1310 SOUTH SERVICE ROAD

DESIGN REVIEW PANEL

November 10th, 2021

TURNER
FLEISCHER

TEAM & COLLABORATIVE PARTNERS

forum

The Planning Partnership

TURNER FLEISCHER

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CONTEXT & ANALYSIS

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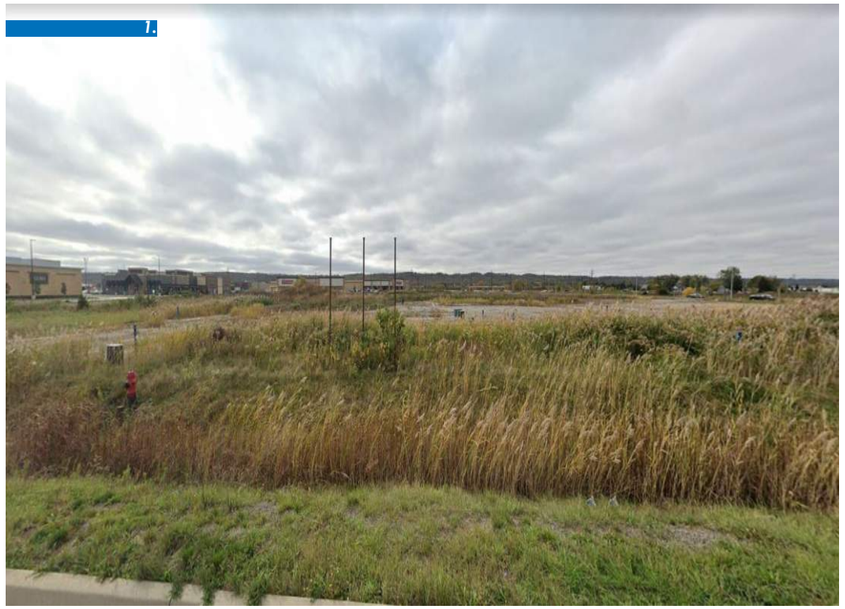
SITE & AREA CONTEXT

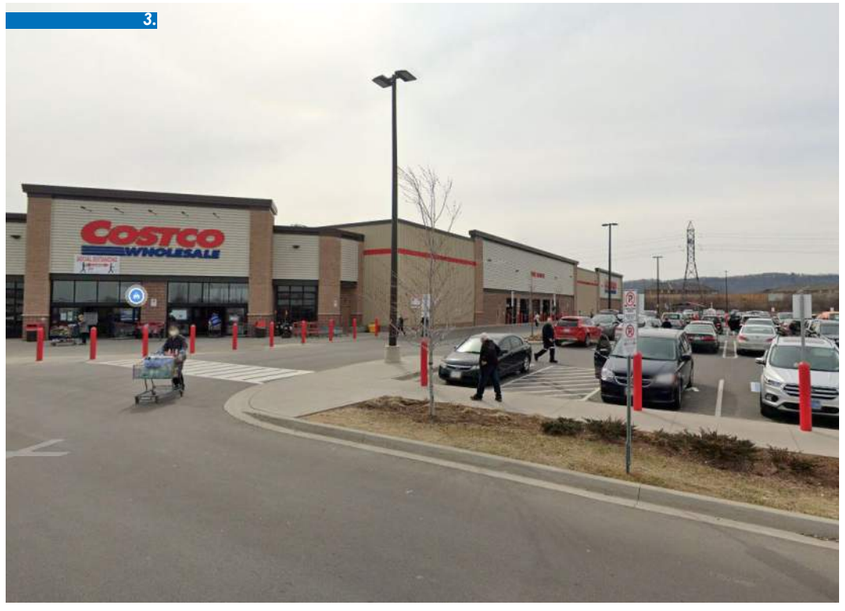
Active/Future Developments

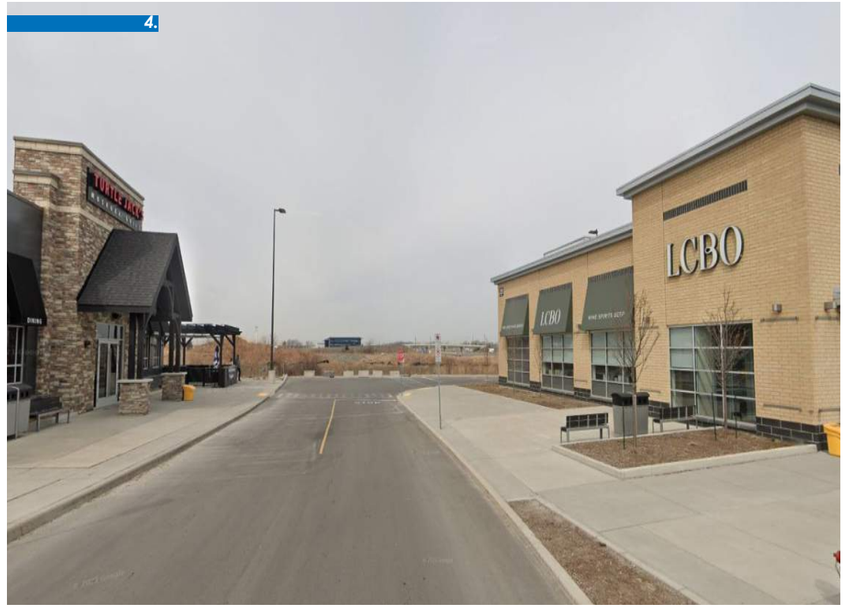
The Subject Site and Proposed Development are located at the southeast corner of South Service Road and Vince Mazza Way, just west of the Queen Elizabeth Way and Fifty Road interchange. This is a diverse area with an existing mix of uses and significant recent and proposed development, including:

- 1290 South Service Road – Approved development for twelve 4-storey stacked townhouse blocks & five 3-storey mixed use buildings, total 454 units.
- 1400 South Service Road – Proposed development for four 8- to 16-storey residential buildings, 3-storey office building and two single-storey commercial buildings, total 986 residential units.
- 1288 Baseline Road – Approved development for 60 townhouse units (under construction).
- 1365 & 1367 Baseline Road – Approved development for 3-storey mixed-use building.
- 522 & 526 Winona Road – Proposed development (under appeal to OLT) for four 15- to 24-storey residential buildings and five townhouse blocks, total 1200 units.
- 400 Winona Road – Future residential development proposal in the Pre-Consultation and preliminary planning stage with the City.

CONTEXT & ANALYSIS







SITE PHOTO

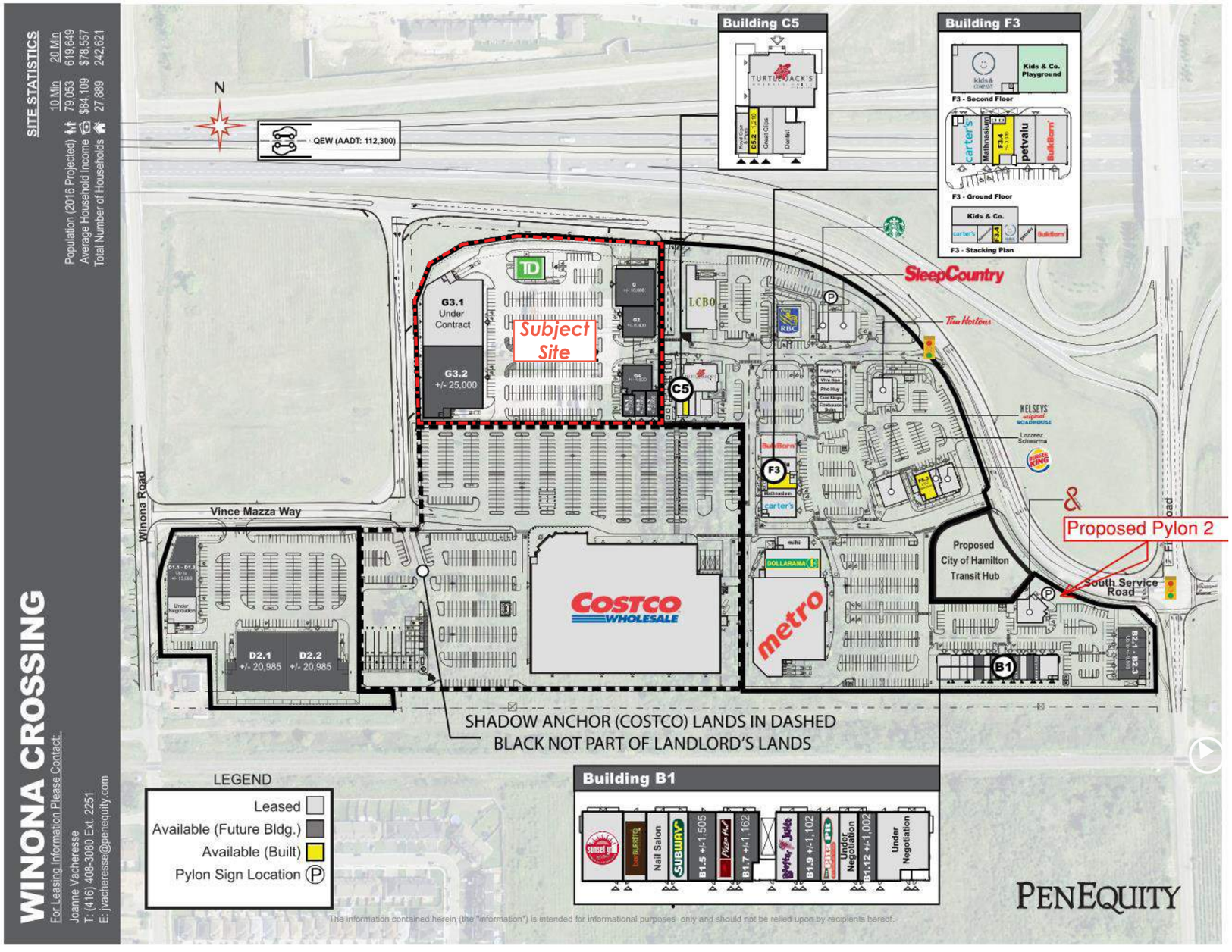
1.View of Subject Site looking southeast from South Service Road.

2.View of Subject Site looking east from Vince Mazza Way.

3.View from the adjacent commercial shopping centre lands looking south towards the existing Costco store.

4. View from the adjacent commercial shopping centre lands looking west towards the Subject Site.

CONTEXT & ANALYSIS

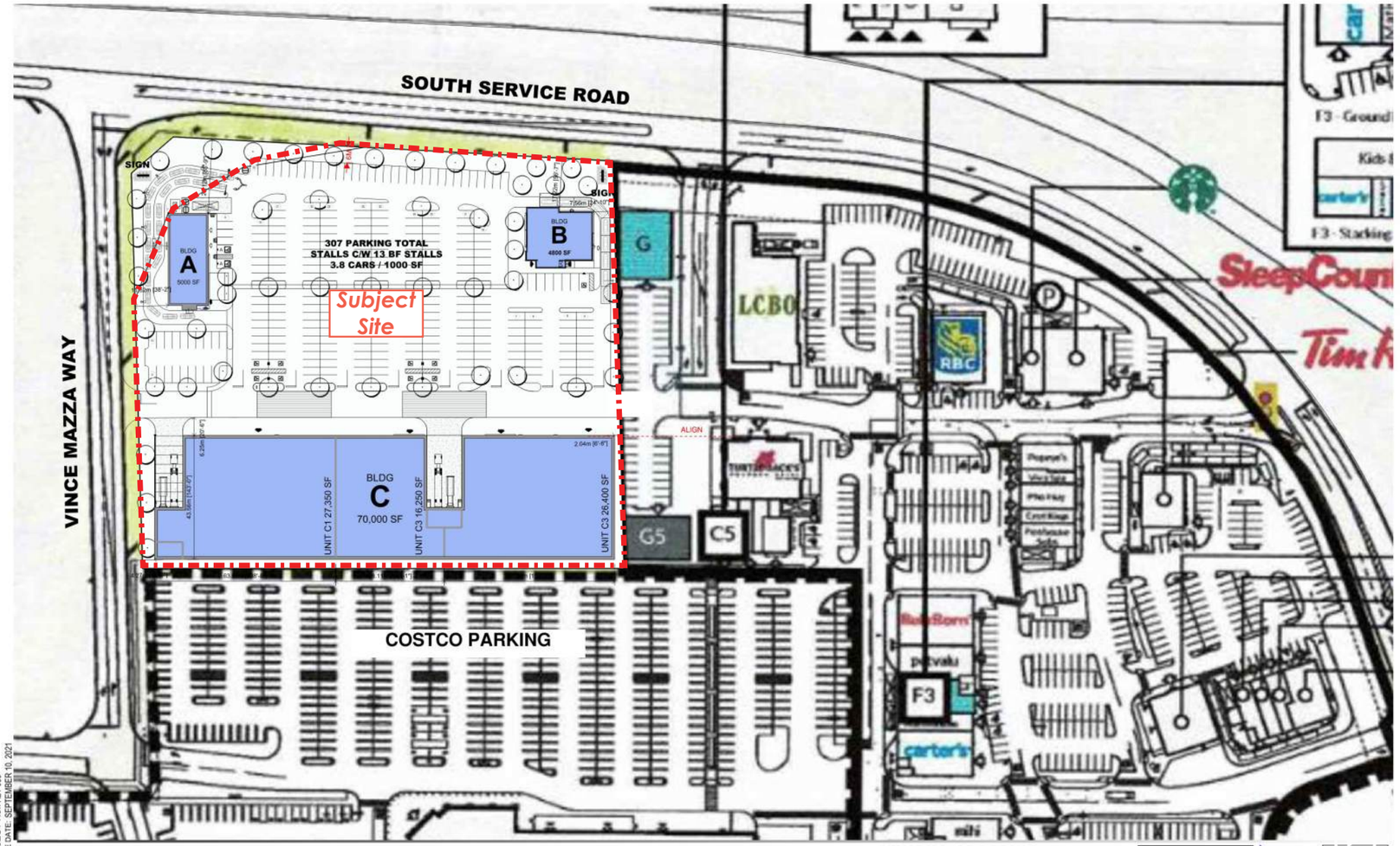


EVOLVING DEVELOPMENT VISION

Original Retail Vision – Owner of Adjacent Shopping Centre

- Subject Site currently designated District Commercial, originally envisioned as expansion of existing retail shopping centre to east.
- Acquisition of Subject Site by traditional shopping centre owner was previously conditionally agreed to, retail owner walked away.
- Subject Site has remained vacant since previous use ceased.
- Existing shopping centre already developed for over 30,000 square metres of floor space, additional 5,000 square metres also planned.
- District Commercial function already achieved with existing development, limited demand or interest shown for additional traditional commercial format in this Site.

CONTEXT & ANALYSIS



PATH: S:\2021\38. A21-038 Stoney Creek - Winona Crossing Development\3.0 - Drawings\3.1 - Design\Site Plan\A-1006.0 - Thunder Bay Site Plan - Commercial\
ISSUED FOR: CLIENT REVIEW
PROJECT No.: A21-038
ISSUE DATE: SEPTEMBER 10, 2021

1.0 REVISION

SITE PLAN
A-100

1:600 (22 X 34) 1:1200 (11 X 17)

PROJECT NORTH TRUE NORTH

WINONA CROSSING
COMMERCIAL DEVELOPMENT
GOLF LINKS ROAD
Closest Major intersection: Vince Mazza Way & South Service Road
Stoney Creek , Ontario, Canada

forum
3027 Harvester Road, Suite 202
Burlington, Ontario L7N 3G7

API CONSULTANTS Inc.

SAI SAPLYS ARCHITECTS

EVOLVING DEVELOPMENT VISION

Original Retail Vision –Current Applicant

CONTEXT & ANALYSIS

EVOLVING DEVELOPMENT VISION

New Mixed-Use Vision

• The Applicant conditionally acquired the Subject Site in 2021, originally contemplated opportunity for expansion of similar form of commercial development, determined not to be viable.

• The Applicant and the broader team drew from their collective expertise and experience with the evolving nature of commercial areas/uses and the transition of many traditional shopping centres into true "Mixed Use Centres" and better, more complete and liveable communities.

• Recognizing the limited demand for new commercial development, the applicant began to consider the opportunity for a more relevant, contemporary vision for the Site given its attributes, location and adjacencies, including proposed residential. The Applicant's new mixed-use, mid-rise, urban vision for the Subject Site includes or involves:

- **Focusing on mid-rise, medium density development,** appropriate for the unique, transitional context of the surrounding area and at a transit-supportive density to support and leverage the planned transit hub.
- **Creating a pedestrian-friendly environment as a top priority,** successfully fitting the Site into the emerging context while facilitating connectivity improvements that support enhanced pedestrian activity.
- **Providing an appropriate mix of uses** that supports/is supported by existing commercial development in the area, while also supplementing this with tailored commercial/institutional activities (e.g. potential daycare, live/work units, etc.).
- **Incorporating abundant landscaping and outdoor amenity** to support residents/visitors, foster an active and engaging environment.

• This new vision was introduced to planning and other City Staff as well as the local Councillor through a series of pre-consultation meetings held over several months prior to making the formal planning submission. Some of the comments and feedback received during the pre-consultation process informed and influenced revisions to the initial concept to form the ultimately submitted proposal for the planning applications.

• The new vision for this Site contemplates a more diverse plan with the introduction of new higher density residential uses into the surrounding area, an abundance of amenities and tailored commercial space, all of which will support and be supported by the existing surrounding commercial uses.

URBAN PLANNING
& DESIGN BRIEF

PLANNING SUMMARY

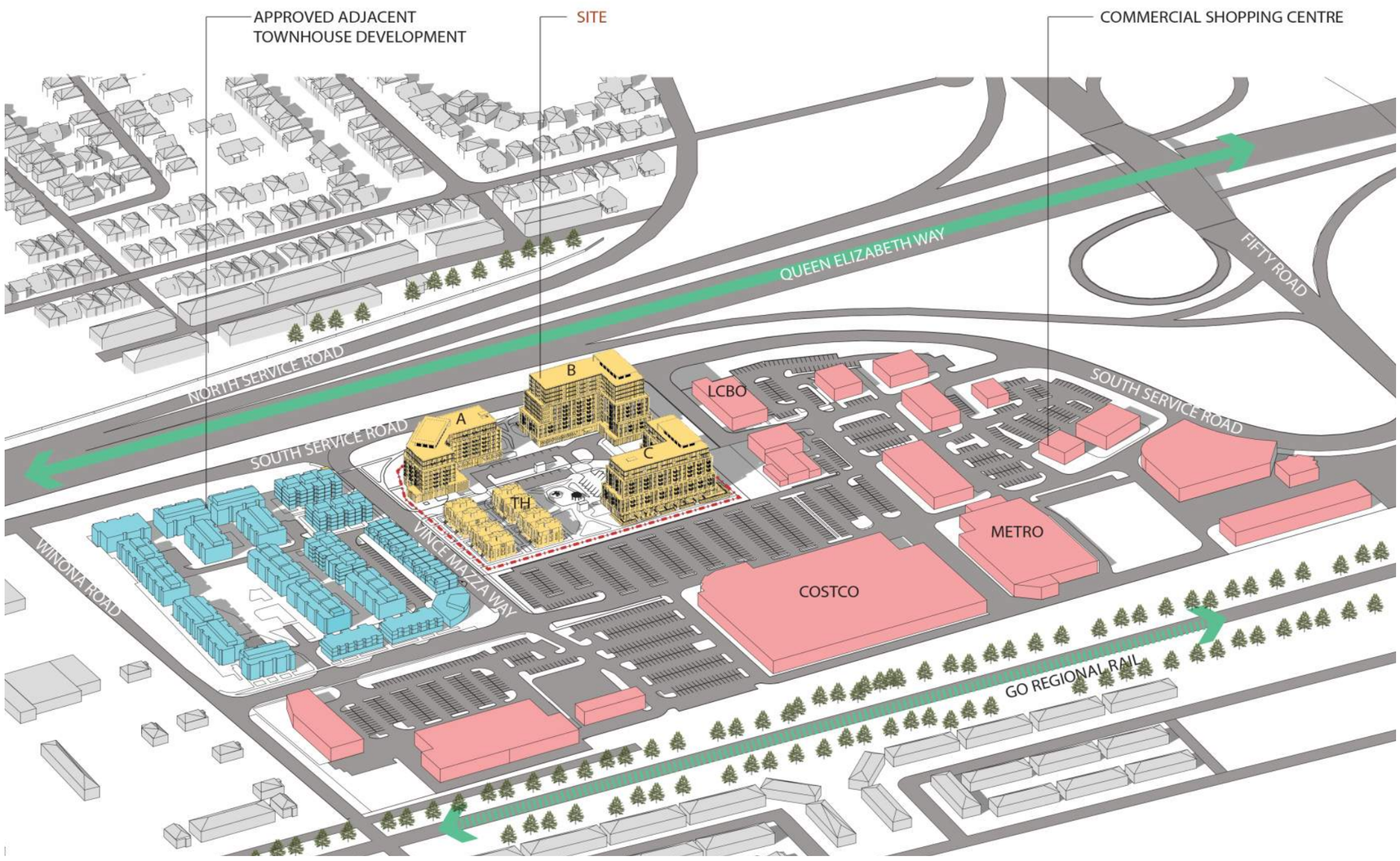
Applications for Official Plan and Zoning By-law Amendment submitted in September.
Site Plan application to be submitted later this year.

Official Plan Designation / Zoning		
	Current	Proposed
Official Plan Designation	District Commercial	Mixed Use – Medium Density
Secondary Plan Designation	District Commercial	District Commercial – with site-specific policies
Zoning	C6 Zone	C6 – with site specific provisions

Zoning Provisions		
	Current	Proposed
Building Setback from Street Line	1.5 metres minimum 14 metres minimum (MTO)	1.3 metres minimum 14 metres minimum (MTO)
Minimum Rear Yard Setback	6.0 metres	4.4 metres
Maximum Height	14 metres	39.2 metres / 12 storeys (following recently adopted OPA)

***Note:** Proposed Development complies with other applicable zoning provisions.

URBAN PLANNING & DESIGN BRIEF



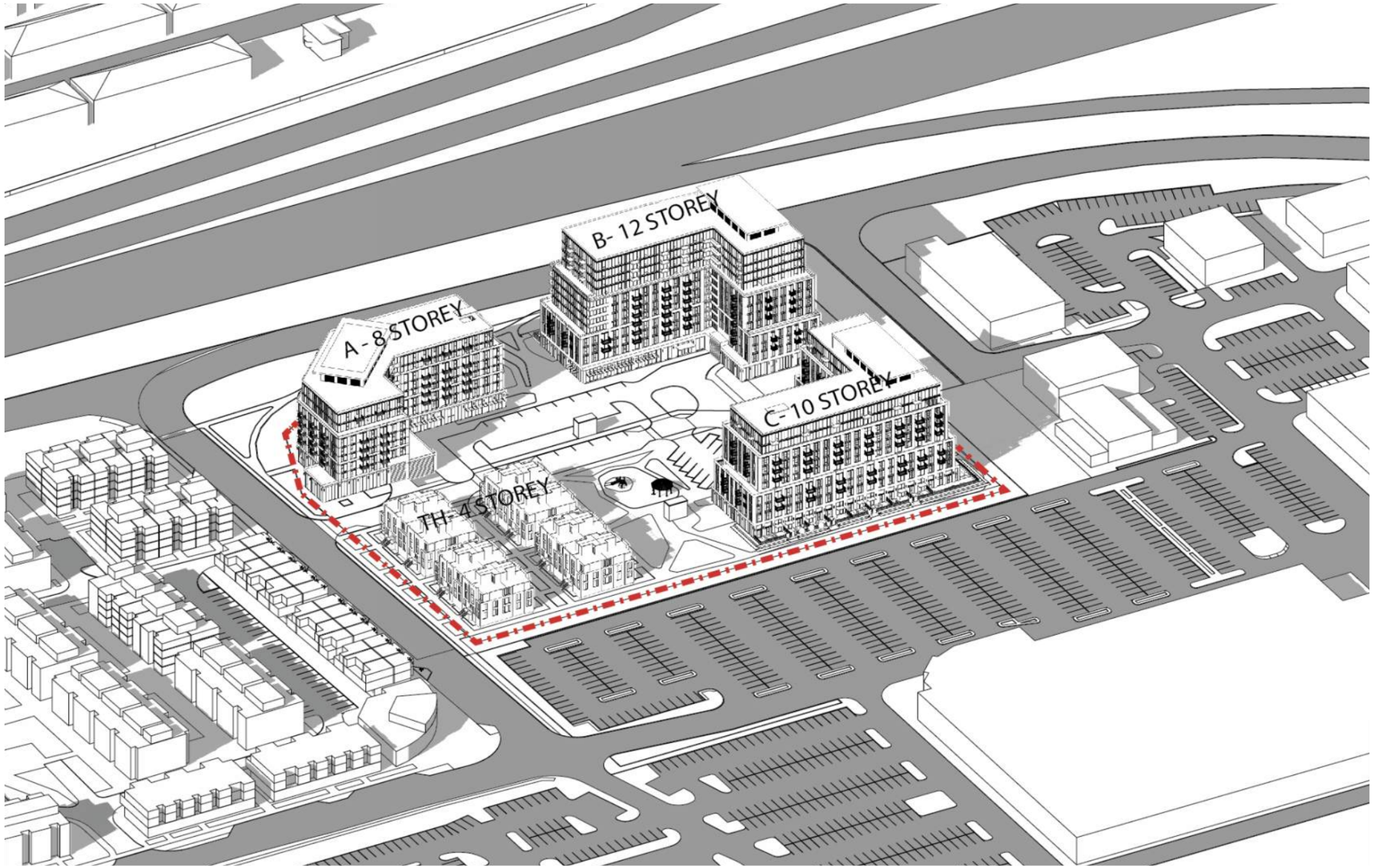
URBAN DESIGN SUMMARY

A primary goal of the Proposed Development is to create a contemporary, compact, interconnected, pedestrian-oriented and transit-supportive mixed-use community that can be successfully integrated into the emerging context of the area, leveraging and supporting a number of positive area attributes, including the planned transit hub and concentration of commercial uses.

This Urban Design Summary will review the key components of the Proposed Development and assess their contribution and ability to successfully achieve this goal.

A more thorough urban design analysis was provided in the Planning & Urban Design Rationale Report submitted as part of the proposed Official Plan and Zoning By-law Amendment applications.

Our team will also highlight and expand upon this urban design vision at the DRP meeting and look forward to an engaging discussion and responding to any of the panel's questions and comments.



BUILT FORM & BUILDING HEIGHT

The Proposed Development includes articulated, mid-rise built forms that consider the existing and planned context as well as the best practices, broader policies and objectives for new development and the evolution of the City and its communities. The Subject Site is ideally located to accommodate mid-rise development, given the immediate proximity to wider, higher order streets and highways, planned transit and active transportation improvements and a large shopping centre. Three mid-rise apartment buildings and stacked townhouse blocks serve to strongly frame Vince Mazza Way and South Service Road, providing distinct urban forms along the street edge, with a variety of active uses at-grade in the form of townhouse-style units, amenity/commercial space, building lobbies and a day care. The townhouse blocks are located facing the approved townhouse development to the west, across Vince Mazza Way, thereby providing a consistent built form interface and relationship.

The City's recently adopted Official Plan Amendment No.167 increases the maximum permitted height in the Medium Density Residential and Mixed-Use Medium Density designations from 8- to 12-storeys, subject to satisfying a number of specific criteria related to unit mix, sustainable design principles, shadow impacts, height transition and massing along streets. This recent policy change provides for an updated framework and encouragement and consideration of a broader range of and scale of the built form options that fall within the "Medium Density" and "Mid Rise" classifications.

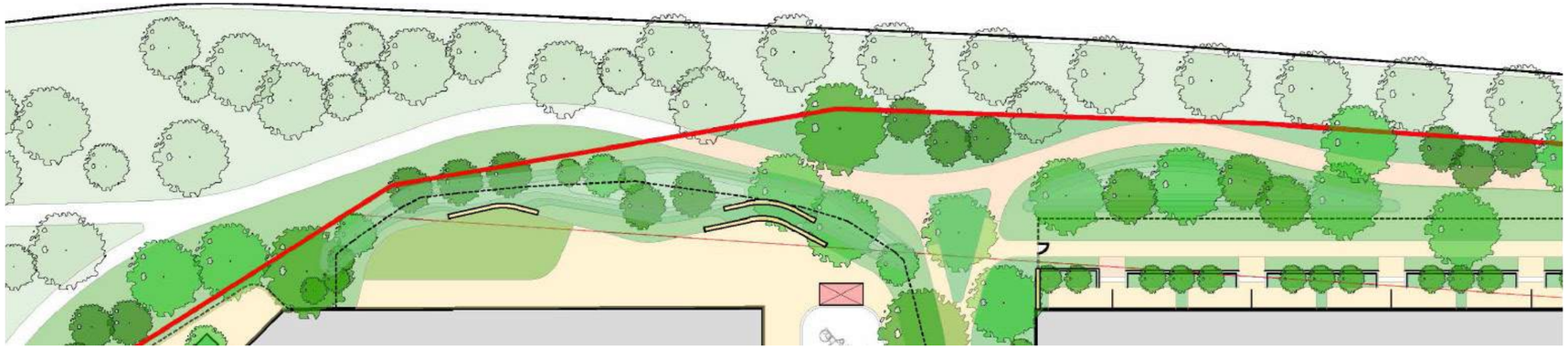
The proposed mid-rise built form is an appropriate and well thought out response to the emerging planning and physical context of the area, which will see the introduction of taller medium and high density residential and mixed-use development, with the Subject Site being served by wide higher-order streets. The proposed 8-, 10- and 12-storey buildings, and the 4 townhouse blocks, have been appropriately deployed and distributed across the Site and carefully and specifically situated in each corner of the Subject Site to best respond to the surrounding context. The 4 townhouse blocks and shorter, 8-storey building are located on the west side of the Site, facing Vince Mazza Way and an approved townhouse development to the west. This provides for a compatible relationship and interface in terms of built form and scale.

The tallest building (Building B), is situated closest to South Service Road, with its wide 34 metre right-of-way, and with the QEW further to the north and commercial development to the east. The majority of shadowing caused by this building is cast on the QEW, with limited impacts on the Site itself or surrounding uses. The 10-storey building is located immediately to the south, bordered by commercial uses to the east and south.

The proposed form of development and mix of different unit types approximately address the various criteria outlined within OPA 167, that permit taller mid-rise buildings up to 12-storeys in height in the medium density designations.

URBAN PLANNING & DESIGN BRIEF

South Service Road Trail



An integral component in the creation of vibrant, liveable and complete communities is the establishment of a pedestrian friendly environment that empowers pedestrians, encourages the use of active transportation and provides safe and inviting spaces for gathering and all types of recreational or social activity. By locating the buildings around the perimeter of the Site in a manner that frames and activates adjacent streets and locating the vast majority of parking underground, a significant proportion of the interior of the Site is opened up and thus made available for large amounts of open space and amenity.

A large central open space is the focus of the vision for this community and outdoor amenity system, located in the centre of the Site, south of the vehicular driveway, which will provide opportunities for both passive and active amenity. This central open space is supplemented and supported by additional more distinct amenity spaces located between buildings A and B, and B and C, where more focused urban amenity areas are provided for residents, with the ability to support spill-out activity from at-grade uses in the adjacent buildings. At the north end of the Site, a landscaped pedestrian trail is proposed within the 14 metre MTO setback, providing a continuation of the trail proposed to the west of Vince Mazza Way. Collectively, these open spaces and amenity areas will provide a diverse range of outdoor amenity options to residents and visitors, which is not typically found in other newer planned developments.

These open spaces and outdoor amenity areas are supported by a robust and well-connected pedestrian network which includes on-site sidewalks/walkways and numerous off-site connections. A walking loop extends around the entirety of the exterior of the Site, with various amenities dispersed along the way and at key access points to surrounding areas. The loop will offer both residents and visitors a pedestrian-only walking route for the purposes of travel, recreation, fitness or social interaction, thereby further enhancing livability and quality of life as well as increasing pedestrian connectivity throughout the Site and with surrounding areas.

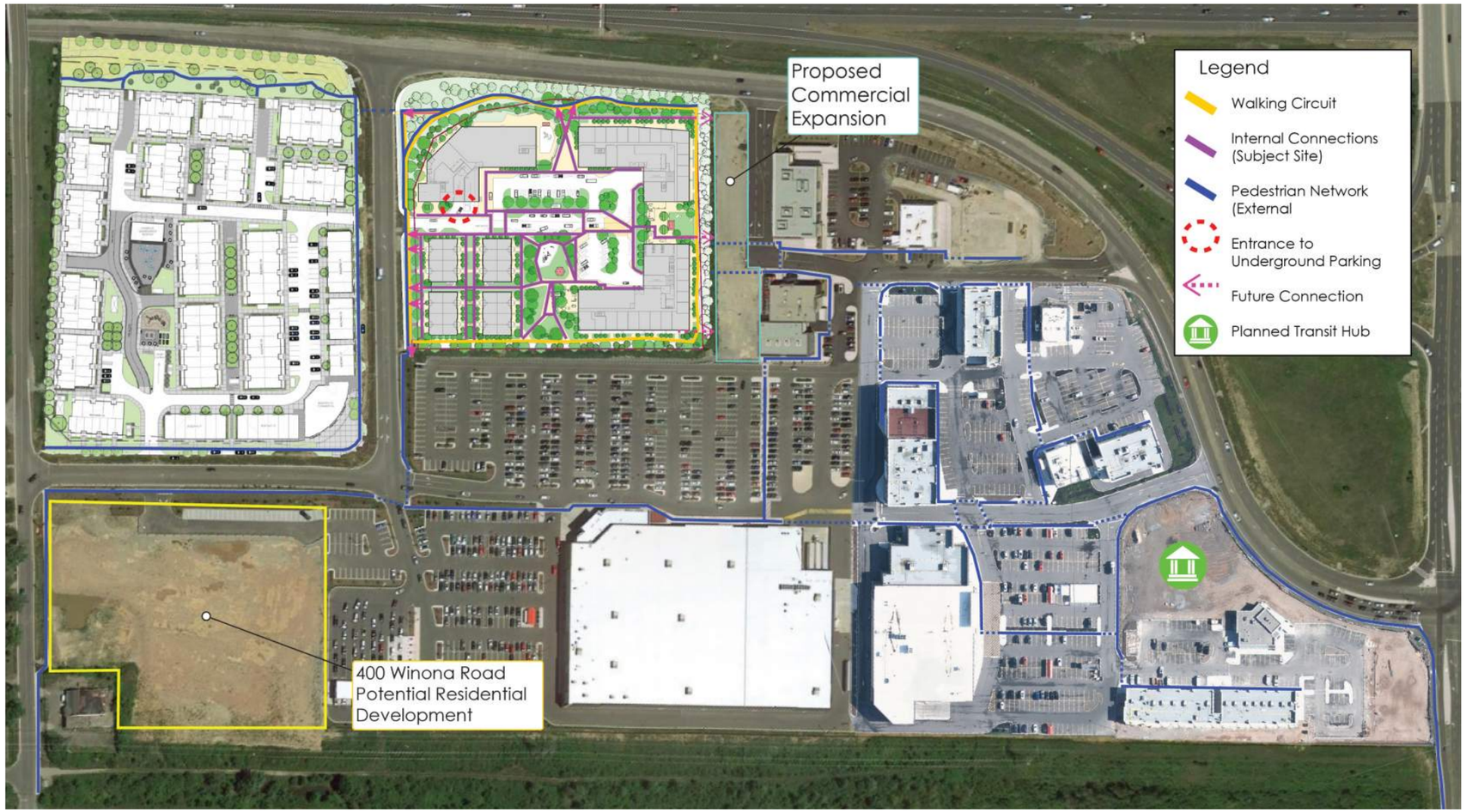
In addition to this extensive outdoor amenity program, the Proposed Development will also incorporate other landscaped elements in proximity to buildings, roadways and pedestrian connections to provide for an enhanced pedestrian environment. Trees will be planted along the interior driveways, which will provide further separation between vehicular paths of travel and open space areas, and will improve the pedestrian experience. Trees and other landscaping will also be planted around the boundary of the Subject Site, which will create noise buffering and separation from the vehicle dominated space of the adjacent parking lots and provide for a softer interface. Patio areas for ground floor units will be tastefully landscaped to provide for a well-manicured aesthetic and new trees along South Service Road and Vince Mazza Way will significantly enhance the streetscape condition.

The inclusion of significant common indoor amenity areas or rooms within each of the mid-rise buildings will, in tandem with the significant landscape and outdoor amenity elements, further enhance the liveability of this community. Many of these amenity areas or rooms are located adjacent to and continuous with outdoor amenity areas, which elevates the useability and desirability of each space throughout the seasons. With higher density developments, these indoor amenity areas are important to add to the functionality of residents own, somewhat compact living spaces. Some of the challenges of living and working at home during COVID-19 have further reinforced this need. Amenity not only takes the form of interior space for leisure, socialization and recreation, but also other spaces and uses in the area, such as institutions, community and commercial spaces and uses contribute to the completeness and liveability for residents.

For example, a day care is not only a very active use, it also represents an important community, social and economic building block by providing a use that helps individuals and families in their day to day lives, fosters social interactions and friendships, creates jobs and supports the local economy.

LANDSCAPE & AMENITY

Central Square



ACCESS & CIRCULATION

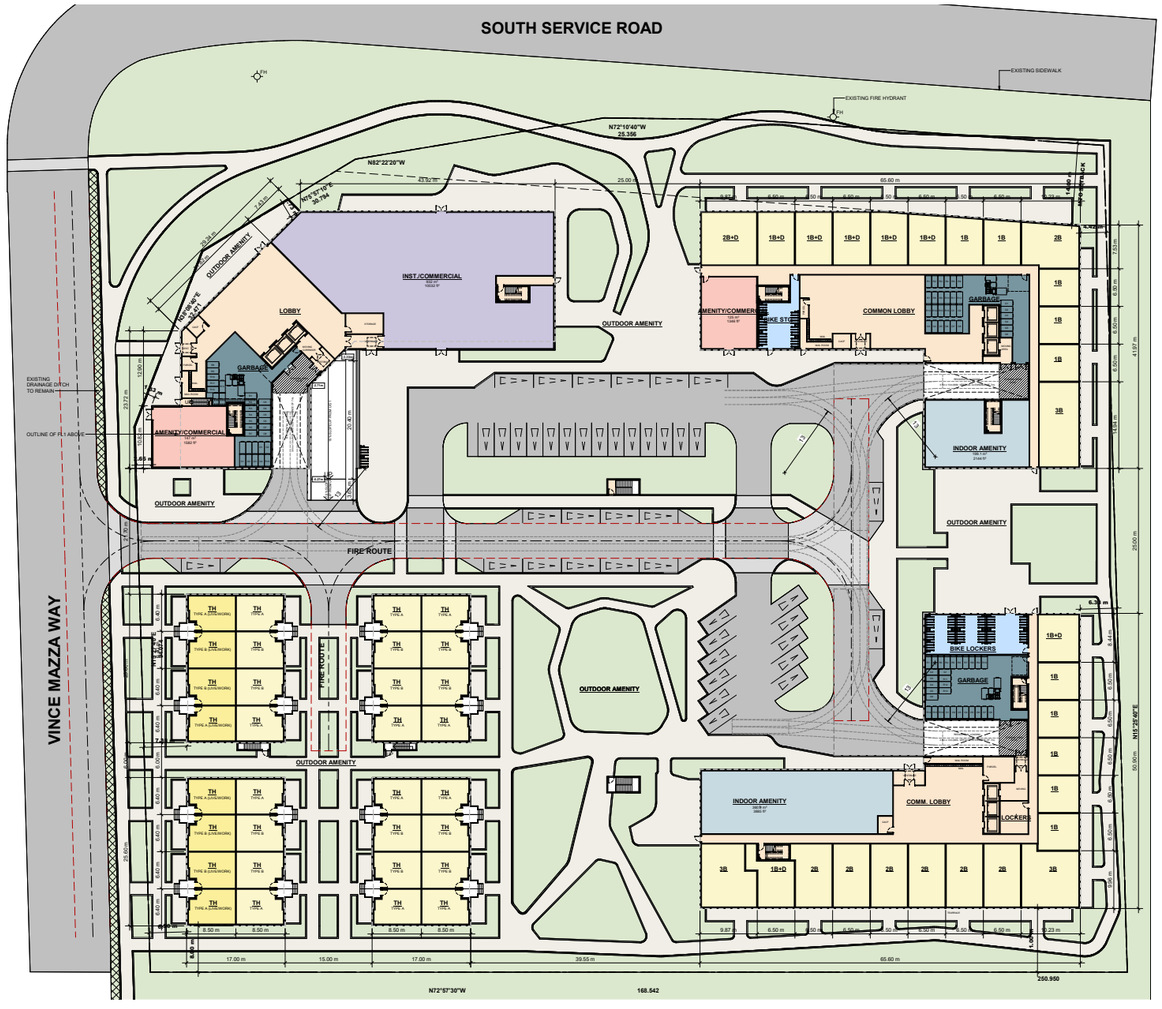
Access and Circulation

Pedestrian safety and connectivity have been one of the primary considerations in designing access to and circulation within the Subject Site. The Proposed Development will provide an extensive pedestrian circulation and amenity network to and through the Subject Site. Wide sidewalks and other walkways will provide easy pedestrian access to all buildings and areas on the Subject Site. Multiple, direct pedestrian connections are provided to new sidewalks that will be constructed along each of Vince Mazza Way and South Service Road, with a future connection also proposed to the commercial plaza to the east and a landscaped pedestrian trail proposed along South Service Road, providing a continuation of the proposed trail in the approved townhouse development to the west. This will facilitate a more localized, safe, convenient, accessible and pedestrian-friendly lifestyle. This expansive pedestrian network will be supported by the various outdoor amenity areas and features noted above, and the higher density form of development which will help create a critical mass of residents and visitors, and incorporates active uses at-grade and residential uses above with views in all directions on and around the Subject Site.

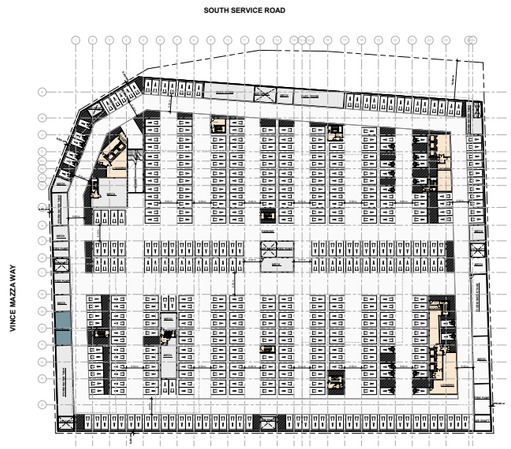
Views and Vistas

The Subject Site is ideally located adjacent to the QEW and existing commercial development, ensuring that no negative impacts will be created for proximate residential neighbourhoods and uses. The Subject Site has also been situated such that any visual impacts on views of the Niagara Escarpment or Lake Ontario from existing neighbourhood areas would be very minimal, given the separation from these features and large noise walls that exist along the QEW, within the residential neighbourhood to the north.
Notwithstanding this, the various buildings have been carefully scaled, distributed and situated around the Subject Site, providing ample transition and separation between buildings and allowing for an abundance of green space. The distribution of the different buildings and inclusion of stepbacks maintains ample sky view and minimizes any potential view obstructions. This also allows for the creation of a north to south view corridor in between the buildings to maintain the important near-area vistas to both the Escarpment and Lake Ontario.

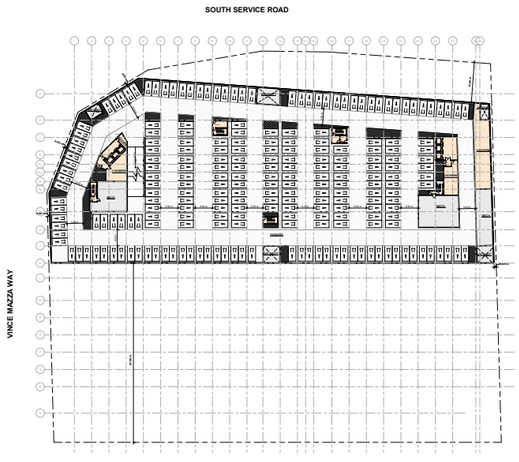
URBAN PLANNING & DESIGN BRIEF



Ground Floor Plan



Underground Level 1



Underground Level 2

PARKING & LOADING

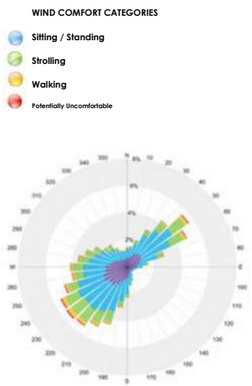
Vehicle use and deliveries will be necessary to serve and support the various uses and residents of the Proposed Development and therefore appropriate parking and loading facilities must be provided to accommodate these needs. However, these features should be carefully designed and programmed in order to prioritize a safe and inviting pedestrian environment and the visual amenity of the community. The Proposed Development will provide nearly all vehicular parking (over 650 spaces) underground, with one central garage access point provided close to the Vince Mazza Way site entrance under Building A. This will limit the amount of vehicles encroaching and driving into and through the Subject Site.

The Proposed Development provides a generous amount of bicycle parking on-site with a total of 195 included spaces. The intent of providing more bicycle parking than what is required is to follow current best practices, increase the liveability and prepare the Proposed Development for the anticipated investment of the City into active transportation infrastructure in the local and surrounding area.

The Proposed Development will include three loading areas, one serving each of Buildings A, B and C. All three loading areas will be appropriately tucked within buildings and located internal to the Subject Site and away from outdoor amenity areas, green spaces and the pedestrian system. The locations of the three loading areas also remove them from view from the public streets.

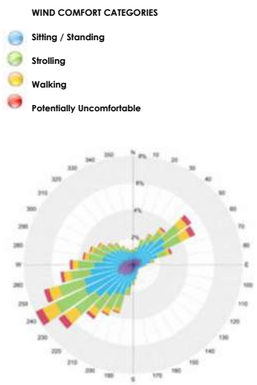
Shadow Studies

Predicted wind conditions at grade - Summer



Summer Wind Rose

Predicted wind conditions at grade - Winter



Winter Wind Rose

Pedestrian Wind Study

ASSESSING POTENTIAL IMPACTS

The distribution of the different buildings and inclusion of stepbacks mitigates shadow impacts on the Site itself and on adjacent sites. On-site amenity areas will receive minimal shadowing, with large parts of the exterior walking loop remaining out of shadows for most the day, including the central square being largely free of shadows from the late morning to evening. The area north of the Subject Site will receive the longest exposure to the Proposed Development's shadow, however this area is occupied by the QEW and therefore will not be negatively impacted. Moreover, existing residential neighbourhoods to the north are sufficiently separated from the Subject Site such that there will be no new shadowing created. This separation also ensures that there will be no privacy-related concerns caused by overlook conditions for these neighbourhoods.

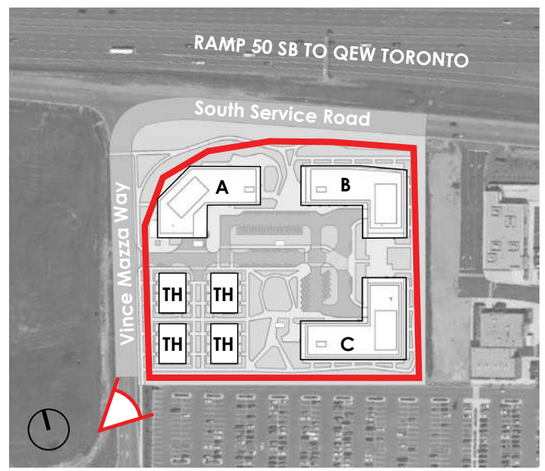
Wind impacts on the Site and surrounding areas are anticipated to be minimal, with wind conditions expected to be suitable for standing/strolling in the summer and walking in the winter, except in the southeast corner of the Site. These conditions reflect the inclusion of a number of wind responsive features for the proposed building and site design, such as the stepped massing of the mid-rise buildings. Additional mitigation measures to further improve wind conditions that will be explored in further detail at the Site Plan stage include canopies and wind screens.

PERSPECTIVE VIEWS

PERSPECTIVE VIEWS

AERIAL VIEW

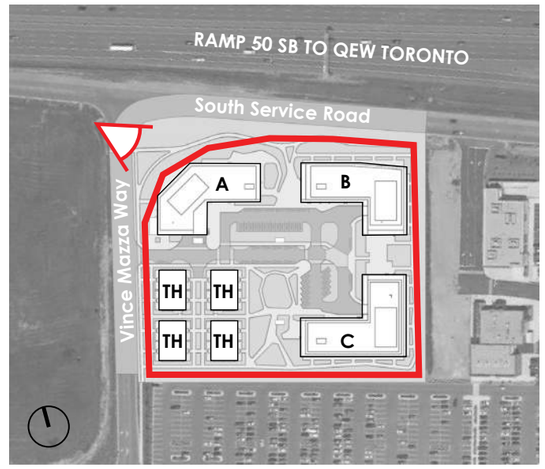
Aerial View looking Northeast.



PERSPECTIVE VIEWS

STREET VIEW

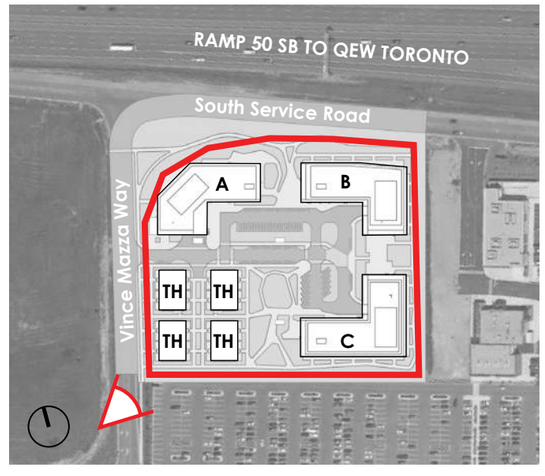
Street View looking Southeast towards Building A from South Service Road.



PERSPECTIVE VIEWS

STREET VIEW

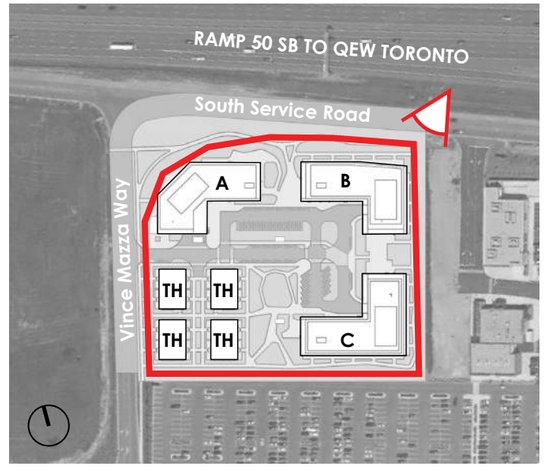
Street View looking Northeast towards Townhouses from Vince Mazza Way.



PERSPECTIVE VIEWS

STREET VIEW

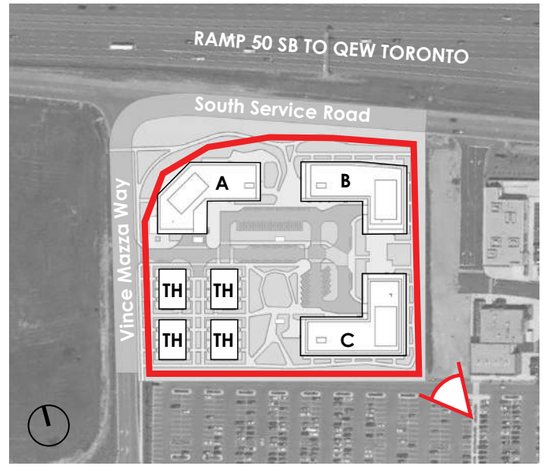
Street View looking Southwest towards Building B.



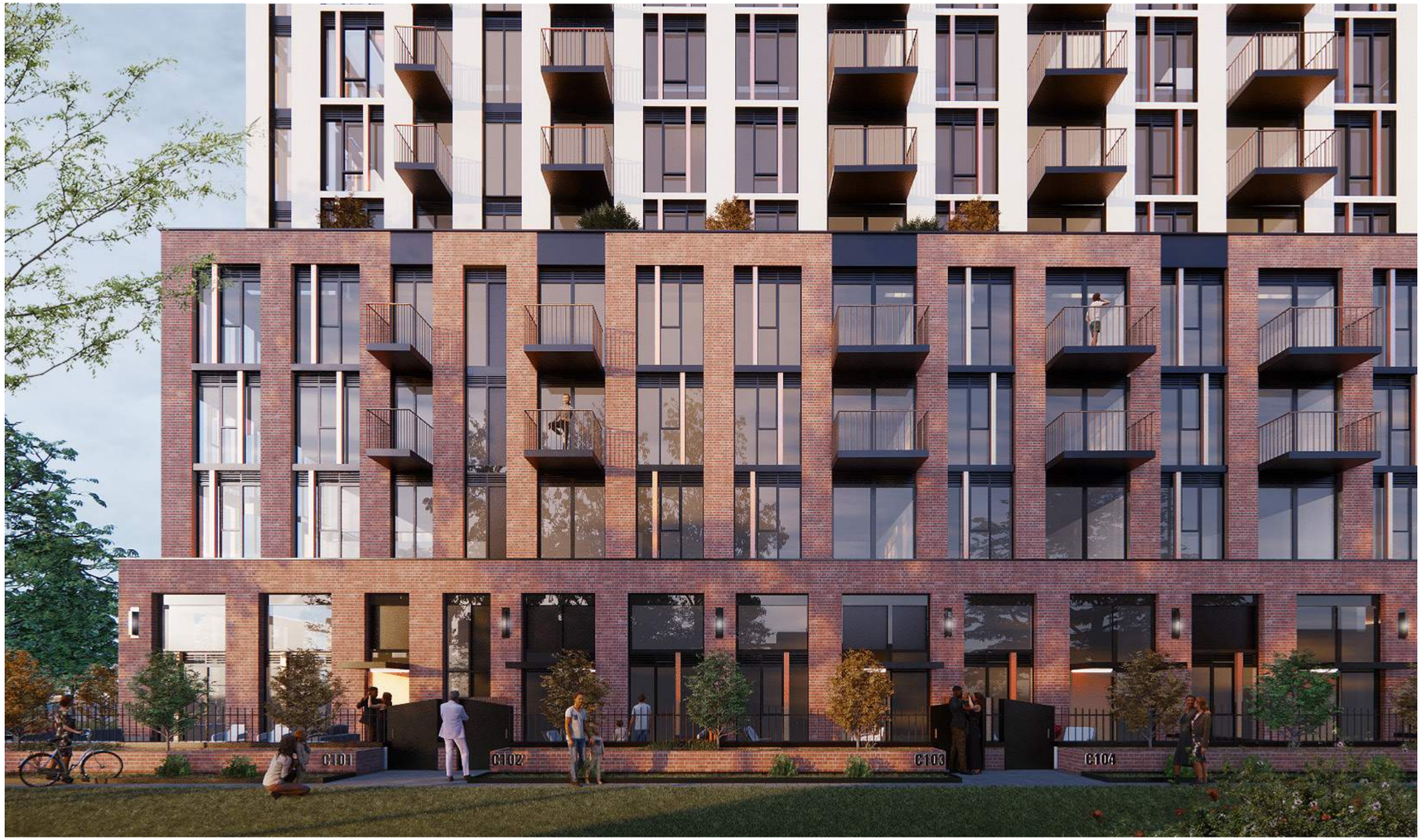
PERSPECTIVE VIEWS

STREET VIEW

Street View looking Northwest towards Building C from retail parking lot.

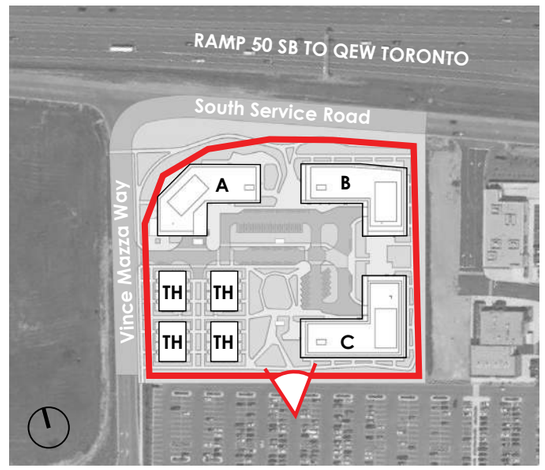


PERSPECTIVE VIEWS



STREET VIEW

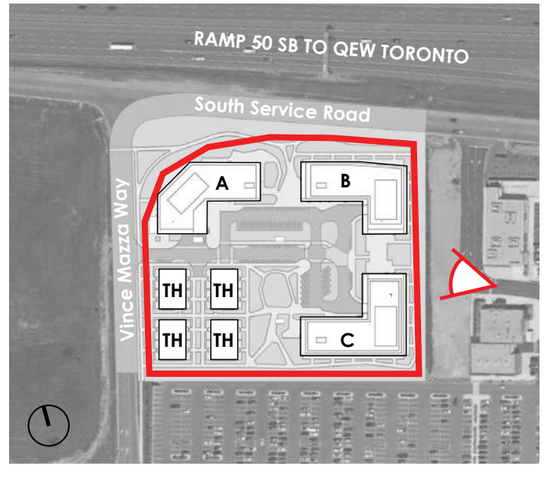
Street View looking North towards at-grade townhouse-style units in Building C.



PERSPECTIVE VIEWS

STREET VIEW

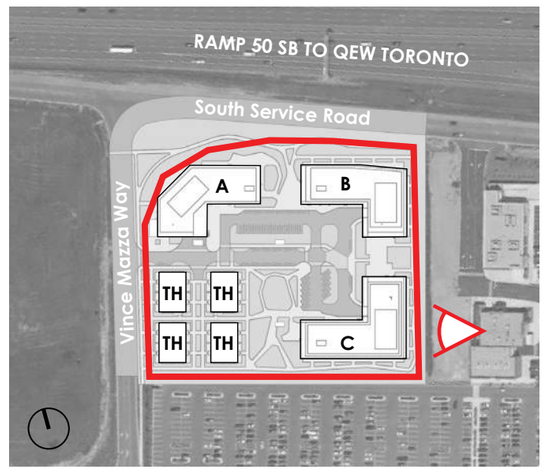
Street View looking West towards at-grade townhouse-style units in Building C.



PERSPECTIVE VIEWS

STREET VIEW

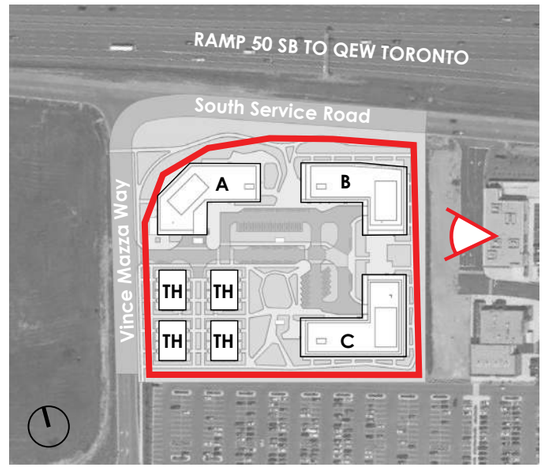
Street View looking West towards at-grade townhouse-style units in Building C.



PERSPECTIVE VIEWS

STREET VIEW

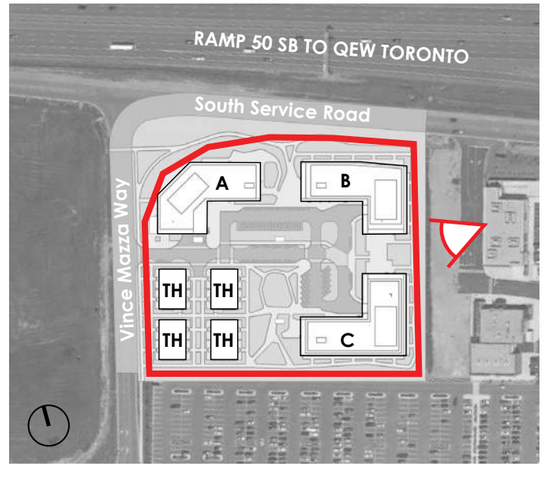
Street View looking West towards at-grade townhouse style units in Building B.



PERSPECTIVE VIEWS

STREET VIEW

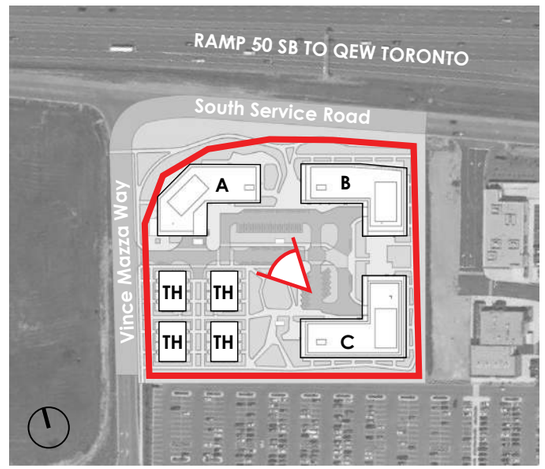
Street View looking West towards at-grade townhouse style units in Building B.



PERSPECTIVE VIEWS

BUILDING A

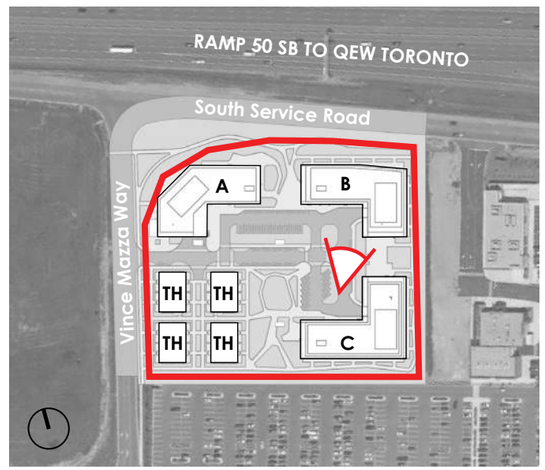
Street View looking Northwest towards Building A.



PERSPECTIVE VIEWS

BUILDING B

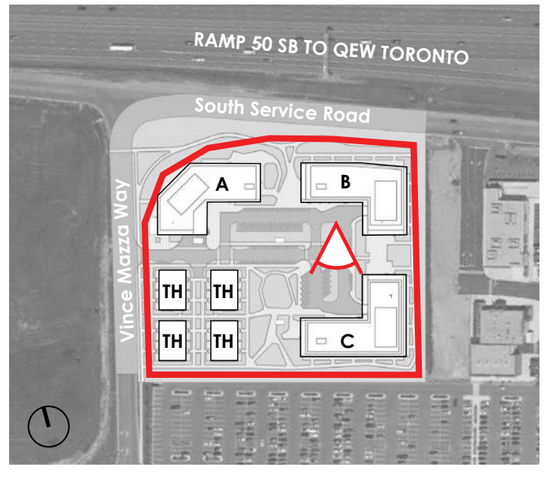
Street View looking Northeast towards Building B.



PERSPECTIVE VIEWS

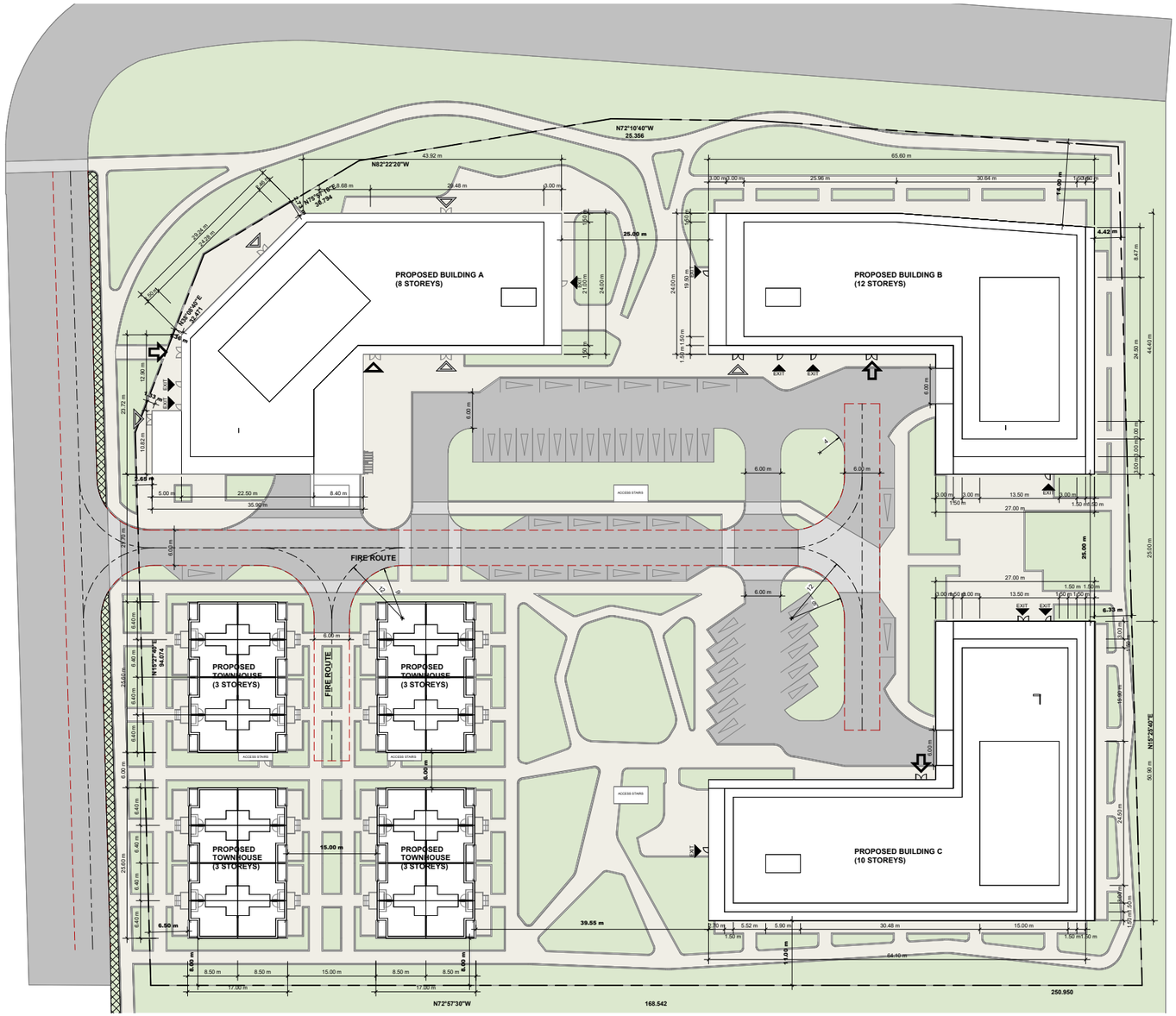
BUILDING C

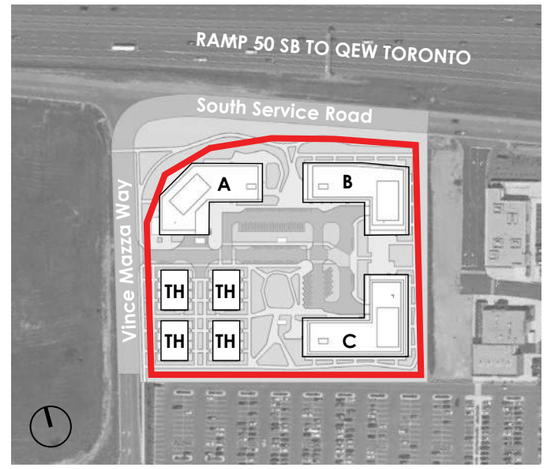
Street View looking South towards Building C.



SITE PLAN

DRAWINGS





0 5 10 m 20 m 50 m

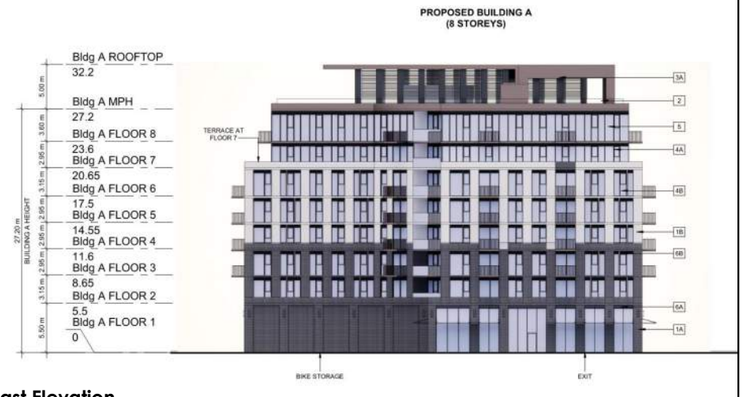
SITE PLAN / ROOF PLAN

- Primary Residential Entrance
- Secondary Residential Entrance
- Retail Entrance
- Exit

ELEVATIONS

DRAWINGS

North Elevation



East Elevation

South Elevation

West Elevation

0 5 10 m 20 m 50 m

BUILDING A ELEVATIONS

1A. Masonry / Precast Panel - *Dark Brown*

1B. Masonry / Precast Panel - *Light Brown*

1C. Masonry / Precast Panel - *Grey*

2. Precast / Metal Panel - *White*

3A. Precast / Metal Panel - *Metallic Grey*

3B. Precast / Metal Panel - *Metallic Copper*

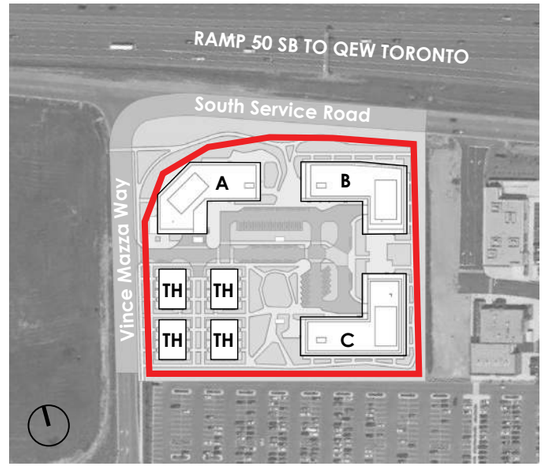
4A. Mullions - *Metallic Bronze*

4B. Mullions - *Black*

5. Clear Glazing

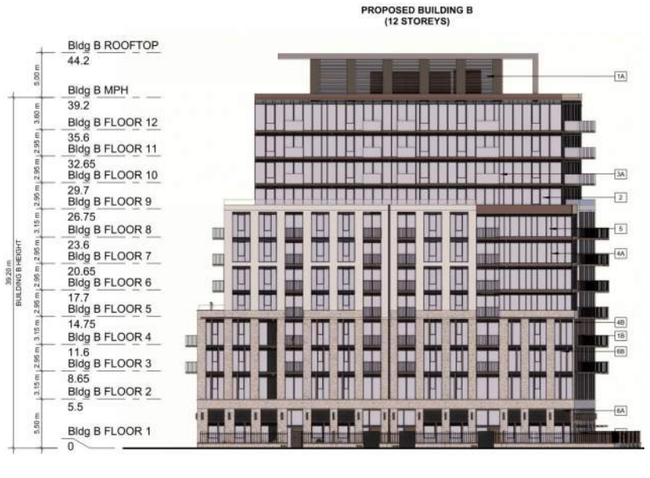
6A. Spandrel Glass - *Metallic Bronze*

6A. Spandrel Glass - *Grey*



DRAWINGS

North Elevation



East Elevation

South Elevation

West Elevation

0 5 10 m 20 m 50 m

BUILDING B ELEVATIONS

1A. Masonry / Precast Panel - *Dark Brown*

1B. Masonry / Precast Panel - *Light Brown*

1C. Masonry / Precast Panel - *Grey*

2. Precast / Metal Panel - *White*

3A. Precast / Metal Panel - *Metallic Grey*

3B. Precast / Metal Panel - *Metallic Copper*

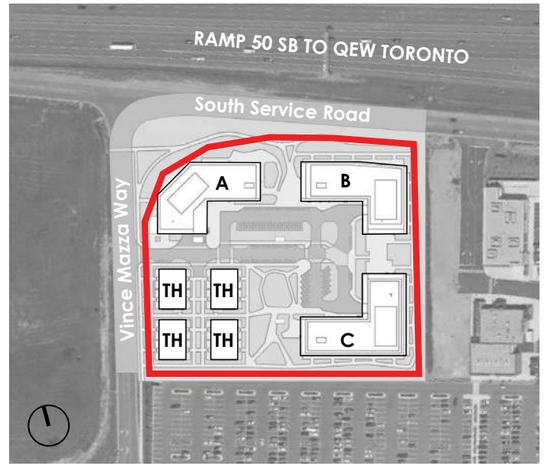
4A. Mullions - *Metallic Bronze*

4B. Mullions - *Black*

5. Clear Glazing

6A. Spandrel Glass - *Metallic Bronze*

6A. Spandrel Glass - *Grey*



DRAWINGS

North Elevation

East Elevation

South Elevation

West Elevation

0 5 10 m 20 m 50 m

BUILDING C ELEVATIONS

1A. Masonry / Precast Panel - *Dark Brown*

1B. Masonry / Precast Panel - *Light Brown*

1C. Masonry / Precast Panel - *Grey*

2. Precast / Metal Panel - *White*

3A. Precast / Metal Panel - *Metallic Grey*

3B. Precast / Metal Panel - *Metallic Copper*

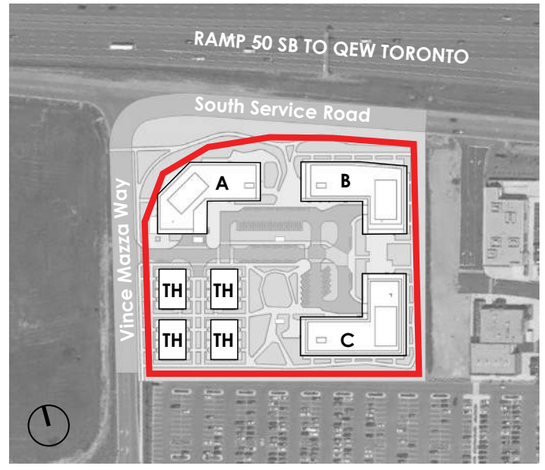
4A. Mullions - *Metallic Bronze*

4B. Mullions - *Black*

5. Clear Glazing

6A. Spandrel Glass - *Metallic Bronze*

6A. Spandrel Glass - *Grey*



DRAWINGS

North Elevation

East Elevation

South Elevation

West Elevation

0 5 10 m 20 m 50 m

TOWNHOUSE ELEVATIONS

1A. Masonry / Precast Panel - *Dark Brown*

1B. Masonry / Precast Panel - *Light Brown*

1C. Masonry / Precast Panel - *Grey*

2. Precast / Metal Panel - *White*

3A. Precast / Metal Panel - *Metallic Grey*

3B. Precast / Metal Panel - *Metallic Copper*

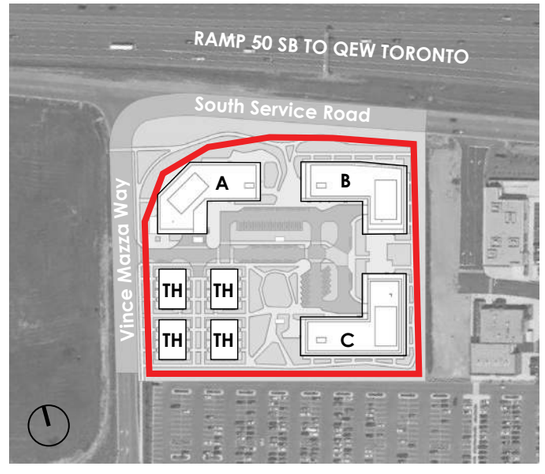
4A. Mullions - *Metallic Bronze*

4B. Mullions - *Black*

5. Clear Glazing

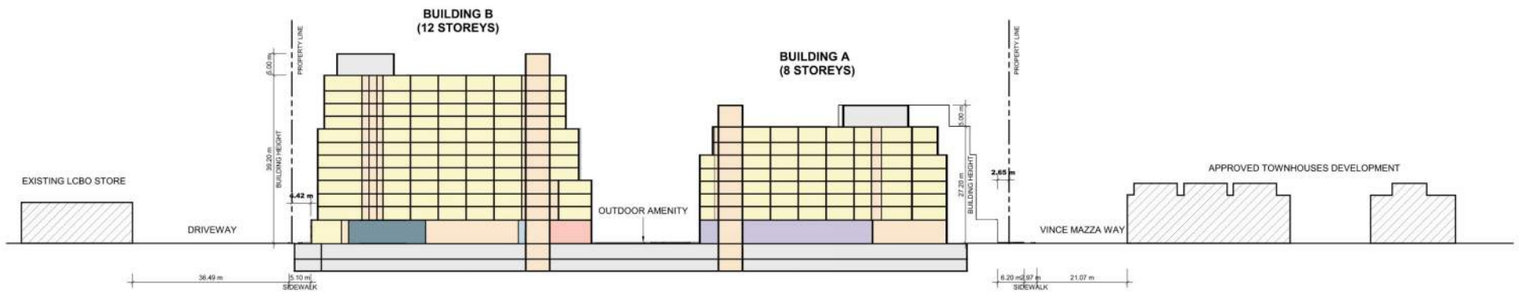
6A. Spandrel Glass - *Metallic Bronze*

6A. Spandrel Glass - *Grey*

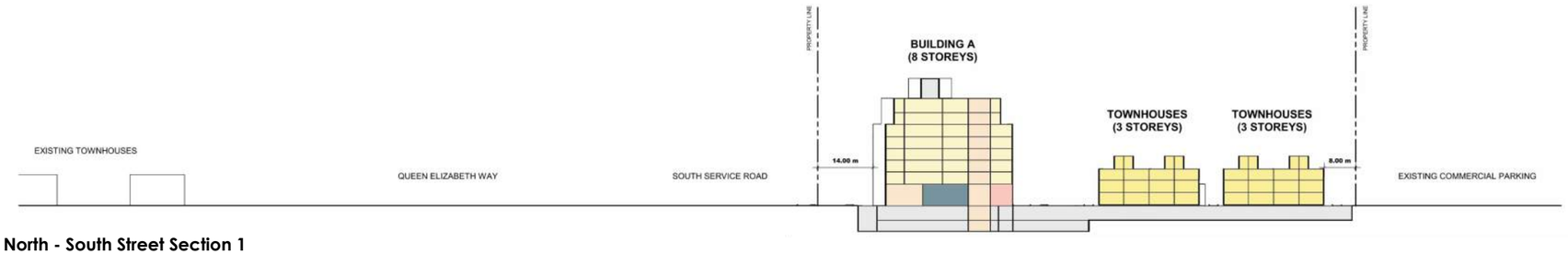


SECTIONS

DRAWINGS



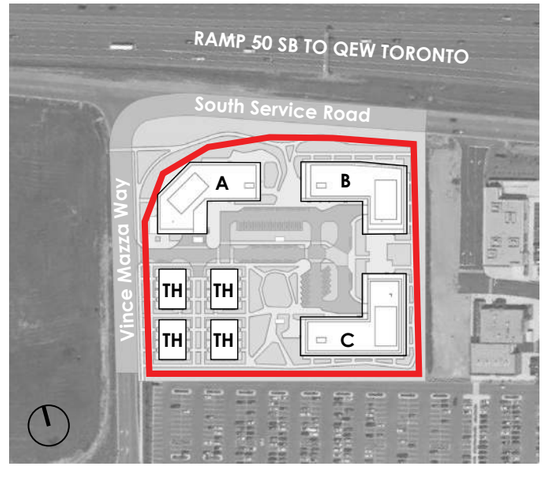
East - West Street Section 1



North - South Street Section 1

SITE SECTIONS

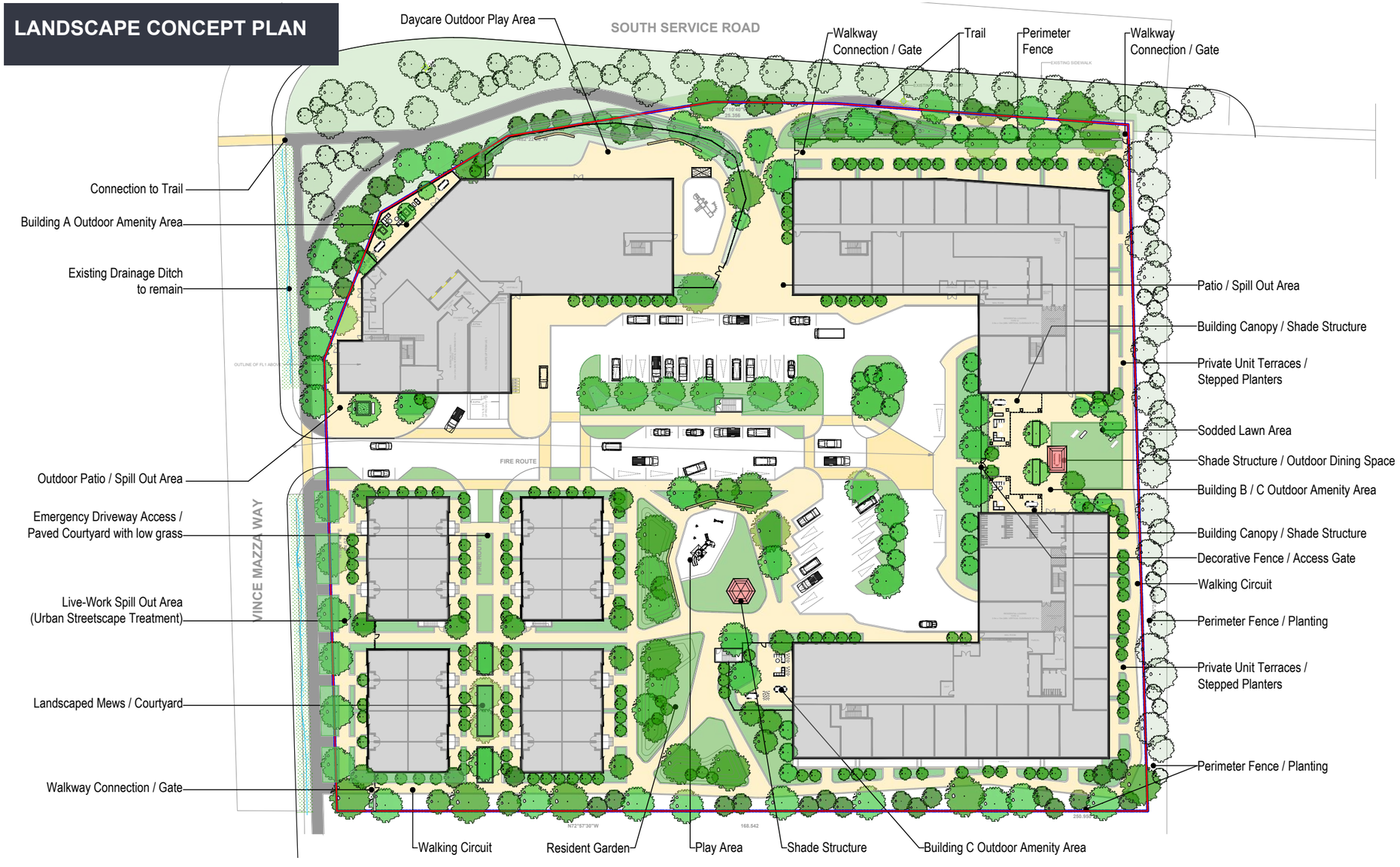
- Commercial/Amenity
- Instiutional / Commercial (Potential Daycare)
- Garbage
- Bike Storage
- Residential
- Residential (Live/Work)
- Lobby
- Amenity
- Landscaped Area and/or Outdoor Amenity



LANDSCAPE PLAN

LANDSCAPE PLAN

LANDSCAPE CONCEPT PLAN



LANDSCAPE PLAN

VINCE MAZZA WAY

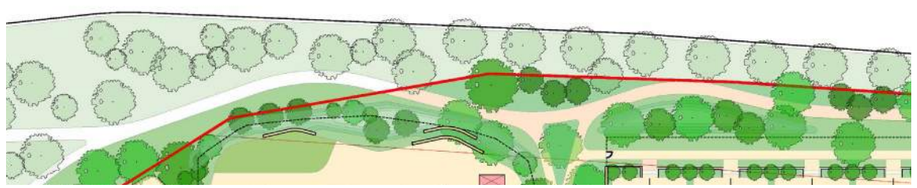
Front yards may include a combination of landscaping elements to create a transition from public to private areas. The design of this landscaped zone should reinforce the ground floor uses along this frontage (residential, live-work and/or commercial).

Elevated front entrances may be appropriate in residential conditions where privacy is more desirable, whereas at-grade front entrances may be more appropriate where non-residential conditions occur.

SOUTH SERVICE ROAD

The ‘public’ portion of the trail will blend seamlessly with the ‘private’ portion of the trail, within a landscape that has amenities such as benches and plantings, including diverse species of canopy trees and native shrubs.

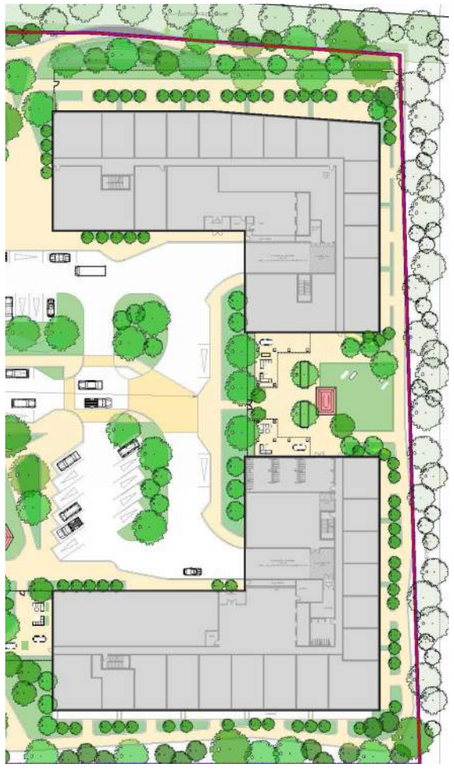
The form of fencing (style, height, materials) and location of access points (walkway connections / gates) between the front yards of the at-grade residential units and the open space to the north, should be designed in consideration for both privacy and visual permeability (CPTED).



WALKING LOOP

The internal walkway system may be developed as a pedestrian 'loop', with amenities dispersed along the way, and key access points (pedestrian connections / gates) to the surrounding uses and streets.

A continuous 'privacy' fence will be located along the north, south and east limits of the site and, in combination with plantings, be designed to either screen adjacent uses or allow filtered views to/from these areas.



DAYCARE PLAY AREA

The potential daycare outdoor play area may be located along the north side of Building A. In this location, the adjacency of the landscaped area to the north contributes to the visual extent of the space (and functions as part of the 'borrowed' landscape).

Any requirements for separation, screening and/or acoustic attenuation from the public trail and South Service Road may be designed as integral components of the landscape, including landscaped berms, fencing, plantings and play elements. A naturalized landscape theme should be one of the principles of the site development; in this location, there is ample opportunity to implement a naturalized planting strategy in conjunction with these elements.

LANDSCAPE PLAN

CENTRAL SQUARE

The central 'park' area may be designed as a series of outdoor rooms that accommodate a variety of active and passive activities. The focal point for this space is a central lawn area, in which a children's play area and a shade structure / pavilion is situated. Landscaped berms which frame the lawn create a 'sculpted' landscape which also serves as a buffer between private unit entrances and the communal areas, creates informal 'theatre' seating overlooking the space, and provides areas where soils may be mounded to support the planting of larger trees.

Consideration will be given to providing a small pet relief area.

LANDSCAPE MEWS

The internal mews located between the stacked townhouse blocks may be designed as a landscaped courtyard with front doors and front yards that open onto a common landscaped area.

Within the north portion a central grass lawn area allows for open play / gathering while also allowing for emergency vehicles to access the units. Beyond the emergency access, the south portion of the mews may incorporate raised planting areas that include small trees, shrubs and perennials.

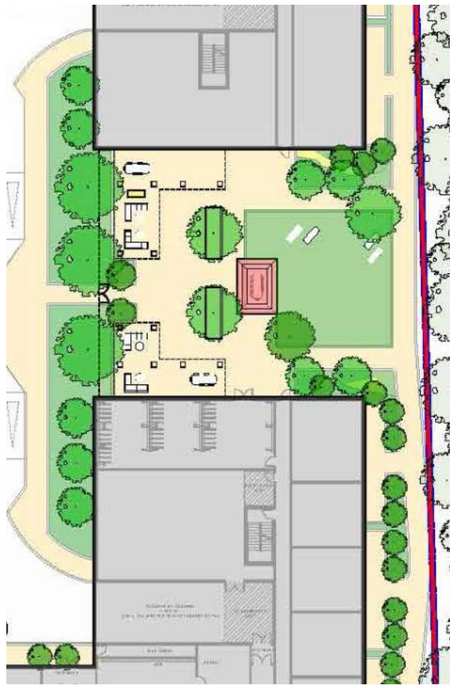
LANDSCAPE PLAN

SOUTH AMENITY SPACE

The Building C outdoor amenity area is an extension of the interior party room and may contain landscaping, seating and dining areas as well as a small lawn area for activities / events. The amenity area will defined with fencing and plantings carefully arranged to create a landscaped transition from the secure amenity area to the surrounding open space areas.

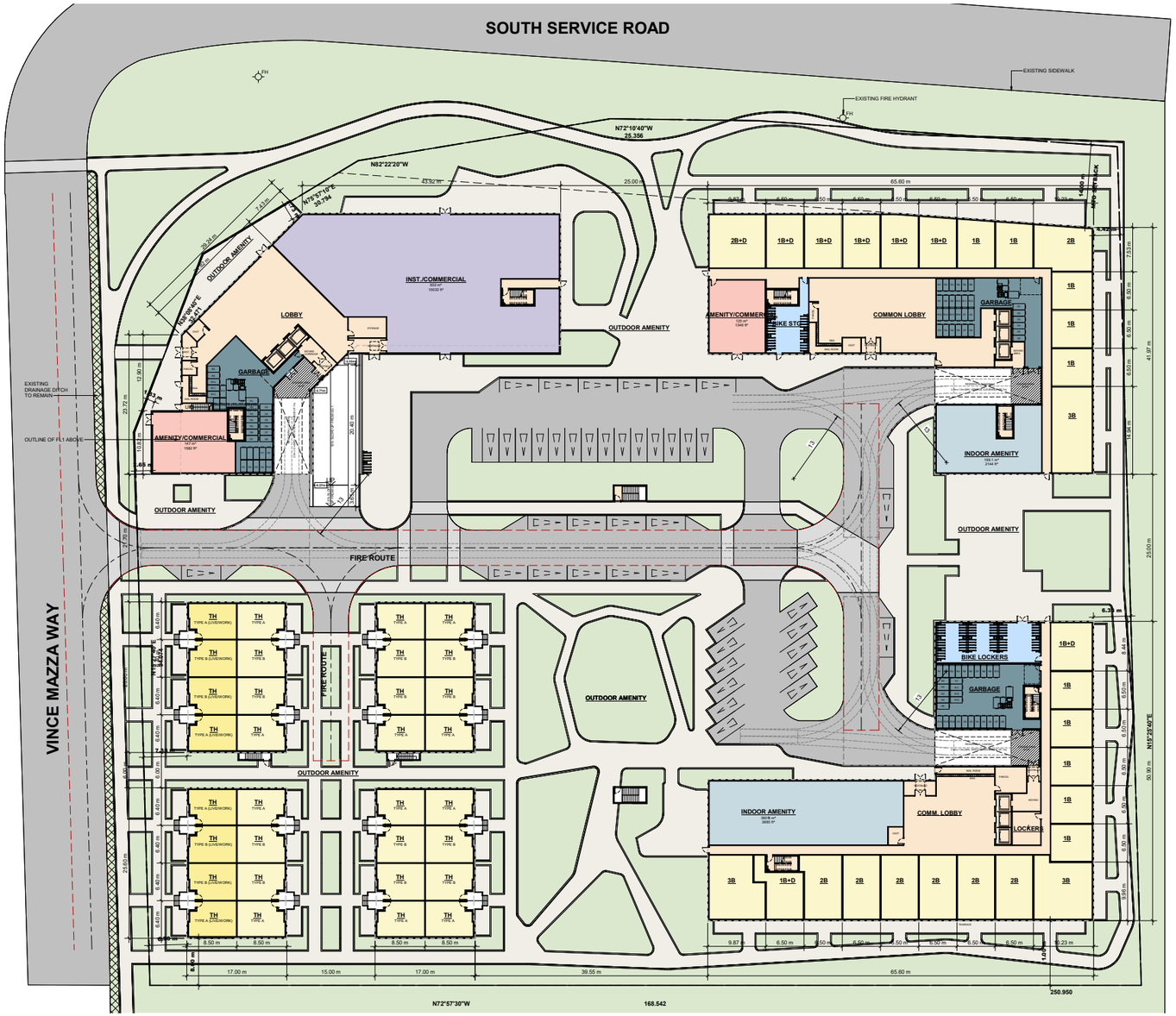
EAST AMENITY SPACE

The Building B/C outdoor amenity area contains a series of gathering and informal event spaces that may be programmed for a variety of uses. The focal point of the space is a large central lawn and pergola structure. Seating / dining areas adjacent to the party rooms may be covered by way of canopies that extend from the two buildings.



FLOOR PLANS

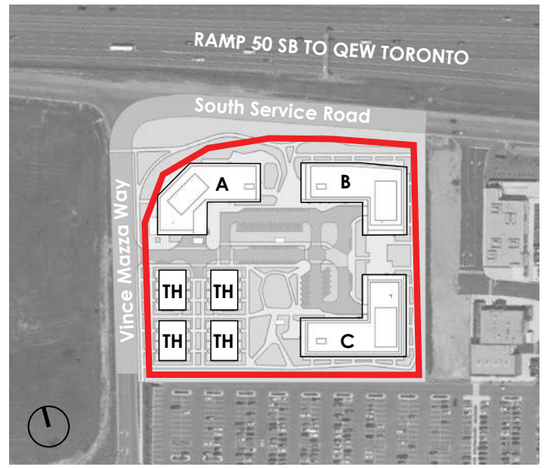
DRAWINGS



0 5 10 m 20 m 50 m

FLOOR PLAN 01

- Commercial/Amenity
- Instiutional / Commercial (Potential Daycare)
- Garbage
- Bike Storage
- Residential
- Residential (Live/Work)
- Lobby
- Amenity
- Landscaped Area and/or Outdoor Amenity



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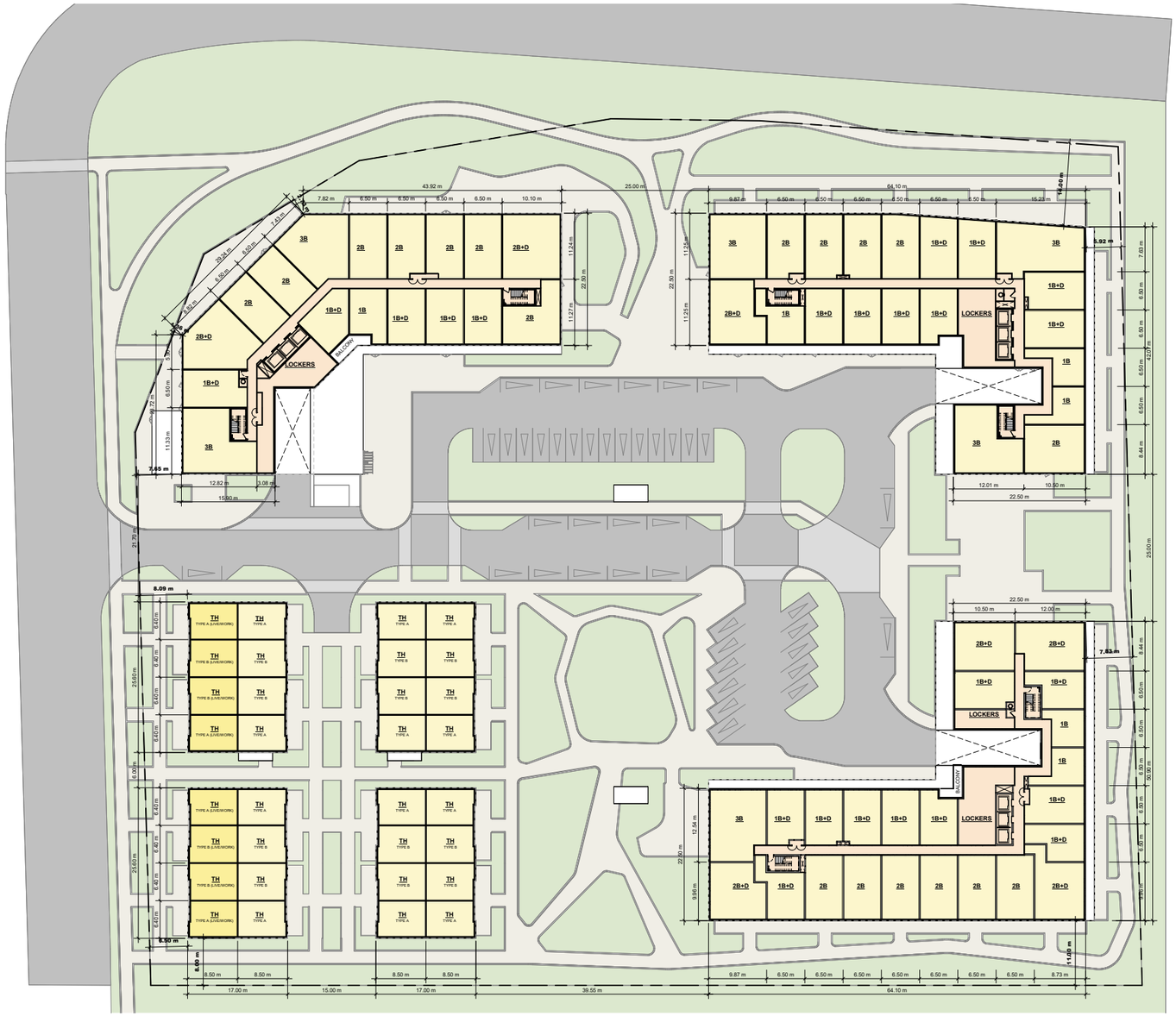
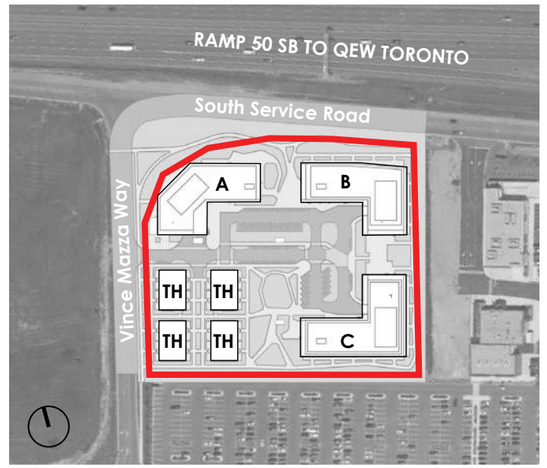


FLOOR PLAN 02

- Residential
- Residential (Live/Work)
- Lobby



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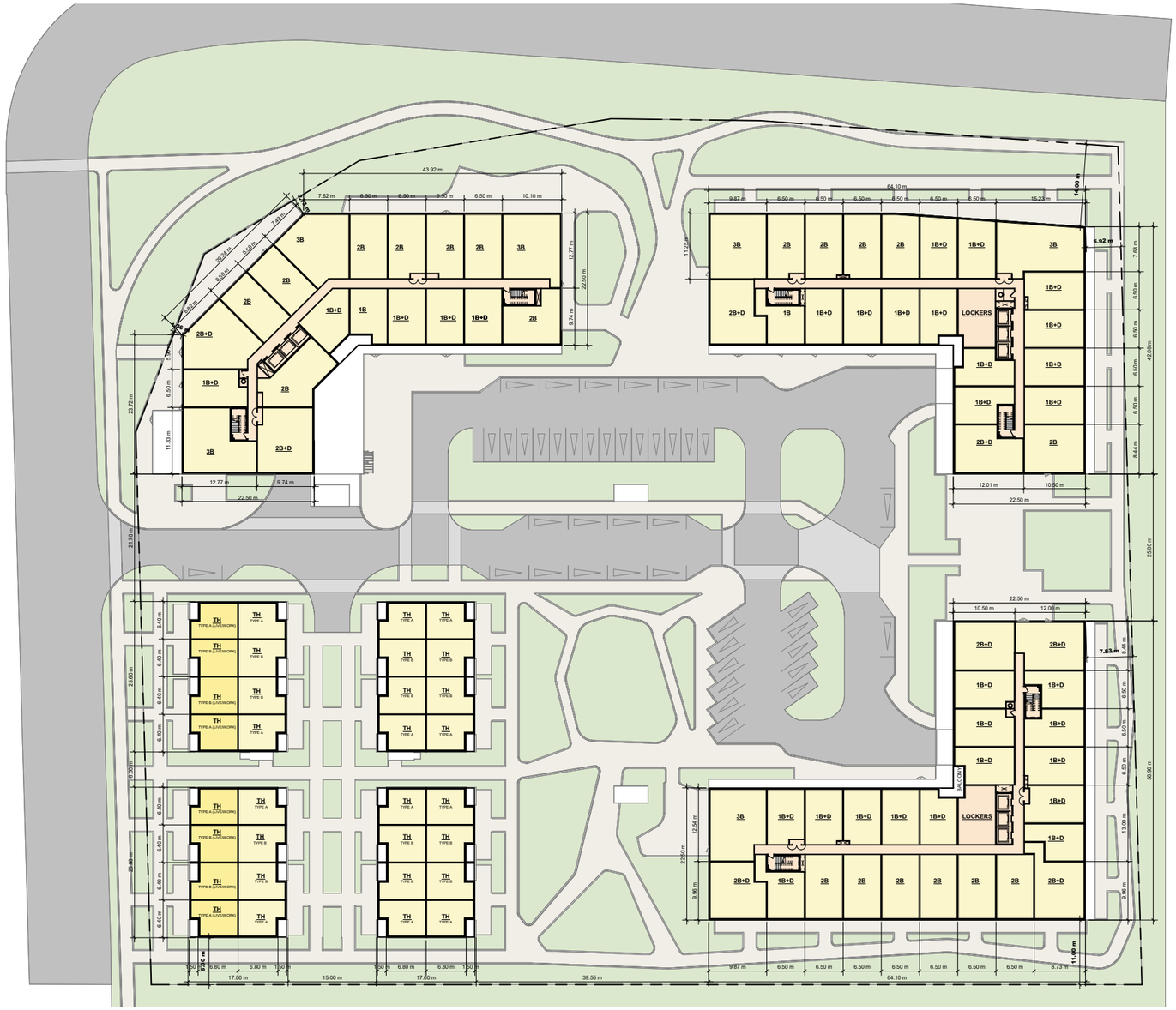
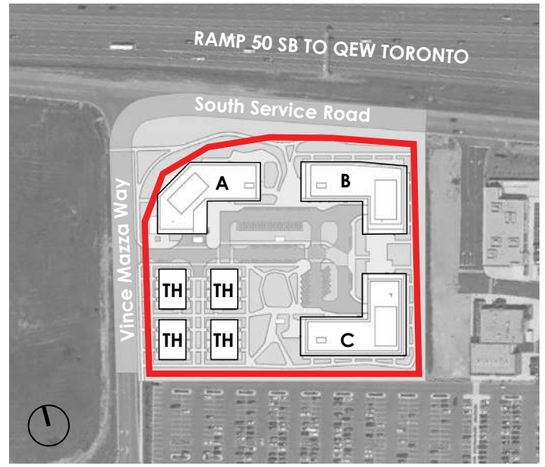


FLOOR PLAN 03

- Residential
- Residential (Live/Work)
- Lobby



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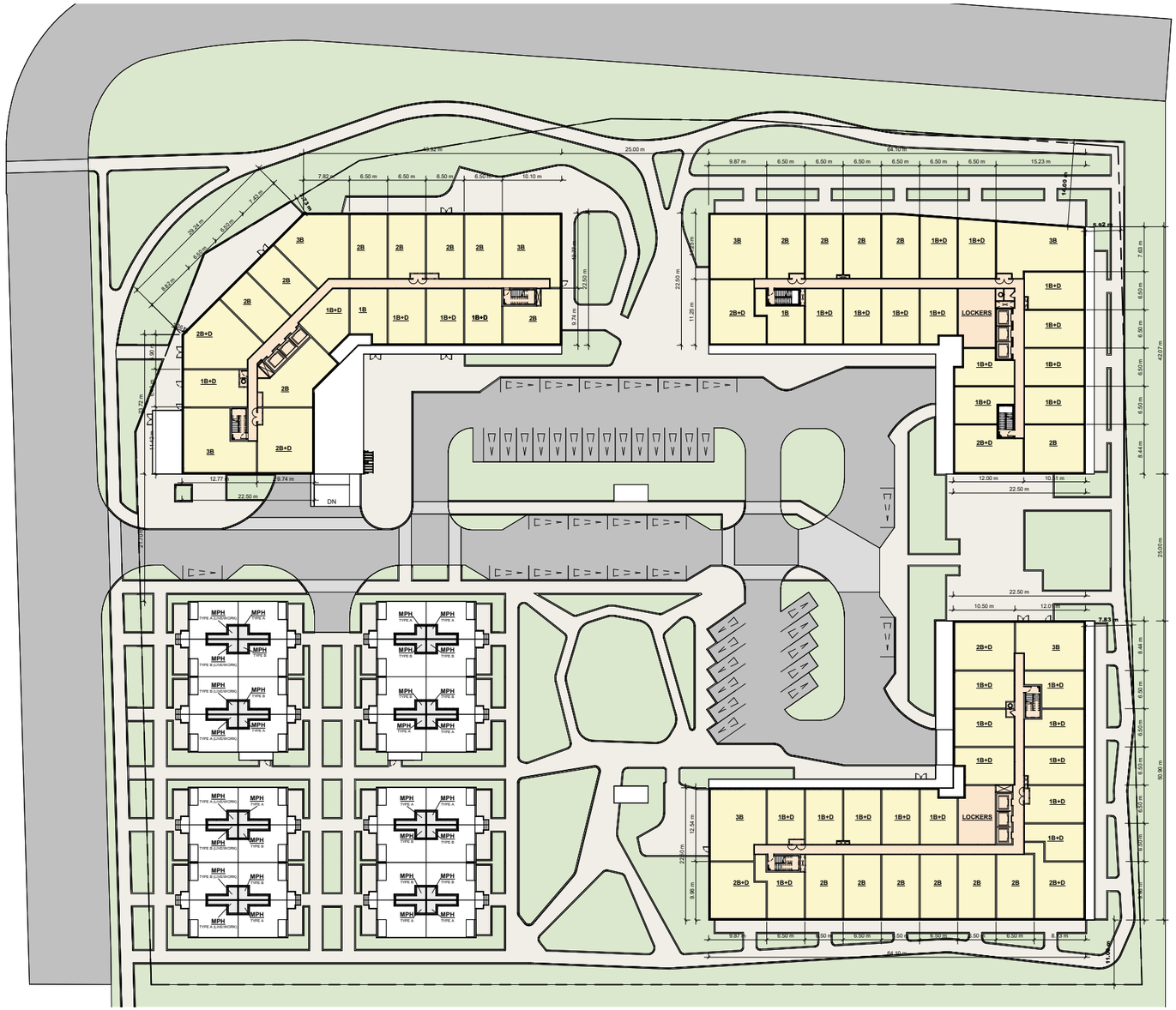
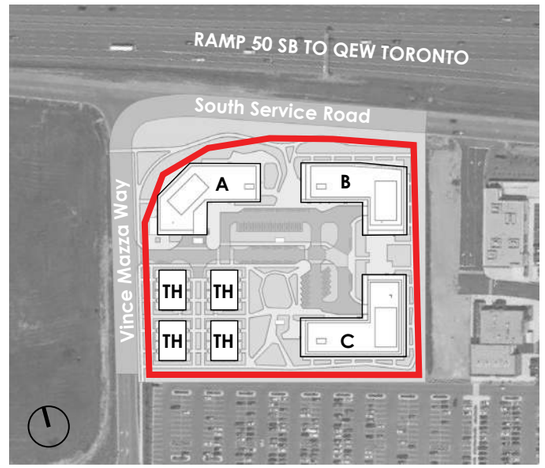
DRAWINGS



FLOOR PLAN 04

- Residential
- Residential (Live/Work)
- Lobby



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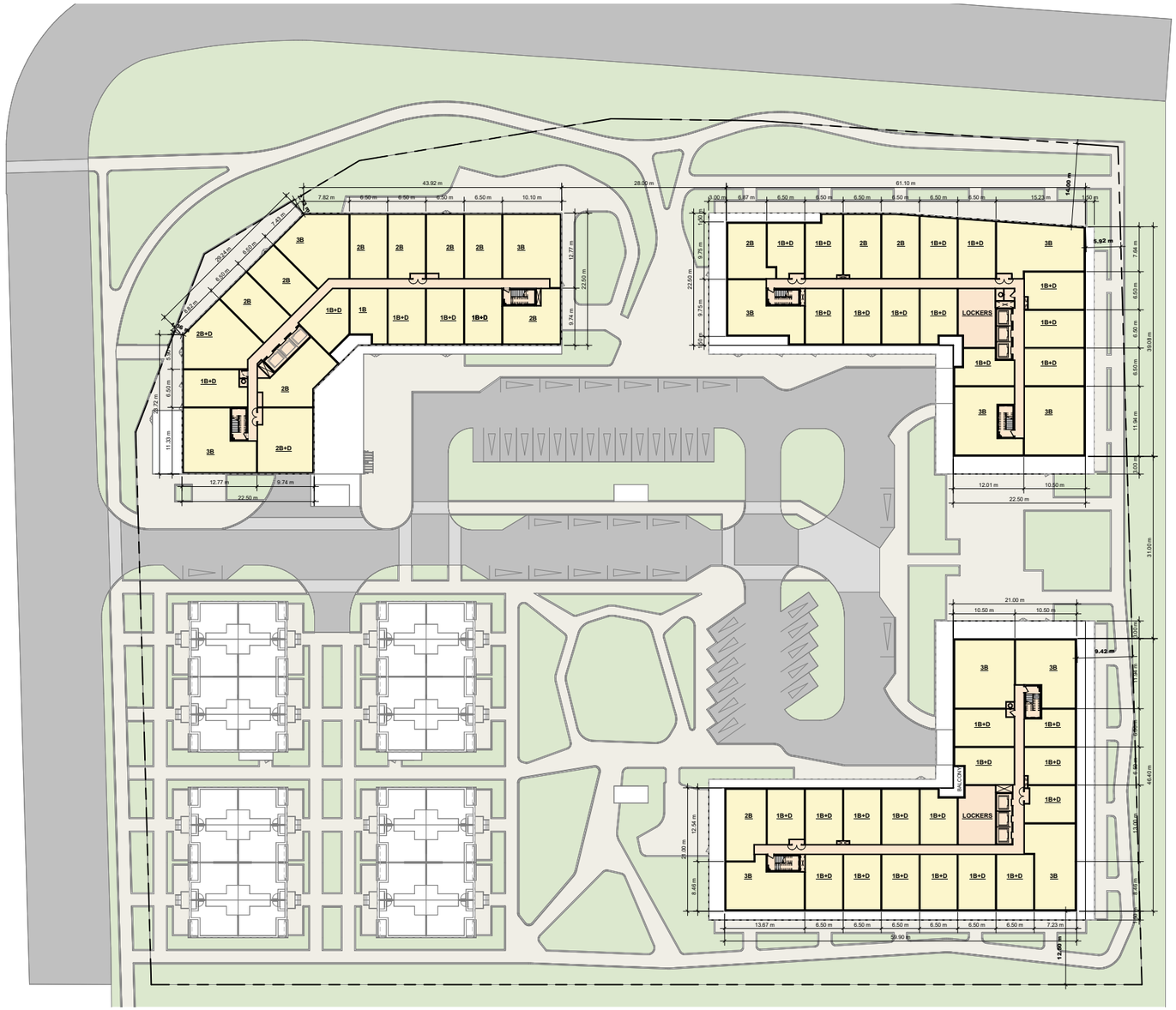


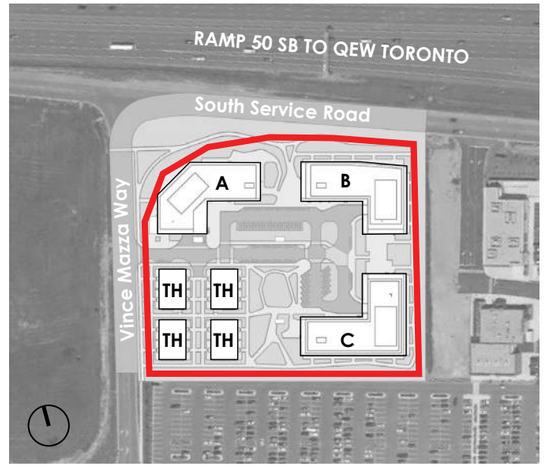
0 5 10 m 20 m 50 m

FLOOR PLAN 05-06

Residential

Residential (Live/Work)

Lobby



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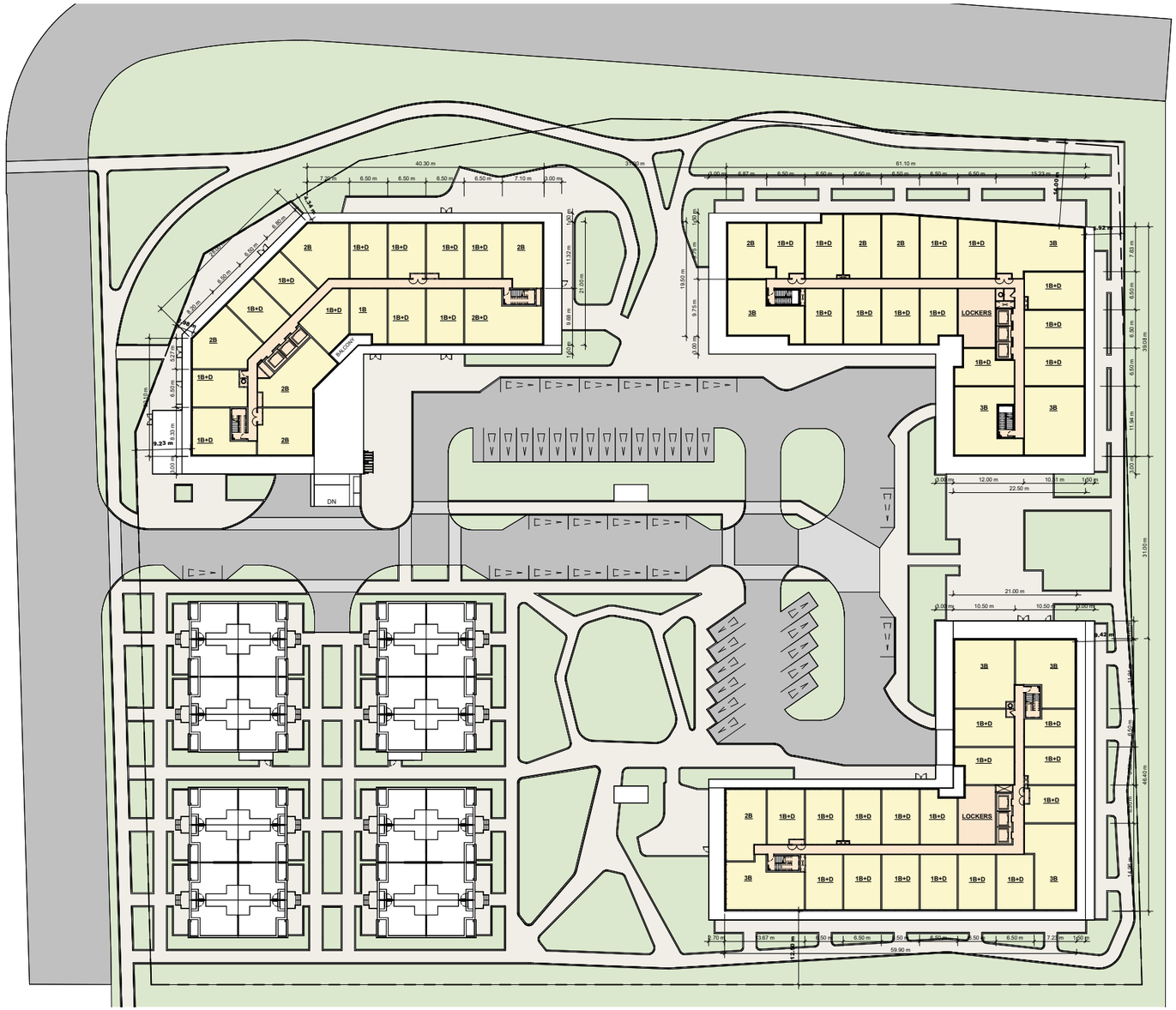
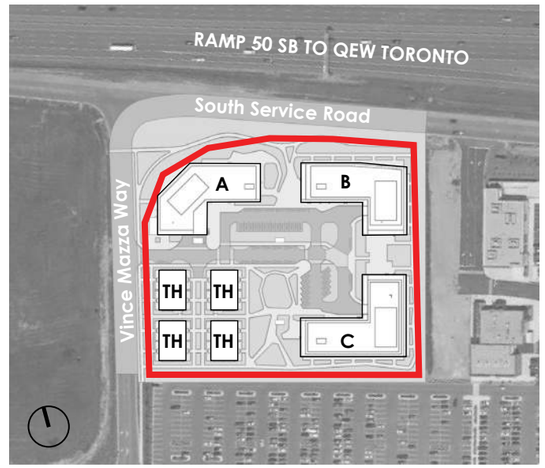


0 5 10 m 20 m 50 m

FLOOR PLAN 07-08

- Residential
- Residential (Live/Work)
- Lobby



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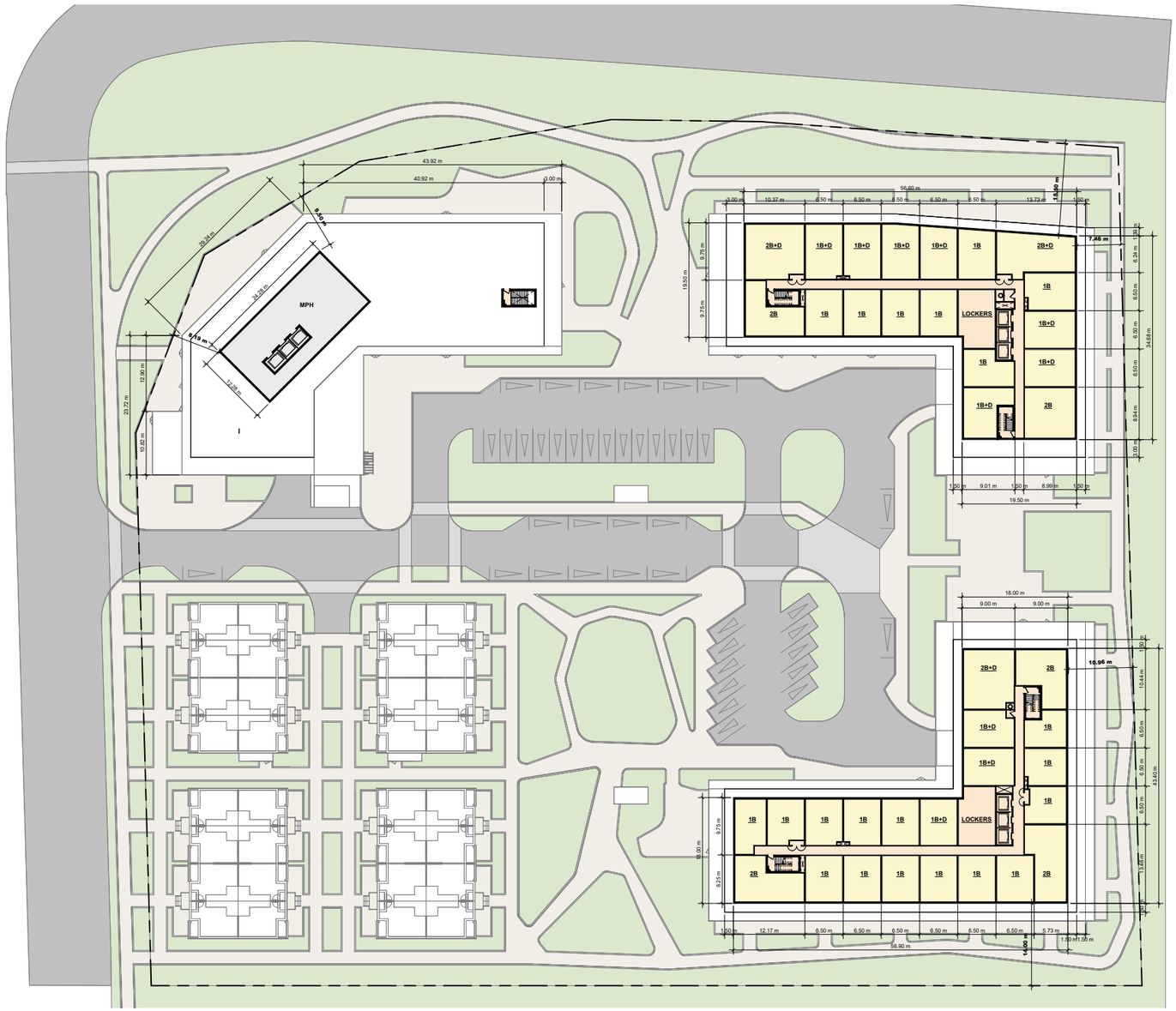
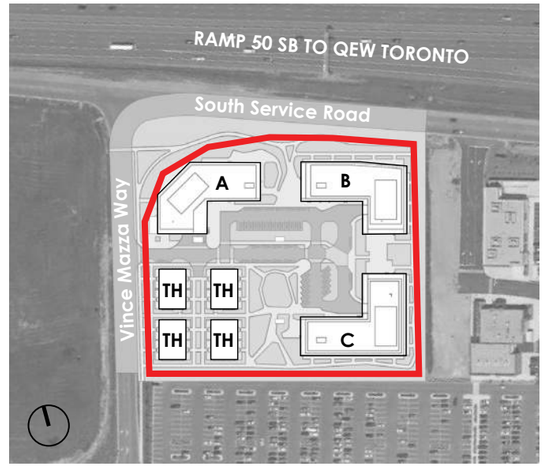


0 5 10 m 20 m 50 m

FLOOR PLAN 09-12

- Residential
- Residential (Live/Work)
- Lobby
- Mechanical



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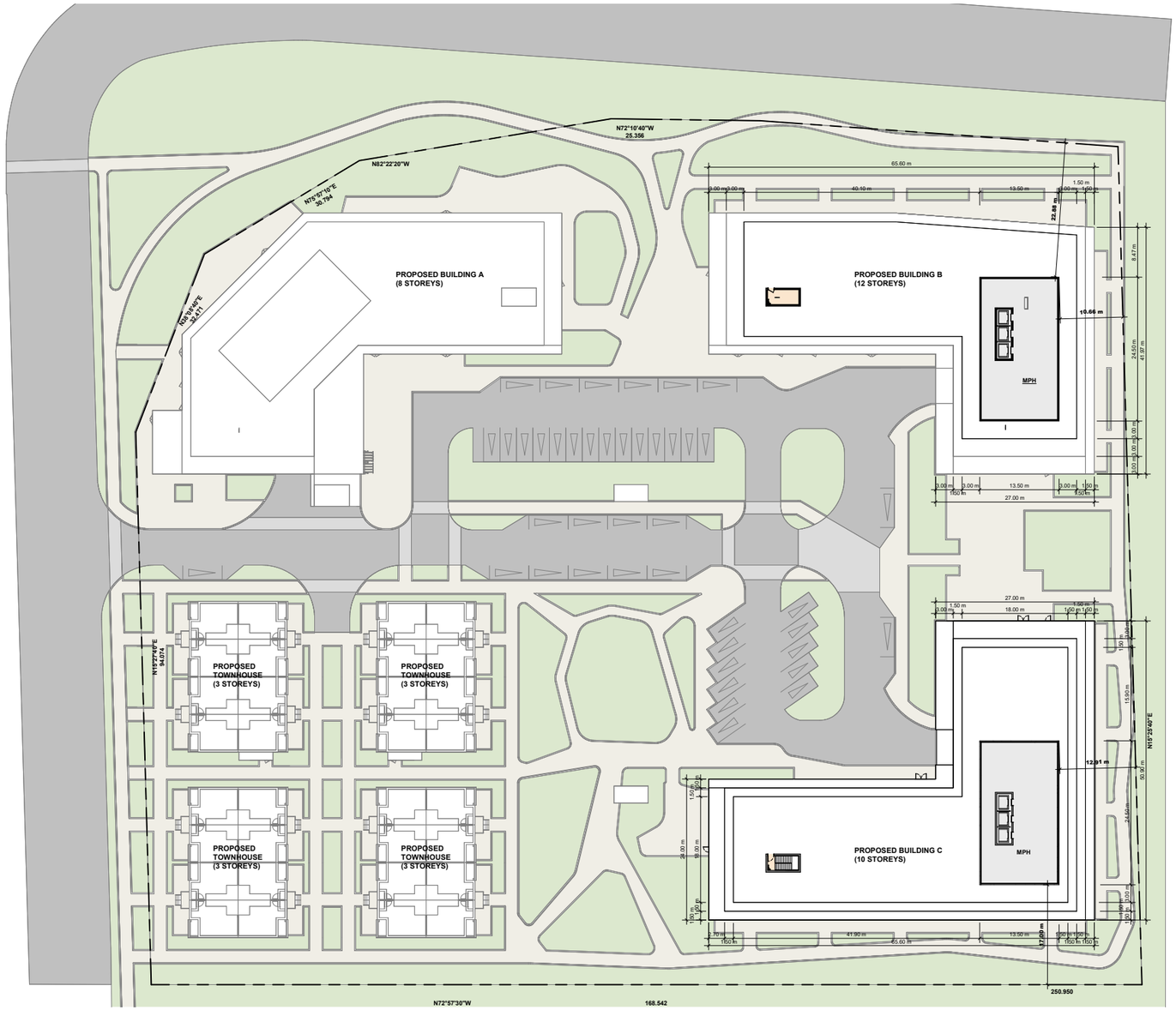
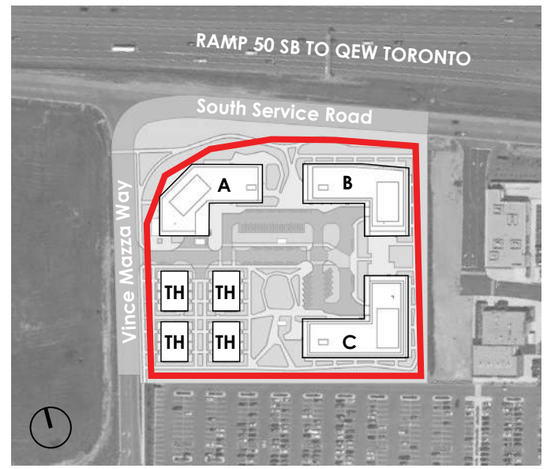




0 5 10 m 20 m 50 m

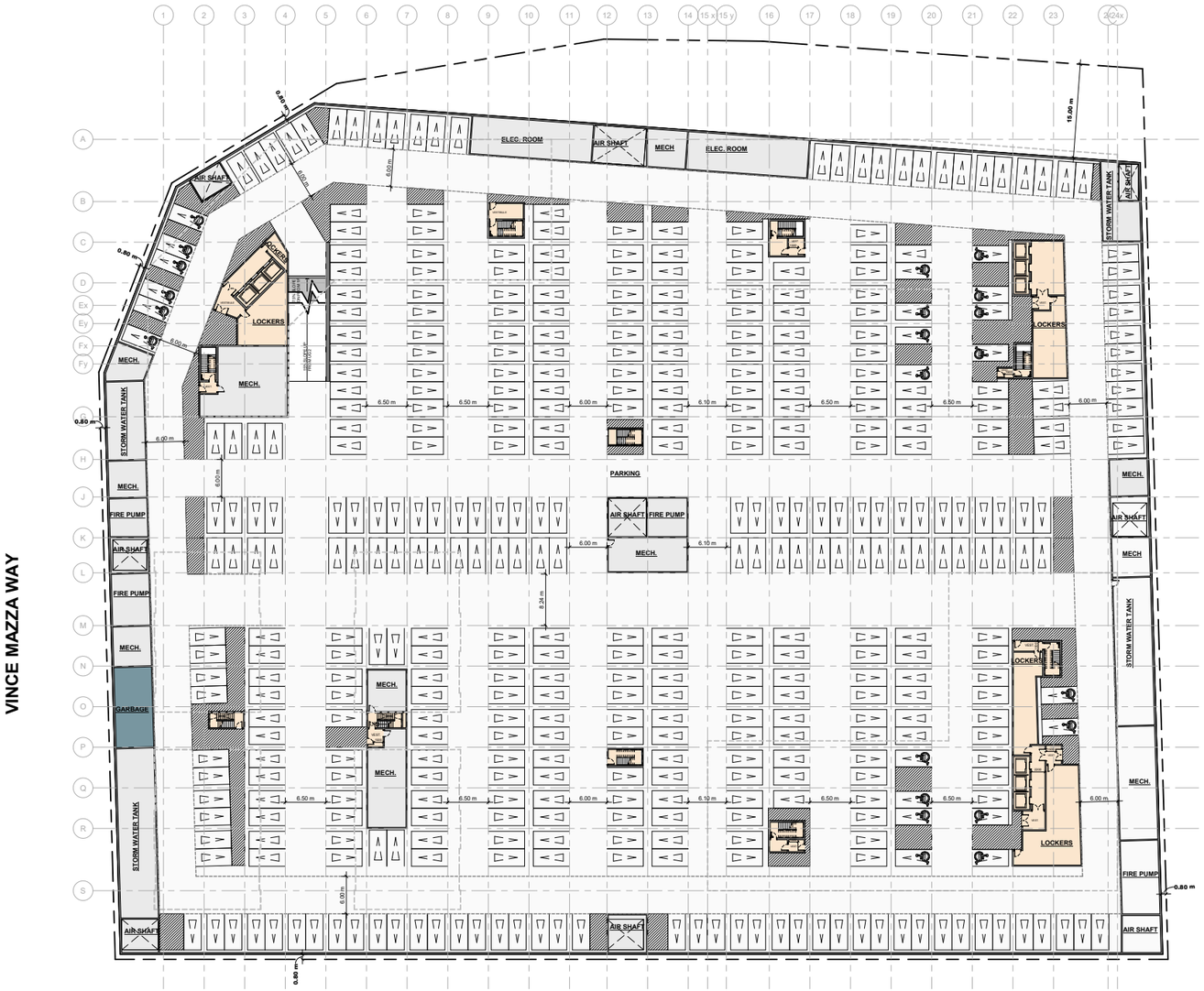
FLOOR PLAN MPH

Mechanical

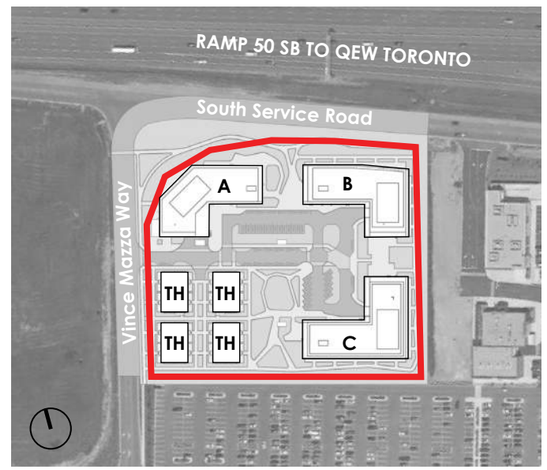
DRAWINGS

UNDERGROUND LEVEL 01

SOUTH SERVICE ROAD



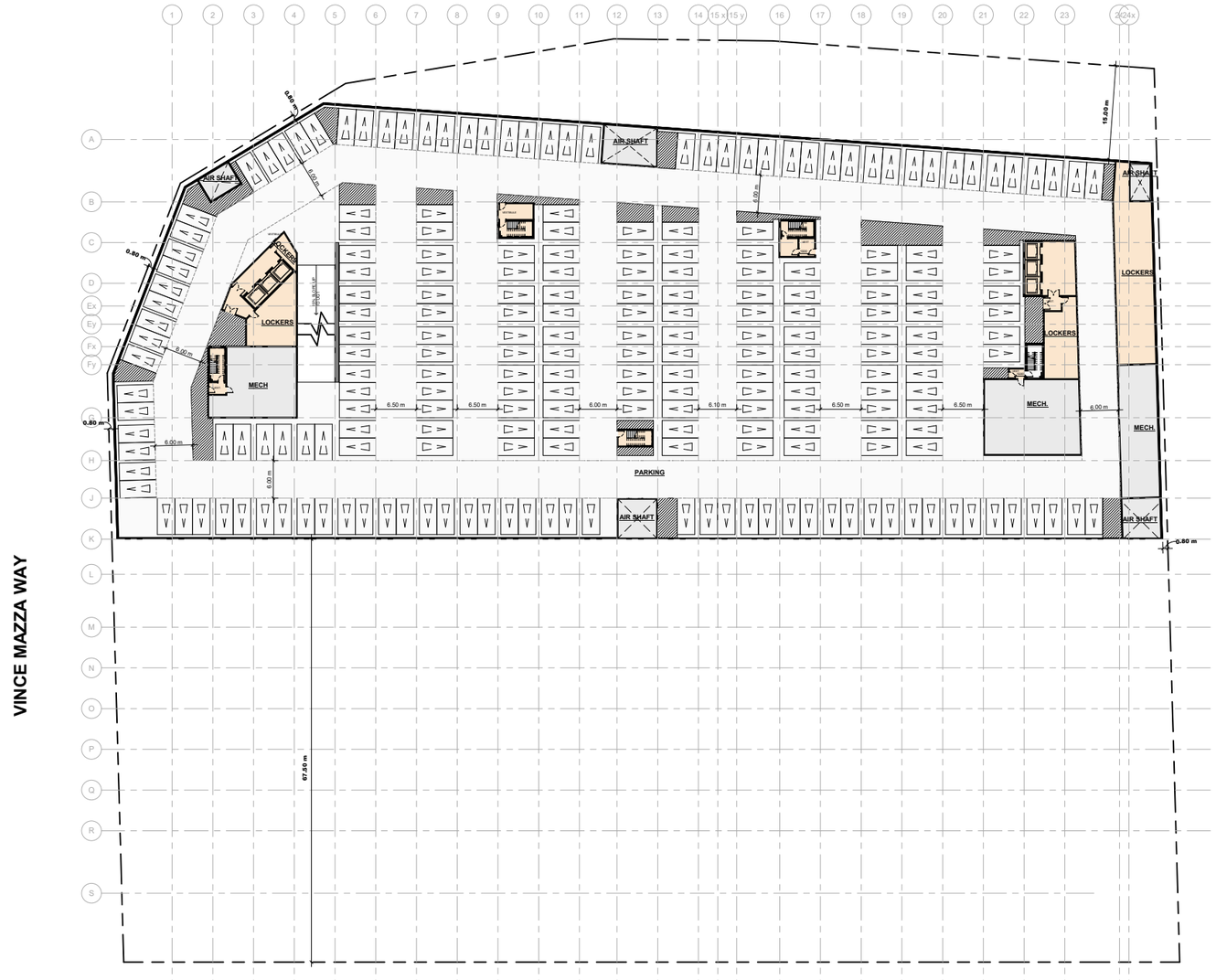
VINCE MAZZA WAY

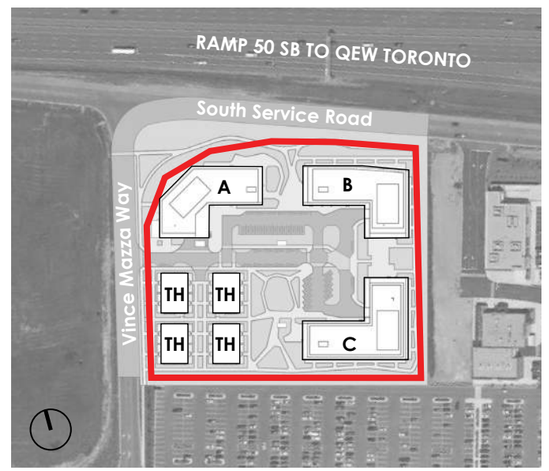


0 5 10 m 20 m 50 m

DRAWINGS

UNDERGROUND LEVEL 02





0 5 10 m 20 m 50 m

SHADOW STUDIES

SHADOW STUDIES

March 21 - 0850 AM

March 21 - 0950 AM

March 21 - 1050 AM

March 21 - 1150 AM

MARCH

- Existing shadows
- Net new shadows by proposed development
- Overlapping shadows
- Approved building shadows
- As of right shadows (maximum height = 14m)

Assuming site is flat and at 169.85m CGD.

SHADOW STUDIES

March 21 - 1250 PM

March 21 - 1326 PM (Solar Noon)

March 21 - 1350 PM

March 21 - 1450 PM

MARCH

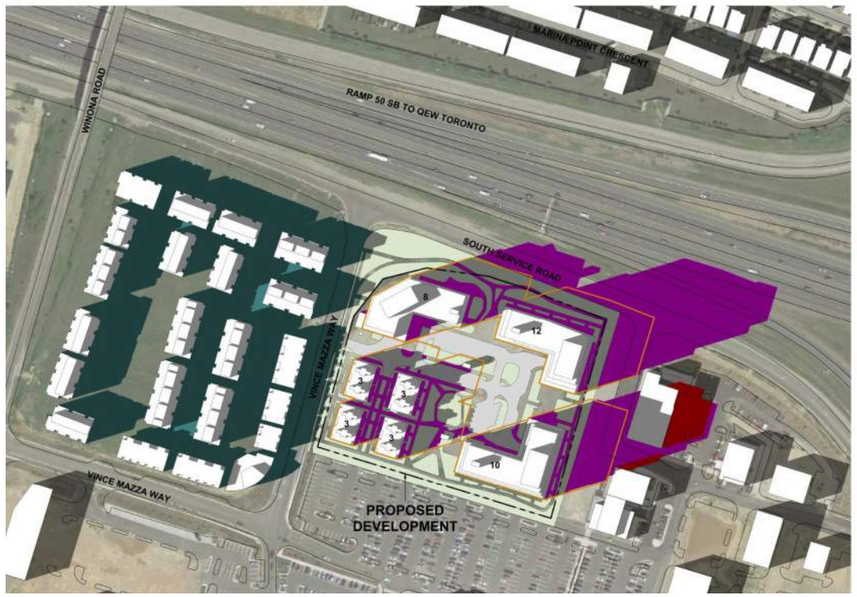
- Existing shadows
- Net new shadows by proposed development
- Overlapping shadows
- Approved building shadows
- As of right shadows (maximum height = 14m)

Assuming site is flat and at 169.85m CGD.

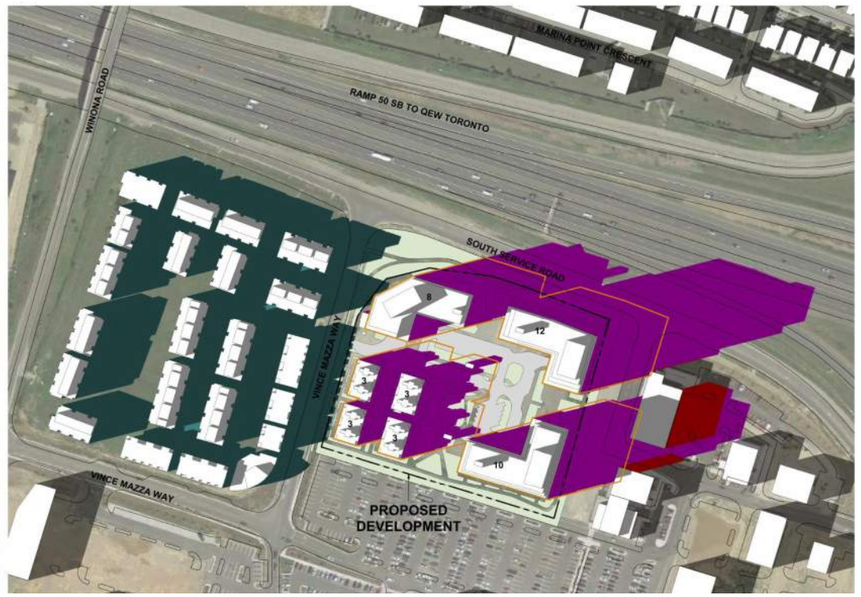
SHADOW STUDIES

March 21 - 1550 PM

March 21 - 1650 PM



March 21 - 1750 PM



March 21 - 1803 PM

MARCH

- Existing shadows
- Net new shadows by proposed development
- Overlapping shadows
- Approved building shadows
- As of right shadows (maximum height = 14m)

Assuming site is flat and at 169.85m CGD.

SHADOW STUDIES

September 21 - 0835 AM

September 21 - 0935 AM

September 21 - 1035 AM

September 21 - 1135 AM

SEPTEMBER

- Existing shadows
- Net new shadows by proposed development
- Overlapping shadows
- Approved building shadows
- As of right shadows (maximum height = 14m)

Assuming site is flat and at 169.85m CGD.

SHADOW STUDIES

September 21 - 1235 PM

September 21 - 1312 PM (Solar Noon)

September 21 - 1335 PM

September 21 - 1435 PM

SEPTEMBER

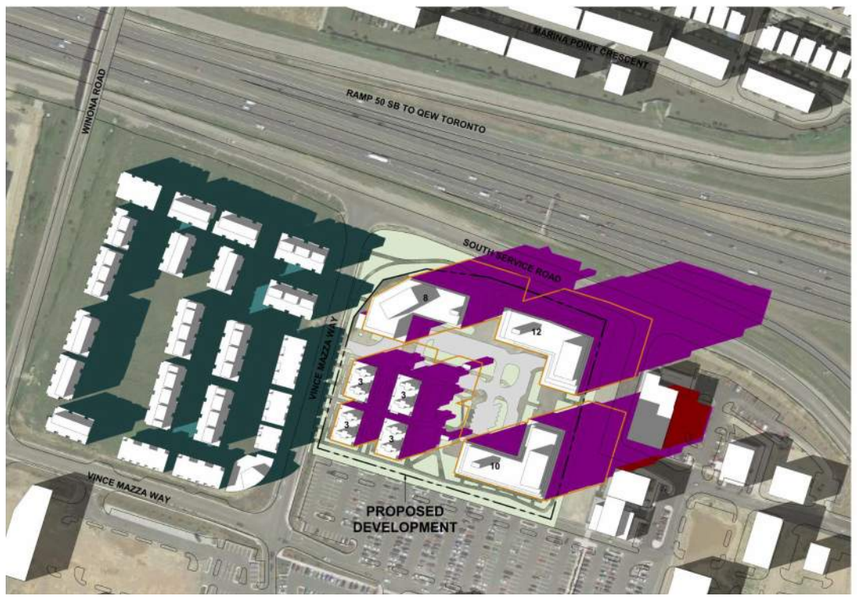
- Existing shadows
- Net new shadows by proposed development
- Overlapping shadows
- Approved building shadows
- As of right shadows (maximum height = 14m)

Assuming site is flat and at 169.85m CGD.

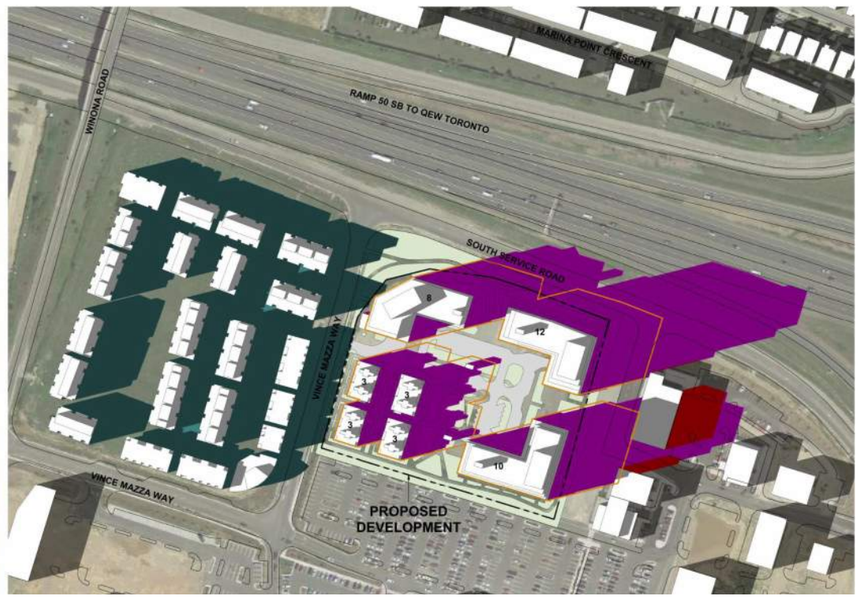
SHADOW STUDIES

September 21 - 1535 PM

September 21 - 1635 PM



September 21 - 1735 PM



September 21 - 1748 PM

SEPTEMBER

- Existing shadows
- Net new shadows by proposed development
- Overlapping shadows
- Approved building shadows
- As of right shadows (maximum height = 14m)

Assuming site is flat and at 169.85m CGD.

PEDESTRIAN WIND STUDY

INTRODUCTION

Image 3: Ground Level Plan

Image 1: Aerial View of the Existing Site and Surroundings (Credit: Google Maps)

Image 2: Project Rendering

Rowan Williams Davies & Irwin Inc. (RWDI) was retained to conduct a qualitative assessment of the pedestrian wind conditions expected around the proposed project at 1310 South Service Road in Stoney Creek, Ontario. This effort is intended to inform good design and has been conducted in support of Zoning By-Law Amendment Application for the project.

The proposed site is located at the southeast corner of the intersection of South Service Road and Vince Mazza Way (Image 1) and is currently unoccupied with surroundings consisting of low-rise commercial and residential developments, open lands and roadways.

The project consists of 3 mid-rise residential and mixed-use buildings, varying from 8 to 12 storeys in height, and 4 rows of 3-storey townhouses, as shown in Image 2. Areas of interest include sidewalks and walkways on and around the development, green open spaces throughout the development, including a childcare play area to the north, and an open amenity space to the east of the development (shown in Image 3).

SUBMITTED TO	SUBMITTED BY
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Briann Flynn	
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METHODOLOGY

Predicting wind speeds and occurrence frequencies is complex. It involves the combined assessment of building geometry, orientation, position and height of surrounding buildings, upstream terrain and the local wind climate.

Over the years, RWDI has conducted thousands of wind-tunnel model studies on pedestrian wind conditions around buildings, yielding a broad knowledge base. In some situations, this knowledge and experience, together with literature, allow for a reliable, consistent and efficient desktop estimation of pedestrian wind conditions without wind-tunnel testing. This approach provides a screening-level estimation of potential wind conditions and offers conceptual wind control measures for improved wind comfort, where necessary.

It is understood that the city of Hamilton has confirmed that this type of analysis is sufficient for this development. Further detailed quantitative wind analyses could be undertaken if required.

RWDI's assessment is based on the following:

- Architectural drawings and landscape concept received from The Planning Partnership on July 29, 2022;
- A review of the regional long-term meteorological data from Hamilton International Airport;
- Use of RWDI's proprietary software (WindEstimator1) for providing a screening-level numerical estimation of potential wind conditions around generalized building forms;
- Wind-tunnel studies and desktop assessments undertaken by RWDI for projects in the Stoney Creek area;
- RWDI's engineering judgement and knowledge of wind flows around buildings and,
- RWDI Criteria for pedestrian wind comfort and safety.Note that other microclimate issues such as those relating to cladding and structural wind loads, door operability, building air quality, noise, vibration, etc. are not part of the scope of this assessment.

1. H. Wu, C.J. Williams, H.A. Baker and W.F. Waechter (2004), "Knowledge-based Desk-Top Analysis of Pedestrian Wind Conditions", ASCE Structure Congress 2004, Nashville, Tennessee.
2. H. Wu and F. Kriksic (2012). "Designing for Pedestrian Comfort in Response to Local Climate", Journal of Wind Engineering and Industrial Aerodynamics, vol.104-106, pp.397-407.
3. C.J. Williams, H. Wu, W.F. Waechter and H.A. Baker (1999), "Experience with Remedial Solutions to Control Pedestrian Wind Problems", 10th International Conference on Wind Engineering, Copenhagen, Denmark.

METEOROLOGICAL DATA

Meteorological data from Hamilton International Airport for the period from 1990 to 2020 were used as a reference for wind conditions in the area as this is the nearest station to the site with long-term, hourly wind data. The distributions of wind frequency and directionality for the summer (May through October) and winter (November through April) seasons are shown in the wind roses in **Image 4**.

When all winds are considered, winds from the southwest and northeast directions are predominant throughout the year.

Strong winds of a speed greater than 30 km/h measured at the airport (at an anemometer height of 10m) are more frequent in the winter than in the summer season (red and yellow bands in **Image 4**) . These winds potentially could be the source of uncomfortable or severe wind conditions, depending on the site exposure and development design.

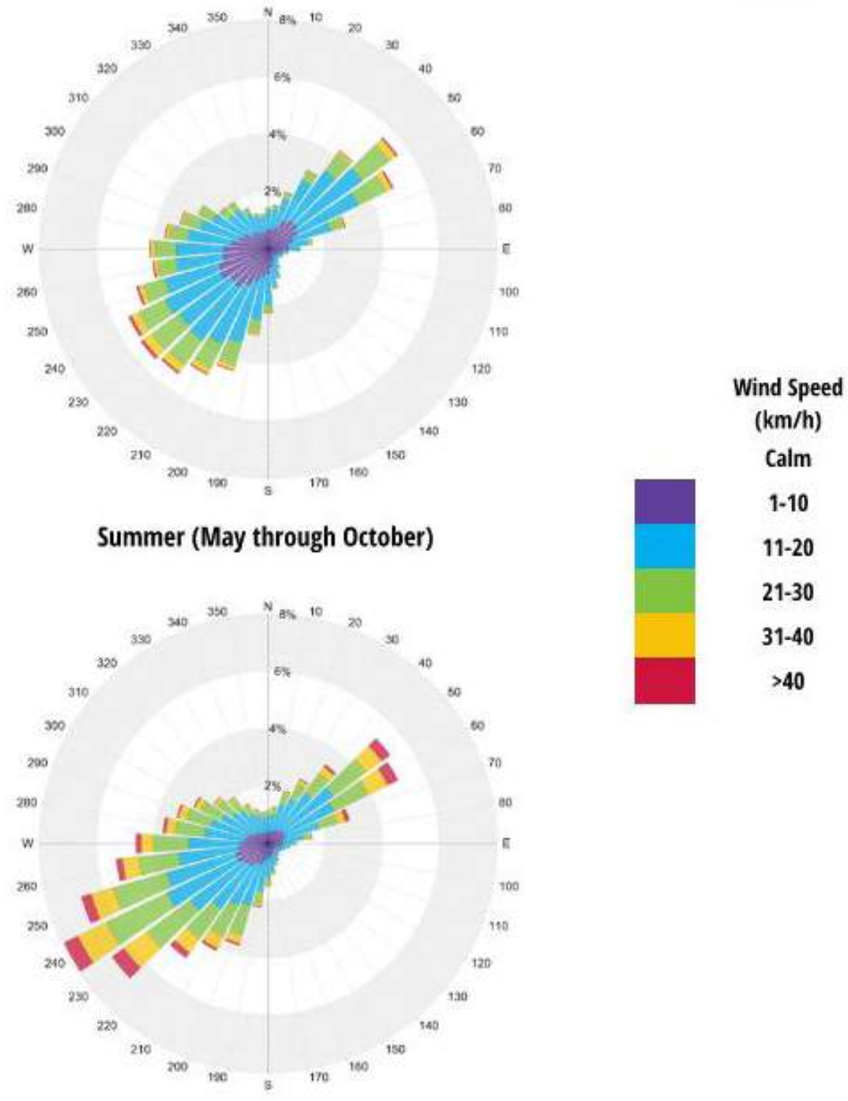


Image 4: Directional Distribution of Winds Approaching Hamilton International Airport (1990 - 2020)

The RWDI pedestrian wind criteria are used in the current study. These criteria have been developed by RWDI through research and consulting practice since 1974. They have also been widely accepted by municipal authorities, building designers and the city planning community. The criteria are as follows:

4.1 Safety Criterion

Pedestrian safety is associate with excessive gust that can adversely affect a pedestrian's balance and footing. If strong winds that can affect a person's balance (**90 km/h**) occur more than **0.1%** of the time or 9 hours per year, the wind conditions are considered severe.

4.2 Pedestrian Comfort Criteria

Wind comfort can be categorized by typical pedestrian activities:

Sitting (≤ 10 km/h): Calm or light breezes desired for outdoor seating areas where one can read a paper without having it blown away.

Standing (≤ 14 km/h): Gentle breezes suitable for main building entrances and bus stops.

Strolling (≤ 17 km/h): Moderate winds that would be appropriate for window shopping and strolling along a downtown street, plaza or park.

Walking (≤ 20 km/h): Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering.

Uncomfortable: The comfort category for walking is not met.

Wind conditions are considered suitable for sitting, standing, strolling or walking if the associated mean wind speeds are expected for at least four out of five days (**80% of the time**). Wind control measures are typically required at locations where winds are rated as uncomfortable or they exceed the wind safety criterion.

Note that these wind speeds are assessed at the pedestrian height (i.e., 1.5 m above grade or the concerned floor level), typically lower than those recorded in the airport (10 m height and open terrain).

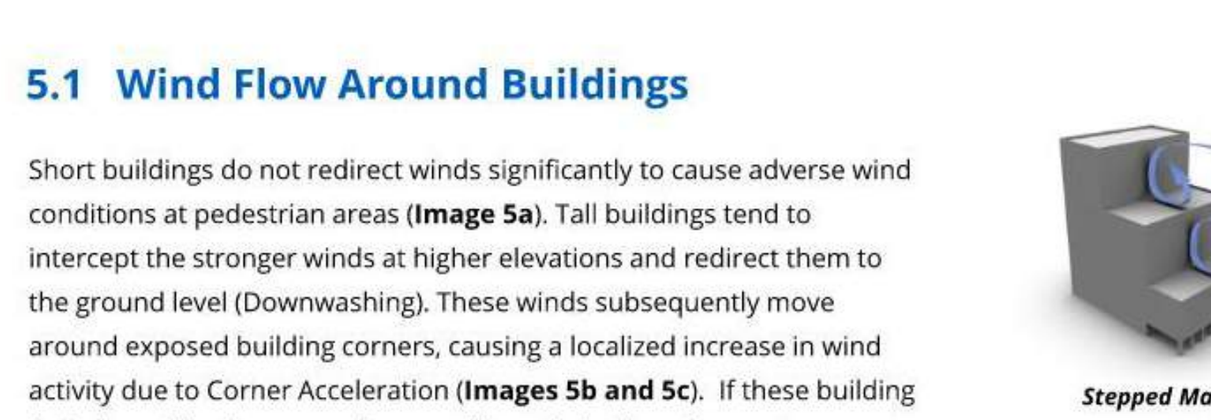
These criteria for wind forces represent average wind tolerance. They are sometimes subjective and regional differences in wind climate and thermal conditions as well as variations in age, health, clothing, etc. can also affect people's perception of the wind climate.

For the current development, wind speeds comfortable for walking or strolling are appropriate for sidewalks and walkways; lower wind speeds comfortable for standing are recommended for building entrances and bus stops where pedestrians may linger; and calm wind speeds suitable for sitting are desired in areas where passive activities are anticipated, such as the outdoor dining and amenity terraces, especially during the summer when these areas are typically in use.

5.1 Wind Flow Around Buildings

Short buildings do not redirect winds significantly to cause adverse wind conditions at pedestrian areas (**Image 5a**). Tall buildings tend to intercept the stronger winds at higher elevations and redirect them to the ground level (Downwashing). These winds subsequently move around exposed building corners, causing a localized increase in wind activity due to Corner Acceleration (**Images 5b and 5c**). If these building / wind combinations occur for prevailing winds, there is a greater potential for increased wind activity and *uncomfortable* conditions.

Design details such as stepped massing, tower step-back from a podium edge, deep canopies close to ground level, wind screens / tall trees with dense underplanting, etc. (**Image 6**) can help reduce wind speeds. The choice and effectiveness of these measures would depend on the exposure and orientation of the site with respect to the prevailing wind directions and the size and massing of the proposed buildings.

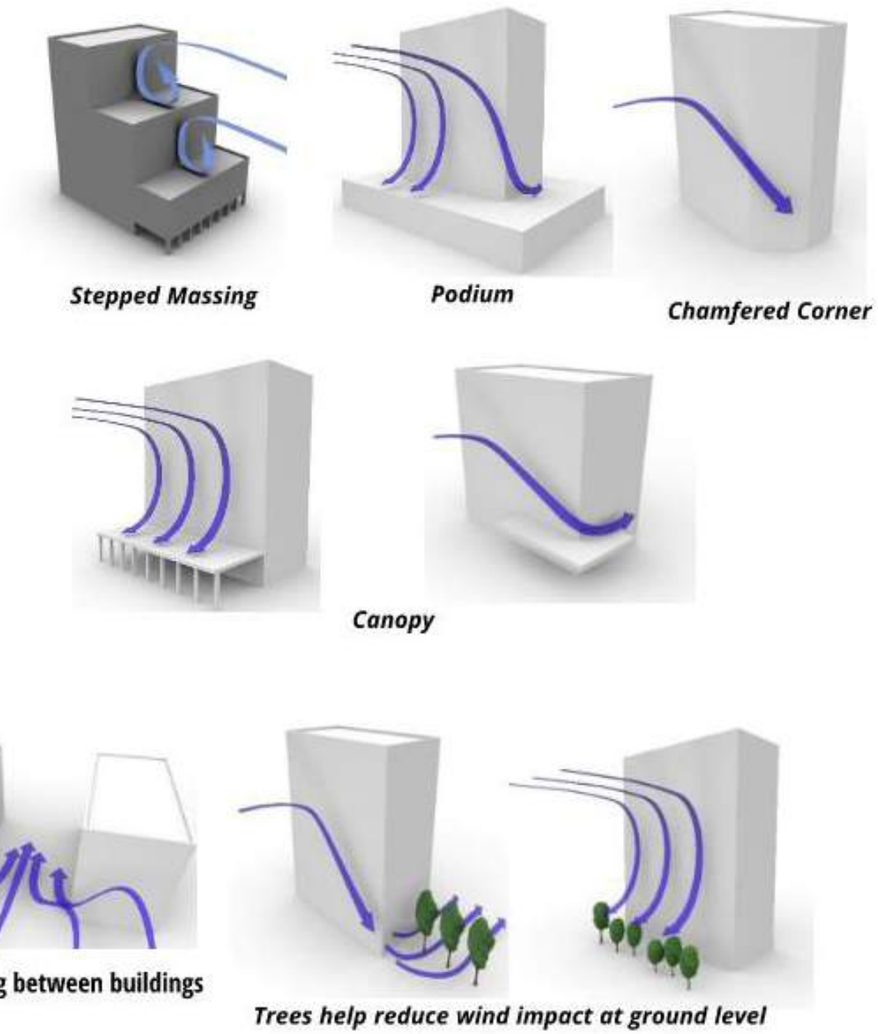


a) Wind flow over built terrain

b) Downwashing and corner acceleration

c) Channeling between buildings

Image 5: Generalized Wind Flows



Stepped Massing

Podium

Chamfered Corner

Canopy

Trees help reduce wind impact at ground level

Image 6: Examples of Common Wind Control Measures

5.2 Existing Scenario

The existing site is unoccupied and surrounded by suburban neighbouhoods, comprising buildings that are one to three storeys tall. As such, there are no significant structures that would deflect ambient winds to the ground to cause adverse wind impacts. Currently, wind conditions on sidewalks around the site are considered comfortable for standing or strolling in the summer and for strolling or walking in the winter.

Wind conditions exceeding the safety criterion are not expected.

5.3 Proposed Scenario: Wind Flow

The proposed development is taller than buildings in the surrounding area and, therefore, will be exposed to the prevailing winds. Strong downwashing, corner acceleration and channelling flows are predicted to result in increased wind activity around the proposed buildings and nearby sidewalks with the highest speeds expected around the southeast corners of the project site.

Although the project will increase wind speeds in the immediate surroundings, several features of the building massing are favourable towards reducing the potential for severe wind impacts. These features are:

- Stepped elevation profile disrupts wind flow at high elevations, and effectively reduces the severity of the downwashing mechanism.
- Low townhouses to the southwest, which help disrupt winds at the pedestrian levels.
- The chamfered corner of the northwest building, which reduces corner acceleration.
- Largely enclosed central lawn and extensive landscaping, which help reduce wind speeds at the pedestrian levels.

The expected wind flow pattern and conditions are shown in **Images 7**, **8a**, and **8b**.

RESULTS & DISCUSSION

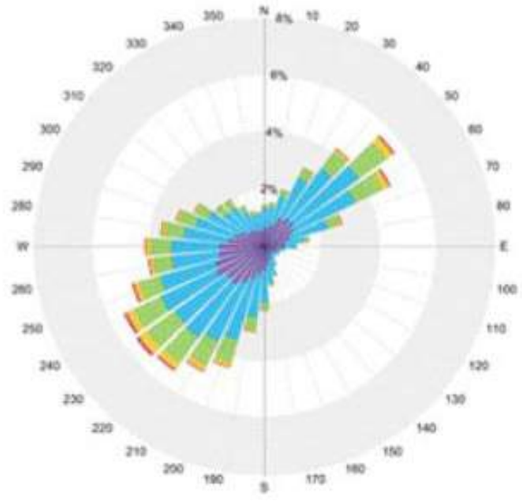
Image 7: Predicted Flow Pattern around the Site

RESULTS & DISCUSSION

Predicted wind conditions at grade - Summer

WIND COMFORT CATEGORIES

- **Sitting / Standing**
- **Strolling**
- **Walking**
- **Potentially Uncomfortable**



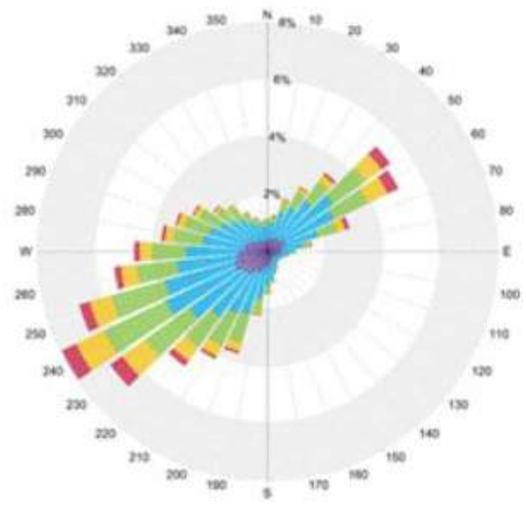
Summer Wind Rose

RESULTS & DISCUSSION

Predicted wind conditions at grade - Winter

WIND COMFORT CATEGORIES

- **Sitting / Standing**
- **Strolling**
- **Walking**
- **Potentially Uncomfortable**



Winter Wind Rose

5.5 Proposed Scenario: Wind Safety

The proposed development is taller than the surrounding buildings in the area. With the site exposure, higher wind speeds are anticipated, causing elevated wind speeds at the sharp corners compared to chamfered ones, due to the corner acceleration and channelling effect.

Wind conditions on and around the proposed project are expected to meet the recommended criteria for pedestrian safety, with the exception possibly at the southeast corner of the site and along the gaps between the proposed towers.

5.6 Proposed Scenario: Wind Comfort

5.6.1 Entrances

It is generally desirable to have wind conditions comfortable for standing or sitting near entrance locations, as pedestrians are likely to linger more at entrances.

For the current masterplan, no building entrances are identified. As a general guideline, main entrances should be placed away from exposed building corners and gaps where elevated wind speeds may occur in the winter. It is also recommended that entrances be recessed from building facades or sheltered by canopies, screens and planters to achieve appropriate wind conditions throughout the year.

5.6.2 Amenity and Outdoor Areas

Wind conditions at most areas at ground-level around the project, including amenity and outdoor areas, are predicted to be comfortable for standing or strolling in the summer, and for walking overall in the winter, except near the exterior corner to the southeast, where conditions are expected to be uncomfortable.

The stepped massing is a positive from a wind perspective (Section 5.3) and should be retained in the final design. Modified corner massing at lower levels, large canopies, dense coniferous landscaping and wind screens are measures to be considered at the areas of concern in order to diffuse accelerating winds. Examples of wind control features are provided in **Image 9.**

If required, a more detailed wind study could be undertaken as the design develops in order to confirm the frequency of high wind activity and the need and level of wind mitigation that is required.

Image 9: Design strategies for wind control at ground level

SUMMARY

RWDI was retained to provide an assessment of the potential pedestrian level wind impact of the proposed project at 1310 South Service Road in Stoney Creek, Ontario. Our assessment was based on the local wind climate, the current design of the proposed development, the existing surrounding buildings, our experience with wind tunnel testing of similar buildings, and screening-level modelling of wind flows around buildings.

Our findings are summarized as follows:

- The proposed project is taller than buildings in the existing surroundings, and therefore will cause an increase in wind speeds around it.
- The building design incorporates several wind-responsive features which will moderate the potential wind impacts on the surroundings.
- Wind conditions on and around the proposed project are expected to meet the recommended criteria for pedestrian safety, with the exception possibly at the southeast corner of the site, which is predicted to have uncomfortable wind conditions in the winter. Potential mitigation measures that could be incorporated in these areas include canopies, wind screens and dense coniferous landscaping, which are expected to reduce wind speeds and improve conditions if placed appropriately.
- A more detailed wind analysis could be undertaken at a later design stage to quantify these wind conditions and to develop wind control solutions, however, the potential mitigation measures outlined above can also be incorporated into the proposed development at the Site Plan stage on the basis of this study.
- In the summer, wind conditions on sidewalks and other public areas on and around the proposed buildings are expected to be comfortable for standing or strolling.
- Wind speeds on the ground-level outdoor amenity areas may be slightly windier than desirable for long-term passive use in the summer, depending on their exposure. The proposed landscaping and suggested mitigations are expected to reduce these wind speeds and improve the conditions.

Design Assumptions

The findings/recommendations in this report are based on the building geometry and architectural drawings communicated to RWDI July 29, 2022, listed below. Should the details of the proposed design and/or geometry of the building change significantly, results may vary.

File Name	File Type	Date Received (mm/dd/yyyy)
1310 South Service Road - Updated Concept Plan - 2022.06.15	PDF	07/29/2022
Winona Crossing_LA Concept_20220727	PDF	07/29/2022

Changes to the Design or Environment

It should be noted that wind comfort is subjective and can be sensitive to changes in building design and operation that are possible during the life of a building. These could be, for example: outdoor programming, operation of doors, elevators, and shafts pressurizing the tower, changes in furniture layout, etc. In the event of changes to the design, construction, or operation of the building in the future, RWDI could provide an assessment of their impact on the discussions included in this report. It is the responsibility of Others to contact RWDI to initiate this process.

Limitations

This report was prepared by Rowan Williams Davies & Irwin Inc. for Jennum Properties Inc. ("Client"). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein and authorized scope. The conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared. Because the contents of this report may not reflect the final design of the Project or subsequent changes made after the date of this report, RWDI recommends that it be retained by Client to verify that the results and recommendations provided in this report have been correctly interpreted in the final design of the Project.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilize the report and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the conclusions and recommendations provided.

APPENDIX A

APPENDIX A

STATISTICS

GROSS FLOOR AREA DEFINITION

CITY OF HAMILTON (By-law No. 05-200)

Gross Floor Area shall mean the aggregate horizontal area measured from the exterior faces of the exterior walls of all floors of a building (excluding any cellar or floor area having a ceiling height of 2.0 meters or less or devoted exclusively to parking) within buildings on a lot but shall not include any area devoted to mechanical equipment.

BUILDING HEIGHT DEFINITION

CITY OF HAMILTON (By-Law No. 05-200)

Building Height shall mean the vertical distance from grade to the uppermost point of the building but not including any mechanical penthouse or any portion of a building designed, adapted or used for such features as a chimney, smokestack, fire wall, stair tower, fire tower, water tower, tank, elevator bulkhead, ventilator, skylight, cooling tower, derrick, conveyor, antenna, or any such requisite appurtenance, or a flagpole, display sign, ornamental figure, parapet, bell tower, or other similar structure. Provided, however, where this By-law requires building height to be calculated to determine a minimum rear yard or a minimum side yard requirement, building height shall mean the vertical distance between the lowest finished grade elevation along the lot line related to such required yard at that point closest to the building and the horizontal extension of the uppermost point of the building.

PROJECT SITE AREA

BLDG	SITE AREA	m²	ft²
BLDG A+B+C+ TH	TOTAL SITE AREA	23,631.3	254,365
	TOTAL PROPOSED GFA	57,968.0	623,968
	F.S.I OF PROPOSED DEVELOPMENT	2.45 x SITE AREA	

PROJECT INFORMATION

	REQUIRED	PROVIDED
BUILDING HEIGHT	14.0 M (MAX)	39.20 M
BUILDING SETBACKS		
NORTH SETBACK	14.00 M	14.00 M
SOUTH SETBACK	6.00 M	8.00 M
EAST SETBACK	1.50 M	4.40 M
WEST SETBACK	1.5 M (MIN), 4.5 M (MAX)	9.50 M
LANDSCAPE BUFFER	0.00 M	VARIES
LOADING SPACE	0	3
ESTABLISHED GRADE		

GROSS FLOOR AREA SUMMARY

BLDG	USE		GFA m²	GFA ft²	FSI
BLDG A+B+C+ TH	NON-RESIDENTIAL		1,204.0	12,960	0.05
	RESIDENTIAL	600 UNITS	56,204.0	604,975	2.37
	INDOOR AMENITY		560.0	6,028	0.02
	SUBTOTAL RESIDENTIAL		56,764.0	611,003	2.40
	SUB TOTAL		**57,968.0**	**623,968**	**2.45**
	TOTAL		**57,968.0**	**623,968**	**2.45**

GROSS FLOOR AREA BREAKDOWN — BLDG A

FLOOR	# OF UNITS	RESIDENTIAL SALEABLE m²	ft²	RESIDENTIAL NON-SALEABLE m²	ft²	TOTAL RESIDENTIAL m²	ft²	NON-RESIDENTIAL INST./COMM. m²	ft²	NON-RESIDENTIAL AMENITY/COMM. m²	ft²	TOTAL NON-RESIDENTIAL m²	ft²	TOTAL GFA (TFA - EXCLUSIONS) m²	ft²
UG 2				218.3	2,349	218.3	2,349							218.3	2,349
UG 1				219.3	2,360	219.3	2,360							219.3	2,360
Bldg A FLOOR 1				526.6	5,668	526.6	5,668	932.0	10,032	147.0	1,582	1,079.0	11,614	1,605.6	17,282
Bldg A FLOOR 2	17	1,361.6	14,656	286.2	3,081	1,647.8	17,737							1,647.8	17,737
Bldg A FLOOR 3	19	1,562.0	16,814	183.7	1,978	1,745.8	18,791							1,745.8	18,791
Bldg A FLOOR 4	19	1,562.0	16,814	183.6	1,976	1,745.6	18,790							1,745.6	18,790
Bldg A FLOOR 5	19	1,562.0	16,814	183.6	1,976	1,745.6	18,790							1,745.6	18,790
Bldg A FLOOR 6	19	1,562.1	16,815	183.5	1,975	1,745.6	18,790							1,745.6	18,790
Bldg A FLOOR 7	18	1,302.5	14,020	173.2	1,864	1,475.8	15,885							1,475.8	15,885
Bldg A FLOOR 8	18	1,303.2	14,027	172.6	1,858	1,475.8	15,885							1,475.8	15,885
Bldg A MPH				18.3	197	18.3	197							18.3	197
INDOOR AMENITY (INCLUDED IN GFA)														0.0	0
TOTAL	**129**	**10,215.6**	**109,959**	**2,348.9**	**25,283**	**12,564.4**	**135,242**	**932.0**	**10,032**	**147.0**	**1,582**	**1,079.0**	**11,614**	**13,643.4**	**146,856**

AMENITY AREA BREAKDOWN — BLDG A

FLOOR	OUTDOOR AMENITY m²	ft²	INDOOR AMENITY m²	ft²
UG 2				
UG 1				
Bldg A FLOOR 1	8,610.9	92,687		
Bldg A FLOOR 2				
Bldg A FLOOR 3				
Bldg A FLOOR 4				
Bldg A FLOOR 5				
Bldg A FLOOR 6				
Bldg A FLOOR 7				
Bldg A FLOOR 8				
Bldg A MPH				
TOTAL	**8,610.9**	**92,687**		

TOTAL FLOOR AREA — BLDG A

FLOOR	AREA EXCLUSIONS m²	ft²	TOTAL FLOOR AREA (GFA+INDOOR AMENITY+EXCL) m²	ft²
UG 2	9,554.1	102,840	9,772.4	105,189
UG 1	19,882.5	214,014	20,101.8	216,374
Bldg A FLOOR 1			1,605.6	17,282
Bldg A FLOOR 2			1,647.8	17,737
Bldg A FLOOR 3			1,745.8	18,791
Bldg A FLOOR 4			1,745.6	18,790
Bldg A FLOOR 5			1,745.6	18,790
Bldg A FLOOR 6			1,745.6	18,790
Bldg A FLOOR 7			1,475.8	15,885
Bldg A FLOOR 8			1,475.8	15,885
Bldg A MPH	298.2	3,209	316.4	3,406
TOTAL	**29,734.8**	**320,063**	**43,378.2**	**466,919**

GROSS FLOOR AREA BREAKDOWN — BLDG B

FLOOR	# OF UNITS	RESIDENTIAL SALEABLE m²	ft²	RESIDENTIAL NON-SALEABLE m²	ft²	TOTAL RESIDENTIAL m²	ft²	NON-RESIDENTIAL AMENITY/COMM. m²	ft²	TOTAL NON-RESIDENTIAL m²	ft²	TOTAL GFA (TFA - EXCLUSIONS) m²	ft²
UG 2				354.7	3,818	354.7	3,818					354.7	3,818
UG 1				202.0	2,174	202.0	2,174					202.0	2,174
Bldg B FLOOR 1	13	830.0	8,934	760.9	8,190	1,590.9	17,124	125.0	1,346	125.0	1,346	1,715.9	18,470
Bldg B FLOOR 2	20	1,501.9	16,166	294.1	3,166	1,796.0	19,332					1,796.0	19,332
Bldg B FLOOR 3	22	1,637.8	17,629	248.7	2,677	1,886.5	20,306					1,886.5	20,306
Bldg B FLOOR 4	22	1,637.8	17,629	248.7	2,677	1,886.5	20,306					1,886.5	20,306
Bldg B FLOOR 5	19	1,466.1	15,781	245.6	2,644	1,711.7	18,425					1,711.7	18,425
Bldg B FLOOR 6	19	1,466.1	15,781	245.6	2,644	1,711.7	18,425					1,711.7	18,425
Bldg B FLOOR 7	19	1,466.1	15,781	245.6	2,644	1,711.7	18,425					1,711.7	18,425
Bldg B FLOOR 8	19	1,464.9	15,768	245.6	2,644	1,710.5	18,412					1,710.5	18,412
Bldg B FLOOR 9	18	1,162.3	12,511	246.7	2,655	1,408.9	15,166					1,408.9	15,166
Bldg B FLOOR 10	18	1,162.3	12,511	246.7	2,655	1,408.9	15,166					1,408.9	15,166
Bldg B FLOOR 11	18	1,162.3	12,511	246.6	2,655	1,408.9	15,166					1,408.9	15,166
Bldg B FLOOR 12	18	1,162.3	12,511	245.4	2,641	1,407.7	15,152					1,407.7	15,152
Bldg B MPH				18.3	197	18.3	197					18.3	197
INDOOR AMENITY (INCLUDED IN GFA)												199.1	2,143
TOTAL	**225**	**16,119.8**	**173,512**	**4,095.1**	**44,079**	**20,214.9**	**217,592**	**125.0**	**1,346**	**125.0**	**1,346**	**20,539.0**	**221,081**

AMENITY AREA BREAKDOWN — BLDG B

FLOOR	OUTDOOR AMENITY m²	ft²	INDOOR AMENITY m²	ft²
UG 2				
UG 1				
Bldg B FLOOR 1			199.1	2,143
Bldg B FLOOR 2				
Bldg B FLOOR 3				
Bldg B FLOOR 4				
Bldg B FLOOR 5				
Bldg B FLOOR 6				
Bldg B FLOOR 7				
Bldg B FLOOR 8				
Bldg B FLOOR 9				
Bldg B FLOOR 10				
Bldg B FLOOR 11				
Bldg B FLOOR 12				
Bldg B MPH				
TOTAL			**199.1**	**2,143**

TOTAL FLOOR AREA — BLDG B

FLOOR	AREA EXCLUSIONS m²	ft²	TOTAL FLOOR AREA (GFA+INDOOR AMENITY+EXCL) m²	ft²
UG 2	362.8	3,905	717.5	7,723
UG 1	302.9	3,260	504.9	5,435
Bldg B FLOOR 1			1,915.0	20,613
Bldg B FLOOR 2			1,796.0	19,332
Bldg B FLOOR 3			1,886.5	20,306
Bldg B FLOOR 4			1,886.5	20,306
Bldg B FLOOR 5			1,711.7	18,425
Bldg B FLOOR 6			1,711.7	18,425
Bldg B FLOOR 7			1,711.7	18,425
Bldg B FLOOR 8			1,710.5	18,412
Bldg B FLOOR 9			1,408.9	15,166
Bldg B FLOOR 10			1,408.9	15,166
Bldg B FLOOR 11			1,408.9	15,166
Bldg B FLOOR 12			1,407.7	15,152
Bldg B MPH	330.7	3,560	349.0	3,757
TOTAL	**996.5**	**10,726**	**21,535.5**	**224,641**

GROSS FLOOR AREA BREAKDOWN — BLDG C

FLOOR	# OF UNITS	RESIDENTIAL SALEABLE m²	ft²	RESIDENTIAL NON-SALEABLE m²	ft²	TOTAL GFA (TFA - EXCLUSIONS) m²	ft²
UG 1				317.7	3,420	317.7	3,420
FLOOR 1	15	1,016.6	10,942	816.3	8,787	1,832.9	19,729
Bldg C FLOOR 2	23	1,638.7	17,639	342.0	3,681	1,980.7	21,320
Bldg C FLOOR 3	25	1,812.2	19,506	256.5	2,761	2,068.7	22,267
Bldg C FLOOR 4	25	1,811.4	19,498	256.5	2,761	2,067.9	22,259
Bldg C FLOOR 5	21	1,530.4	16,473	248.4	2,674	1,778.8	19,146
Bldg C FLOOR 6	21	1,530.3	16,472	246.8	2,657	1,777.1	19,129
Bldg C FLOOR 7	21	1,529.3	16,461	246.8	2,657	1,776.1	19,118
Bldg C FLOOR 8	21	1,530.3	16,472	248.4	2,674	1,778.8	19,146
Bldg C FLOOR 9	21	1,232.5	13,266	248.9	2,679	1,481.4	15,946
Bldg C FLOOR 10	21	1,230.6	13,246	248.4	2,674	1,479.0	15,920
Bldg C MPH				18.3	197	18.3	197
EXCESS INDOOR AMENITY (INCLUDED IN GFA)						360.9	3,885
TOTAL	**214**	**14,862.3**	**159,976**	**3,495.2**	**37,622**	**18,718.3**	**201,482**

AMENITY AREA BREAKDOWN — BLDG C

FLOOR	OUTDOOR AMENITY m²	ft²	INDOOR AMENITY m²	ft²
UG 1				
FLOOR 1			360.9	3,885
Bldg C FLOOR 2				
Bldg C FLOOR 3				
Bldg C FLOOR 4				
Bldg C FLOOR 5				
Bldg C FLOOR 6				
Bldg C FLOOR 7				
Bldg C FLOOR 8				
Bldg C FLOOR 9				
Bldg C FLOOR 10				
Bldg C MPH				
TOTAL			**360.9**	**3,885**

TOTAL FLOOR AREA — BLDG C

FLOOR	AREA EXCLUSIONS m²	ft²	TOTAL FLOOR AREA (GFA+INDOOR AMENITY+EXCL) m²	ft²
UG 1	499.8	5,379	817.5	8,799
FLOOR 1			2,193.8	23,614
Bldg C FLOOR 2			1,980.7	21,320
Bldg C FLOOR 3			2,068.7	22,267
Bldg C FLOOR 4			2,067.9	22,259
Bldg C FLOOR 5			1,778.8	19,146
Bldg C FLOOR 6			1,777.1	19,129
Bldg C FLOOR 7			1,776.1	19,118
Bldg C FLOOR 8			1,778.8	19,146
Bldg C FLOOR 9			1,481.4	15,946
Bldg C FLOOR 10			1,479.0	15,920
Bldg C MPH	330.7	3,560	349.0	3,757
TOTAL	**830.5**	**8,940**	**19,548.8**	**210,422**

GROSS FLOOR AREA BREAKDOWN — BLDG TH

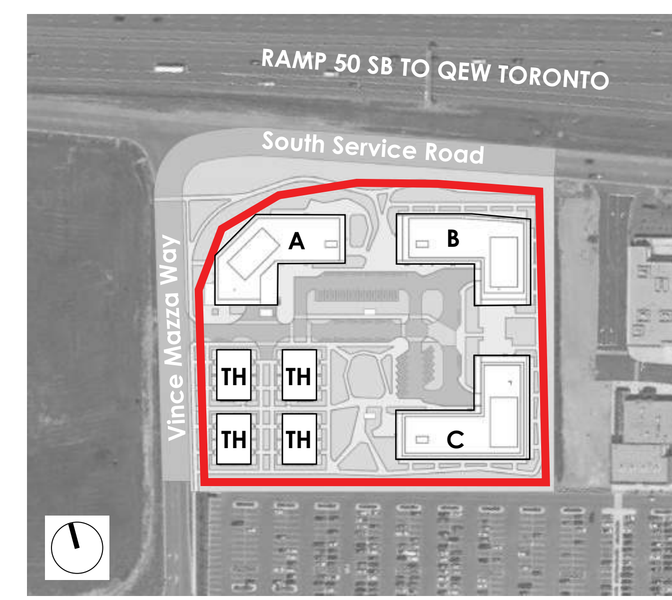
FLOOR	# OF UNITS	RESIDENTIAL SALEABLE (LIVE/WORK) m²	ft²	RESIDENTIAL SALEABLE m²	ft²	RESIDENTIAL NON-SALEABLE m²	ft²	TOTAL GFA (TFA - EXCLUSIONS) m²	ft²
UG 1						133.1	1,433	133.1	1,433
TH FLOOR 1	32	415.5	4,472	1,246.4	13,416			1,661.8	17,888
TH FLOOR 2		429.9	4,627	1,289.6	13,881			1,719.4	18,508
TH FLOOR 3		388.2	4,179	1,164.6	12,536			1,552.8	16,714
TH ROOF TERRACE								0.0	0
INDOOR AMENITY (INCLUDED IN GFA)								0.0	0
TOTAL	**32**	**1,233.5**	**13,277**	**3,700.6**	**39,832**	**133.1**	**1,433**	**5,067.2**	**54,543**

AMENITY AREA BREAKDOWN — BLDG TH

FLOOR	OUTDOOR AMENITY m²	ft²	INDOOR AMENITY m²	ft²
UG 1				
TH FLOOR 1				
TH FLOOR 2				
TH FLOOR 3				
TH ROOF TERRACE				
TOTAL				

TOTAL FLOOR AREA — BLDG TH

FLOOR	AREA EXCLUSIONS m²	ft²	TOTAL FLOOR AREA (GFA+INDOOR AMENITY+EXCL) m²	ft²
UG 1	0	3,654	0	5,495
TH FLOOR 1			1,661.8	17,888
TH FLOOR 2			1,719.4	18,508
TH FLOOR 3			1,552.8	16,714
TH ROOF TERRACE	279.0	3,003	279.0	3,003
TOTAL	**618.4**	**6,657**	**5,723.6**	**61,608**



APPENDIX A

SALEABLE UNIT MIX PROVIDED

BLDG	FLOOR						TOTAL
		1B	1B+D	2B	2B+D	3B	
BLDG A	Bldg A FLOOR 2	1	5	7	2	2	17
	Bldg A FLOOR 3	1	5	8	2	3	19
	Bldg A FLOOR 4	1	5	8	2	3	19
	Bldg A FLOOR 5	1	5	8	2	3	19
	Bldg A FLOOR 6	1	5	8	2	3	19
	Bldg A FLOOR 7	1	11	5	1		18
	Bldg A FLOOR 8	1	11	5	1		18
	SUBTOTAL	7	47	49	12	14	**129**
	TOTAL UNITS	**54**		**61**		**14**	
	UNIT MIX	5.4%	36.4%	38.0%	9.3%	10.9%	100.0%
	UNIT MIX TOTAL	41.9%		47.3%		10.9%	100.0%

SALEABLE UNIT MIX PROVIDED

BLDG	FLOOR						TOTAL
		1B	1B+D	2B	2B+D	3B	
BLDG B	Bldg B FLOOR 1	5	5	1	1	1	13
	Bldg B FLOOR 2	3	8	5	1	3	20
	Bldg B FLOOR 3	1	12	5	2	2	22
	Bldg B FLOOR 4	1	12	5	2	2	22
	Bldg B FLOOR 5		12	3		4	19
	Bldg B FLOOR 6		12	3		4	19
	Bldg B FLOOR 7		12	3		4	19
	Bldg B FLOOR 8		12	3		4	19
	Bldg B FLOOR 9	7	7	2	2		18
	Bldg B FLOOR 10	7	7	2	2		18
	Bldg B FLOOR 11	7	7	2	2		18
	Bldg B FLOOR 12	7	7	2	2		18
	SUBTOTAL	38	113	36	14	24	**225**
	TOTAL UNITS	**151**		**50**		**24**	
	UNIT MIX	16.9%	50.2%	16.0%	6.2%	10.7%	100.0%
	UNIT MIX TOTAL	67.1%		22.2%		10.7%	100.0%

SALEABLE UNIT MIX PROVIDED

BLDG	FLOOR						TOTAL
		1B	1B+D	2B	2B+D	3B	
BLDG C	FLOOR 1	5	2	6		2	15
	Bldg C FLOOR 2	2	10	6	4	1	23
	Bldg C FLOOR 3		14	6	4	1	25
	Bldg C FLOOR 4		14	6	3	2	25
	Bldg C FLOOR 5		16	1		4	21
	Bldg C FLOOR 6		16	1		4	21
	Bldg C FLOOR 7		16	1		4	21
	Bldg C FLOOR 8		16	1		4	21
	Bldg C FLOOR 9	14	3	3	1		21
	Bldg C FLOOR 10	14	3	3	1		21
	SUBTOTAL	35	110	34	13	22	**214**
	TOTAL UNITS	**145**		**47**		**22**	
	UNIT MIX	16.4%	51.4%	15.9%	6.1%	10.3%	100.0%
	UNIT MIX TOTAL	67.8%		22.0%		10.3%	100.0%

SALEABLE UNIT MIX PROVIDED

BLDG	FLOOR	LIVE/WORK		TOTAL
		TH	TH	
BLDG TH	3-STOREY UNITS	8	24	32
	SUBTOTAL	8	24	**32**
	TOTAL UNITS	**8**	**24**	

SALEABLE UNIT MIX PROVIDED - UNIT TOTALS

	BLDG								TOTAL
		1B	1B+D	2B	2B+D	3B	TH	(LIVE/WORK)	
BLDG A+B+C +TH	A	7	43	49	12	14			129
	B	38	81	36	14	24			225
	C	35	79	34	13	22			214
	TH						24	8	32
	SUBTOTAL	80	270	119	39	60	24	8	**600**
	TOTAL UNITS	**350**		**158**		**60**	**32**		
	UNIT MIX	13.3%	45.0%	19.8%	6.5%	10.0%	0.4%	0.1%	100.0%
	UNIT MIX TOTAL	58.3%		26.3%		10.0%	0.5%		100.0%

BARRIER FREE UNITS - REQUIRED AND PROVIDED

BLDG	TYPE	TOTAL UNITS	BF UNITS
BLDG A, B, C	1B	350	53
	2B	158	24
	3B	60	9
	SUBTOTAL		86
	TOTAL PROVIDED		
	RATIO PROVIDED		15.00%
	TOTAL REQUIRED		86

AMENITY AREAS REQUIRED & PROVIDED

	TYPE	PROVIDED		
		RATIO	m²	ft²
BLDG A+B+C+TH	INDOOR AMENITY	0.88 m²/UNIT	559.97	6,028
	OUTDOOR AMENITY	13.62 m²/UNIT	8,610.87	92,687
	TOTAL AMENITY	**14.51 m²/UNIT**	**9,170.85**	**98,714**

VEHICULAR PARKING - REQUIRED

	RESIDENTIAL			
	USE	UNITS/m2	RATIO	SPACES
BLDG A+B+C+TH	INSTITUATIONAL/COMMERCIAL	1204	1 PER 125	9
	BEWLOW 50 M2	95	0.3 PER UNIT	29
	RESIDENTIAL PARKING	505	1 PER UNIT	505
	TOTAL			**543**

VEHICULAR PARKING - PROVIDED

		USE		TOTAL
	FLOOR	RESIDENTIAL	INST./COMM.	
BLDG A+B+C+TH	FLOOR 1	34	9	**43**
	U/G 1	432		**432**
	U/G 2	225		**225**
	TOTAL	**691**	**9**	**700**

BARRIER FREE PARKING - REQUIRED

	USE	TOTAL
BLDG A+B+C+TH	FLOOR RESIDENTIAL	
	MIN 2 + 2% OF REQUIRED	13
	TOTAL	**13**

BARRIER FREE PARKING - PROVIDED

		USE		TOTAL
	FLOOR	RESIDENTIAL	INST./COMM.	
BLDG A+B+C+TH	FLOOR 1			
	U/G 1	22		**22**
	U/G 2			
	TOTAL	**22**		**22**

BICYCLE PARKING - REQUIRED

		RESIDENTIAL		NON-RESIDENTIAL		TOTAL
	USE	RATIO	SPACES	USE	SPACES	
BLDG A+B+C+TH	SHORT TERM		5	COMMERCIAL/INSTITUTIONAL	5	**10**
	LONG TERM			COMMERCIAL/AMENITY	5	**5**
	TOTAL REQUIRED		**5**		**10**	**15**

BICYCLE PARKING - PROVIDED

		RESIDENTIAL		COMM./INST.		COMM./AMENITY		TOTAL
	FLOOR	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM	
		OUTDOOR		OUTDOOR		OUTDOOR		
BLDG B+C	FLOOR 1	5	180	5		5		195
	U/G 1							
	U/G 2							
	TOTAL	**5**	**190**	**5**		**5**		**195**

STATISTICS