Gladstone Village Phase 1

Site Plan Control Application Design Brief

September 8th, 2021







Design Brief

The proposed Gladstone Village Phase 1 (GVPH1) building is the first in a series of high-rise, mid-rise, and townhomes development, at the Ottawa Community Housing's (OCH) Gladstone Village site, at 933 Gladstone Avenue, that will provide affordable and market rent units for a diverse cross-section of the community, located in a transitoriented neighbourhood anchored by the future Corso Italia LRT station.

The GVPH1 development will include studio and one-bedroom units for singles and couples, through to larger two, three, and four-bedroom units for growing families. The GVPH1 will be designed to include for several barrier-free/accessibility features, above and beyond the minimum building-code requirements, including dedicated accessible units, and enhanced accessibility and visitability features in other units, and in common and amenity areas, to meet OCH's design for inclusivity requirements. Accessible units will be provided to accommodate single individuals, as well as larger families.

The Gladstone Village Phase 1 building will include various private, semi-private and communal amenity spaces, specifically designed to address the current needs of the new residents. Amenity spaces will be designed to provide various opportunities for social interaction and enhance the overal well-being of the mixed-user community. Some of these spaces include laundry facilities, scooter and stroller dedicated storage, bicycle parking and repair stations, flexible lounge spaces and exterior amenities such as community gardens and children's play areas.

Gladstone Village Phase 1 aims to minimize its environmental footprint through a series of sustainable strategies. Goals have been established to plan the new community for future district energy readiness, provide for photovoltaics as part of the base design, and to detail the building and systems in keeping with Passive House principles. In this way, the development aims provide the greatest benefit for the community while minimizing its ecological footprint.

The following pages detail both the understanding of the technical aspects of the development area, as well as the understanding of the community into which the Gladstone Village Phase 1 building will be built. The following pages detail both the understanding of the technical aspects of the development area, as well as the understanding of the community into which the Gladstone Village development will be built.



Context Contextual Analysis

The Corso Italia district is a rich and vibrant community with a long history and a tight-knit fabric. The new Gladstone Village Phase 1 development aims to fit into the neighbourhood through careful integration in order to support and supplement the existing community.

The proposed master plan of the Gladstone Village development seeks to take advantage of it's well placed location and connection into the wider surroundings, beginning with the development of Phase 1.

One of the focal elements for the development is the OC Transpo corridor, and connectivity to the new Corso Italia LRT station, currently under construction, which will be in walking and cycling proximity for residents.

The development will also incorporate feeder streets that allow for pedestrian, vehicular and cycling traffic into the neighbourhood. At the north boundary, Oak Street will act as a primary vehicular entry on the one side of the site from Preston Street. From the south, the development will be fed through a newly proposed street leading inwards from Gladstone Avenue.

This is further supplemented by an extension of Laurel Street, from east to west, including connection over the OC Transpo O-Line, which will be implemented as an 'Active Transportation Corridor' for cyclists and pedestrians, with connection to the Multi-Use Pathway.





Context Gladstone Village Master Plan

The conceptual masterplan for the Gladstone Village Development details a pedestrian-oriented district, with a gradual increase in density from the east boundary where it meets the existing Corso Italia neighbourhood, through to high-density towers on the west side along the Multi-Use Pathway and the OC Transpo LRT line.

The first phase of the development will be Block 6, at the north-west corner of the masterplanned site. The project site will consist of one 18-storey high-rise tower, with a second midrise component, with a 3-storey to 5-storey podium at it's base.

The base itself will be animated through a mix of residential, amenity and retail uses in order to create a vibrant and attractive ground floor level. Through the introduction of spaces dedicated to both tenants and the greater public, the site will attract pedestrian throughtraffic.

The Gladstone Village Phase 1 development will be bounded by Plouffe Park, based on its future expansion, providing residents with a broad greenspace and open views from the north and east units.





Addressing Policies & Guidelines

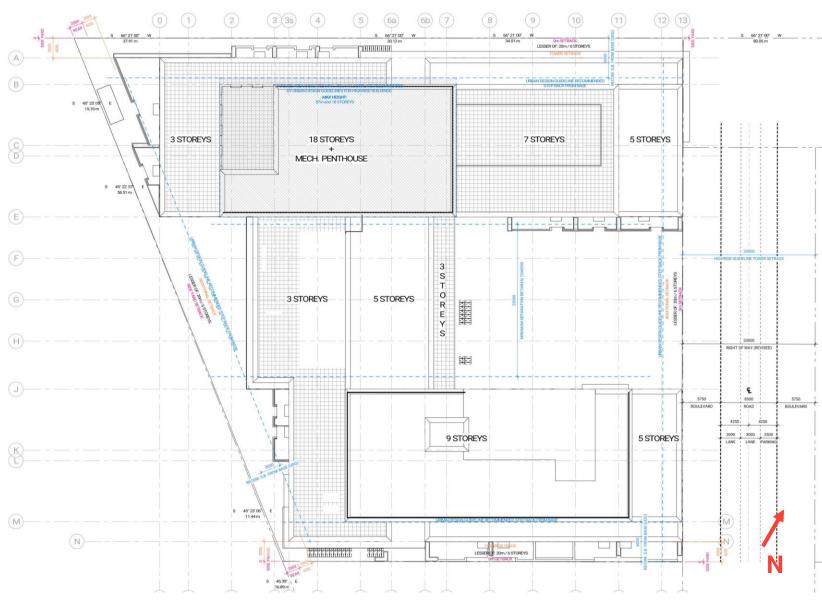
Site-specific Zoning Requirements

The Gladstone Village Phase 1 development is zoned as a Mixed Use Centre, Subzone 17, Exception 2690 with a maximum height of 57m.

The development massing abides by the front and side yard setbacks of Om, with a rear yard setback of 2m, as prescribed for a rear lot line abutting a rapid transit corridor.

Further to this, the development massing abides by additional tower setback requirements of 2m from the ground floor building face.

While the building does contain an entryway to below grade parking, the setback is well in excess of the 0.3m requirement, with an aisle width in excess of 6m.





Addressing Policies & Guidelines

Urban Design Guidelines for High-rise Buildings

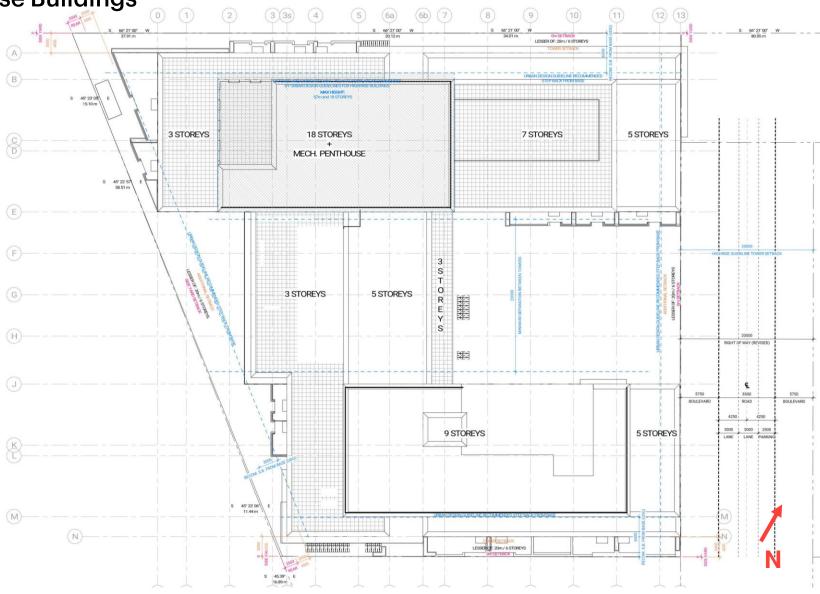
The Gladstone Village Phase 1 development has also been designed in keeping with the recommendations and prescribed requirements of the Urban Design Guidelines for High-Rise Buildings.

The podium design is kept to a maximum height of 20m / 6-storeys within the recommended setbacks.

For the tower and midrise portion of the site, the two masses are kept 23m apart, in excess of the recommended minimum distance requirements.

For the 18-storey tower component, the east face of the tower is well in excess of the 20m requirement from adjacent low-rise property boundaries.

Finally, the tower floorplate is kept to 750m².

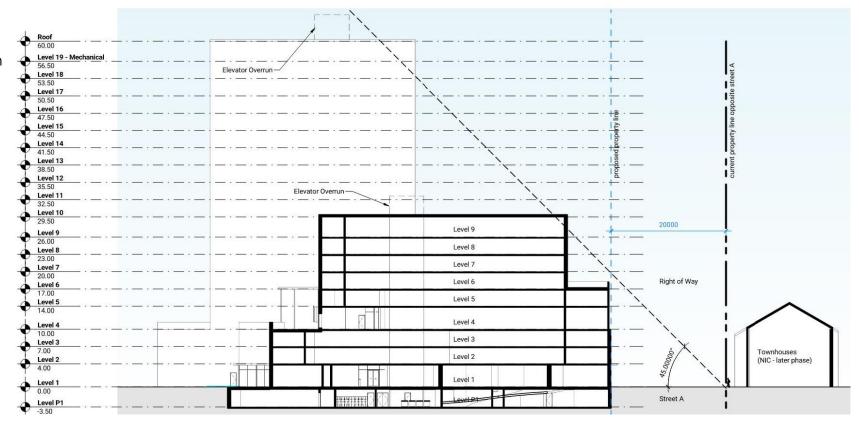




Addressing Policies & Guidelines Urban Design Guidelines for High-rise Buildings

In order to address the future development of low-rise units directly to the east of the Phase 1 development, the massing of the proposed building generally complies with the requirements of a 45° angular plane, when measured from the opposite side of the proposed Right of Way for Street A.

This angular plane shows general compliance with best practices for high-rise massing in order to provide a desirable transition between the proposed high-rise development, and future low-rise units.





Addressing Policies & Guidelines Urban Design Guidelines for High-rise Buildings

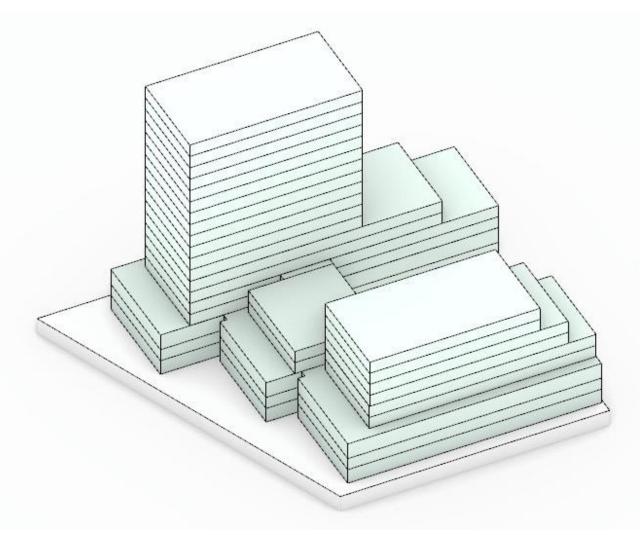
The building massing has been developed hand-in-hand with the site-specific zoning requirements, as well as with best practices outlined in the Urban Design Guidelines for High-rise Buildings. This massing also allows for good daylight access for future residents, as well as to be considerate of its existing and future neighbours.

The base massing of the Gladstone Village Phase 1 development embraces the built form recommendations of the Design Guidelines by providing a base-middle-top approach to its massing.

The podium acts as the base, with a strong horizontal three-storey massing along the south, west and north faces.

The middle portion of the building encompasses the next 6-storeys, from the fourth through the ninth, to provide a slightly set back terraced form from the east. Along the west face, the setbacks are deeper, allowing for occupiable areas.

Finally, the top is served by the tower on the north side of the site. The tower is oriented in the east-west direction in order to maximize the potential for views into Plouffe Park to the north, and to maximize daylighting potential for units along the south.

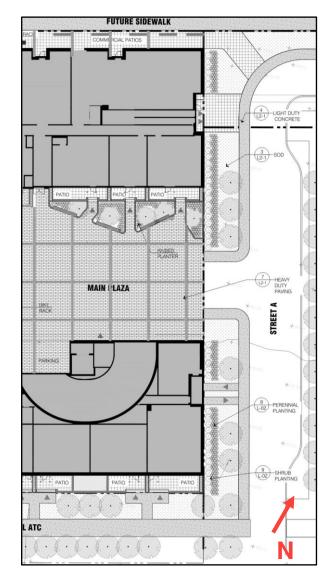


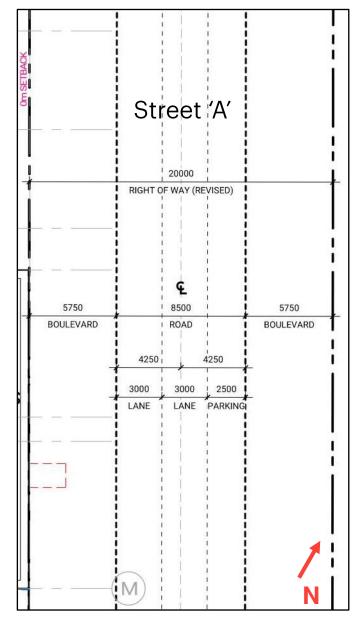


Addressing Policies & Guidelines Street Frontage Considerations

The frontage considerations along Street A, include strategies to create an animated and pleasing streetscape. This streetscape is being developed hand-inhand with the requirements of the Street A Right-of-Way planning, including the provisions for a wide 5.75m pedestrian boulevard.

This boulevard will be programmed in a way to promote pedestrian circulation through the area, with ample room for distancing considerations and comfort. In addition, landscape plantings are being implemented in order to provide natural shading, and to minimize the urban heat island effect.







Addressing Policies & Guidelines Bird-Safe Design Guidelines

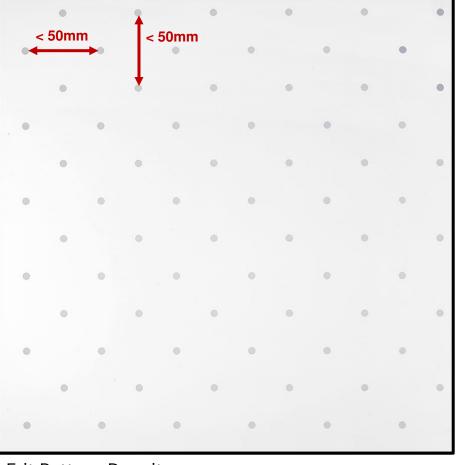
As part of the project development, strategies are being looked at in regards to addressing the requirements and recommendations for avoiding bird strikes per the City of Ottawa Bird-Safe Design Guidelines.

This includes a multi-fold approach includes glazing treatments within the first 16 metres of building height, eliminating design traps such as glass passageways, designing landscape to reduce the risk of collisions, and designing exterior lighting to minimize impacts on night migration.

One of the strategies for mitigating bird-strike potential is through the implementation of glazing finish strategies. As recommended by the Bird-Safe Design Guidelines, reflective glass coatings will be minimized or avoided.

Where vision glazing is provided within 16 metres of grade, an acid-etched or ceramic frit pattern on the exterior face of glass (surface #1) with a minimum 4mm diameter contrasting frit, spaced in a grid or diagonal running pattern will be used. This pattern will be designed so that the frit pattern has a maximum distance of 50mm between frit elements.





Frit Pattern Density



Addressing Policies & Guidelines Bird-Safe Design Guidelines

Planning + Design

The treatment of a minimum of 95% of the glazing within 16 metres above local grade will be provided on all building elevations.

Where green roof areas are provided, this treatment will be provided on adjacent glazing a minimum of 4 metres above the surface of the roof or terrace.

Where mature tree canopies are located (as along the Multi-Use Pathway), these treatments will be expanded as per City of Ottawa requirements.

The diagram on the right is illustrative of an overall bird strike mitigation strategy, this will be developed in detail throughout building design to address all potential areas of concern.

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Long-term Planning Strategies to address future connectivity

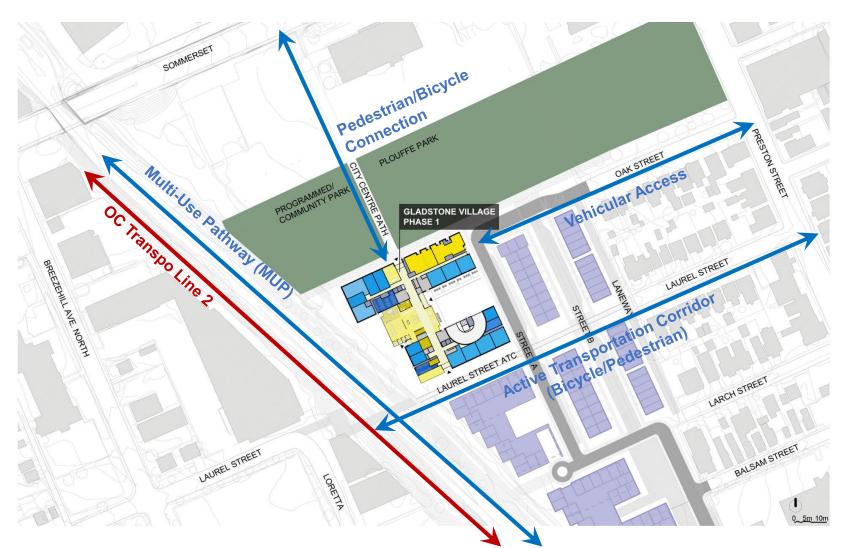
Providing for multiple active connections into and out of the Gladstone Village site is a key factor in creating a successful and well integrated project. Central to this ethos is the connectivity created through multiple modes of transportation: Pedestrian, transit, automobile and cycling.

Beginning with the south side of the site, the Laurel Street ATC is addressed by locating one of the main entrances along it's length, which allows for direct access by residents to bicycle and pedestrian connections to the east and west.

On the east side of the site, vehicular connectivity for parking, servicing and resident pick-up and drop-off is addressed, all while mediating this perimeter condition along Street A with a wide sidewalk and further cycling connectivity. Parallel parking for vehicles is considered for on the east side of the street.

Connectivity to the north is currently being developed in mind of a future extension to City Centre road as a pedestrian and cycling connection, with the main entry to the north tower, and retail tenant spaces are provided at the south terminus of that pathway. In addition, this helps to frame the park and create an urban room that supports any future active programming.



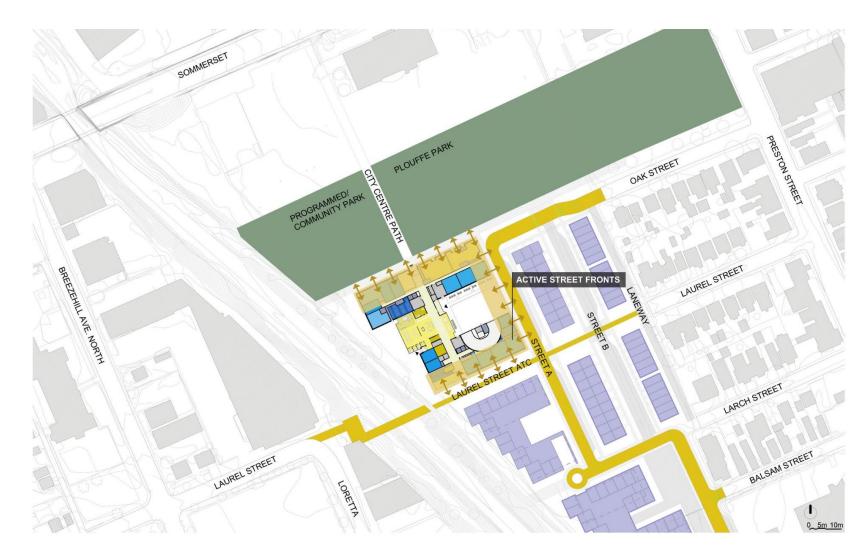


Long-term Planning Strategies to address future connectivity

In order to further activate the site and its connectivity to the neighbourhood, the north, east and south facades are all planned as active street fronts, with a mix of amenity, retail and public and private patio space.

This allows these facades to become dynamic spaces at the perimeter of the building, while allowing for a variety of functions. This will further emphasize the importance of a pedestrian scale at street level and reinforce the districts planning goals.

Activating these street facing facades, presenting transparency and openness, will contribute greatly to the the overall integration of the new building with the exiting neighborhood and the community.



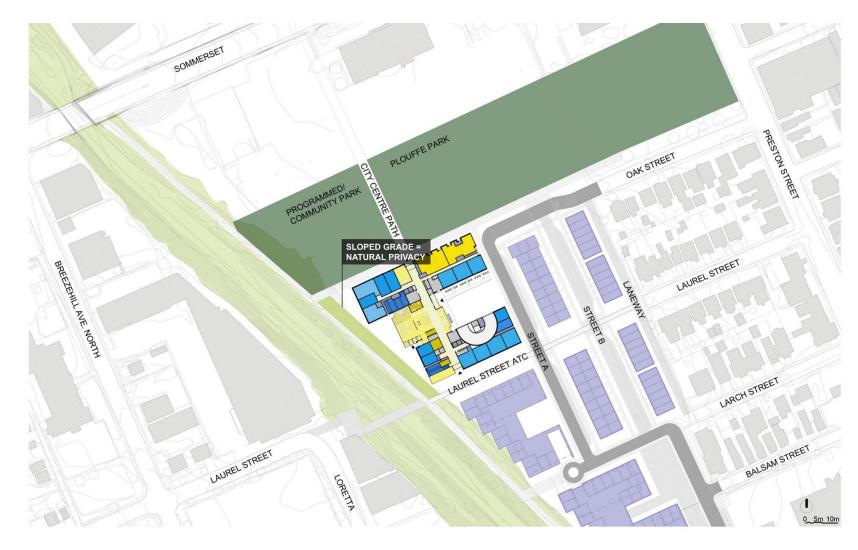


Long-term Planning Strategies to address future connectivity

As the development site is located at the north-west corner of the Gladstone Village site, it is nestled between two active greenspaces, one being the Multi-Use Pathway (MUP) which runs north-south along the OC Transpo corridor, the other being the expansion of Plouffe Park.

Connectivity to the MUP will be provided via pathways along the north and the south side of the site, with additional connectivity along the west property line. Due to the relatively shallow slope to the MUP, it will be possible to grade the topography to provide multiple points of connection.

The connection to Plouffe Park to the north will be provided via at-grade connectivity and by providing a direct access from the main building entry, as well as the residential and retail units.





Design Opportunities Identifying opportunities

The surroundings of the Gladstone Village development is a rich tapestry into which the planning for Phase 1 is being implemented. For this Gladstone Village Phase 1 project, design opportunities have been identified in order to make the new development a successful part of the existing fabric.

As articulated in the following pages, at every level, between the landscape planning, through the connectivity into the building interior, as well as the massing and the articulation of the façade, each element has been carefully considered in terms of planning rationale.

On the landscape and planning level of the at-grade programming, connectivity to the surrounding elements, both existing and future, have been implemented into the design. This includes strong connectivity and pathways to the pedestrian, cycling, transit and automobile infrastructure surrounding Gladstone Village, identified on earlier pages. This is further supplemented by programming that responds and reinforces these planning decisions, both along the exterior façade, as well as in the planning rationale within the building on the ground level.

The form and massing of the building also take advantage of the zoning stipulations, in order to create a massing that respects the neighbouring properties, and underlining the goals and aspirations of the project itself. By using the mass to frame neighbouring elements along the north and the west sides, the building reinforces the highlights of the greenspace surrounding the project. At the south and east, where the massing tapers to create an urban city scape, without overwhelming the street with a vertical wall, that steps back from the pedestrian realm, in keeping with Urban Design Guideline best practices.

The massing articulation has also been developed to create large terraced expanses on upper floors that can be programmed for residents and to allow for a variety of programs including seating and picnic areas, community gardens, children's play areas and other exterior amenities that are meant to connect and provide delight for those living in the building.

The massing articulation has also been studied for sustainability considerations, with volumes and orientation that maximize the potential of energy harvesting and water retention on the roofs. Where possible, these areas are consolidated in order to minimize the area impact for infrastructure, while providing the maximum benefit. In addition, through a more detailed articulation of the façade, integration of energy harvesting systems are being looked at for feasibility.

The Gladstone Village Phase 1 development offers numerous opportunities to leverage the design to create a forward-looking community, and one that leaves a light footprint on environment, but with a strong tie to its surroundings and community.



Design Intent Implementation on Site

Beginning with the approach to the site and landscaping elements, the aim to provide connectivity to the neighbouring sites and pathways is seen through the multifold and varied programming along the perimeter.

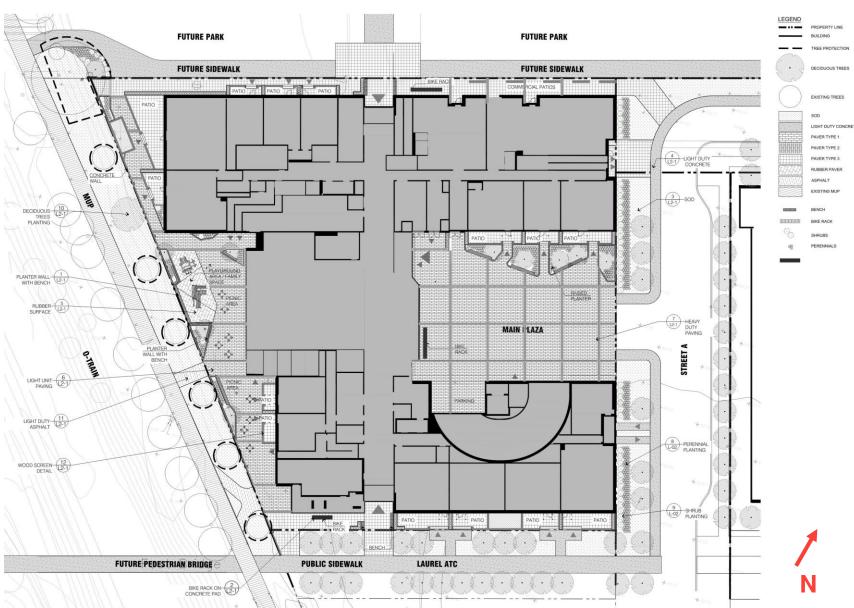
Along the north, which will be bound by the future Plouffe Park expansion, a generous plaza is provided, supported by bicycle parking in close proximity to the building entry. A commercial patio space at the north-east portion of the site helps to support retail tenants. To the west, this is supplanted by patio space for residential units.

At the south, a similar entry condition is provided as at the north, with ample connectivity to the Laurel Street ATC and plentiful bicycle parking provided. Connection around the south-west corner of the building is provided, to allow for circulation along the west side of the site alongside the MUP. Finally, residential units on the south façade will be partially screened via plantings and trees, allowing for a semi-private space while still engaging with Laurel Street.

The central courtyard is programmed in a way that allows a co-existence between vehicular traffic, for loading, drop-off and deliveries, with a raised planter and seating for pedestrians.

Finally, on the west side of the site along the MUP, a quieter space is dedicated to tables and chairs, as well as a playground and family space, including a dedicated picnic area.





Design Intent Implementation at Grade

Moving to the interior of the building at grade, the major design connections are pulled through the ground floor planning.

The major entrances at the north and south create a circulation axis through the building. This creates connection between the north and south towers, as well as to the major ground-level amenity spaces in the centre-block and the entry from the courtyard. As the connection will be capped with glazed curtainwall at both ends, it will also act as a wayfinding strategy within the building.

Around the perimeter of the ground floor, the programming is mixed between residential units, amenity space, small-scale commercial and service access. In this way, no one program is provided in a large block, and the variation in programming promotes circulation around the exterior of the building.





Design Intent Form

The main form of the building can be read as three distinct blocks, a high rise block at the north perimeter, a mid-rise bar building along the south, with a low-to-mid-rise element between them that houses a majority of shared amenity spaces. Looking at the massing in further detail, several otherkey elements and considerations were implemented.

By taking into account the multifold approaches to the building from the surrounding neighbourhood, it was imperative that the ground plane of the proposed Phase 1 development reads in a strong language that provides for a dialogue, both in its materiality as well as in its scale, to its low and mid-rise surroundings. By utilizing the setback requirements directly above the three-storey podium, this expression is read as a strong and consistent horizontal banding that wraps the entire perimeter of the podium. The materiality of this expression is described in the pages ahead.

The only locations where this strong horizonal band is broken is at main entries at the north and south of the development. This break in the banding provides a strong visual cue and acts as a wayfinding marker that is visible from a distance, whether across Plouffe Park, or from a distance long the Laurel Street ATC. In this way the main entries become apparent through the architecture and guide pedestrians to the appropriate arrival points along the perimeter of the site.

Above the podium setback, the form of the building along the north goes vertically up without any further terracing. By providing a strong vertical element along the north façade, this helps to frame the future Plouffe Park expansion, and assist in creating an urban room. From the interior of the building, this provides a large quotient of tenants with direct views into the park.

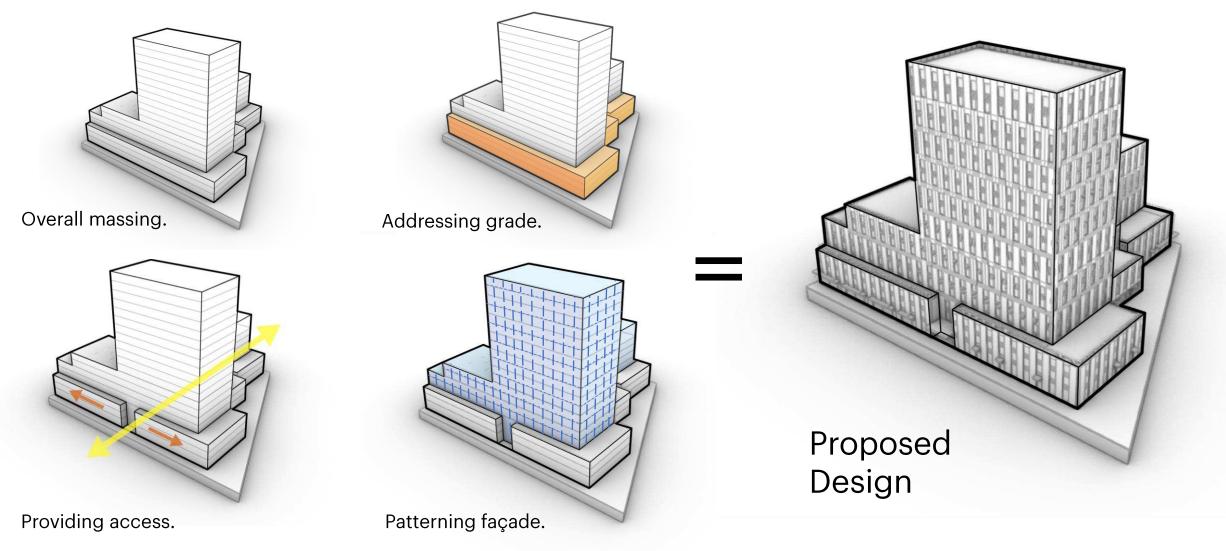
Along the west portion, the variety in scales of the three main elements of the massing can be read, especially from the Multi-Use Pathway. Through the use of materiality and colour, the interleaving of program and connectivity within the interior is further expressed.

Along the east, the massing is pulled back to create an entry courtyard for vehicles, pedestrians and cyclists. The three block expression can also be read on this façade, however, entry into the site is more apparent as the north and south wings of the building wrap the courtyard, creating a sequence of approach to the building. The north and south wings of the buildings to the east, and creating opportunities for exterior amenity spaces on a number of levels.

The massing along the south perimeter retains the podium level banding, with a fourth-floor setback to the mid-rise block. This mid-rise block then continues as a flat vertical element. This expression allows the Laurel Street ATC to be framed on it's north side, with a similar massing likely in the future on the south side of Laurel Street, based on the masterplan.



Design Intent Form





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Design Intent Materiality

The development and design of the overall exterior façade was rooted in the idea of knitting, using the pattern of interleaving strips of material to bring the expression of warmth, domesticity, and connection into the façade.

The idea of a knitted, interweaved pattern grew out of the ideas around the strong linkages the project vision presents of providing a new home in a long-established neighbourhood.

This underscores the aim of the project to be a connector as well as a place of revitalization. By carrying this narrative through the façade, it speaks to the implementation of these aspirations in real terms through the architecture, planning and community amenities provided within.







Design Intent Materiality

In terms of materiality, the building will address the ground in a direct way through the use of brick masonry within the bottom three levels of the building, interspersed with vision glazing.

The inclusion of brick is two-fold: It ties the new development directly into its existing low- and mid-rise context, building upon the rich masonry tapestry of the surrounding Corso Italia neighbourhood. In addition, masonry provides a resilient, warm and inviting texture at the ground level. This offers a rich tonality with a long lasting and tough exterior for the touchzone areas of the building.

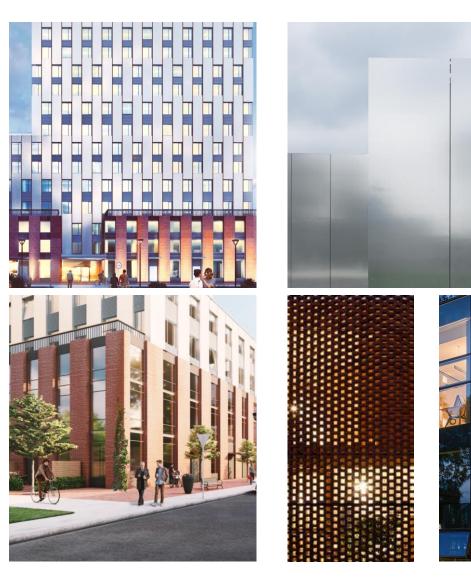
On the portions of the building above the podium, a lightcoloured prefinished metal panel will be employed, with a light and airy pattern, again interspersed with vision glazing.

The metal panel façade will lighten the overall impression of the building in the neighbourhood, and provide a pleasing and regular rhythm that will integrate will with the future development of the Gladstone Village neighbourhood. Tower Portion Levels 4 – 18

Metal panelGlass

Ground Plane Levels 1 – 3

BrickMetal panelGlass





Sustainability Initiatives Overview

A central component of the Gladstone Village Phase 1 development will be to meet various sustainable goals for the project, including reaching Passive House levels of building performance. Not only will this help to achieve one of the central goals of Ottawa Community Housing, but will also promote good community stewardship through building design to mitigate climate change.

Tenets such as thermal comfort and resiliency are at the heart of high-performance building design, and they help to define the high-quality building elements that compose the building enclosure. Rigorous testing, quality control and third-party verification are part-and-parcel of the process of designing and constructing a building that will meet these metrics. Raising the bar on residential construction to a great degree, with the ultimate goal to achieve building performance that is beneficial for those that dwell within, as well as for the broader community and global environment.

One of the most critical funding sources for the Gladstone Village development is in reaching the CMHC Energy and GHG Performance requirements. This funding model requires the Gladstone Village Phase 1 development and Rochesterville Phase 1 & 2 developments to meet a combined minimum 55% decrease in energy consumption, as well as a 55% decrease in greenhouse gas emissions (GHGs) against an equivalent 2015 NBC or 2015 NECB reference building.

This goal will require a 25% decrease in energy consumption and GHG emissions for the Gladstone Village Phase 1 development against the 2015 NBC/ NECB reference building. In order to align the design with this funding model and establish the project on solid footing, the reference building model will be established at the beggining of the Schematic Design phase, with energy budget comparisons of the Gladstone Village design provided in Schematic Design, Design Development and Construction Documentation phases.

The Gladstone Village Phase 1 development will be designed and documented in keeping with the Passive House Institute US (PHUS) 2021 standard, further discussed later in this document.

In order to embrace renewable sources of energy as well as energy harvesting strategies, the exterior rooftop areas will be programmed in a way to maximize photovoltaic array installation. This will include modelling the proposed scheme to understand potential energy generation, and providing solar system design to incorporate the array into the building's electrical system.

While embodied carbon is not a set mandate for the Gladstone Village Phase 1 development, the team will recognize and be sensitive to the role of embodied carbon on the project and material selections.

The design team will take into consideration waste management strategies to provide for waste diversion strategies (green waste & recycling) in hand with OCH's operational goals, as well as the requirements and goals of the City of Ottawa.



Sustainability Initiatives District Energy Readiness

The Gladstone Village development will look to connect into a future geothermal district energy system located underneath the future expansion of Plouffe Park directly north of the Phase 1 project site.

This district energy system is being developed by the City of Ottawa and a Utility Partner, and will come online in the near-future, with a rough five- to ten-year timeline anticipated.

The project team will develop the design and systems of the Gladstone Phase 1 development to plan for integration of the district energy system in the future.





Sustainability Initiatives Passive House Strategies

The Gladstone Village Phase 1 development will aim to achieve energy performance values to be equivalent with the Passive House US (PHIUS) 2021 standard. While the pursuit of this energy performance is a project mandate from OCH and will also assist in achieving the CMCH funding goals of the project, this performance level is also in keeping with the contemporary best practices for building design and will be an exemplar project for future residential developments in Ottawa.

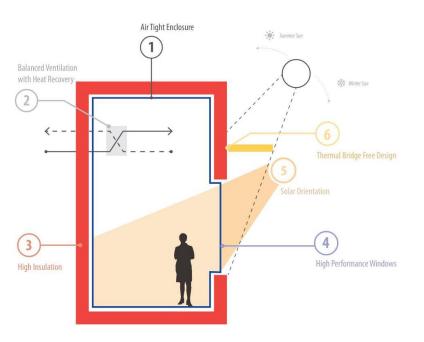
The best practices of passive house design are being employed on the development from its earliest phases. One of the fundamental strategies is to reduce the form factor of the building. By reducing the form factor, the result is a better performing building and greater energy efficiency. This reduction in building envelope to floor area, however, is being carefully balanced with regulatory and best practices when it comes to access to daylight and views in order to design a building which is a pleasing and comfortable place to live.

One of the other critical elements in meeting passive house energy targets is a robust building envelope. As a baseline, the entire building envelope is enclosed in both a continuous thermal layer, as well as an airtight layer, in order to mitigate energy losses. This is supplemented through triple-glazed windows that meet a low window-to-wall ratio percentage (<40%). This is further supported through minimizing thermal bridging and detailed considerations for all penetrations required through the envelope for services.

When it comes to mechanical and ventilation systems, careful consideration is being made to design the building with high-efficiency systems, as well as to implement district energy connectivity and the use of energy recover systems where possible. Mechanical systems design will also fold into the development of the building envelope where penetrations through the envelope are required. Reduction and consolidation of penetrations per the best practices of the passive house standard will be followed. This will further extend into the appliance selections for residential units, including the use of Energy Star rated appliances. The use of heat pump dryers to avoid additional penetrations through the façade and the heat loss associated with ejection of dryer air will also be used on residential levels.

Electrical systems will be designed in order to minimize energy usage where possible. This will go hand-in-hand with the use of photovoltaic panels to implement energy harvesting strategies into the baseline building systems. Additional strategies that are currently being investigated include all-LED lighting fixtures, occupancy sensors in common areas, among others.





Sustainability Initiatives

Passive House Envelope Strategies

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Flat metal panel Glazing & slab by-pass Flat metal panel (w/ tapered top) Rainscreen + punched window Rainscreen + punched window Rainscreen + punched window Triple-glazed punched Triple-glazed punched Prefinished flat metal panel on window system within window system within thermally broken clips + z-girts line of insulation line of insulation Glazing within insulation line Exploration into tapering Prefinished corrugated for water shedding + 8" semi-rigid insulation metal panel on thermally design highlight Continuous air-vapour barrier broken clips + z-girts 8" semi-rigid insulation Continuous air-vapour barrier Prefinished flat metal panel on thermally Overinsulated window frame Overinsulated window frame broken clips + z-girts AVB tie-in to window AVB tie-in to window Triple-glazed punched Triple-glazed punched 8" semi-rigid insulation window system within window system within Continuous air-vapour barrier line of insulation line of insulation

Sustainability Initiatives Renewables & Energy Harvesting

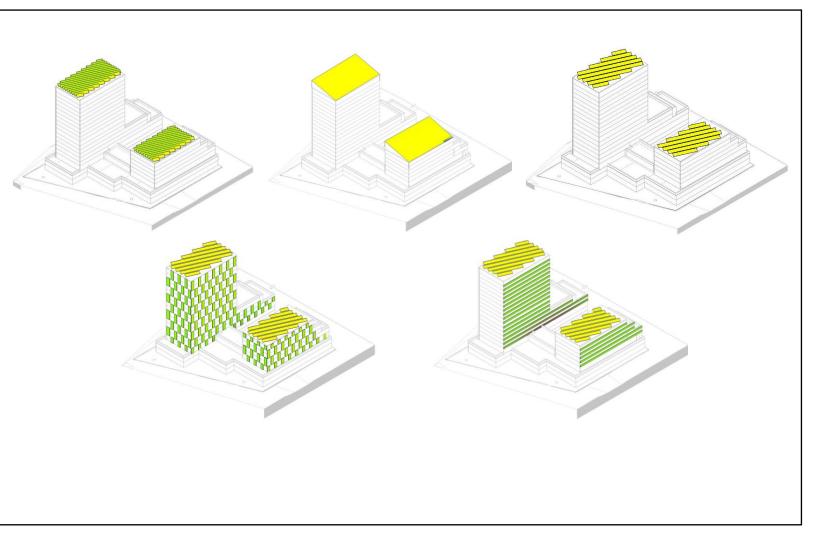
In order to meet both CMCH funding goals, as well as the requirements of Passive House, the project team has already begun analyzing the Gladstone Village Phase 1 development for opportunities for energy harvesting.

Further to this, as part of Ottawa Community Housing's mandate, photovoltaics are required as part of their design standards for any new development. The implementation of PV arrays will go a long way in helping to meet the energy-use reduction requirements of this phase of the Gladstone Village development.

The team has also been exploring ideas around buildingintegrated photovoltaic (BIPV) systems, to understand the possibilities around maximizing sunlight harvesting on vertical faces of the building.

The image on the right indicates several early-phase studies done to understand solar harvesting and areas which would benefit the project to the greatest degree.

These studies are ongoing to balance energy harvesting opportunities, with maintenance factors, cost and efficient use of resources.





11. Sustainability Initiatives 11.3 Future Adaptability

The design of the Gladstone Village Phase 1 development will keep in mind the changing landscape of sustainable design, and the need for the project to remain adaptable to changing needs as well as opportunities that will be available in the future.

To this end, the design of the project will implement future-readiness capabilities on a number of fronts.

One of the major elements for future-readiness will be the ability for building systems to plug into and make use of the District Energy system being developed to the north of the site for when it comes on-line.

However, even at the more detailed level, considerations are being made for changing needs. As one example, the ability to support a greater percentage of electrical vehicles through roughed-in infrastructure, will allow for more charging stations to be rolled out on an as-needed basis beyond current needs.

Through the strategies being implemented on the Gladstone Village Phase 1 development, the baseline sustainable strategies will be able to be expanded upon in the future.

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