. 3.4).

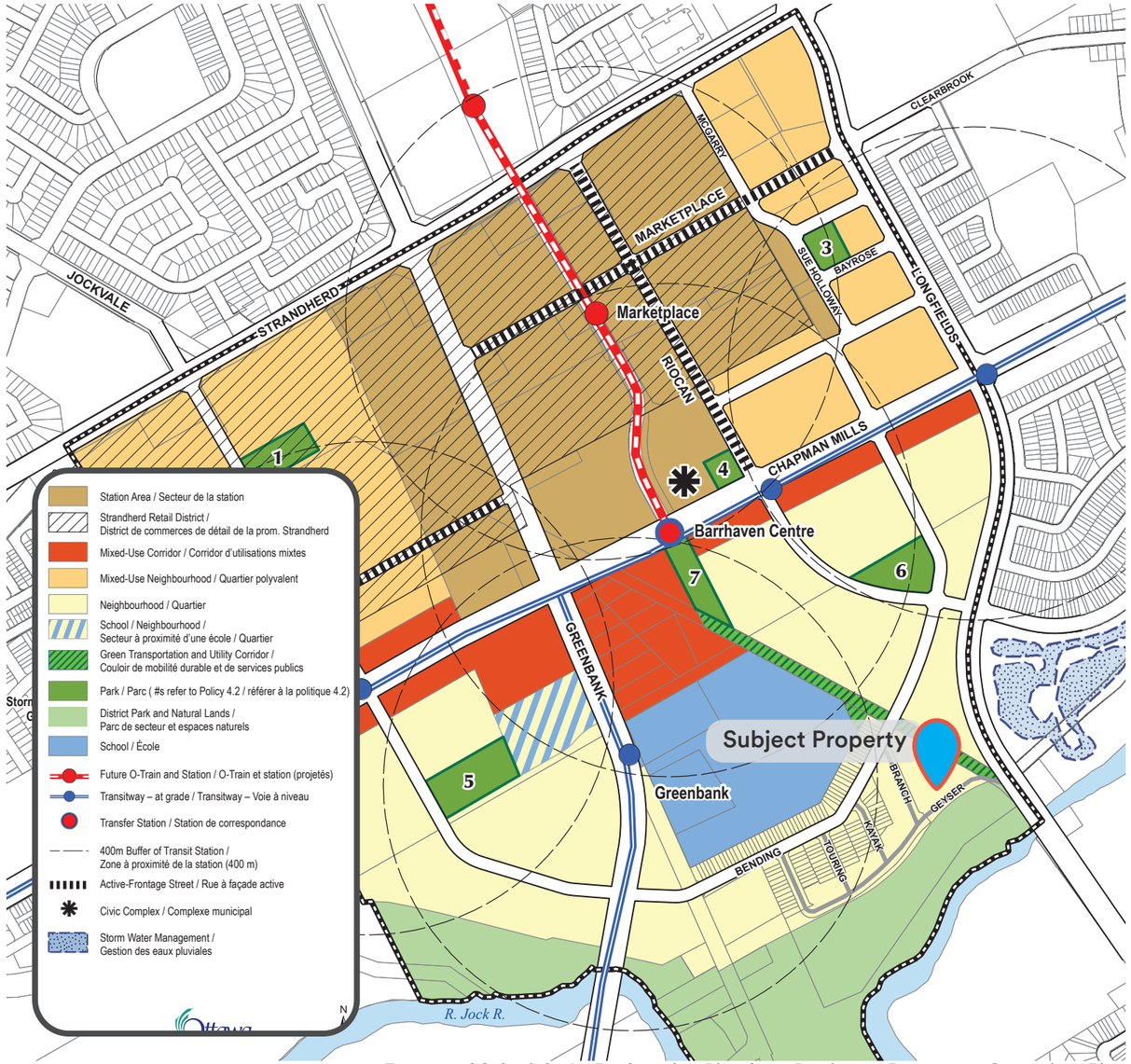
Residential uses and parks are permitted and encouraged to reflect the compact, dense, urban nature of the planning area (S. 3.3.15). Buildings will be minimum 2-storeys tall and have a minimum density for residential development of 50 units per net hectare (S. 3.3.15-16).

The former Jockvale Road ROW east of Barrhaven Centre Station is envisioned to be repurposed as recreation corridor to further improve the pedestrian and cyclist connectivity between the District Park and Natural Lands and the Central plaza.

The Built form within the Secondary Plan area is envisioned as compact, mixed-use, transit-supportive community and intended to develop with a mix of different building heights, massing and typologies. The minimum density targets are intended to ensure minimum densities to support the Transitway and O-Train are achieved.

Building heights of 30 storeys are generally permitted within 400 metres of transit stations identified in Schedule A – Designation Plan. And High-rise built form is generally encouraged along major arterial roads including Longfields Drive, as long as they demonstrate compatibility with surrounding uses in accordance with appropriate policies of the Official Plan (S. 5.1.2).

The Secondary Plan does not establish a designation specific building height maximum for the area, but rather directs growth based on proximity to transit, and ability to successfully transition height and massing away from low-rise communities. Further, minimum density targets are established throughout the plan area to facilitate vibrant and transit-supportive growth overtime.



Excerpt of Schedule A - Designation Plan from Barrhaven Downtown Secondary Plan

The Barrhaven Downtown Urban Design Guidelines are in Appendix 1 of the Barrhaven Downtown Secondary Plan. The urban design guidelines provide specific design guidance for the secondary plan area and are to be applied on a case-by-case basis. The following guidelines are applicable to the proposed development:

In response to Guideline 1: Entrances, the stacked townhouse units are proposed to be accessed via walkways connecting to the public sidewalk on Branch Street. Two secondary entrances to the apartment building are proposed to connect to the Jockvale Road multi-use trail.

Having regard for Guideline 2: Orientation, the proposed buildings are oriented to frame the interior shared amenity space and the abutting public realm. The apartment building main entrance is oriented to the greenspace and some of the stacked townhouse units will be accessed via a pathway abutting the greenspace. Both buildings frame the amenity space providing visual connection.

Having regard for Guideline 7: Lighting, within the subject property, lighting is proposed along all pedestrian pathways, within the visitor parking area, and along building façade where appropriate to illuminate the space for residents comfort and safety.

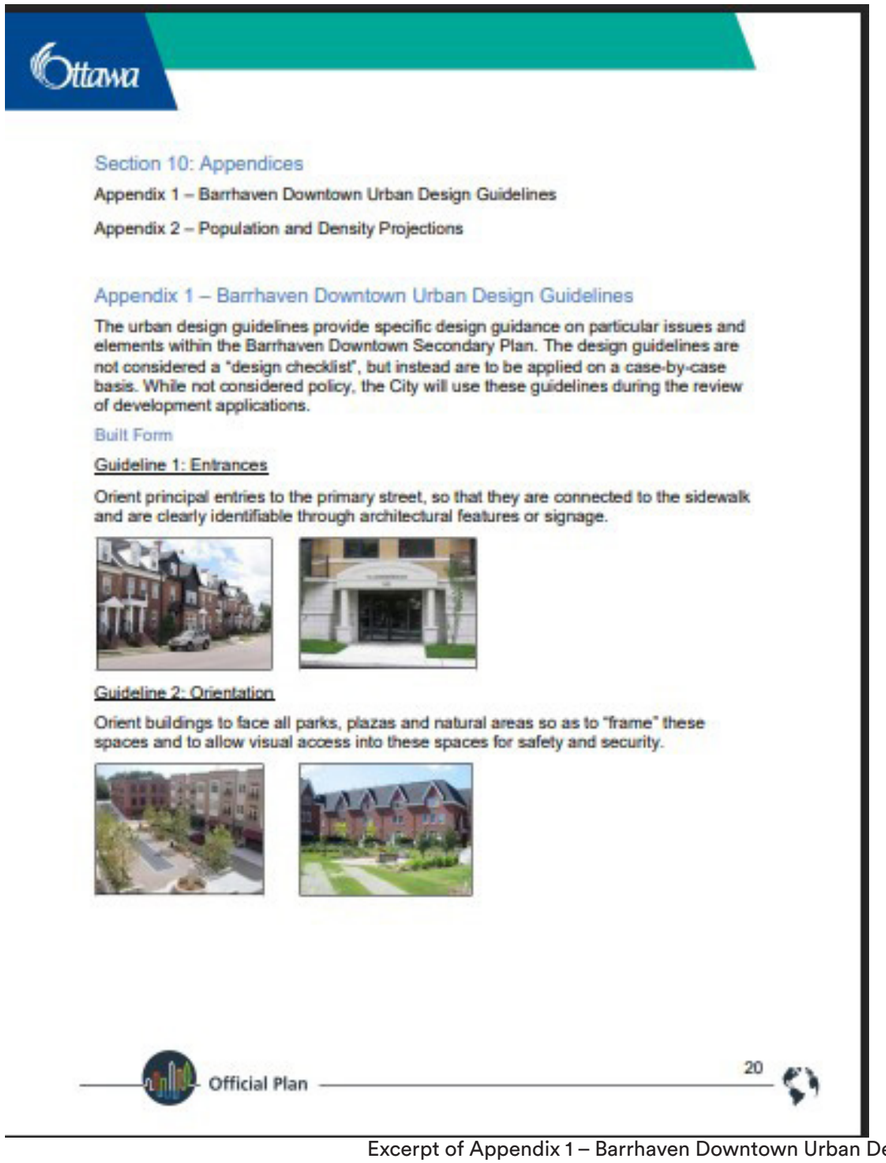
Having regard for Guideline 15: Residential Setbacks, the proposed buildings are appropriately setback from the lot lines providing adequate yard space for landscaping, including street trees, sunlight, and utilities.

Having regard for Guideline 23: Street Landscaping, landscaping is proposed between the buildings and abutting sidewalks and future MUPs including trees, other planting, benches, and pathways.

Having regard for Guideline 26: Service Areas, cehicular access to the property is coordinated with the Phase 1 development to reduce vehicular interruptions to the street.

Having regard for Guideline 28: Surface Parking - Surface parking is provided on the interior of the property for visitors. Resident and employee parking is proposed to be located in the underground parking garage. The driveway access to the site is combined with Phase 1 to minimize pedestrian and vehicular conflicts.

Having regard for Guideline 38: Outdoor Amenity Areas - Communal outdoor amenity areas are proposed to be located between the stacked townhouses and the apartment building adjacent to the indoor amenity space on the ground floor of the apartment building. Pedestrian pathways will connect the outdoor space to Phase 1 as well as the public streets and multi-use pathways. Outdoor amenity space is also proposed on a portion of the



Ottawa

Section 10: Appendices

Appendix 1 – Barrhaven Downtown Urban Design Guidelines

Appendix 2 – Population and Density Projections

Appendix 1 – Barrhaven Downtown Urban Design Guidelines

The urban design guidelines provide specific design guidance on particular issues and elements within the Barrhaven Downtown Secondary Plan. The design guidelines are not considered a "design checklist", but instead are to be applied on a case-by-case basis. While not considered policy, the City will use these guidelines during the review of development applications.

Built Form

Guideline 1: Entrances

Orient principal entries to the primary street, so that they are connected to the sidewalk and are clearly identifiable through architectural features or signage.

Guideline 2: Orientation

Orient buildings to face all parks, plazas and natural areas so as to "frame" these spaces and to allow visual access into these spaces for safety and security.

Official Plan 20

Excerpt of Appendix 1 – Barrhaven Downtown Urban Design Guidelines

The following are the consolidated Urban Design comments recieved April 4, 2024 from the pre-consultation meeting held on March 27, 2024. Please see the responses to each comment below.

Comment 8. Urban Design Brief required – please see attached terms of reference.

RESPONSE: This Urban Design Brief has been prepared in accordance with the terms of reference.

Comment 9. The site is located within a Design Priority Area – a visit to the UDRP may be required following the review of the Phase 2 submission.

RESPONSE: Noted. Design Priority Area policies in Section 4.6 of the City of Ottawa Official Plan have been reviewed as part of the submittion package.

Comment 10. Please improve pedestrian connections between the Phase 1 and Phase 2 lands.

RESPONSE: Pedestrian connections have been provided between the Phase 1 and Phase 2 lands.

Comment 11. Please detail the sites relationship with the public realm – street trees should line all public streets. There may be an opportunity to landscape the triangular site within the City's right-of-way.

RESPONSE: Please see Section 4.7 of this Urban Design Brief and the landscape plan prepared in support of the application.

Comment 12. Please demonstrate that a 9-storey form is appropriate relative to the surrounding context.

RESPONSE: Please see Section 2.1 of this Urban Design Brief for a discussion of the 9-storey built form in relation to the policy directions and Section 4.7 of the brief.

Comment 13. Active uses will be required at-grade; please provide a ground floor plan for the proposed 9-storey building as part of your Phase 2 meeting with staff.

RESPONSE: Please see the attached architectural package for the ground floor plan. Communal amenity space is proposed on the ground floor with active entrances leading to communal outdoor amenity areas.

Comment 14. Please provide details for the outdoor amenity area and consider whether all or a portion of the space could be dedicated as POPS for the community to use.

RESPONSE: Details on the design of the outdoor amenity area can be found on the Landscape Plan and Site Plan included in this application package.

Comment 15. Please provide parking details; surface parking is not supported.

RESPONSE: Resident and staff parking is proposed in the undergound parking garage. Limited surface parking is proposed for visitors.

Comment 16. Please provide architectural details as part of your Phase 2 meeting with staff.

RESPONSE: Please see renderings and drawings within this Urban Design Brief.

Comment 17. Please provide sustainability details as part of your Phase 2 submission to staff.

RESPONSE: Please see Section 4.10 of this Urban Design Brief.

The subject property is designated Residential Fourth Density, Subzone Z, Urban Exception 2465 (R4Z[2465]).

The purpose of the R4 - Residential Fourth Density Zone is to:

(1) Allow a wide mix of residential building forms ranging from detached to low rise apartment dwellings, in some cases limited to four units, and in no case more than four storeys, in areas designated as General Urban Area in the Official Plan;

(2) Allow a number of other residential uses to provide additional housing choices within the fourth density residential areas;

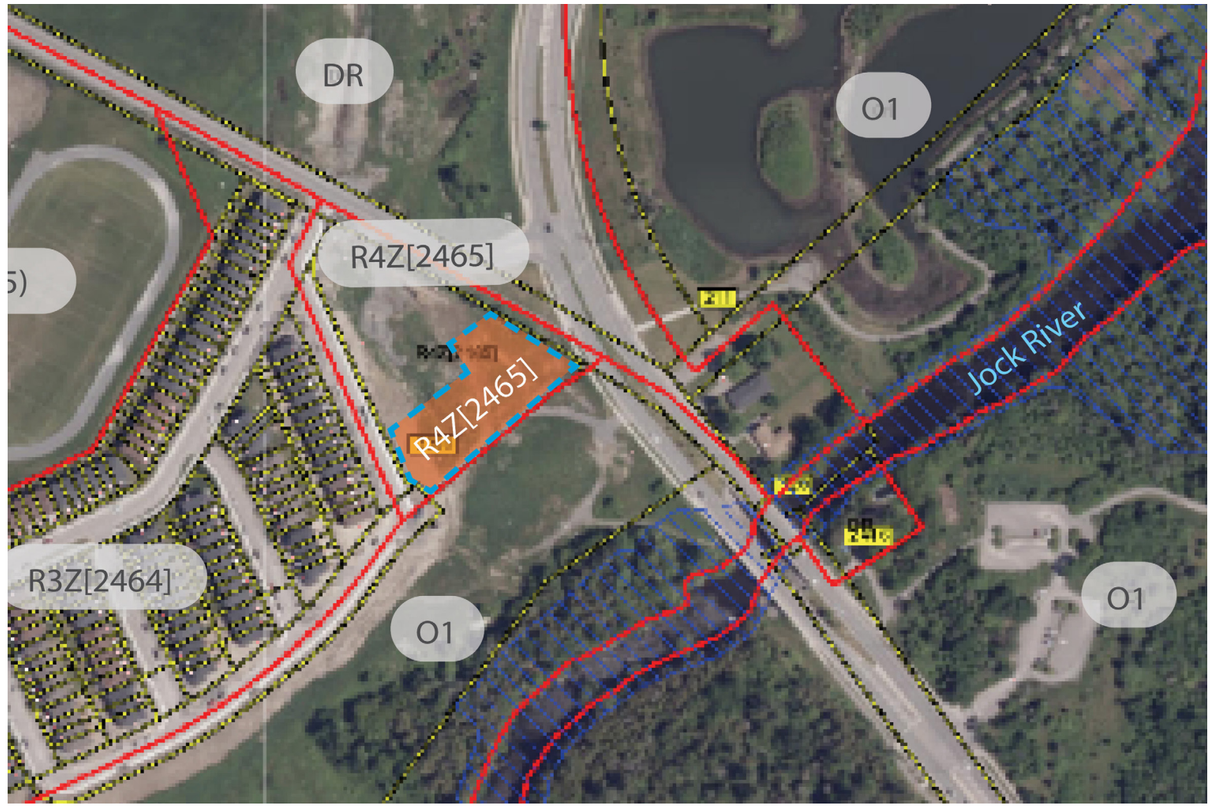
(3) Permit ancillary uses to the principal residential use to allow residents to work at home;

(4) Regulate development in a manner that is compatible with existing land use patterns so that the mixed building form, residential character of a neighbourhood is maintained or enhanced: and

(5) Permit different development standards, identified in the Z subzone, primarily for areas designated as Developing Communities, which promote efficient land use and compact form while showcasing newer design approaches.

To facilitate the proposed development, the following amendments to the Zoning By-law is requested:

- Rezone site from Residential Fourth Density to Residential Fifth Density (R4 to R5)
- Increase Maximum Building Height to 9-storeys
- Increased Maximum Front Yard Setback
- Reduce Minimum Required Parking Spaces & Visitor Parking (Section 101 & 102)



Zoning Context Map

3

Site, Context and Analysis

03.1 Photographs of Existing Conditions

Site Summary

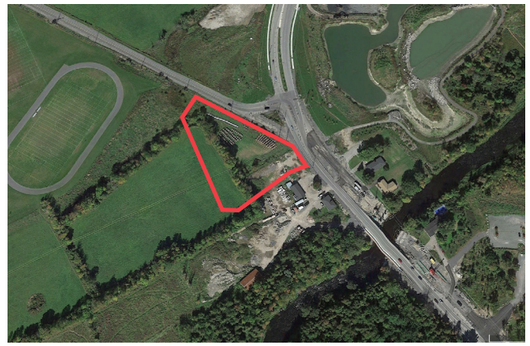
The subject site falls within the neighbourhood of Barrhaven West, Ward-2. This neighbourhood is currently in an early development phase having a high number of newly arrived residents (within 5 years), with predominantly residential subdivisions in the area, some immediately adjacent the site to the west and north on Branch Street and Bending Way. The Jock River runs along the south with trailhead to Stonebridge Trail directly adjacent the site. Other major landmarks include St. Joseph Catholic High School to the west, Levesque Park to the east, and Chapman Mills Marketplace to the north, all of which are within walking distance and offer positive amenities to the future residents of the subject site. This site is located in proximity to a planned future rapid transit station.

Fig.01. Aerial View and Site Context

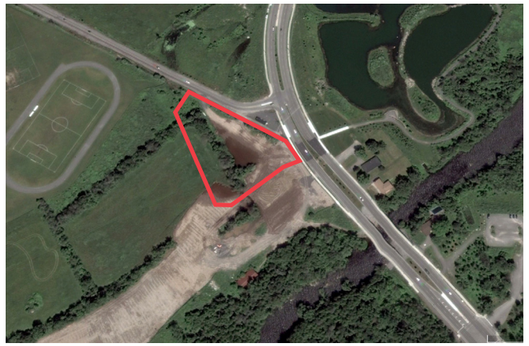
Historical Development on Site

The site has historically been used as agricultural land with greenhouses occupying large portions of the site. Between 2004 and 2013 these structures were demolished and significant roadwork was undertaken to Longfields Drive. The site appeared vacant by 2017, with new development of the

2004



2013



2017

2018

2020

2024-04

03.1 Photographs of Existing Conditions

1) West side view of property

2) North-west side view of property - phase one

5) East side view of property

4) Longfields Drive Sidewalk and North Property Line with hydro and trees

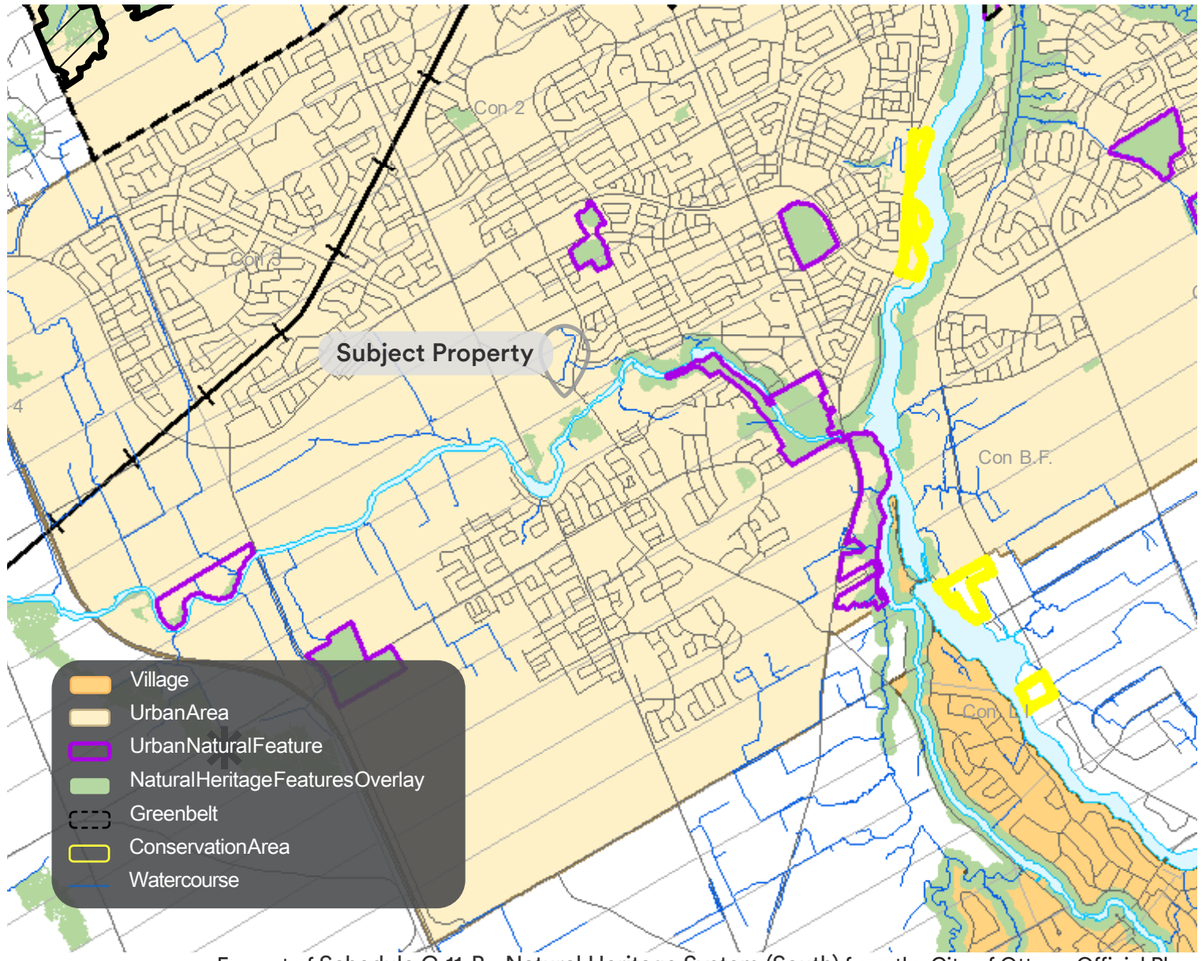
3) Existing building and surrounding area

03.2 Perspectives Images To/From the Site

03.2 Perspectives Images To/From the Site

As illustrated in Schedule C-11-B - Natural Heritage System (South) to the right, the subject property is identified as Urban Area. The city-owned land to the south of the subject property abutting the Jock River is subject to the Natural Heritage Features Overlay. Furthermore there is a watercourse identified on the north side of Jockvale Road. Both of the features identified are beyond the boundaries of the subject property.

There are no identified heritage buildings in the area surrounding the



Excerpt of Schedule C-11-B - Natural Heritage System (South) from the City of Ottawa Official Plan.

03.4 Key Uses, Destinations and Spatial Elements in the Surrounding Area

The following is a list of key uses and destinations surrounding the subject property. The corresponding map to the right identifies the location of each item listed below.

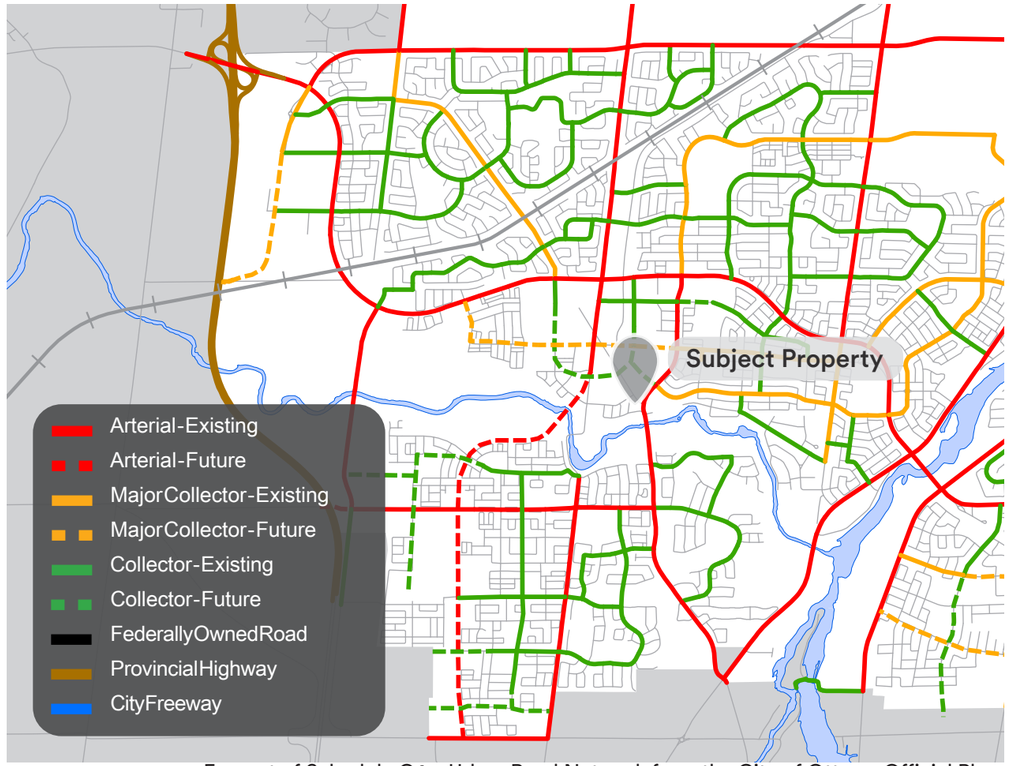
1. Future Civic Complex - Transitway
2. St. Joseph Catholic High School - 3333 Greenbank Rd, Nepean, ON K2J 4J1
3. Lolaws - 3201 Greenbank Rd, Ottawa, ON K2J 4H9
4. Independent Grocery Store - 3777 Strandherd Dr, Nepean, ON K2J 4B1
5. Shoppers Drug Mart - 3781 Strandherd Dr, Nepean, ON K2J 5M4
6. Cineplex Odeon Barrhaven Cinemas - 131 Riocan Ave, Nepean, ON K2J 5G3
7. Walmart - 3651 Strandherd Dr, Ottawa, ON K2J 4G8
8. Half Moon Bay District Park

03.5 Characteristics of Adjacent Streets and Public Realm

Prepared by Fotenn

Longfields Road to the east of the subject property is a four-lane arterial road. Branch Street, Geyser Place and Bending Way are all local roads. As illustrated in Schedule C4 – Urban Road Network there are planned future arterial, major collector and collector roadways near to the subject property connecting to and through Barrhaven Town Centre.

The images below illustrate the public realm on the surrounding streets. Moving left to right, the first image is of Branch Street showing the existing sidewalk which abutts the subject property. The middle photograph shows Bending Way facing west. There is a sidewalk on both sides of the street. The image on the right displays the sidewalk along Longfields Drive adjacent to the subject property. A multi-use path can be seen on the left side of the image however there is no sidewalk on Jockvale Road. There is street parking on both Branch Street and Bending Way



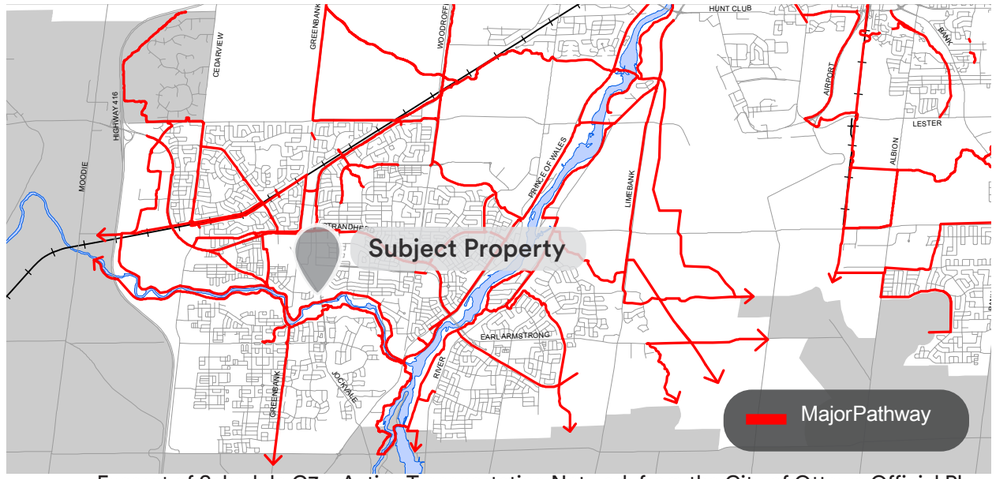
Excerpt of Schedule C4 – Urban Road Network from the City of Ottawa Official Plan.

03.6 Mobility Networks

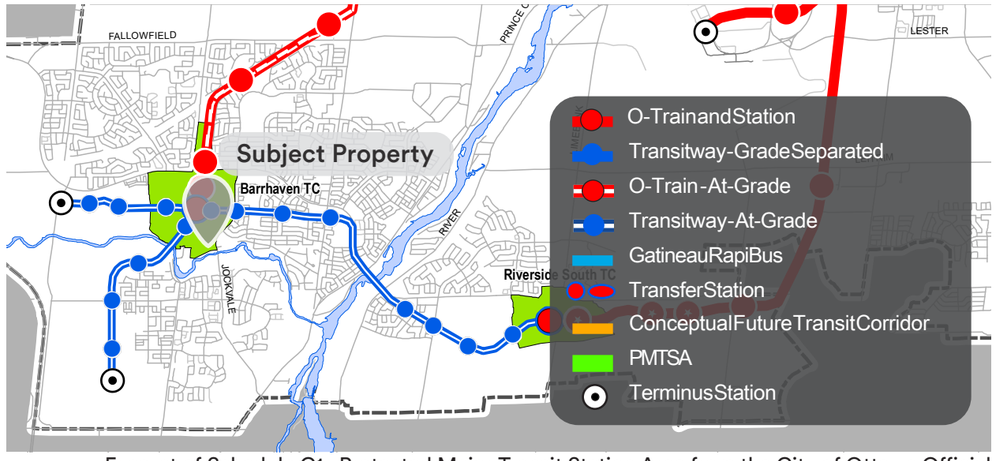
There are major multi-use pathways planned for both sides of the Jock River, as illustrated on Schedule C3 of the Official Plan, connecting to the city's larger active transportation network.

The subject property is located within the Barrhaven Town Centre (TC) Protected Major Transit Station Area (PMTSA) as shown in Schedule C1. The property is approximately 600 metres from the Barrhaven Centre BRT station. There is also a bus stop adjacent to the subject property on Jockvale Road for Route 75 and Route 175 along Longsfield Road. There are also future O-Train and Bus Rapid Transit stations and lines planned for the Barrhaven TC PMTSA that will be approximately 400 metres from the subject property.

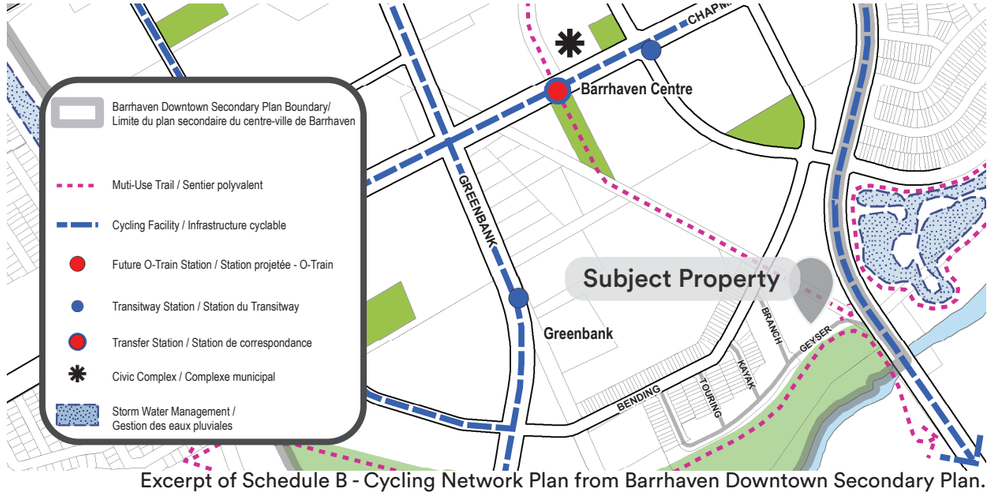
As illustrated in Schedule B - Cycling Network Plan from the Barrhaven Secondary Plan, Jockvale Road and the future multi-use path on the north side of the Jock River are identified as multi-use trails. Longfields Drive is identified as a cycling facility.



Excerpt of Schedule C3 – Active Transportation Network from the City of Ottawa Official Plan.



Excerpt of Schedule C1 - Protected Major Transit Station Area from the City of Ottawa Official Plan.



Excerpt of Schedule B - Cycling Network Plan from Barrhaven Downtown Secondary Plan.

4

Design Research

04.1 Parti Diagrams, Sketches and Precedent Images

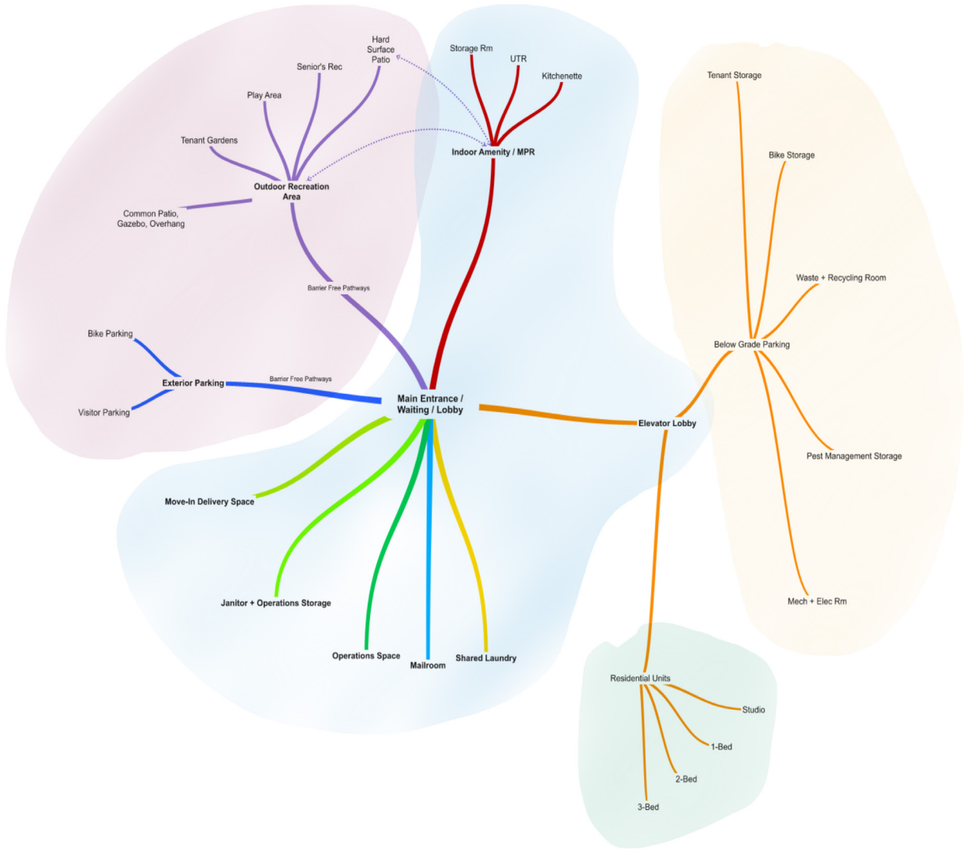
The proposed project was designed to meet a set of specific architectural criteria: seamless integration into the existing context, alignment with OCH's specific programmatic requirements, the creation of high-quality, diverse indoor and outdoor communal spaces, and a simple, compact architectural form to ensure both energy performance and cost efficiency.

The site's particular geometry, combined with the need to accommodate two buildings of different scales, presented an additional design challenge.

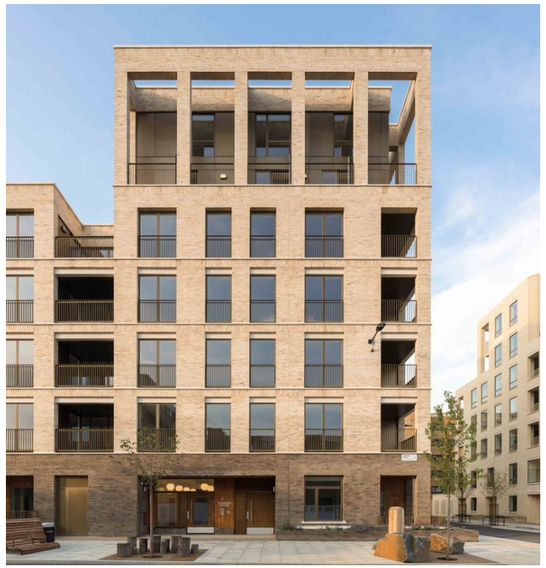
Guided by clear performance and efficiency goals, the architectural response naturally evolved toward a clean, minimalist design—compact in volume, yet brought to life through a dynamic interplay of façades. Numerous precedents, particularly Passivhaus-certified projects, informed and reinforced this design direction.

While the architecture establishes a clear distinction from the existing built environment, it nonetheless maintains a sense of continuity through a carefully considered palette of materials and tones, including the use of traditional clay brick.

Bubble diagram - programm requirements



Precedent image from Passivhaus project



04.2 Alternative Site Plan Options

Phase 1 Site Plan

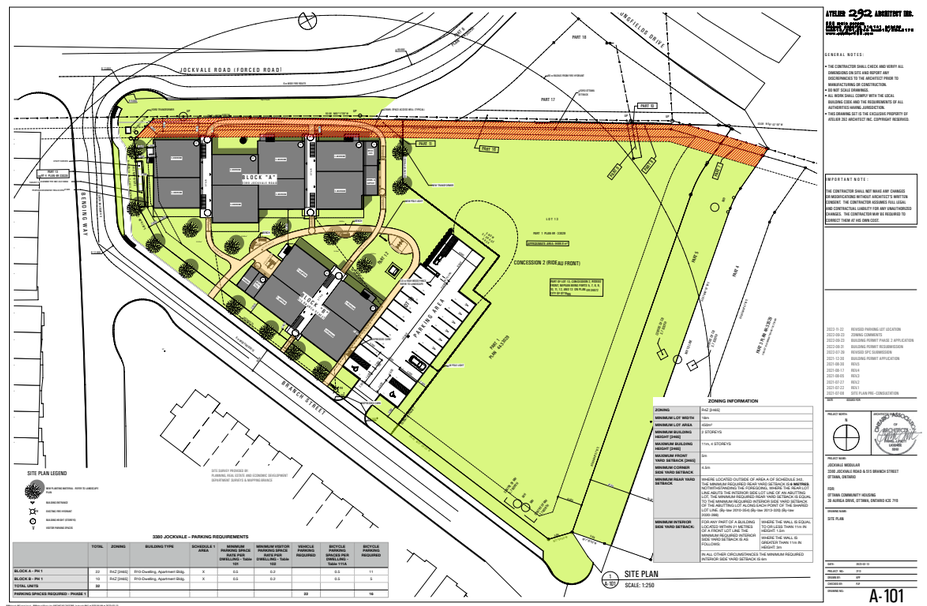
It is understood that the Phase 1 site (designed by Atelier 292) has commenced construction and that a site plan agreement is in place based on the architect's drawing below. The project consists of 32 units with surface parking situated at the center of the lot.

The Site Boundary identified in the site plan below will form the eventual site severance and property line location. The Phase 2 site development is subject to tying into this parking lot and waste collection area, and will unavoidably affect the location of the site boundary to accommodate the proposed Phase 2 work. The design team is mindful to minimize the changes to the site boundary to avoid inadvertent impacts to any calculations such as hard / soft scape ratios that have been established based on the previous site boundary area. However, it is the understanding that there is some flexibility with this line as Phase 2 develops.

We have learned that the Phase 1 waste collection area is situated approximately 100 meters from the furthest residential unit, which is the maximum distance an occupant may travel to dispose waste per OCH's requirements. Future replanning of the waste collection area is unavoidable but our options of relocating this central collection area is limited to this 100m radius which affords few options for alternative locations. Our approach intends to keep the parking layout as-is and relocate the waste collection area to a central location where possible.

Snow storage is a secondary parameter that we are requiring to relocate to suit the future parking and hardscape design.

Phase 1 Rendering by Atelier 292



Phase 1 Site Plan by Atelier 292

Phase 1 Site Plan impacts

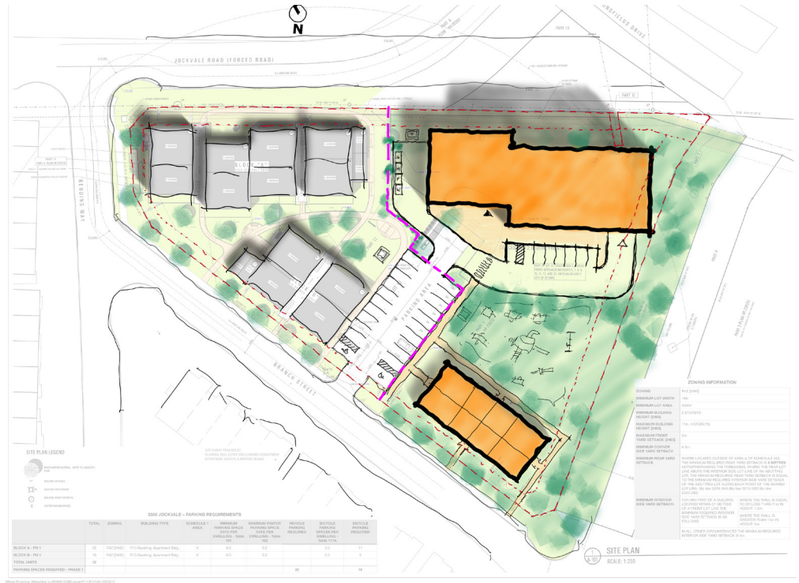
During the Predesign process, a thorough analysis of the conditions and constraints of the project site that have and will continue to influence the design.

Relationship to Phase I:

The project is located on the southeast half of the site. The northeast half is being developed as Phase I, with a site plan agreement already in place and currently under construction. The Phase I project consists of 32 units with surface parking and an entrance from Branch St. This entrance will become a shared entrance for both phases. The items identified so far that affect Phase I and its approved Site plan are:

04.2 Alternative Site Plan Options

Site Plan Approaches



Site Plan Option "Z"
Concept Summary

This option proposes for the 9-story building a position and geometry that echoes the language of the Jockvale Rd and Branch St frontage of Phase 1. The building shape is stepped which creates space for the Hydro easement. The townhouse block is aligned with Branch St. As a master plan, the buildings aim to complement the Phase 1 building axes that results in a sizeable central exterior amenity space.

See Drawings section for a larger scale site plan sketch.

Key Features:

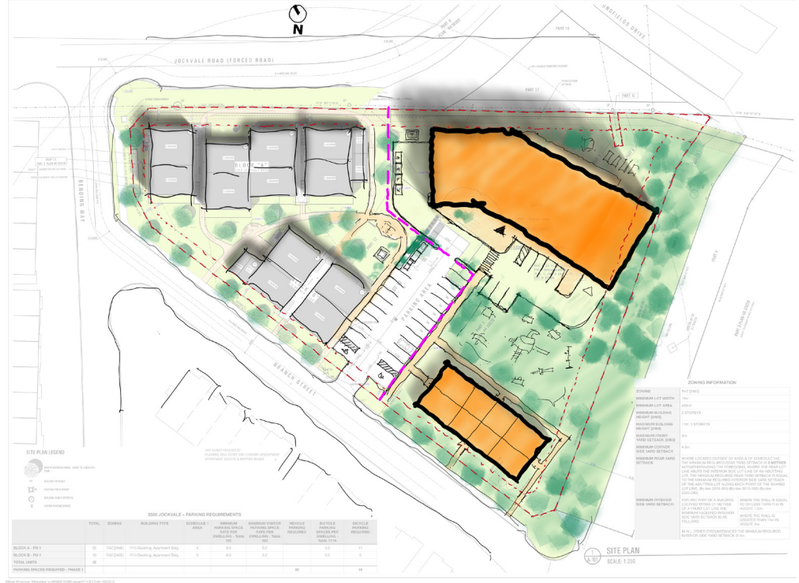
- Below-grade parking access at the east.
- Centralized waste collection at the west between Phase 1 and 2 sites.
- Visitor parking immediately available at the entrance to 9-storey building.

Advantages

- This building performs well in terms of energy efficiency due to its solar orientation.
- Exterior amenity space is well-located centrally, protected from the street, and well-proportioned to facilitate a variety of uses. Ample possibility for vegetation, which could help screen the view from the parking area
- If Jockvale Rd is continued through the pie-shaped lot, the building is well located and promotes a good relationship to the street.
- Waste collection is closer to Phase 1 units.
- Impact to Phase 1 site boundary and parking connection is minimal.
- Ample staging area space for moving / deliveries.

Disadvantages

- Challenging truck access to waste collection area.
- Proximity of the building to the Part 4 Right-of-Way could be too tight, leaving limited tolerance on site once construction starts.
- Vehicular pinch-point if turn left towards waste collection area.
- No turn-around lane / traffic loop.



Site Plan Option "V"
Concept Summary

This option proposes a building geometry that continues the Jockvale building frontage but angles inward to avoid the Hydro easement while still flanking a central exterior amenity space. The townhouse block is parallel to Branch. St.

See Drawings section for a larger scale site plan sketch.

Key Features:

- Below-grade parking access at the east.
- Centralized waste collection at the west between Phase 1 and 2 sites.
- Visitor parking immediately available at the entrance to 9-storey building.

Advantages

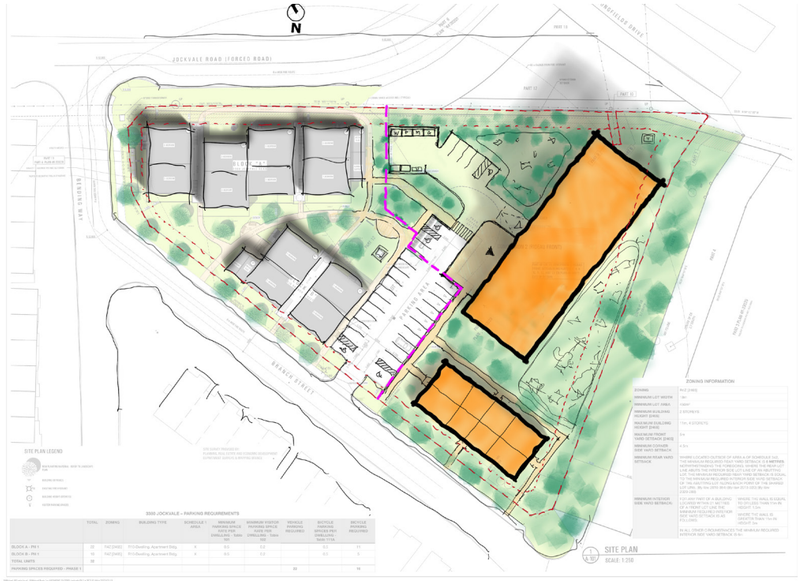
- This building performs slightly better than Option Z in terms of energy efficiency due to its solar orientation.
- Due to the cranked geometry a secondary exterior amenity space is created on the Jockvale side that could support alternative outdoor activities (e.g. planter beds, outdoor terrace etc). With the tower and townhouses being parallel to each other, the resulting amenity space has a clean, rectangular shape.
- Exterior amenity space is well-located centrally, protected from the street, and well-proportioned to facilitate a variety of uses. Ample vegetation.
- Waste collection is closer to the Phase 1 units.
- Impact to Phase 1 site boundary and parking connection is minimal.
- Ample staging area space for moving / deliveries.

Disadvantages

- Cranked geometry creates angled spaces on the interior floor plan that reduce planning and cost efficiencies.
- Challenging truck access to waste collection area.
- Proximity of the building to the Part 4 Right-of-Way could be too tight, leaving limited tolerance on site once construction starts.
- Vehicular pinch-point if turn left towards waste collection area.
- No turn-around lane / traffic loop.

04.2 Alternative Site Plan Options

Site Plan Approaches



Site Plan Option "North-South" Concept Summary

This option explores a more radical approach to positioning the 9-storey building with the main intent of maximizing solar exposure on the south face. The goal is to explore the energy efficiency potential of this building orientation and determine if it was beneficial enough to drive the master planning of the site. The townhouse block is parallel to Branch. St.

See Drawings section for a larger scale site plan sketch.

Key Features:

- Central parking and underground parking access.
- Centralized waste collection at the west between Phase 1 and 2 sites.
- Exterior amenity space divided into two main areas.

Advantages

- 9-Storey apartment building makes most use of the overall site's triangular shape.
- Hardscaping is concentrated on the west side of the building, leaving a large space free of parking or vehicles
- Bar-shaped building maximizes energy efficiency and simplifies structure.
- Site boundary between Phase 1 and 2 could remain unchanged.
- Waste collection is closer to Phase 1 units.
- Possibility for lay-by lane immediately next to principal entrance.

Disadvantages

- This configuration did not perform as well as the other options in terms of energy efficiency due to its solar orientation.
- Divided exterior amenity space is not optimal, resulting in a long linear space at the south that may not support as many functions, and an orphaned amenity space to the north (in shadow) of the 9-storey building that will likely be reduced due to additional traffic turning / backup requirement.
- Challenging truck access to waste collection area.
- 9-Storey building and Townhouses are tight to each other and create an unusable greenspace between.
- No turn-around lane / traffic loop.

Early Studies: Site Plan & Massing Options resume

During the predesign process, several building footprint options were discussed and developed. Four variations were identified as possible avenues, the "V" / "Z" and "North-South" options, each presenting different advantages and disadvantages .

The “North-South” option was quickly ruled out as it was considered the least effective in terms of Passive House requirements, as well as limiting the useable outdoor amenity area remaining.

The other two options including their variations were retained and served as the basis for the development of the different variations presented in this report.

1. Snow Removal Area
2. Waste Collection
3. Transformer Location Option
4. Barrier Free Parking
5. Exterior Amenity Space

"V" option variation #1 - retained.

1. Snow Removal Area
2. High Density Waste Collection
3. Transformer Location Option
4. Barrier Free Parking
5. Exterior Amenity Space

"V" option variation #2

04.3 Alternative Massing Options

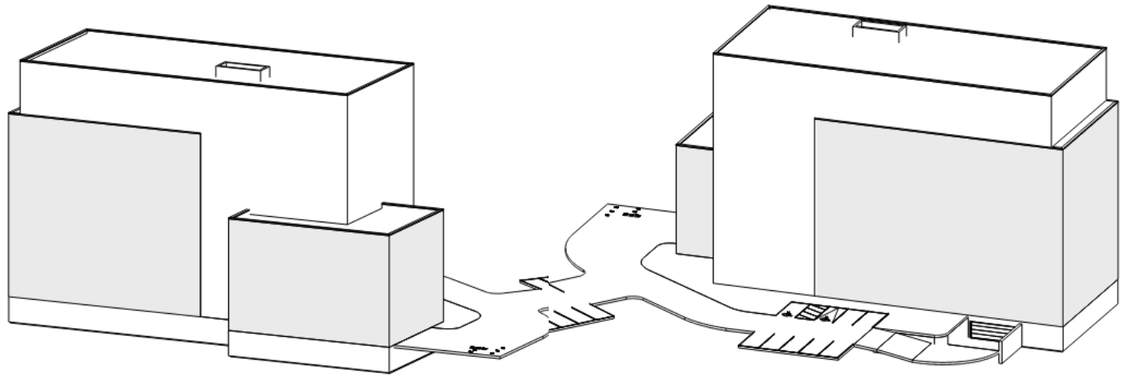
Tower Massing: Z and V Parallel Studies

Z Option - Starting Point

The footprint of the option called "Z" follows a natural east-west orientation, continuing the lines from the Phase I buildings. The offset between the two volumes results from avoiding the Hydro Ottawa easement, while maximizing space in the centre of the site.

The objective was to leave enough clearance with the townhouses and maximize amenity space. The massing had two nested volumes of 5 and 9 floors, to provide a transition in height with the adjacent Phase I buildings.

Initially, the ramp to the parking level was placed on the south-east corner of the building and the waste collection area was planned on the southwest side, with the possibility of sharing it with Phase I.



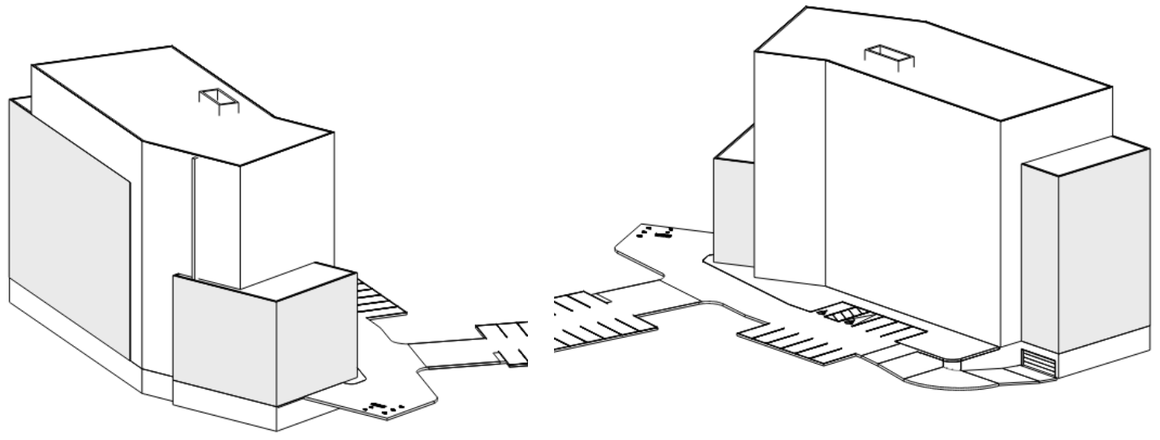
Z option axonometry- step 1

V Option - Starting Point

The V option footprint results from rotating the main volume on its North-South axis in order to move the northern facade away from the guy wire easement. This movement reduces the main exterior space available for the park planned at the heart of the site but also creates a smaller outdoor space at the north.

The locations of the waste collection area as well as access to the basement are the same as with option Z.

Volumetrically, this option offers the same height transition with Phase 1 (5 and 9 storey volumes) while adding an additional lower volume facing the future MUP.



V option axonometry- step 1

04.3 Alternative Massing Options

Tower Massing: Z and V Parallel Studies

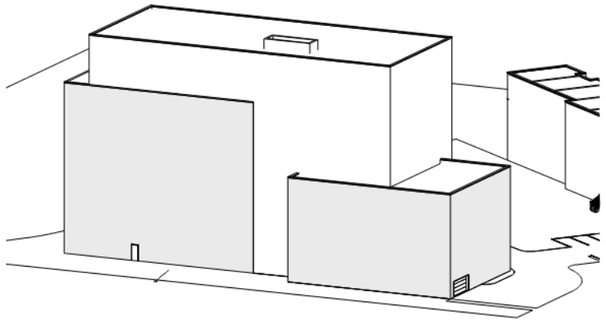
Z option – Step 2, Mechanical Spaces and Layout

This second step in the design process addressed different options regarding the addition of mechanical & technical spaces and how to integrate them into the building. Following a review of the primary areas needed for technical spaces, a first approach proposed the addition of a penthouse on the top floor dedicated to mechanical equipment.

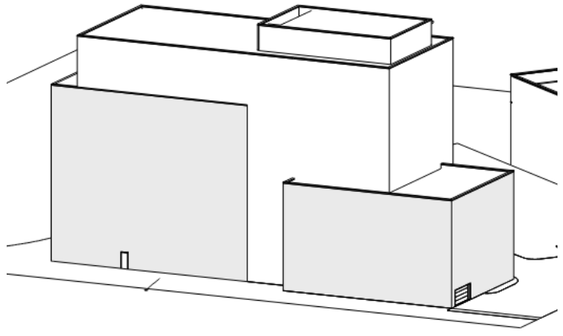
A second approach proposed an extension to the basement to create the additional area needed. After discussion and feedback, this option was discarded as it was deemed to be too costly compared to a penthouse.

At this stage, the basement and the ground floor layouts are developed further in order to test fit the main spaces required in the program.

In addition, the idea of a lower volume facing the MUP is also adopted for the Z option, allowing for the creation of an interesting rooftop amenity space.



Z axonometry option 1



Z axonometry option 2

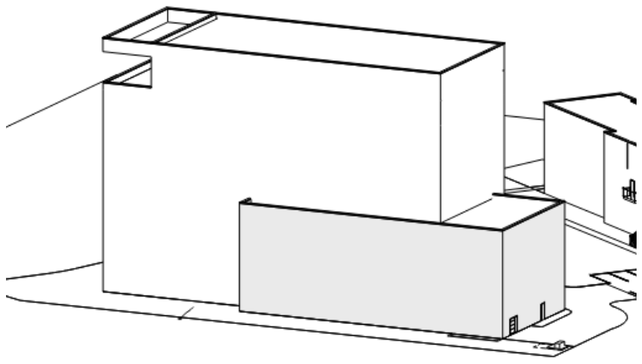
Z & V option - Step 3, easement and mechanical storey impact

This third step brought two new main avenues:

1 - Considering there is a need for a main mechanical room on the roof, the option to create a 10th floor was explored. This would be a storey exclusively dedicated to mechanical equipment, both indoors and outside, but with a roof occupying the entire floor area. The configuration and dimension of this floor remain to be defined according to the mechanical requirements. Thanks to the addition of this complete roof, a larger surface area is cleared on the roof to optimize the solar panel layout.

2 - Southern-East setback: the presence of a major municipal servicing along the southern easement is confirmed. This presence including the manhole requires reviewing the easement from 5m to 10m. The site layout impact is major for both option Z and V as the footprint was shortened and shifted towards Phase 1.

Once again, option Z is favoured to serve as the base for discussion regarding the site layout and program.



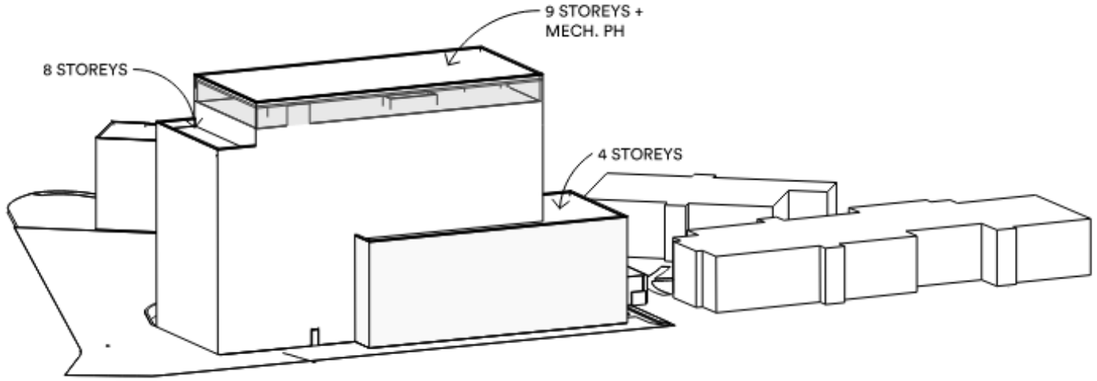
Z axonometry step 3

04.3 Alternative Massing Options

Tower Massing: Z and V Parallel Studies

Z option- Step 4, refined layout and massing

The volume was refined as its final location became clearer. Due to the change in the setback to 10m, the building footprint had to be compressed and moved towards Phase I. This affected the ground-floor and basement layout. The main volume, including the 10th mechanical floor was preserved. The common area and its terrace were shifted from 8th to 9th floor.



Z massing option - step4

Final Selection

Following the process in plan, site and volumetry, it appeared that the two options both fulfill well the square footage, programming and energy performance requirements.

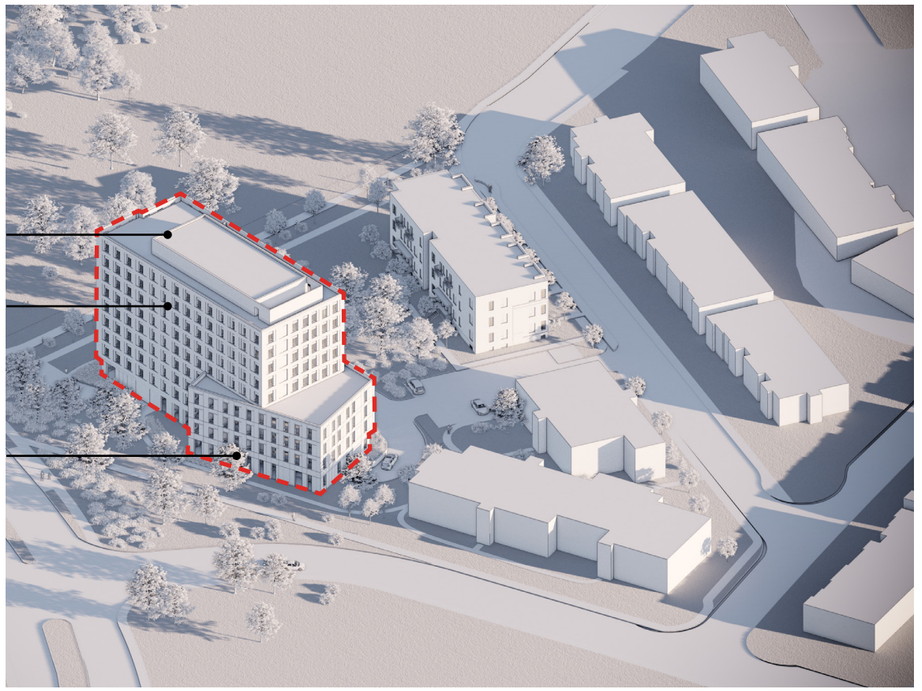
Each option had different strengths and weaknesses, summarized below:

- Site layout: the V shape is better adapted to the different constraints and the site orientation.

- Excavation, basement and foundations: although more complex in shape, the V shape basement and its distance from the Hydro easement make it possible to anticipate less cost and complexity in excavation and foundation design.

- Volumetry and layout: the simple shape of the Z, except for a few specific locations, offers more optimized layouts for units and a better organization of the common space at Level 9.

A final proposal was therefore developed, integrating a mix of the strengths of both options V and Z. The main features considered were:



04.3 Alternative Massing Options

Town Homes Massing Process

Starting Point

The first approach for the townhomes massing was to establish the orientation and volumetric

layout of the 16 required units. According to the initial concept plan proposed by Fotenn, this block is inserted between Branch Street, the Phase I parking lot/project entrance and the South-East easement.

Two layouts were proposed:

- A linear layout parallel to the street with a succession of several volumes representing 3.5 floors. A central block with back-to-back units was placed separating two wings of transversal units.

- An "H" layout without a basement but with a larger footprint. This option has the advantage of potentially offering accessible units on the ground floor

Linear Option Variations - Step 1

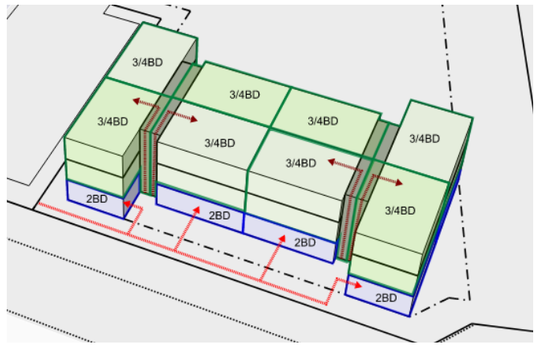
The need to reduce the footprint of the volume, and following Passive House feedback, the linear option and its basement is preferred. Furthermore, it is confirmed that all accessible units in the program will be located in the tower.

In order to provide a common laundry room in the town-houses footprint and to avoid a separate structure on site, a dedicated room is added to the program. Two variations are explored:

- Laundry room integrated into the main volume

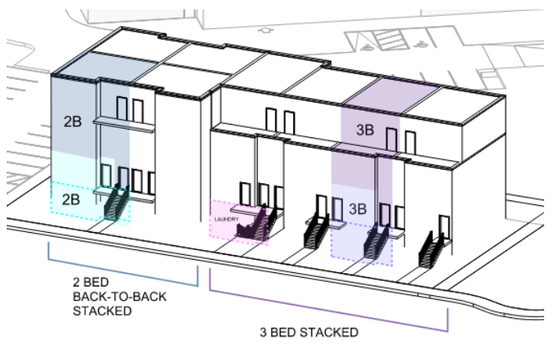
- Laundry / storage creating a separation and a volume variation on the facade. This adds the possibility of adding a terrace on the top floor.

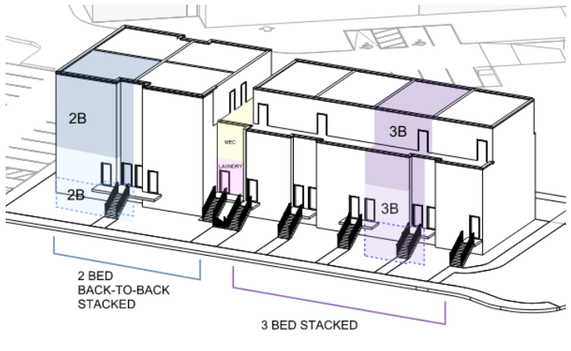
In both proposals, the top floor is set back in order to break up the height, while providing the fire refuge spaces required by code.



Option 2 - "H" shape

Option 1 - linear





04.3 Alternative Massing Options

Town Homes Massing Process

Massing Development - Step 2

The new option integrates the laundry area into the body of the townhouses, separating the back-to-back unit block from the front-to-back units.

The setbacks on the top floors were removed to optimize the envelope performance and after feedback was received to limit balconies to the minimum required to act as an area of refuge.

Most entrances are positioned towards the street except for the rear dwellings overlooking the park. The doors and landings are separated as much as possible in order to avoid multiple entrances on the same landings as much as possible. This also helps keep the "townhouse" feel of the building.

The roof, parapets and envelope are continuous in order to be as energy efficient as possible. A few small setbacks on the facade create a play of volumes to distinguish the different dwellings.

Massing Development - Step 3

The last step in developing the massing and unit layout followed the decision to include washing machines inside each unit, thus eliminating the common laundry space that separated the front to back units from the mirrored unit block.

The 3-bedroom units that were adjacent to the laundry space were reconfigured to use that free space.

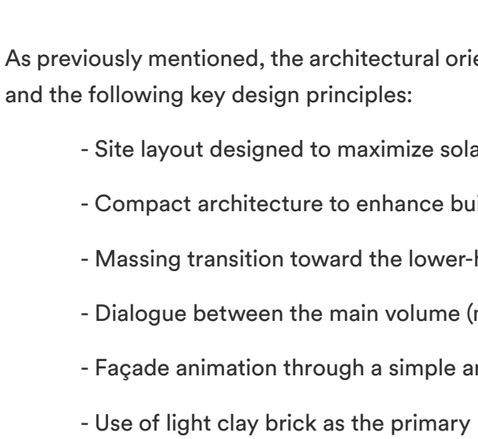
04.4 Design Evolution

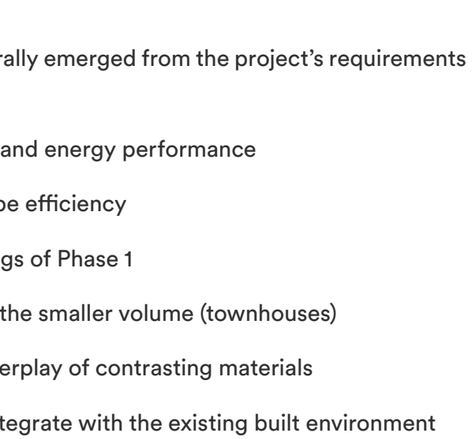
As previously mentioned, the architectural orientation naturally emerged from the project's requirements and the following key design principles:

- Site layout designed to maximize solar orientation and energy performance
- Compact architecture to enhance building envelope efficiency
- Massing transition toward the lower-height buildings of Phase 1
- Dialogue between the main volume (mid-rise) and the smaller volume (townhouses)
- Façade animation through a simple and refined interplay of contrasting materials
- Use of light clay brick as the primary material to integrate with the existing built environment

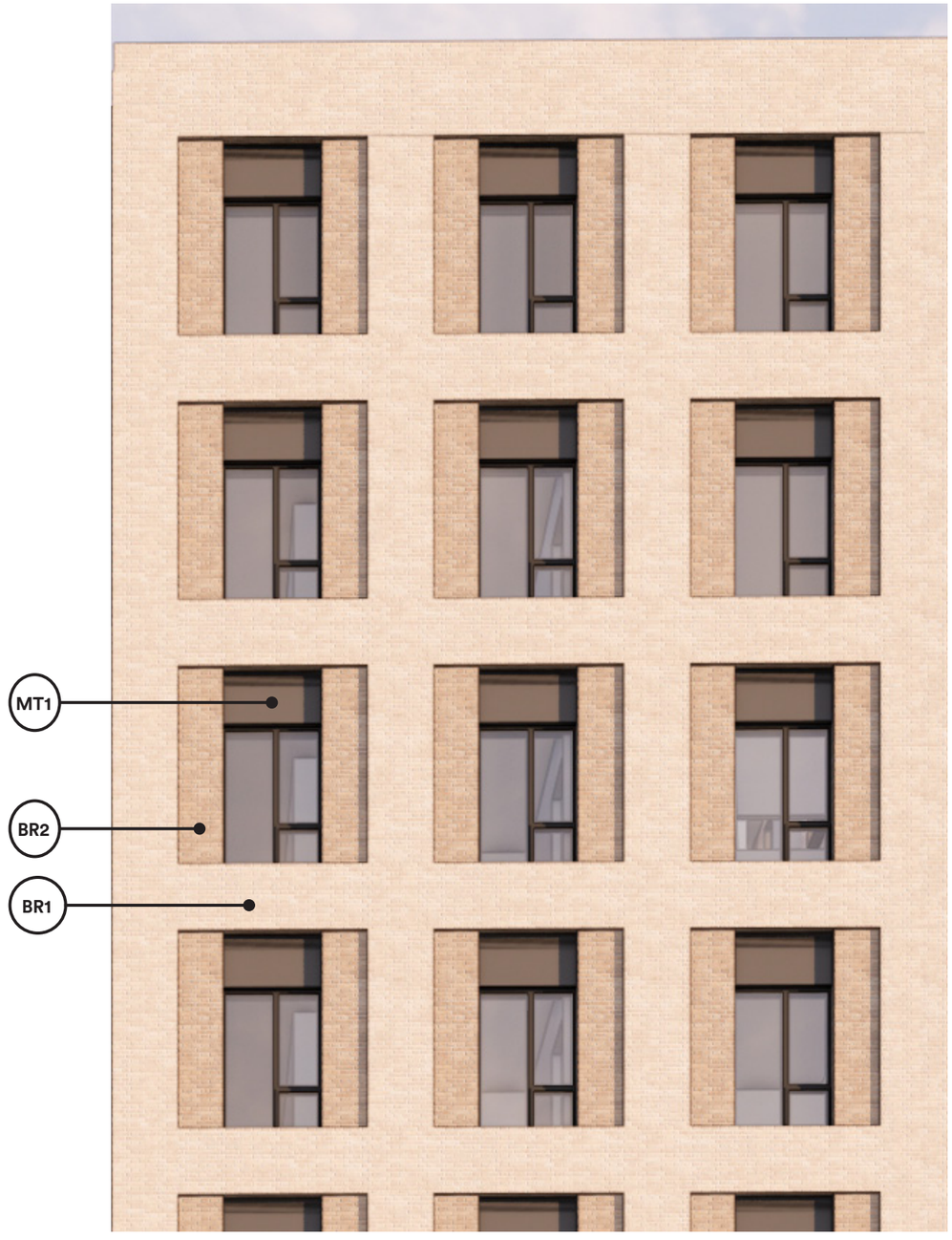
The form of the main building, shaped by subtle variations in massing, naturally led to a composition of offset volumes, each expressing a distinct architectural character. Projecting toward the front façade, a lighter volume wraps around and anchors the base of the primary mass — a more solid, grounded volume clad in masonry.

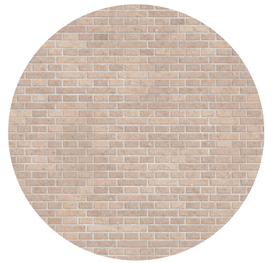
From the early design stages, a regular horizontal and vertical grid was introduced to support both architectural clarity and energy performance. This allowed for the integration of smaller, standardized window openings, optimizing the building envelope without compromising the overall design intent.



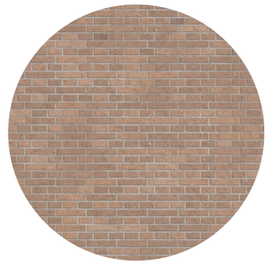


A dynamic contrast between the interlocking architectural volumes

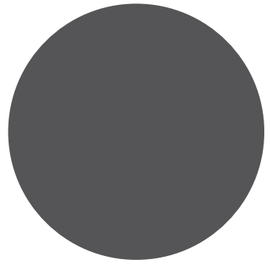




BR1
Brick : Warm Light Grey

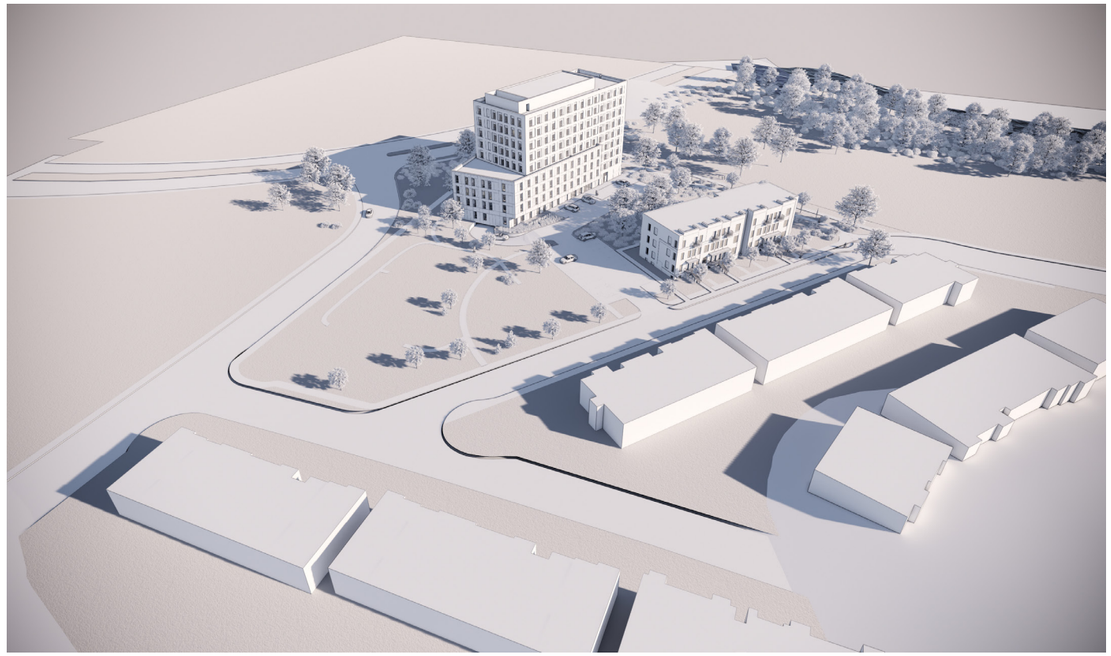


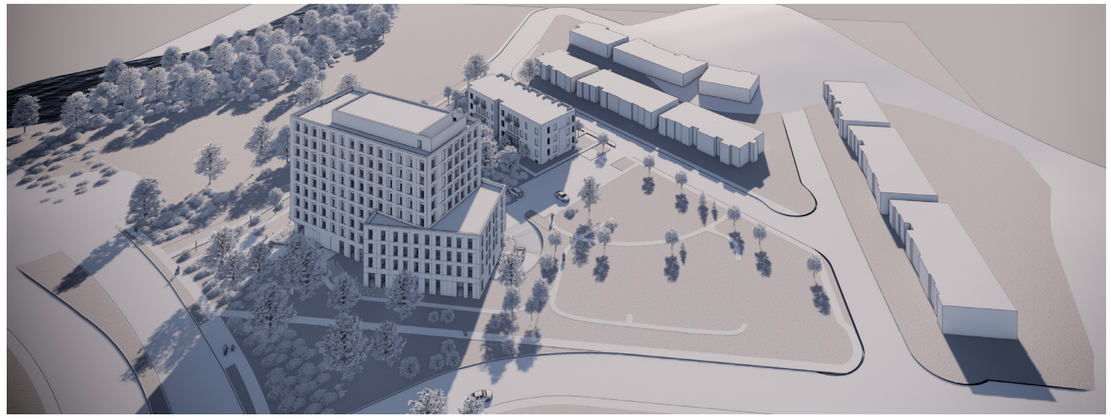
BR2
Brick : Warm Medium Grey

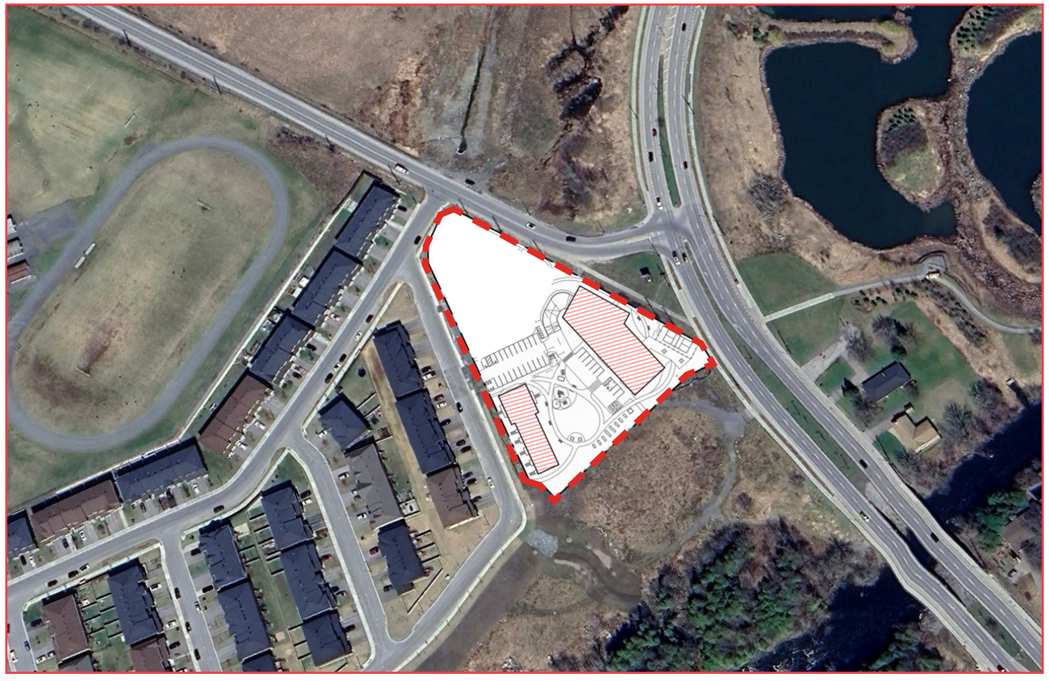


MT1
Metal Panel : Dryvit
Colour : 152 Anthracite Coal

04.5 Massing of the Proposed Development in the Existing Context





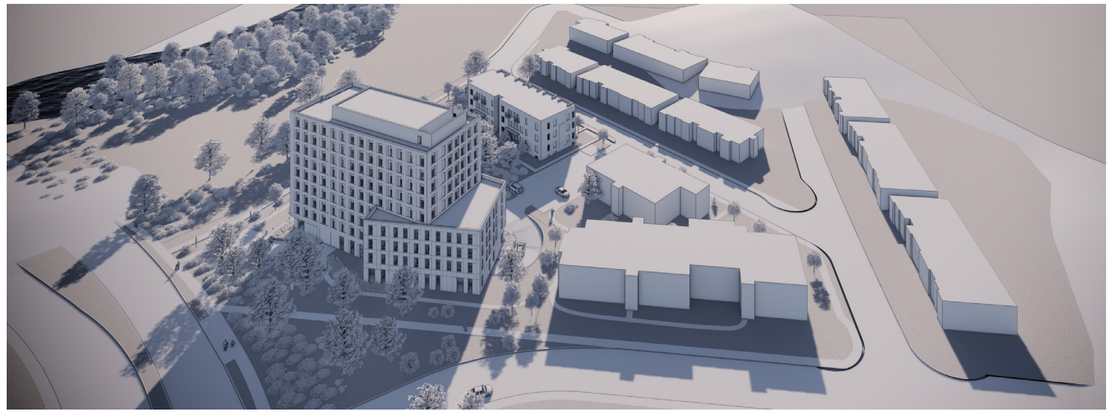


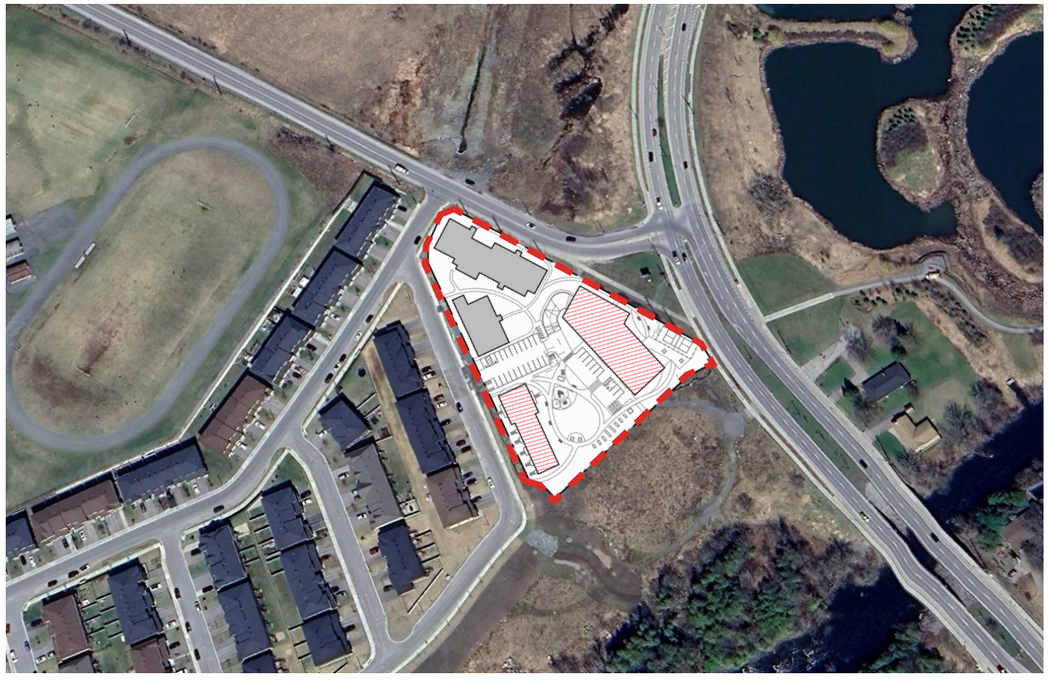
The project is integrated into an existing context characterized by several key elements, such as:

- A low-density built fabric, predominantly composed of two-story attached single-family dwellings
- A green corridor along the Jock River
- St. Joseph's High School
- Numerous open areas and retention ponds

The entire area is connected to the urban fabric via the junction of Jockvale Road and Longfields Promenade.

04.6 Massing of the Proposed Development in the Planned Context





The planned context includes the construction of Phase 1 of the development led by OCH on the northern part of the site. This phase consists of two- to three-story buildings, incorporating 32 housing units. Phase 2 of the project is located on the southern part of the site, continuing the development from Phase 1.

04.7 Built Form Transition Between the Proposed Development and the Surrounding

With its proportions, Phase 2 serves as both a visual anchor and a key focal point of the project within the existing context, while providing a coherent volumetric transition that blends seamlessly with the surrounding environment.

The taller volume (mid-rise) defines the entrance and visual identity of the site from Longfields Promenade, offering both visual and acoustic screening for the central courtyard, where the communal outdoor spaces are located. These spaces will be directly connected to the future MUP (East), while remaining accessible to users from Phase 1 (West), Jockvale Road, bus stops (North), and Branch Street (main entrance, South).

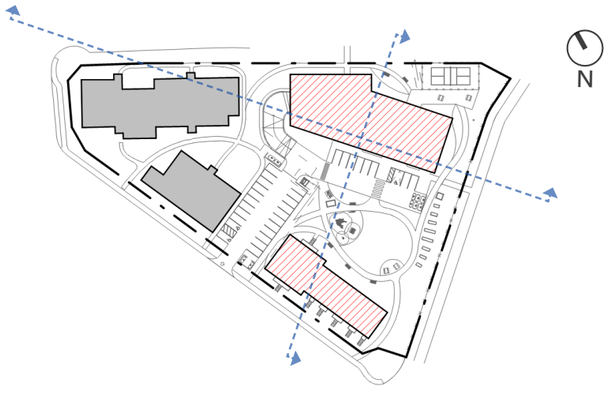
The townhouses along the southern edge follow the same scale and engage in a dialogue with the existing homes directly across from them.

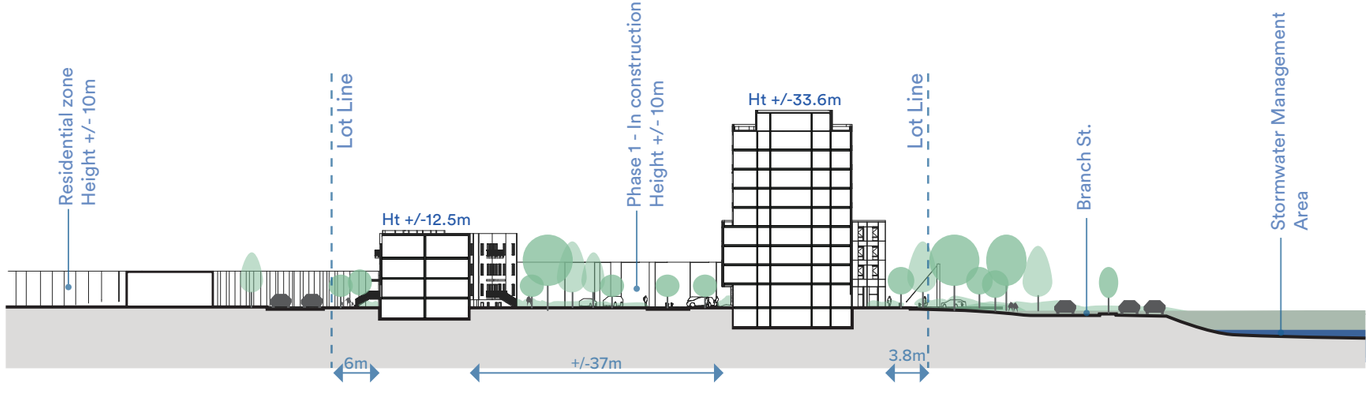
Built transition between Phase 1 and Phase 2 - Mid-rise define the visual identity of the site

Built transition between Phase 1, Phase 2 and existing building - Branch street

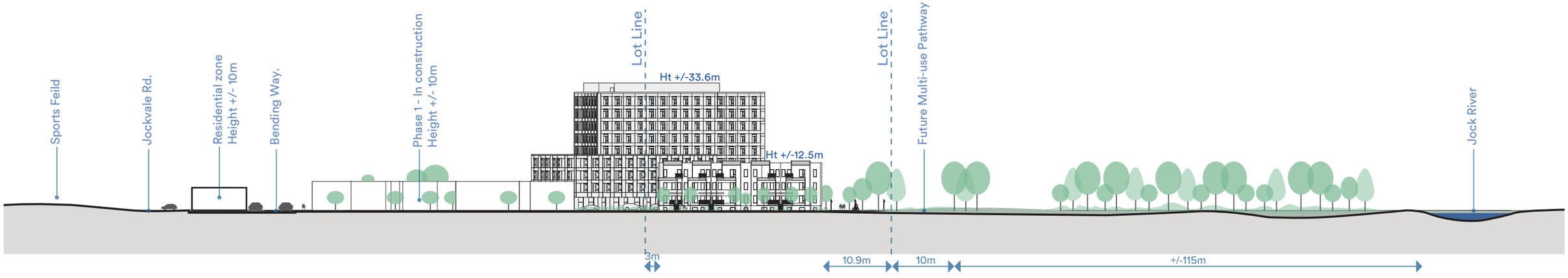
Built transition between Phase 2, existing building and the future MUP

04.8 Street Cross Sections





Section - Southwest



Section - Southeast

0 5 10

1:1000mm

04.10 Approach to Sustainable Design

Passive House design is a core element of the mandate for this project. At the present phase and all along the design process, key metrics and design criteria were identified. The development of both the apartment tower and the townhouses will follow key Phius design parameters.

It has been decided that the project will not pursue formal Phius certification but will be designed to comply with the PH performance metrics. Throughout the predesign phase, the passive house consultants have provided guidance and feedback to all the other disciplines as the team has gathered information and generated initial concepts.

A conceptual massing study was done, where several massing options for the apartment

Sustainability Opportunities in Structural Design

Use of Supplementary Cementitious Materials:

- Conventional Portland Cement requires a high energy input to create and release high loads of CO2 during production

- Using supplementary cementitious materials such as Fly Ash or Slag reduces the demand for this high energy and CO2 producing element, reducing the overall CO2 released with the use of structural concrete

- There are commercially available concrete mixes that utilize these SCM materials. These mixes, such as Lafarge ECOPact, can reduce CO2 by 30-50%, by manufacturer's estimates. The concrete cure time for these products is the same as regular concrete, and thus will not impact the construction schedule.

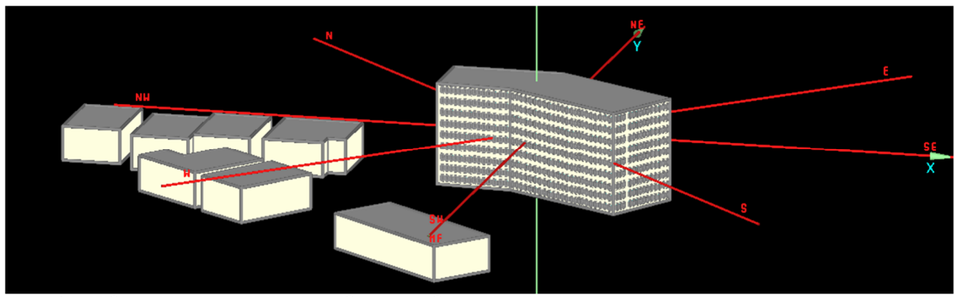
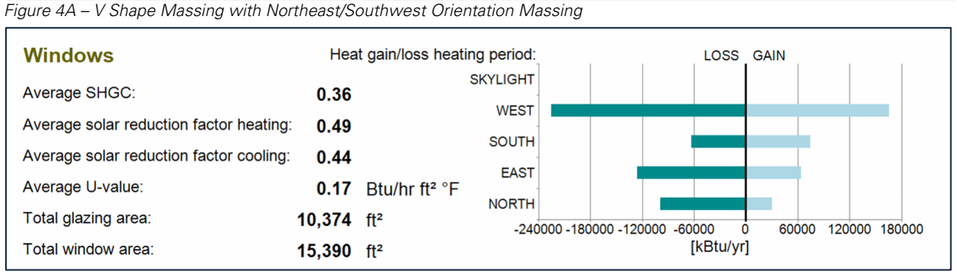


Figure 4A – V Shape Massing with Northeast/Southwest Orientation Massing



Example image of massing energy performance study - Documentation from Thornton Tomasetti

	PRODUCT NAME	SET TIME	CURING TIME	STRENGTH				
				3 Days	7 Days	28 Days	56 Days	91 Days
CO_2 Content*	Standard Concrete	Standard	Standard	50%	70%	100%	-	-
30-50%	ECOPact	Standard	Standard	50%	70%	100%	-	-
50-70%	ECOPact PRIME	Delayed	Additional Curing required	30%	50%	70%	100%	-

Sustainability opportunities in Structural Design

Component	Model Input	Notes
Exterior-Wall	R-40	Minimum of R-10 in continuous insulation
Foundation Wall	R- 20	Along exterior of footing
Roof	R-60	If roof insulation is tapered, minimum of R-40
Slab/Floor	R-20	R-5 insulation at slab edge
Entry-Door	R-5	R-11 Imperial Maxim doors with thermally broken frame preferred
Window-U-factor	U-0.16-(triple-pane)	Preferably Phius Certified
Window-SHGC	0.36	Optimized for energy balance
Window to Wall Ratio	<22%	Lower on Northern facades
Infiltration-Rate	0.06/0.08-CFM/sf-@-50-Pa	
Heating/Cooling	Air or Water Source Heat Pumps with Air Handling Units	Geothermal being reviewed
Heating/Cooling -Efficiency	Heating-COP: 2.4 Cooling-COP: 9.03	Placeholder values
Ventilation-System	Energy-Recovery-Ventilator-(ERV)	Assuming individual in unit ERVs preferably with dedicated duct system and registers.
Outside-Air-(CFM)	15,600-CFM	Assumes 100 CFM per unit & 6,000 CFM Common
ERV-recovery-effectiveness	>80%	MERV 13 Filtration required
ERV-Fan-power	0.1.2 W/CFM	Holding higher figure for AHU fan to distribute
Economizer	Temperature-Controlled-Bypass	
DHW System	Heat Pump	Electric resistance will exceed Source Energy Limit
Efficiency	COP:2.8	
Lighting	100% LED	80,174 kWh/yr or 0.67 watts/ft²
Plug-loads	96,697-kWh/yr	Estimate from Phius Multi-Family Calculator
Refrigerator/Freezer	500 kWh/yr	Energy Star Appliances Noted that units will likely not have Dishwashers or in unit laundry. This will reduce heat gains in units.
Dishwasher	260 kWh/yr – Noted	
Cooking	0.22 kWh/use	
Washing-Machine	116 kWh/yr	
Dryer	CEF 4	
Plumbing Fixtures	Low Flow Fixtures	EPA-WaterSense Certified 1.28 gpf Toilets, 0.5 gpm Lavatory Faucets, 1.5 gpm Kitchen Faucets & Showerheads
PV-Assumption	None	TBD
PV-ready-roof	Required	

Example image of energy performance requirements from the PH consultant - *Documentation from Thornton Tomasetti*

04.11 Approach to Bird-Safe Design

Mid-Rise Project Overview and Compliance with Bird Protection Criteria

The proposed mid-rise project is designed to integrate harmoniously into the surrounding fabric while addressing growing environmental concerns, particularly those related to bird protection. In accordance with the City of Ottawa's guidelines, we have implemented specific measures aimed at minimizing the potential impact of the building on local bird populations, while ensuring the long-term sustainability of the project.

Environmentally Sensitive Architectural Design

The building will be designed to promote a respectful interaction with the local wildlife, taking into account bird flight paths and neighboring habitats. The moderate height of the project (nine stories) avoids the risks associated with taller buildings while preserving visual and biological connectivity with the surrounding green spaces.

Specific Bird Protection Measures

1. Bird-Safe Glazing: All exterior glazing will meet the bird protection criteria outlined by the City of Ottawa. We will use windows treated with visible patterns, such as films or screen-printed glazing, to reduce the risk of collisions. Moreover, the absence of balconies (and glass guardrails) also minimizes the risk of collisions. These treatments will be applied to all building façades, particularly those facing green spaces or identified migratory corridors.
2. Bird-Friendly Landscaping: The project will include landscaping that attracts wildlife while avoiding drawing birds to dangerous areas near windows. The integration of native plant species and those providing natural resources (such as berries or flowering shrubs) will encourage biodiversity while ensuring a safer environment for birds. In this regard, the landscaping at the heart of the site is intended to be a direct continuation of the protected area along the adjacent river.
3. Adapted Outdoor Lighting: In line with recommendations, outdoor lighting will be minimized and designed not to disrupt birds, particularly during nocturnal migration periods. Low-impact lighting systems will be installed to reduce the attraction of birds to the building.
4. Monitoring and Revisions: We will conduct continuous evaluations of the interactions between the building and local wildlife. We commit to making adjustments as necessary after a post-construction monitoring period.

Conclusion

This mid-rise project is designed to meet sustainability and biodiversity protection goals, in line with the City of Ottawa's requirements. By implementing advanced design strategies and incorporating bird protection measures from the early stages of development, we ensure that our project will positively contribute to the environment while meeting safety and comfort standards for residents.

SEAL & SIGNATURE

File Number : 124724B
Date : 2024/05/01
Issuance : Site Plan City Application

Note : The architect's signature and seal shall apply solely to the components produced by Lemay Michaud

2025-05-01

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