

URBAN DESIGN REPORT

July 2022

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455-509 Mill Street
City of Kitchener



Official Plan Amendment
Zoning By-law Amendment

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POLOCORP

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EXECUTIVE SUMMARY

Michael Spaziani Architect Inc. (MSAi) has been retained by Polocorp Inc. to prepare an Urban Design Report in support of the proposed Official Plan and Zoning By-law Amendments necessary to facilitate the redevelopment of 455-509 Mill Street in the City of Kitchener, Regional Municipality of Waterloo (the 'Site').

The purpose of this Urban Design Brief is to:

- Provide a site description and detail the existing conditions of the lands;
- Outline the intended vision and goals for the development of the Site;
- Review the proposed design elements of the Site to ensure compatibility with the surrounding neighbourhood context;
- Summarize how the proposed design responds to the City of Kitchener's Urban Design policies; and,
- Provide conclusions regarding the proposed development of the lands.

The Proposed Development consists of six mixed-use towers, centred around a highly-landscaped central plaza, promenade, and private street, and will ultimately consist of up to 1,500 residential units. The Site's location offers a unique opportunity to provide a gateway to the Rockway neighborhood and enhance the presence and functionality of the existing ION station.

Provincial policy encourages high density development near Major Transit Station Areas (MTSA's). The Site shares its rear boundary with the Mill ION Station and is a prime location to create a high-density, mixed-use node within the Rockway community. The City of Kitchener is in the process of implementing these Provincial and Regional objectives, initiated by the Planning Around Rapid Transit Stations (PARTS) Study.

The City is currently undertaking a Neighbourhood Planning Review (NPR) to implement the policy direction of the PARTS study through the Official Plan, including a proposed Secondary Plan for the Rockway neighbourhood. The Secondary Plan has not been adopted by Council, however, the proposed policies and designations are indicative of the City's vision for development within MTSA's. The applications for Official Plan and Zoning By-law Amendments are intended to implement the objectives of the NPR.

The Applicant envisions the Site as a vibrant, mixed-use community that contributes to the growth of a diverse and inclusive neighbourhood. The Site will function as a multi-modal hub and gathering place within the City. The Proposed Development will emphasize the pedestrian realm through the introduction of public amenity spaces, high-quality design and seamless integration with the ION station. Building materials, height and massing have been considered to ensure compatibility with the surrounding community. Ultimately, the Proposed Development is consistent with design policies outlined within the Official Plan, Urban Design Manual, and proposed Rockway Secondary Plan.

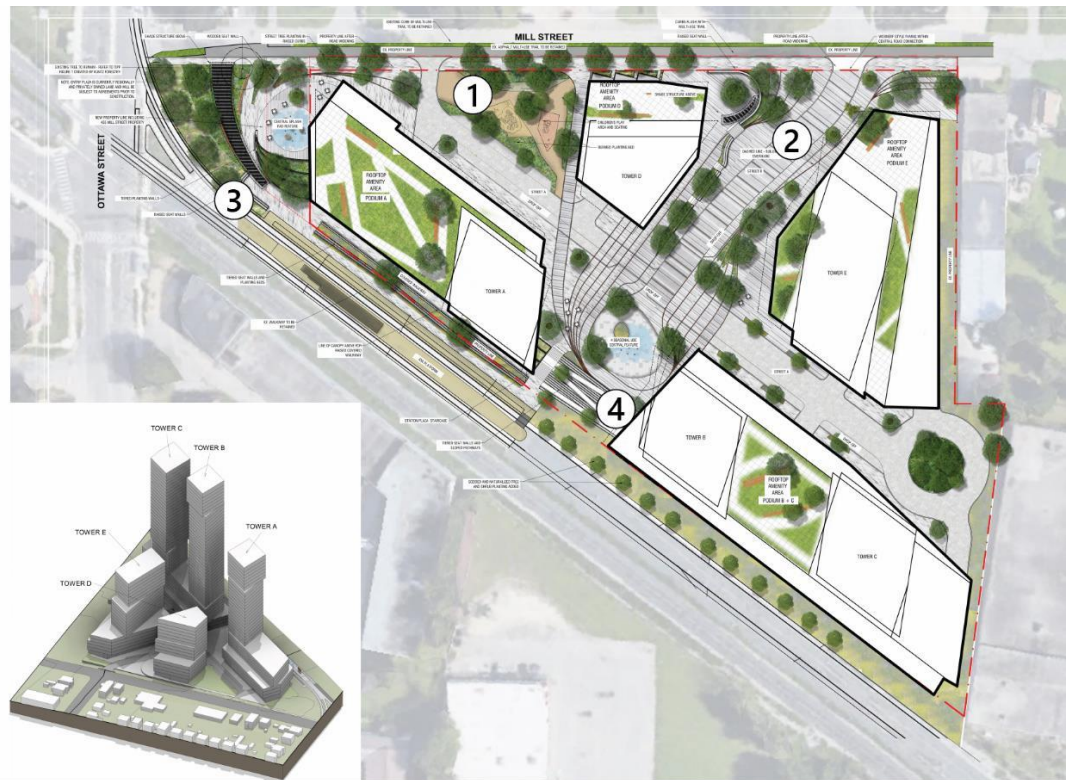


Figure 1: Highlights of the Proposed Development

1.0 INTRODUCTION

Polocorp Inc. is proposing an Official Plan and Zoning By-law Amendment to facilitate the redevelopment of the lands at 455 to 509 Mill Street in Kitchener (the 'Site') (see Figure 2). The redevelopment is envisioned to be a high-density, mixed-used community immediately abutting the Mill ION Station (the "Proposed Development"). An Urban Design Report is required as part of a complete application per the June 9, 2022 Pre-submission Consultation meeting minutes. The following Urban Design Report will demonstrate that the Proposed Development is consistent with design guidelines outlined within the Official Plan and Urban Design Manual and informed by the proposed Rockway Secondary Plan. The Proposed Development is consistent with Provincial, Regional and Municipal planning policy.



1.1 SUPPORTING STUDIES AND MATERIALS

In addition to the Urban Design Report, a series of additional documents are required as part of a complete application. The following supporting studies and materials have been prepared in support of the Proposed Applications, and have been considered in the preparation of this Urban Design Brief:

- Planning Justification Report by The Butler Group Consultants Inc. (July 2022, Updated February 2023);
- Functional Servicing Report & SWM Report by JPE Engineering (July 12, 2022, Updated February 13, 2023);
- Transportation Impact Study and Parking Justification Report by Paradigm Transportation Solutions Ltd (July 2022, Updated February 14, 2023);
- Preliminary Geotechnical and Hydrogeological Investigation by Chung & Vander Doelen (Mar 28, 2022, updated Feb 17, 2023);
- Phase I Environmental Site Assessment (455-473 Mill Street) by Chung & Vander Doelen (July 12, 2022);
- Phase II Environmental Site Assessment (477, 481, and 485 Mill Street) by Chung & Vander Doelen (January 6, 2017);
- Phase I and II Environmental Site Assessment (509 Mill Street) by Chung & Vander Doelen (June 12, 2013);
- Tree Inventory and Preservation Plan Report by Kuntz Forestry Consulting Inc. (June 29, 2022);
- Noise and Vibration Feasibility Assessment by HGC Engineering (July 13, 2022, Updated February 16, 2023);
- Pedestrian Wind Assessment by RWDI (June 22, 2022, updated February 16, 2023); and,
- Sustainability Statement by The Butler Group Consultants Inc. (July 2022).

2.0 SITE CONTEXT



Figure 3: Site Location

2.1 SITE LOCATION AND DESCRIPTION

The Site is located within the Rockway neighbourhood, approximately 1.5 kilometers southeast of Downtown Kitchener. It is municipally known as 455, 459, 469, 473, 477, 481, 485 and 509 Mill Street and is legally described as Part of Lots 16, 17, 18 & B, Registered Plan 384 and Part of Lot 19A, Registered Plan 791, City of Kitchener, Regional Municipality of Waterloo. The Site is situated east of the intersection of Mill Street and Ottawa Street South. It is roughly triangular in shape and occupies the middle of the block. The Site fronts Mill Street on the north side, the ION rail corridor to the south, and private landowners to the east and west. There are approximately 183.3 metres of frontage along Mill Street and 231.8m of frontage on the LRT corridor. The ION platform (Mill Station) is approximately 94.0 metres long and abuts the rear property line. The Site has an overall area of 2.15 ha (Figure 3)

2.2 EXISTING CONDITIONS

The Site consists of existing low-rise residential lots with single detached dwellings on 455 to 481 Mill Street (Figure 4). The lands at 485 and 509 Mill Street contain industrial buildings, with a large industrial facility on 509 Mill Street.

A Tree Inventory documented a total of 80 trees and two tree groupings on and within 6 metres of the Site. Trees were primarily located within the periphery of the Site and in, or around, 485 Mill Street. Street trees are also present along Mill Street. Some vegetation buffers the rear property line facing the ION rail lines.

The industrial parcels at 485 and 509 Mill Street are mainly gravel and paved surfaces with some landscaping in the front yards.

The Site slopes down to the south and east from a high point towards the intersection of Mill Street and Ottawa Street South. The land falls approximately 1 metre along the western edge, 3 metres along the eastern edge, 4 metres along Mill Street, and 5 metres along the LRT corridor.

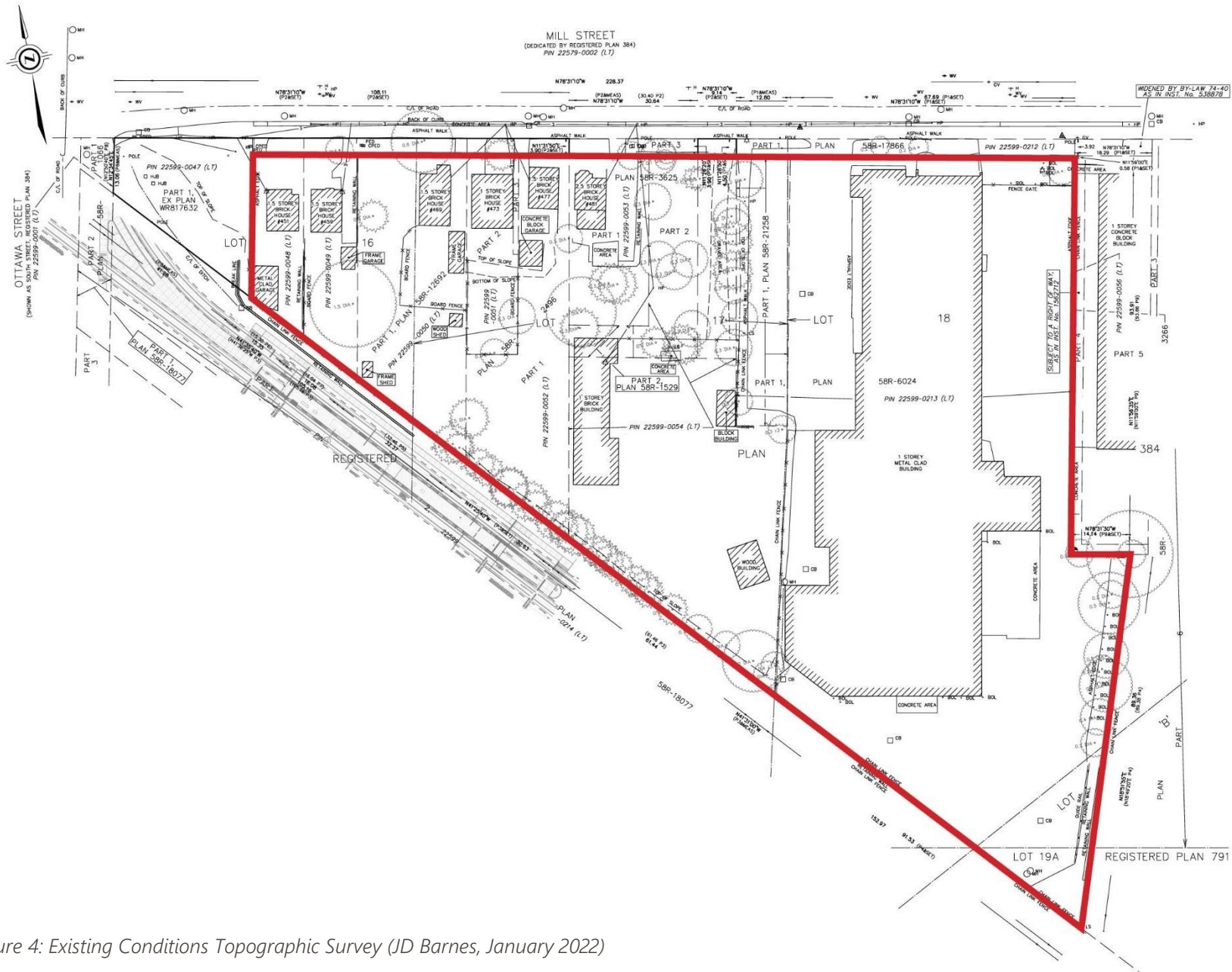


Figure 4: Existing Conditions Topographic Survey (JD Barnes, January 2022)

2.3 SURROUNDING LAND USES

NORTH

The lands to the north of the Site are primarily comprised of low-rise residential uses with single-detached style dwellings. There are some small scale commercial and industrial uses directly across Mill Street on the northern street edge. A high-density redevelopment project is located to the north-west near Borden Ave S and Courtland Ave E. The PARTS plan envisions the north side of Mill Street as accommodating low- and medium-rise residential development in the future.

EAST

The lands to the east are comprised of industrial and commercial parcels (525, 541 & 543 Mill Street) and one residential parcel (531 Mill Street). The Rockway Golf Course begins further east of these lands and is owned by the City of Kitchener.

SOUTH

The Mill ION Station is directly south of the Site and abuts the entire property line. A CN Rail line runs parallel to the ION rail line on the south side. Across the ION LRT and CN Rail corridor is an employment area and the Concordia Club, with low-rise residential fronting Ottawa Street South. Conestoga Parkway (Highway 7 & 8) is also located further south beyond this area.



Figure 5: Surrounding Context Map

WEST

Immediately abutting the Site to the west is a vacant parcel at 451 Mill Street, owned by the Region of Waterloo. Initial discussions to convey the parcel to the City of Kitchener have been begun but have yet to be confirmed. Further west is Ottawa Street South which is primarily characterized by residential uses. There is a mix of single-detached, townhouse and low-rise apartment dwellings in close proximity. There are some supportive commercial and institutional uses along Ottawa Street South.

3.0 PROPOSED DEVELOPMENT

3.1 DESIGN VISION

The vision for the Site is for a vibrant, mixed-use community that contributes to the creation of a diverse and inclusive neighbourhood. The Site will function as a multi-modal hub and gathering place within the Rockway community.

Design Goals

The following core design objectives for the Site reflect the general intent of the Kitchener Official Plan, Urban Design Manual and PARTS Rockway Plan. These objectives form the basis of the Site's Master Plan:

1. **Transit-oriented development** will be the main focus of the design. Overall access to the Mill ION Station will be improved and encouraged. High quality design and materials will be used to improve the user experience of the Site. Pedestrian circulation from within, and through, the Site with the surrounding community is improved by providing accessible and direct access to the ION station.
2. An **urban, mixed-use community** will be created through the allocation of commercial spaces at grade, and residential spaces above.
3. **Human-scaled development** will be implemented at grade by providing high quality design on building podiums. Features such as covered walkways and transparent glazing at grade will assist in the usability, vibrancy and safety of the street level.
4. **Compatible building massing** will be designed that is unique and identifies the site as a prominent location in the community (such as the entrance to the Rockway neighbourhood). Massing will also be compatible to the

surrounding built form through appropriately scaled heights and towers.

5. **Quality open spaces and placemaking** will be created through well-designed streetscapes and parkettes that add vibrancy to the community and soften the built form. These spaces become significant and memorable spaces to the public when they are well-designed and accessible. Local examples of quality open spaces which create memorable places include the Vogelsang Green, Victoria Park, and the recent upgrades to King Street and Queen Street.

3.2 OVERVIEW OF DEVELOPMENT

The Site offers a unique opportunity to create an iconic gateway to the Rockway neighbourhood. The Applicant envisions a vibrant, mixed-use community that functions as a multi-modal hub on the Mill Street ION station. To attain this, the Proposed Development provides the opportunity to create up to 1,500-units within a multi-building, mixed-use community (Figures 6-10). The development will ultimately consist of 5 residential towers, situated atop building podiums that contain residential units; commercial, community and amenity spaces; as well as, structured parking.

Towers A, B, D and E are centred around a large central plaza (the "Station Plaza") and promenade that extends from the south end of the ION station platform to Sydney Street. Collectively, this space forms the primary open space within the Proposed Development. The Station Plaza and promenade are flanked by ~2,200 square metres of commercial space, building entrances and private amenity spaces. Buildings A and D form the north edge of the development, flanked by lands currently owned by the Region of Waterloo. These lands offer an

opportunity to create a gateway to the Mill Street ION station and Proposed Development via a public park (the “Entry Plaza”).

Vehicular access to the Site is via a private street system that loops from Mill Street, through the Site, and ultimately aligns with the southern terminus of Sydney Street. The private street is flanked by wide pedestrian sidewalks and active street frontages, forming a central promenade, as well as a Play Area framed by Buildings A, D and Mill Street.

Approximately 1,150 parking spaces are provided on-site. Of the provided parking, ~680 of the spaces are provided within a 1.5 storey underground parking structure. An additional ~330 spaces are provided within the structured parking podium areas of Buildings A, B, C and E. The balance of the parking spaces are provided as short term visitor spaces at grade.

A detailed review of the Site design is provided within Section 5.0 of this Report.

Community Benefits

The Proposed Development integrates a number of features that will benefit the community at large. The following will be provided by the Owner as part of the development, as proposed:

- High-quality public amenity areas;
- A total of 50 affordable rental units;
- Community Centre space and 10-year financial grant;
- Below-grade and structured parking;
- Bicycle parking cluster located at Mill ION Station;
- Potential construction and on-going maintenance of Entry Plaza;



Figure 6: Proposed Conceptual Site Plan (NEO Architects Inc, February 2023)

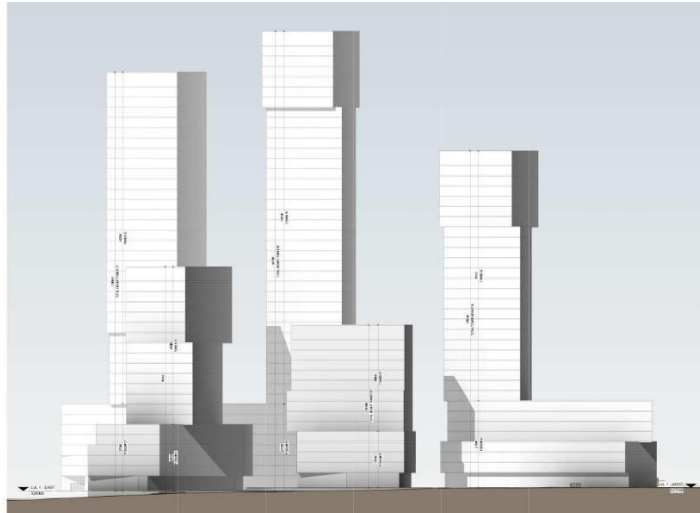


Figure 7: North Elevation (from Mill Street)

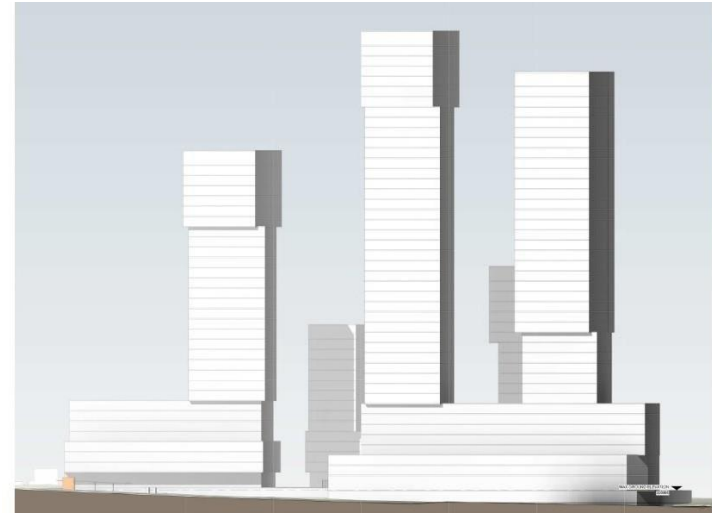


Figure 9: South Elevation (from Rail Corridor)

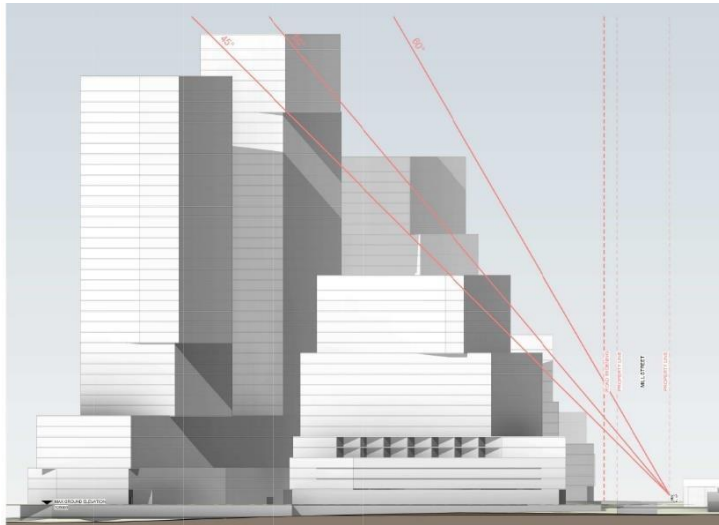


Figure 8: East Elevation (from Rockway Golf Course)

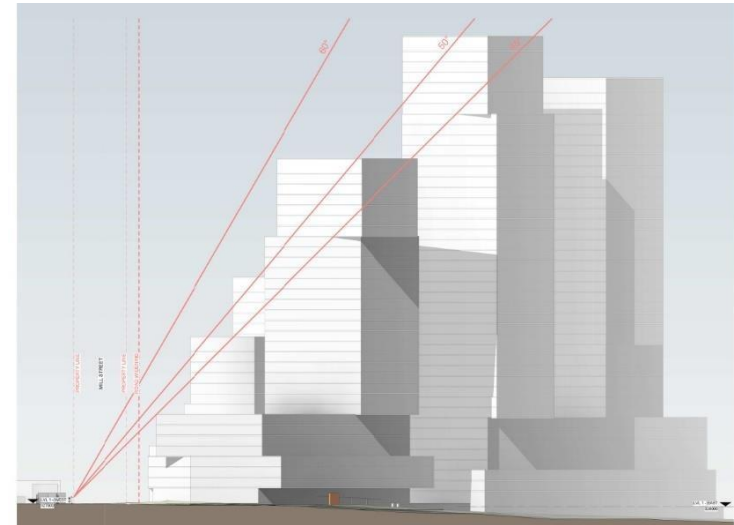


Figure 10: West Elevation (from Ottawa Street South)

3.3 PHASING & MASTER PLAN

Site Phasing

The Proposed Development will require construction to be completed in phases (Figure 11). It is expected that each phase will include one building each, beginning with Building A and ending with Building E. Anticipated phasing is as follows:

- Phase 1 will include Building A and underground parking Level P1;
- Phase 2 will include Buildings B and C, underground parking Level P2, and the extension of P1;
- Phase 3 will include Building D atop Level P1;
- Phase 4 will include the final extensions of Levels P1 & P2. Building E will be constructed on top of the P1 level.

An overview of the phasing is provided in Figure 11. Detailed phasing drawings were prepared as part of the Architectural Package and are provided in **Appendix A** of this Report.

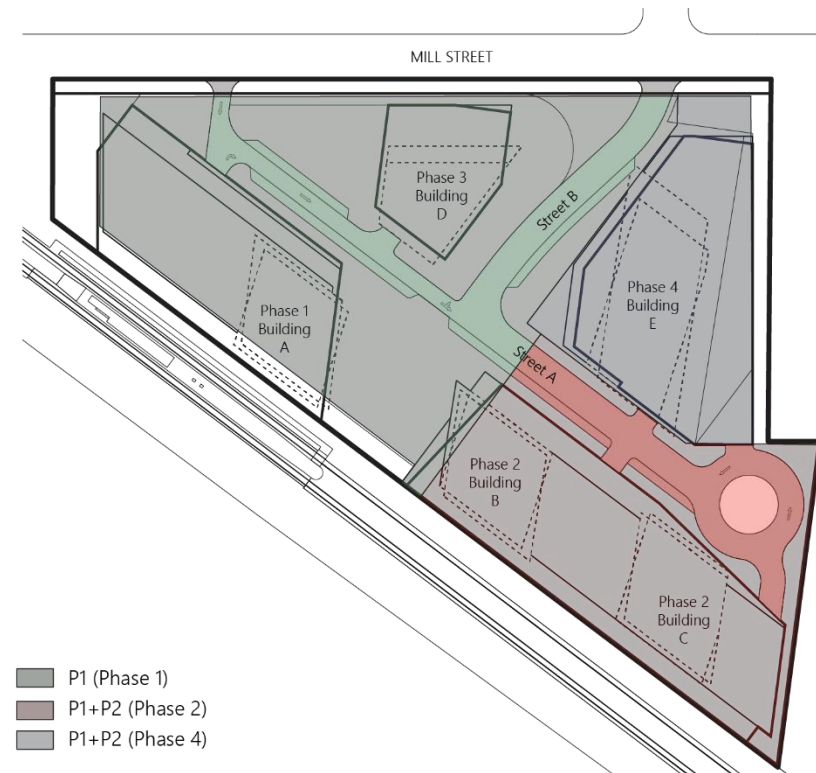


Figure 11: Proposed Phasing

Conceptual Master Plan

While the above describes the phasing strategy for the current land holdings, there are additional lands within the city block bounded by Mill Street, the CN Rail corridor, and the Rockway Golf Course that could be integrated with the Proposed Development. As such, a conceptual Master Plan has been prepared for the surrounding lands to demonstrate feasibility of future development (Figures 12 and 13).

It is anticipated that 2 to 3 additional buildings could be designed as part of the overall development in this area, including approximately 500 to 700 additional units, depending on building design and distribution.

The proposed Site Plan has considered access and integration with the eastern lands at a future development stage. Circulation through the block to the new lands would be accomplished through an extension of Street A to the southeast, with the street then curving to the north to meet Mill Street between Sydney Street and Courtland Avenue East. This would complete the loop of Street A and provide continuous access through the Site and adjacent lands.

Vehicular circulation will be connected between the two sites by the extension of Street A

New towers and podiums would be constructed in a similar rhythm to the proposed developed. Spacing of towers would meet separation requirements and heights will be similar, if not lower, than the rest of the development as it transitions towards the open space of the Rockway Golf Course.

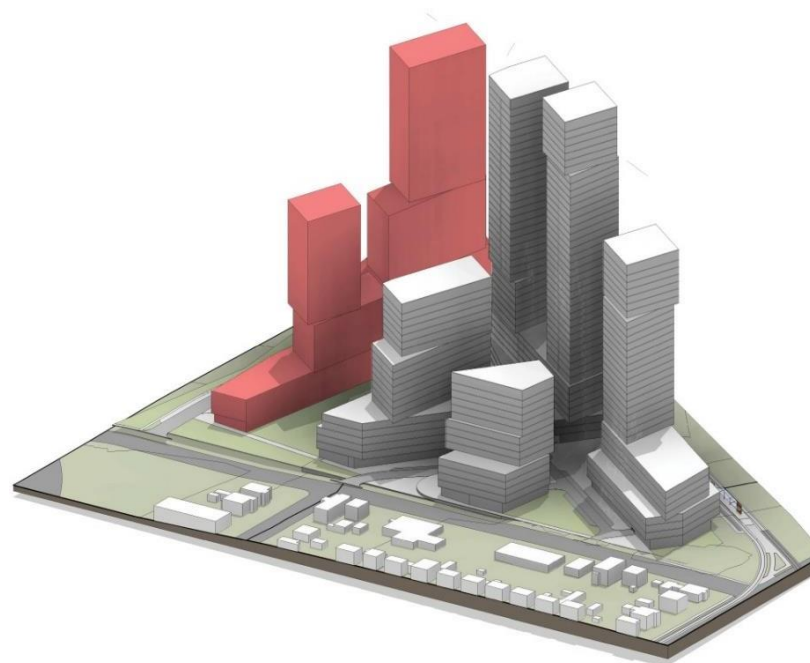


Figure 12: Conceptual Future Site Model (NEO Architects, February 2023)

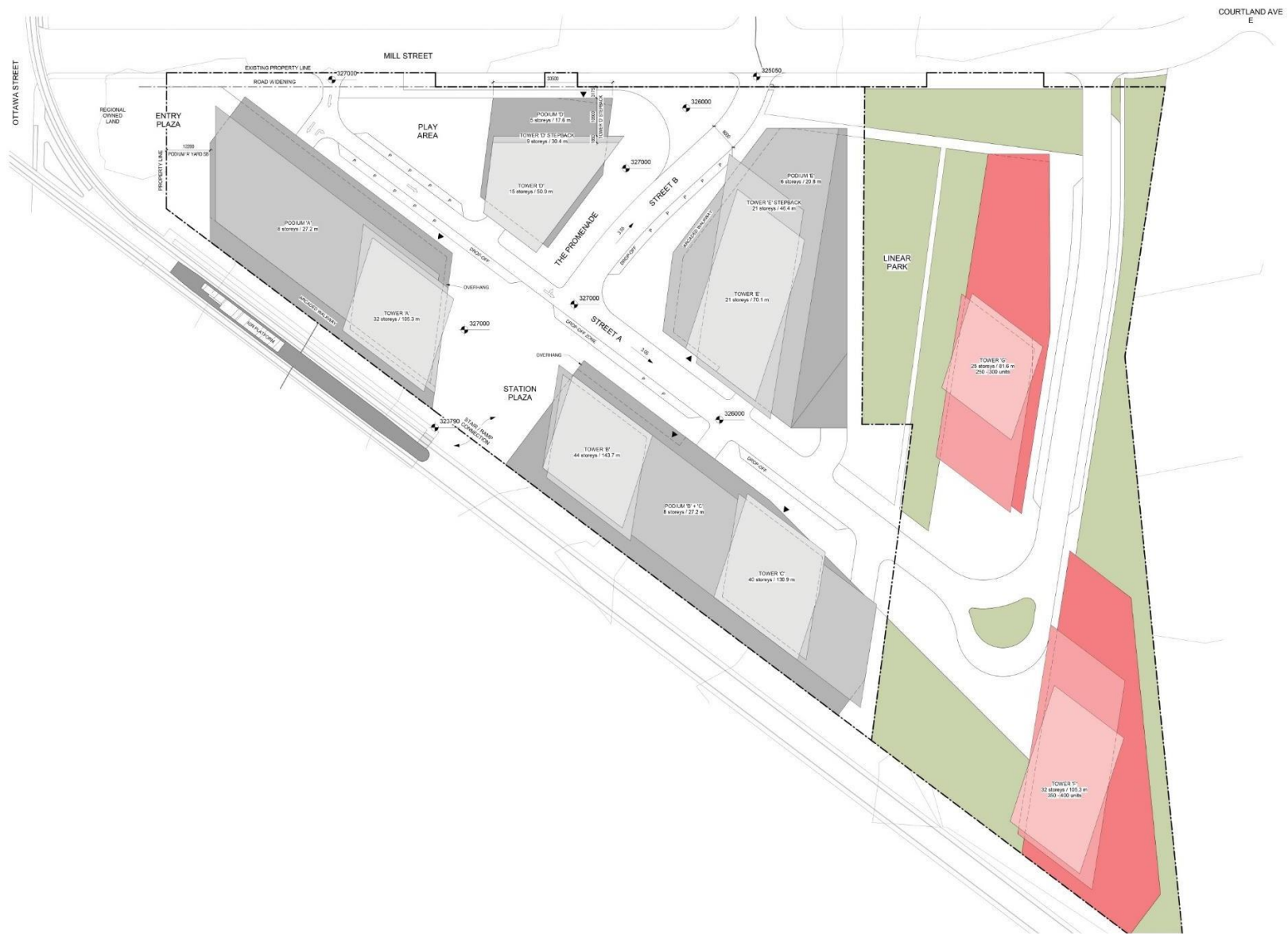


Figure 13: Conceptual Site Master Plan (NEO Architects, February 2023)

Future Community Context

An important factor in considering the contextual compatibility of a development is looking at the planned vision for the surrounding community. With the construction of the LRT and the introduction of the Major Transit Station Area (MTSA) policies by the Province, Region, and City, the neighbourhood is expected to undergo a transformation over time. The Site is one of the first major redevelopment proposals to date within the Rockway MTSA and as such can not draw on other neighbourhood projects as precedent.

A PARTS Rockway Plan (the 'Plan') report was prepared by Urban Strategies and approved by Council on December 17, 2017. The Plan created conceptual massing model for the neighbourhood surrounding Mill Station and shows low and medium density development on the north side of Mill Street. The built form envisioned for the north side of Mill Street is illustrated in Figure 14, which shows the conversion of single



Figure 14: Rendering of Mill Station in PARTS Rockway Plan by Urban Strategies (December 11, 2017)

detached lots to a mid-rise form, acting as a transition to the low-rise residential uses to the north.

Section 3.3 of the Plan discusses objectives and provides direction on achieving the planned vision for the Rockway neighbourhood. Some key objectives that have influenced the design of the Proposed Development include:

02 Better Integrate the Mill Stop With the Broader Station Area

The Mill stop is tucked into the southeast corner of the station area, east of Ottawa Street along the rail corridor and within an employment area. Visibility and access to the stop is challenging due to the lack of road connections and the existing condition of surrounding uses backing onto the rail corridor. As redevelopment occurs, it will be particularly important to elevate the stop's profile by improving its relationship with its surroundings and introducing new land uses and connections.

08 Encourage the Redevelopment of Former Industrial & Underutilized Lands

Rockway is a historic industrial area with a number of large vacant and underutilized parcels. In the context of major investment in higher order transit, former industrial and underutilized lands present a key opportunity to encourage the development of a higher density live-work environment with a greater mix of transit-supportive uses.

10 Ensure Large Redevelopment Projects Are Supported With New On-Site Public Spaces

Rockway currently lacks centrally located parks and public spaces. The station area includes a number of large vacant or

underutilized parcels that will likely redevelop over time in response to the LRT. Ensuring that these sites include adequate parks and public spaces is integral to meeting the increasingly diverse needs of residents and workers.

Response: The Proposed Development will establish the Site and Mill Station as a focal point within the community. Access to the ION station will be improved by creating defined pedestrian pathways and providing high-quality landscaped areas. The former industrial lots forming the Site are being redeveloped into a transit supportive community and higher density living. The influx of residents will be supported by the introduction of high-quality public spaces and active street frontages.

Figures 15 to 18 demonstrate the massing of the Site in relation to the proposed massing of the surrounding community, as envisioned by the PARTS study. Two nearby development proposals requesting increases in height and density were also included (The Metz, formerly the Schneider Site, and 368 Ottawa St S). These figures establish a look at the future massing of the Rockway neighbourhood. It is anticipated that there will be a gradual increase in height from the surrounding low-rise properties toward the Proposed Development. Podiums of the development will complement the heights of the mid-rise densities contemplated by PARTS. Towers are tallest in height when adjacent to the LRT station and help to establish the site as a gateway and focal point within the neighbourhood.

Section 4.2 of this Report further discusses the future vision for the Rockway neighbourhood through the creation of a Rockway Secondary Plan.

3.4 PROPOSED APPLICATIONS

To facilitate the Proposed Development, the following planning applications are required:

- An Official Plan Amendment to redesignate the lands from General Industrial Employment to Mixed Use with a Special Policy Area to permit a maximum Floor Space Ratio of 8.5;
- A Zoning By-law Amendment to rezone the lands from General Industrial Zone (M-2) within Zoning By-law 85-1 to a site-specific MIX-3 zone within Zoning By-law 2019-051.

This Report has been submitted in support of the proposed Official Plan and Zoning By-law Amendments.

The recommendations set forth in this report are to be considered through the detailed design, Site Plan Approval and Plan of Condominium processes.

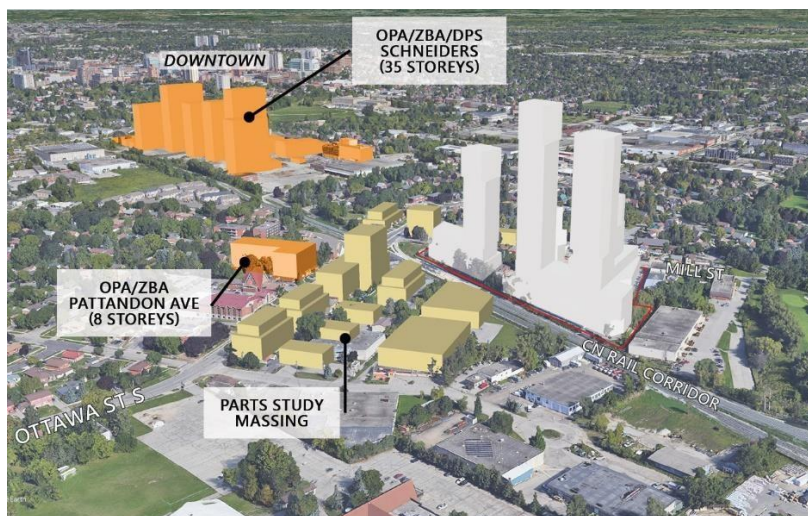


Figure 15: View looking north

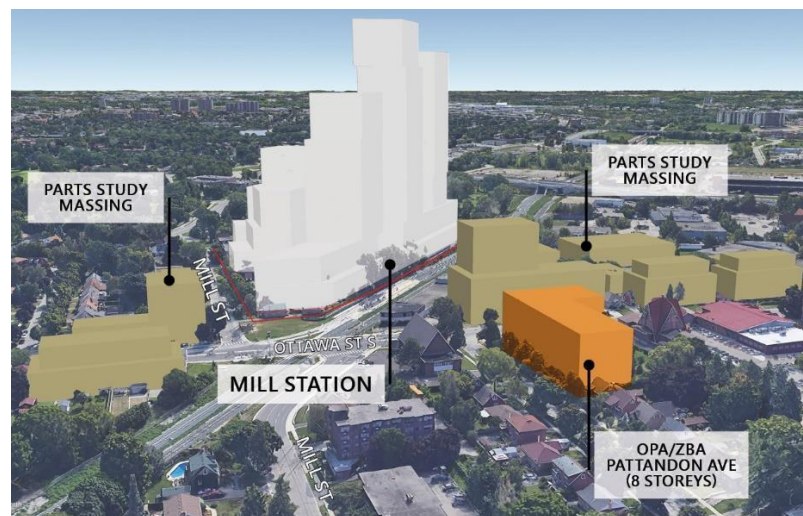


Figure 17: View looking east from Mill and Ottawa Streets

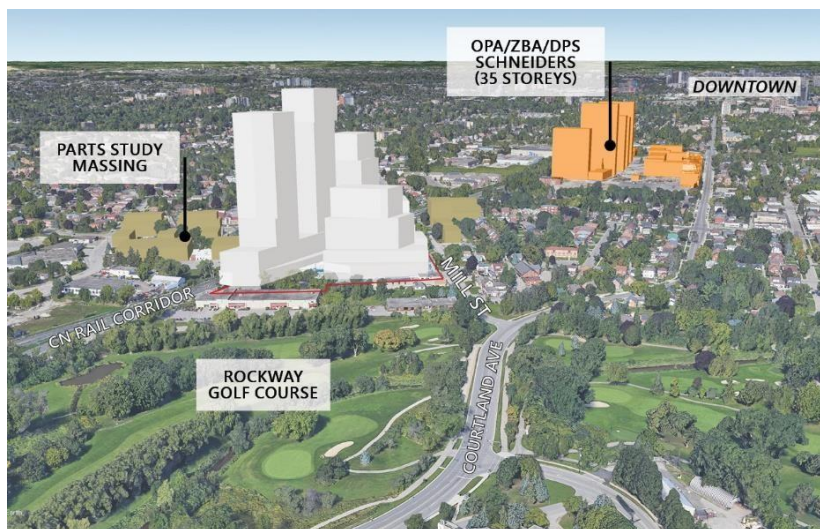


Figure 16: View looking north west along Courtland Ave

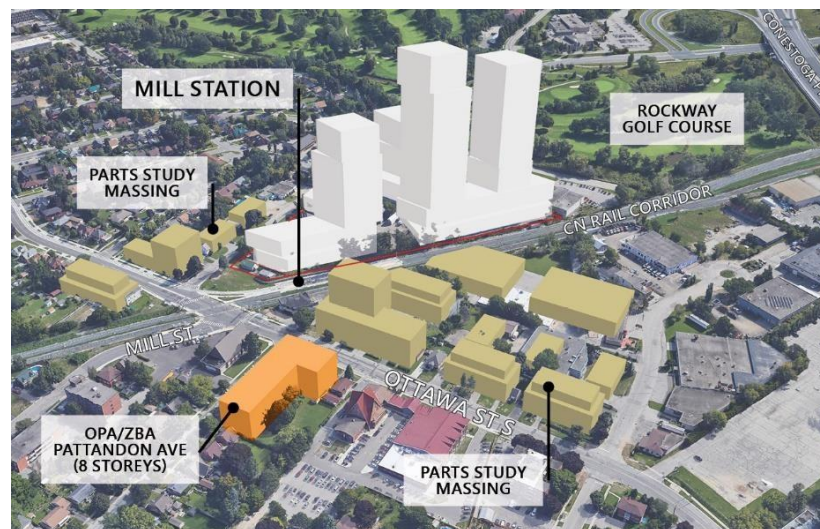


Figure 18: View looking south east towards Conestoga Parkway



SUBJECT LANDS



CURRENT PLANNING APPLICATIONS



CONCEPTUAL MASSING FROM PARTS ROCKWAY PLAN

4.0 POLICY GUIDANCE

The following sections will provide an overview of the main policies and objectives guiding the analysis of the urban design component for the Proposed Development. General responses on policy conformity are summarized for each section, however, more specific design responses are provided in Section 5.0 of this Report.

4.1 KITCHENER OFFICIAL PLAN

4.1.1 Urban Structure Element

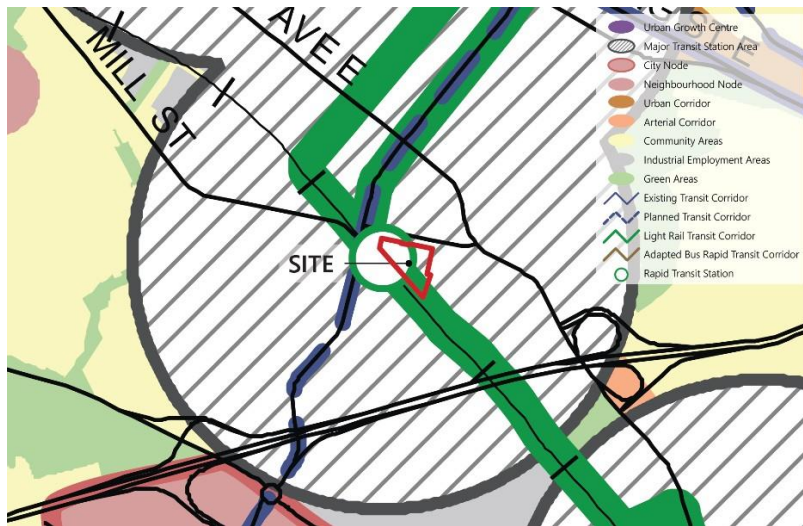


Figure 19: City of Kitchener Official Plan Map 2, Urban Structure

The Site is located within a Major Transit Station Area (MTSA) as identified on Map 2, Urban Structure, in the City of Kitchener Official Plan (Figure 19). The planned function of an MTSA is to support transit and rapid transit. These lands are also designated through the Regional Official Plan and reflect lands within a ten-minute walking distance around rapid transit station stops. Policy direction pertaining to Urban Design include:

- Section 3.C.2.17 further directs that the planned function of MTSA is to *"have streetscapes and a built form that is pedestrian-friendly and transit oriented"* and *"provide connectivity of various modes of transportation to the transit system"*.
- Section 3.C.2.18 directs that the City will develop Station Area Plans for each MTSA outside the City's Urban Growth Centre (Downtown). The Subject Lands are outside of the Downtown and part of the proposed Rockway Station Area Plan.
- Section 3.C.2.19 advises that Station Area Plans will include *"design guidelines and development standards, as necessary, to achieve transit supportive and transit-oriented development"*.

Response: The Proposed Development will implement the policies of the MTSA Urban Structure element by creating a design focused on the use and functionality of the ION station. All methods of transportation will be accommodated on-site including public transit, active transportation and private car. The circulation of people, vehicles and goods will be organized to allow for efficient movement between the ION platform to destinations in the surrounding neighbourhood context.

The Design Response in Section 5.0 of this Report further addresses

4.1.2 Land Use Designation



Figure 20: City of Kitchener Official Plan Map 3, Land Use

The Site is currently designated General Industrial Employment as identified on Map 3, Land Use, in the City of Kitchener Official Plan (Figure 20). The designation contains no direction on the implementation of urban design for the Proposed Development. However, as noted in Section 3.3 of this Report, an Official Plan Amendment to redesignate the lands to Mixed Use is proposed.

The policies of the Mixed Use designation are contained within Section 15.D.4 of the Official Plan. The intent of the designation is to permit a broad range of uses at different scales and intensities, depending on the location's Urban Structure designation (such as MTSA for the subject lands). Some of the policies and objectives relating to urban design include:

- Section 15.4.5 - *To ensure that lands designated Mixed Use are transit-supportive, walkable and integrated and interconnected with other areas of the city.*
- Section 15.4.6 - *To ensure uses, built form and building design are compatible with surrounding low rise neighbourhoods and are pedestrian-oriented and human-scaled in order to positively contribute to the public realm.*
- Section 15.4.7 - *To ensure that development and redevelopment of lands within lands designated Mixed Use implement a high standard of urban design.*

Response: The Proposed Development conforms to the urban design objectives of the City's Mixed Use designation policies. The development will be transit supportive and improve access to the ION station by providing direct connections through the Site from the surrounding community. The Proposed Development will also provide an emphasis on the pedestrian experience by providing building designs that focus on the pedestrian experience through human-scaled podium structures. The intervening public spaces will be highly-landscaped, utilizing a mix of hard- and soft-scaped spaces. Compatibility with the surrounding neighbourhood is considered through the use of graduated podium heights and density as they transition to the rear of the development.

High quality urban design and architectural finishes, including materiality and building finishes, will be considered throughout.

4.1.3 Urban Design Policies

Section 17.E.10.5 of the City of Kitchener Official Plan states that an Urban Design Report may be required as part of a complete application and are intended to assist in the creation of compatible developments. Urban design briefs are meant to:

- a) *demonstrate that a proposed development or redevelopment is compatible;*
- b) *address the relationship to and the privacy of adjacent residential development; and,*
- c) *ensure compatibility with the existing built form and the physical character of the established area and/or neighbourhood.*

Response: This Urban Design Report was created and required by the City as per the above policy direction. Compatibility of the proposed design is addressed through Section 5.0 of this Report but is generally provided through the carefully considered placement and height of buildings and towers. This will increase site permeability and encourage integration with the surrounding community, while minimizing visual impacts on the existing neighbourhood.

Section 11 of the City of Kitchener Official Plan provides the policy framework for Urban Design within the City. The objectives of this section cover general policies for quality urban design including streetscapes, city skylines, Crime Prevention Through Environmental Design (CPTED), emergency services, universal accessibility, public art, priority locations and shade (Section 11.1.1 to 11.C.1.22). Some of the important objectives being met in these sections are discussed in Table 1, below.

Table 1 : Section 11 Policy Conformity		
Policy		Response
11.1.1	<i>To support and achieve a high standard of urban design in order to help create a complete and healthy community that is safe, attractive, thriving, innovative and inclusive in which to live, work and interact.</i>	The Proposed Development will introduce high quality landscape and architectural design to ensure a high standard of urban design. The public realm has been designed as a vibrant community with a mix of uses at ground level to create an active environment.
11.1.2	<i>To create visually distinctive and identifiable places, structures and spaces that contribute to a strong sense of place and community pride, a distinct character and community focal points.</i>	The configuration of the Site's towers and mix of materiality will create a unique and architecturally interesting presence within the City. Such unique massing will enhance the character of the Site and create a sense of place. The Site's location immediately adjacent the ION Mill Station enables the Site to function as a gateway to the Rockway community. The proposed tower heights have been set to achieve a distinct skyline, marking the Site as a node within Kitchener. The anticipated materiality will further differentiate the buildings within the City as the mix of natural earth tones,

		stone and glass will be unique within the current urban environment.
11.1.3	<i>To create a built environment of human scale that respects and enhances cultural heritage resources, natural heritage features, community character and streetscape.</i>	The building podiums and ground level of the proposed development have been designed to enhance the pedestrian experience through the use of human-scaled podium structures and the introduction of enhanced landscaping, well appointed street furnishings and varying surface materials. The character of the CN Rail heritage corridor has been maintained and no adverse impacts will be created by the Proposed Development. The Proposed Development does not encroach on the existing rail corridor lands and does not impact the current use of the corridor.
11.1.4	<i>To design individual site elements, buildings, structures and spaces to have mutually supportive relationships with one another and with the overall urban fabric and interrelated networks and systems.</i>	The Site has been designed to align with the existing street network and urban fabric. The Site will feature several parkettes and plazas that will be integrated with the pedestrian circulation network. This will enhance the public realm and pedestrian

		experience on site and contribute to the pedestrian experience within the community as a whole.
11.1.5	<i>To minimize and mitigate potential adverse impacts of development and infrastructure works on surrounding land uses, the built and natural environments, the integrated transportation system and infrastructure through careful design considerations and solutions.</i>	Any potential adverse impacts by the proposed development will be mitigated through measures recommended by the various studies completed, including: a Wind Study, Functional Servicing Report, Shadow Study, Hydrogeological Study and Geotechnical Report.
11.1.6	<i>To create a safe, secure and walkable community dedicated to pedestrian activity.</i>	On-site safety will be provided by community surveillance and the integration of CPTED principles. Due to the many residential units facing all directions on-site, community surveillance will occur naturally.
11.1.7	<i>To promote and recognize excellence and innovation in architecture, urban design, sustainable building design and landscape design.</i>	Architects and Landscape Architects have been retained to assist in the design on the site since the initial phases of conceptual development. The Proposed Development will provide an architecturally distinct, and comprehensively-design community that is

		recognizable and demonstrates design innovation.
11.1.8	<i>To encourage and support the provision of public art in private and public developments.</i>	The Proposed Development offers numerous opportunities to integrate public art in both public and private spaces. The Station Plaza, Promenade, internal park, private streets and Entry Plaza offers locations for public art to be displayed. The proposed interior community space could also feature art and public events. The Proposed Development is envisioned as being a place to encourage and celebrate local artists and the community.

Section 11 also provides for design specific policies which relate to different scales and aspects of the urban environment. The elements of these policies which relate to the Proposed Development include Site Design policies, and policies for Building Design, Massing and Scale Design.

The **Site Design** policies (Sections 11.C.1.29 to 11.C.1.30) offer the components in which City staff will review the Proposed Development during the Site Plan Control process. These elements include: improving the site's aesthetic quality, the safety and functionality of site circulation, functional site servicing, enhanced landscaping, the designed streetscape, minimizing impacts to adjacent properties, and arranging buildings to create safe and useable internal spaces.

The **Building Design, Massing and Scale Design** policies (Sections 11.C.1.31 to 11.C.1.33) provide guidance on the scaling and placement of buildings on a site. Designs should reflect the human scale and provide for vibrant streetscapes. Consideration should be given for the placement of buildings in priority locations and high standards of building design. Innovative architecture and expression is encouraged to complement the surrounding neighbourhood and context.

Response: The combined impact of the Proposed Development's site design and building configuration creates unique urban spaces that create a sense of place and offer opportunity for vibrant streetscapes. Conformity with the Site Design, Building Design, Massing and Scale Design sections of the Official Plan are detailed in Section 5.0 of this Report.

4.1.4 Proposed Amendments to the City of Kitchener Official Plan

As part of the NPR Process, the City of Kitchener has prepared draft policy changes which effect some of the existing city-wide urban design policies. The following Table 2 reviews some of the proposed revisions and additional Urban Design policies:

Table 2 : Proposed Section 11 Policy Updates		
Policy		Response
11.C.1.22	<i>The City will have regard for views and vistas when considering development applications and infrastructure projects and in the formulation of urban design guidelines and/or</i>	Views and Vistas have been considered in the proposed design through the placement and orientation of towers. Space between towers was maximized to

	<i>urban design briefs. The City will encourage and support the creation of views and vistas in newly developed areas as they contribute to creating a sense of place, community and neighbourhood identity</i>	preserve views to the sky from the pedestrian level. Overall, the proposed development will have a prominent height and density compared to the surrounding community to establish itself as a gateway and focal point within the community and skyline.
11.C.1.37	<i>In addition to the policies in this section, development and/or redevelopment and public works will require a high standard of urban design in the Major Transit Station Area particularly in close proximity to the station stop and will require a site-specific urban design brief and/or urban design report in accordance with Section 17.E.10 to demonstrate how the development application exemplifies high quality urban design and will contribute to the public realm and placemaking in the station area and around the station stop.</i>	The Proposed Development will introduce high quality design and finishes that will create a unique place within the community. The ground level is focused on creating a comfortable pedestrian realm, while encouraging pedestrian circulation and access to the ION station. The ground level will also feature commercial uses and residential units to help enhance the experience while on site. Conformity with Section 17.E.10 is addressed in Section 4.1.3 of this Report.
11.C.1.38	<i>The City will require a built form in the Major Transit Station Area that contributes to placemaking and helps</i>	

	<i>achieve the desired density to support ION. To do this the City will:</i>	
a)	<i>support high density development close to the station stops;</i>	The Proposed Development is a high-density, mixed-use project that aligns with the height and density of proposed and completed projects located within close proximity to other station stops.
b)	<i>establish minimum lot lines with maximum setbacks to achieve a built form that addresses the street;</i>	Building podiums along Mill Street are proposed at a minimum front yard setback of 2.7 metres. The proposed street setbacks provide opportunity to activate the street frontage through the use of street furniture, landscaping and amenity areas. Towers are setback further to meet angular plane guidelines and maintain a pedestrian scale on Mill Street. The proposed built form edge along Mill Street has been modified to create a more mixed urban condition comprising a series of public open spaces between buildings, rather than a continuous hard urban

		street wall. In this way Mill Street will have more active green spaces as an amenity for the current residents on Mill Street, contributing to a more garden-like experience.
c)	<i>require that at least one principle entrance be located within the front of the building and a minimum percentage of building frontage be built to the lot line;</i>	Buildings have been designed with multiple frontages, including principle entrances and active frontages. Residential and commercial entrances have been provided on the frontages of Mill Street and proposed internal streets to enhance the public realm.
d)	<i>require variations in building frontages in terms of setbacks and architectural materials;</i>	Buildings fronting onto Mill Street have articulated frontages and vary from a minimum setback of 3.1 metres up to 11.6 metres. The varied frontages provide opportunity to provide landscaped open spaces, entry features and amenity spaces.
e)	<i>require stepbacks above certain heights to ensure buildings reinforce a pedestrian scale;</i>	Buildings strategically step back from pedestrian spaces to create a human-scaled podium and streetscape. Stepbacks vary from 1.8 metres to over 12.0 metres.

f)	<i>require service and parking accesses be located at the side or rear of buildings; and,</i>	Parking and service accesses have been discretely integrated into service lanes, where feasible. Service areas will be located within buildings with access from street frontages as necessary.
11.C.1.39	<i>The City will require development and/or redevelopment and public works in the Major Transit Station Area particularly in close proximity to ION stops to support and contribute to a high quality of public realm. To do this the City will:</i>	
a)	<i>ensure streetscape treatments and improvements support the pedestrian and other active modes of transportation and will not impede access to and from the ION stops;</i>	The Proposed Development enhances pedestrian connectivity with the Mill ION Station. Numerous pedestrian connections are provided through, and around the Site and enhanced with public amenity spaces.
b)	<i>require a minimum pedestrian promenade width which includes sidewalks, street furniture, street trees and a landscaping zone. Where public sidewalk does not afford this width, greater building setbacks will be encouraged;</i>	A broad promenade along Street B forms a fundamental open space feature within the site. The pedestrian areas flanking Street B fluctuate in profile and reaches up to over 10.0 metres in width from building face to curb.

c)	<i>require developments to support, maintain and/or increase the tree canopy, where possible, to support the city's urban forest;</i>	The preliminary landscape plans feature numerous street trees and landscape spaces both on-street and on building terraces, where feasible.
d)	<i>restrict impermeable surfaces by requiring Low Impact Development ("LID") water management techniques including materials and plantings that have a relatively high infiltration rate to reduce the impact on the city's stormwater management system;</i>	LID techniques will be explored through detailed design.
e)	<i>require landscaping adjacent to any loading/service facility that can be seen from the public street;</i>	Service areas will be designed to integrate into the streetscape will be screened, where feasible, and safe for pedestrian movement.
f)	<i>encourage bus shelters, sidewalk canopies and bicycle parking are provided along streets that connect to ION to support active transportation;</i>	Sidewalk canopies have been integrated around building podiums to create covered walkways and protected areas. Other forms of wind and weather amelioration techniques will be explored through detailed design.

		A cluster of approximately 80 Class B community bicycle parking stalls are proposed at the base of Building B, adjacent the ION station and Station Plaza.
g)	<i>encourage transit facilities to be located in public places such as community centres, parks and public open spaces, schools, and community facilities;</i>	Station Plaza has been located immediately adjacent the southeast end of the Mill ION Station to provide direct access to/from the plaza and the station. The proposed Entry Plaza provides a public space adjacent the north end of the station. Each plaza is interconnected by the Ion platform with multiple alternative pedestrian routes through the site and along Mill St.
i)	<i>encourage the provision of public open spaces, public art, wayfinding clues and other creative placemaking opportunities in private developments.</i>	Station Plaza, the Play Area and wide pedestrian sidewalks provide significant public open spaces, including opportunities for public art and placemaking opportunities. Wayfinding strategies will be explored through detailed design.

4.2 PROPOSED ROCKWAY SECONDARY PLAN

The City is currently undertaking a Neighbourhood Planning Review (NPR) to implement the policy direction established through the Planning Around Rapid Transit Stations (PARTS) Study. Amendments to the Official Plan and related Secondary Plans are propose, including the Rockway Secondary Plan. The update has not been approved by Council, however, the proposed policies and designations are indicative of the City's vision for development near rapid transit stations and are relevant for this application.

While the proposed Rockway Secondary Plan has not been adopted by Council, the Proposed Development will give consideration to the suggested guidelines in the draft Rockway Plan prepared by the City. The draft policies of the Rockway Secondary Plan have the following sections relating to urban design:

- 16.D.7.7 *The City will encourage and support the redevelopment of existing laneways with the addition of pedestrian-scaled lighting and wayfinding elements to enhance pedestrian movement, provide recreational opportunities and allow for the development of additional detached dwelling units.*
- 16.D.7.8 *The City will encourage and support the provision of pedestrian-scaled lighting and wayfinding elements to the improve the quality of laneways and areas adjacent to the Iron Horse Trail.*

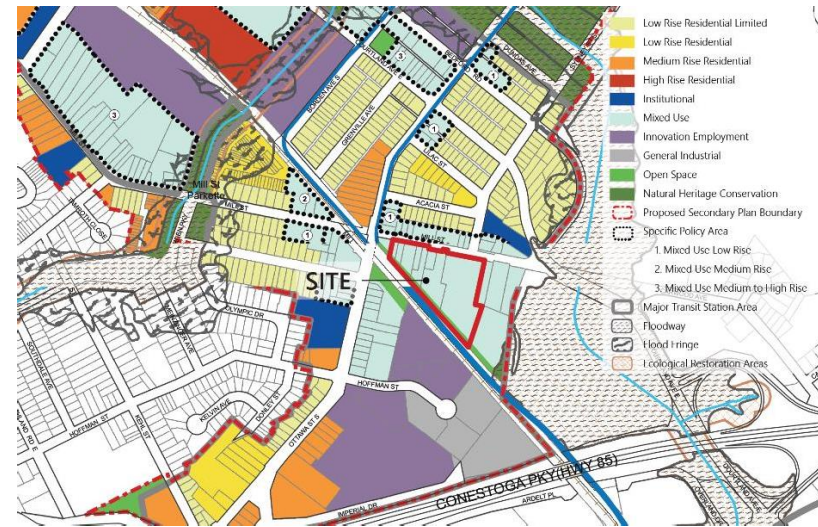


Figure 21: Proposed PARTS Rockway Plan Land Use

Response: The Proposed Development is intended to enhance the pedestrian realm and encourage connectivity with the surrounding neighbourhood. The ground level will be completely accessible to the public and will help to direct pedestrian circulation to the ION station. Wayfinding and CPTED principles are expected to be implemented through detailed design and Site Plan Approval including signage and pedestrian scaled lighting.

The Site is designated as Mixed Use and Open Space within a Major Transit Station Area (MTSA) in the proposed Rockway Secondary Plan (see Figure 21). MTSA's are planned for intensification to provide a range and mix of uses while protecting the established character of existing neighbourhoods. Conformity with the Mixed Use designation was previously discussed in Section 4.1.2 of this Report.

4.3 KITCHENER URBAN DESIGN MANUAL

Kitchener's Urban Design Manual (UDM) is intended to be used as a guiding document toward a vision for the City's future design. The UDM is divided into three sections as follows:

Part A – Design Guidelines

Part A contains guidelines for various land uses and built forms. These guidelines set the direction for urban design within the City and provide a tool to guide private site development. The relevant sections from Part A include:

- **City-Wide Design**, which sets forth the universal design expectations for all of Kitchener at the neighbourhood scale, building scale and unit scale.
- **Major Transit Station Areas**, which provides guidelines for intensification near transit stations, such as the ION's Mill Station directly adjacent to the site. The Site is also subject to the area specific guidelines for the Rockway station area developed by the City's (PARTS) Project.
- **Design for Tall Buildings**, which provides guidance on the size, height, form, and placement of buildings nine storeys or greater.
- **Design for Residential Infill in Central Neighbourhoods**, which provides guidance on the integration and compatibility of new development and redevelopment occurring in the City's established central neighbourhoods.
- **Structured Parking**, which encourages high-quality design standards for above ground parking structures as they are part of the visible urban fabric. This section is relevant for Building E

where portions of the building will be used to create an above ground parking structure.

Municipal Urban Design Guidelines are intended to be used as a means of identifying general design principles and qualitative performance standards rather than quantitative numeric requirements. In this sense they do not have the same binding application as Zoning By-laws or Official Plan policies. They are intended to be applied with a degree of flexibility recognizing various design responses available to achieve the same quality of outcome.

Part B – Area Specific Guidelines

Part B contains guidelines created through other studies, such as streetscape master plans. There are no guidelines related to the Proposed Development in Part B.

Part C – Design Standards

Part C contains more technical design standards and guidelines which assist in site plan development and building design. The design standards of Part C have been considered in the initial work on the proposed development's conceptual Site Plan. It is intended that the final design standards of this section will be implemented in greater detail at the time of Site Plan Approval. The majority of the sub-sections of Part C are applicable to the Proposed Development and will cover elements of the overall design, such as:

- Parking structures & surface parking facilities,
- Emergency services & accessibility standards,
- Pedestrian & transit supportive development, and
- Landscape design and natural features.

Response: The guidelines in Part A of the UDM are applicable to the Proposed Applications at this time. The technical standards of Part C will be considered at the time of Site Plan Approval. The Proposed Development is consistent with the Design Guidelines outlined within Part A. A detailed review of the proposed individual design elements are provided within Section 5.0 of this Report and demonstrates conformity to the City's Urban Design Manual.

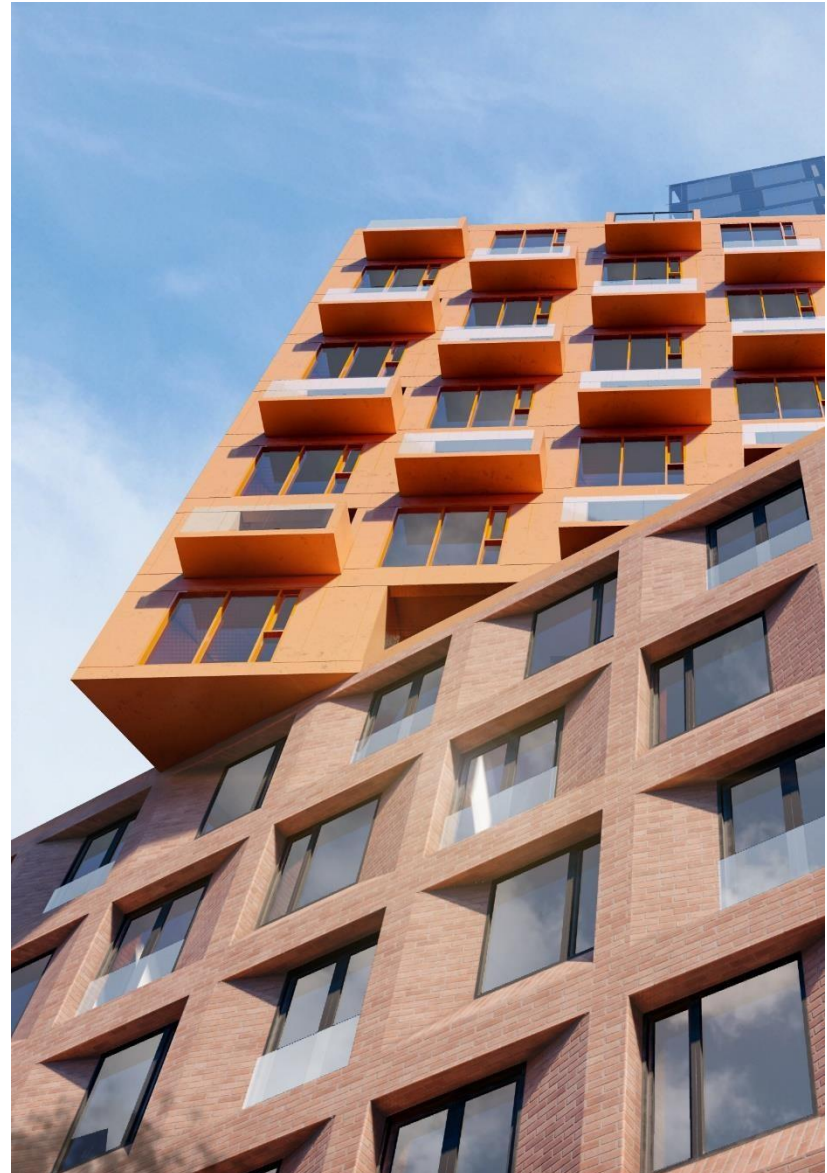


Figure 22: Preliminary Design Render (NEO, December 2022)

5.0 DESIGN RESPONSE

The following sections provide an overview of design elements and themes of the Urban Design Manual, while illustrating how the guidelines of the following sections have been addressed within the Proposed Development:

(CWD)	City-Wide Design
(MTSA)	Major Transit Station Areas
(TBG)	Tall Building Guidelines
(RICN)	Residential Infill in Central Neighbourhoods
(SP)	Structured Parking

5.1 BUILDING DESIGN

The City of Kitchener's urban design policies outline three broad topics pertaining to built form: building design; public realm and placemaking; and impact mitigation. Regarding buildings, the policies call for attractive, human-scaled massing with active frontages and a variety of unit types, sizes, and tenures. Special attention should be paid to priority lots. The policies also call for a public realm that has a distinctive identity and promotes walkable and healthy communities. Finally, the built form should integrate with its surroundings and minimize the potential impacts, such as noise, shadow, and microclimate.

The buildings within the Proposed Development can be divided into three distinct components: the building base (podium), tower and, top. The building podiums range in height from 5 to 8 storeys; whereas the towers and tops range from 15 to 44 storeys. Each component of the towers within the Proposed Development are distinct from one another through the use of articulated massing and varying materiality.

The comprehensive design of the Proposed Development has been inspired by the irregular geometric shape of the Site and, as a result, the buildings which solicit thoughts of geodes and minerals. The buildings

have been designed to transition from the ground up, reflecting the elements that comprise each level. The buildings are grounded by textures and colours reminiscent of minerals, rocks and stone and will be reminiscent of the materials used throughout the existing low-rise residential community. As the buildings rise, they become lighter and transition. Materials and colour palettes soften, ultimately transitioning to sky through the use of glass and glazing. The design's inspiration can be carried throughout the Proposed Development from building siting, building shape, materials and use of colour.

The following policies are relevant to the proposed development:

- Official Plan 11.C.1.11 to 11.C.1.22, 11.C.1.29 to 11.C.1.33
- CWD 01.2.0 (community design), 01.3.0 (site design)
- TBG (built form, streets and open space, compatibility, environment)
- RICN (community & site design), 04.1.4 (Rockway)
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- SP (built form, site design)

5.1.1 Ground Floor & Base Design

The podiums of the development have been situated within the Site to create unique pedestrian spaces and encourage the circulation of pedestrian movement throughout the Site, especially between the ION Station, the Mill & Ottawa Street intersection, and the Mill & Sydney Street intersection.

Podium facades flank the internal and external street edges. Building faces along the rear property line run parallel to Mill ION Station. Other articulations in the podium footprints are for public amenity spaces, as well as vehicular access points.

The ground level will be activated with commercial uses and publicly accessible park spaces. Podiums B & C will include some at-grade units with private accesses fronting onto the public space and the potential for live-work units. Portions of the ground floors will also be designed for permeability and through connections for pedestrians. Covered walkways and canopies along the edges of building will provide protection from harsh weather conditions and sun shade.

From the front property line, Podium A will be setback 2.7 metres, Podium D will be setback 3.1 metres and Podium E will be setback 11.6 metres along Mill Street, after the anticipated road widening. This frontage will feature at grade commercial entrances spilling onto the street as well as a residential lobby access for Building D.

A 12.2 metre side yard setback is provided from the western property line, with the anticipation that Building A may front directly onto the proposed Entry Plaza. Most of this side yard will be dedicated to the City as part of the public park space. When completed, there is the opportunity to provide an active street edge with commercial uses along the plaza edge. A 3.4 metre side yard setback has also been shown on the eastern property line with Building C, and a 4.2m side yard setback with Building E, with the anticipation for future development on the lands to the east.

Along the rear property line, a continuous 5.5 metre setback has been maintained by the podium of Buildings A at the ground level. Upper levels of the podium will cantilever to a 0.0 metre setback. This setback provides the opportunity for a covered walkway and pedestrian circulation space between key destinations on the Site, as well as access to individual dwelling units and commercial frontages.

Podium B/C has a proposed 0.0 metre setback from the rear property line. An indoor cluster of bicycle parking has been proposed within the

podium for public access immediately adjacent to the ION station and Station Plaza.

Podiums heights range throughout the Site, however, they generally step up from west to east, and from Mill Street toward the rail corridor (Figure 23). Podium heights along Mill Street will range from five to six storeys to better complement the adjacent low rise residential community and reflect the planned Mixed-use designation at heights greater than the prevailing low-rise built form.

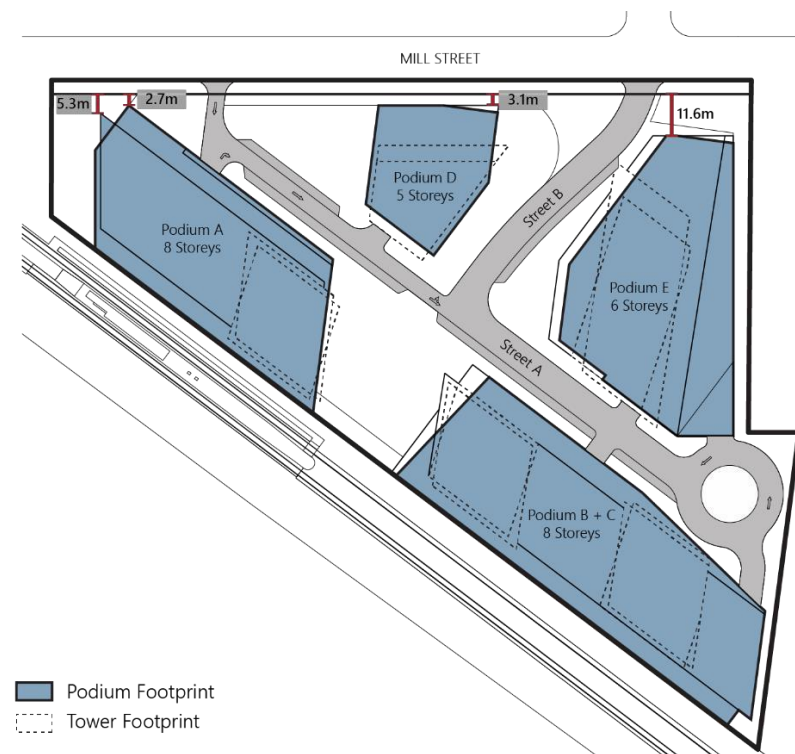


Figure 23: Podium Locations

The podium of Building D will be 5 storeys, Building E will be 6 storeys, and Buildings A to C will be 8 storeys.

Visual interest will be created by varying the heights of podiums, while still keeping heights compatible with the surround low-rise neighbourhood. The tower setbacks along Mill street. range from 7.2 metres to 10.6 metres allowing the mid-rise podiums to be the dominant built form experience for pedestrians.

Ground floor levels are proposed to be 4.8 metres in height to allow for a variety of commercial and retail uses to occur. These floors will also function as the lobby areas for access to residential units above. The upper residential floors in the podiums and towers above are 3.2 metres in height.

As seen in Table 3, some podium lengths exceed the recommended maximum 70 metre length, particularly Buildings A, B, C and E. In order to mitigate this length, enhanced streetscaping, materials and articulations are proposed. Long frontages will feature varied design features based on the uses proposed that location. For example, entrances to apartment lobbies will vary from commercial and retail entrances. The streetscapes along these frontages will be active and interesting through the spill out of commercial uses into the public realm.

Table 3 : Podium Heights & Dimensions

BUILDING	HEIGHT	APPX. LENGTH	APPX. WIDTH	APPX. GROUND FLOOR AREA
Building A	8 Storeys	92.3 m	36.5 m	±2,400 m ²
Building B	8 Storeys	116.6 m	36.5 m	±3,880 m ²
Building C				
Building D	5 Storeys	41.9 m	33.2 m	±1,100 m ²
Building E	6 Storeys	81.8 m	48.6 m	±3,000 m ²

5.1.2 Tower Design

A tower is the middle component of a tall building, connecting the base to the top structure and houses the building's primary function. In the case of the proposed development, this function is for residential uses. The UDM divides tower guidelines into two sub-sections: Size & Proportion and Separation & Placement. Figures 24 & 25 demonstrate the location of towers and relative heights.

Size & Proportion

Overall height and massing of the Proposed Development is constrained to the maximum permitted height by the Waterloo Region Airport Authority. The Site is located within the approach surface of the Region of Waterloo International Airport's Runway 8. No encroachments into the flight path, located at 487.68 m above sea level, are permitted. Given

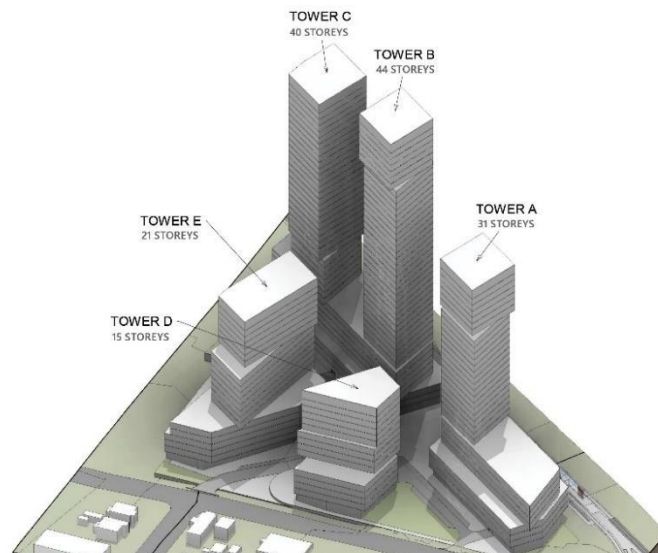


Figure 24: Tower Heights Model

this, the building and crane heights are restricted to ~161 m (assuming a ground floor elevation of 326m). Currently, the maximum building height proposed from existing grade is approximately 143.7 metres.

The second constraint to the initial massing of buildings was the angular plane from Mill Street. While a 45-degree plane is the typical recommendation for massing, some minor variation was required to achieve the desired density on site. As such, a 60-degree angular plane has been proposed. This deviation from the standard is mitigated through an increase in tower setbacks along Mill Street and designing the majority of towers as "Compact Point Towers".

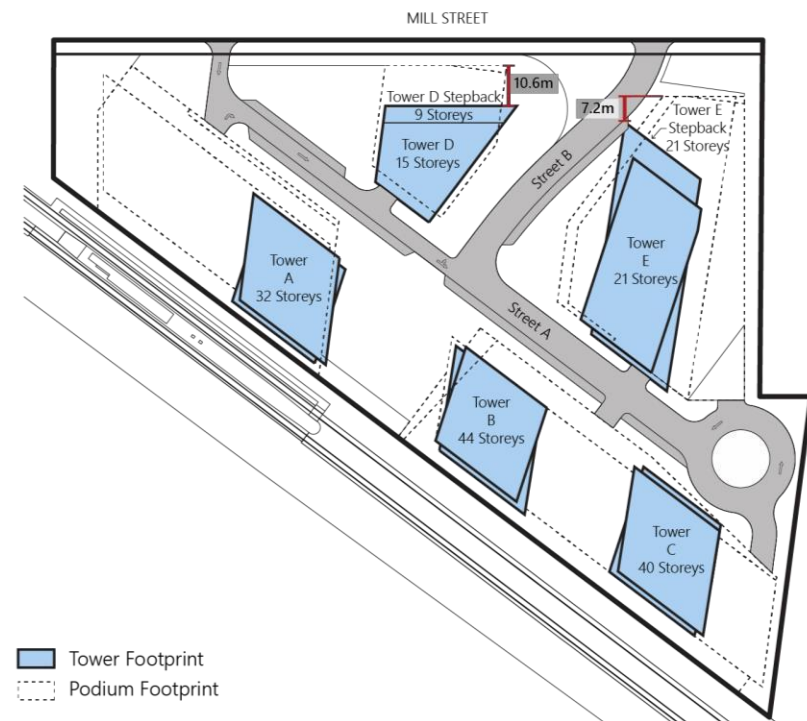


Figure 25: Tower Height Diagrams

As seen in Figure 26, is a small portion of towers encroaching into the 45-degree plane, even less so at a 50-degree angular plane. The upper six storeys are affected on Towers A and E, including the top mechanical levels. However, when a 60-degree plane is used, all parts of the Towers are within the plane. A 60-degree plane is seen as an appropriate benchmark for the Site, as a majority of the development and density can fit within the plane. No significant negative impacts due to shadows or views are impacted.

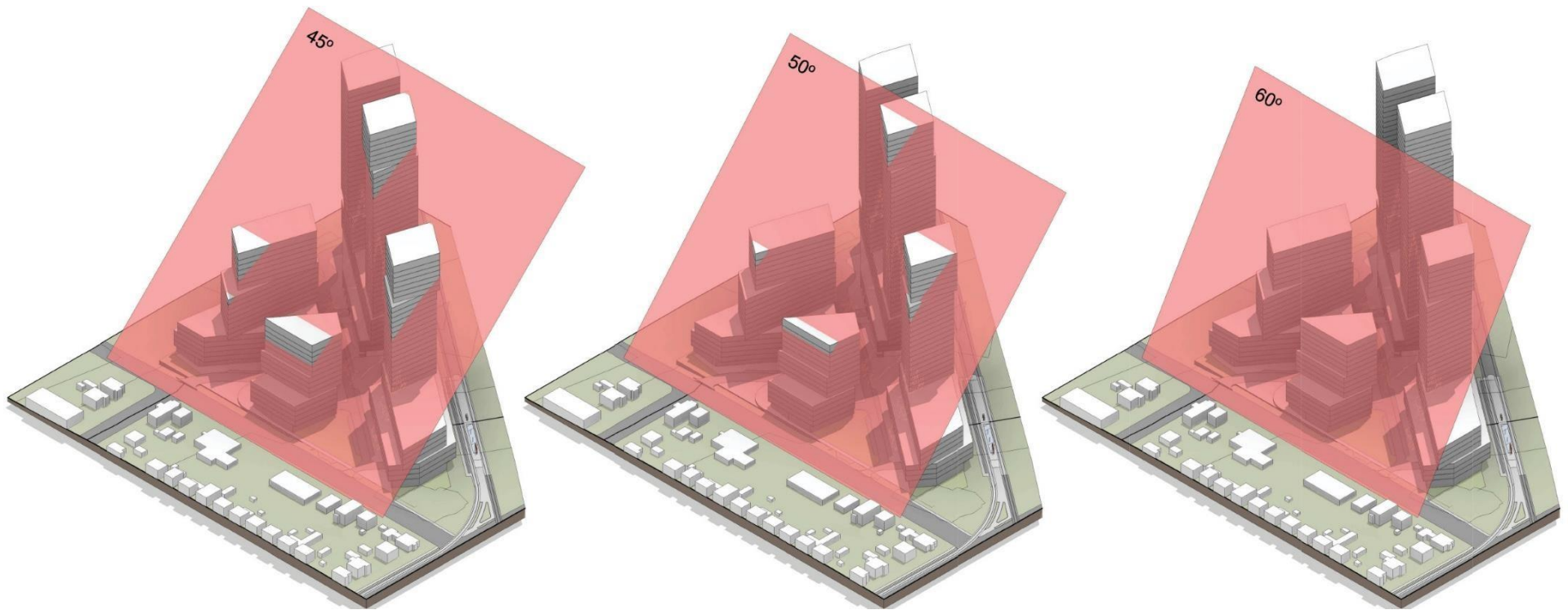


Figure 26: Angular Plane Diagrams (NEO Architects, February 2023)

TOWER	STOREYS	HEIGHT	Height % of Tallest Tower
A	31	105.3 m	73%
B	44	143.7 m	100%
C	40	130.9 m	91%
D	15	50.9 m	35%
E	21	70.1 m	49%

Further regarding height, the Tall Building guidelines recommend applying varying heights to towers to assist in the transition to lower density areas and to provide variety in the skyline.

As per Table 4 above, all towers generally meet the recommendation of compact point towers, which should be less than 90% of the height of the tallest tower (Tower C is 91% of Tower B, which is only a minor variation of the recommendation). Large Slab towers (Tower E) should not exceed 85% of the tallest tower. Tower E meets this recommendation at 49%.

TOWER	LENGTH (m)	WIDTH (m)	AREA (m ²)	RATIO	SIZE
A	28.49	25.80	735.11	1.10	Compact Point
B	27.94	25.80	720.66	1.08	Compact Point
C	29.39	25.80	758.31	1.14	Compact Point
D	38.58	28.26	704.26	1.37	Compact Point
E	44.33	23.10	1080.26	1.92	Large Slab

The size of a tower is categorized by its floor area, and the ratio of its length to width. Towers fall into one of the four categories: Compact Point, Compact Slab, Large Point, or Large Slab.

The Tower Floor Area is categorized as either **compact** (less than 850 sq.m.) or **large** (greater than 850 sq.m.). The proportion of a tower is determined by the ratio produced by dividing its length by its width. **Point** towers produce a ratio of less than 1.6, while **slabs** produce a ration of greater than 1.6.

The sizes of the proposed towers are detailed in Table 5, above. Compact Point towers are the preferred option for intensification, and the proposed development will feature four (4) of the five (5) towers as this size. A slab sized building is required for Tower E to fit within the height and angular plane requirements of the site. The large scale of this massing will be mitigated at the time of detailed design through features such as façade articulation and the thoughtful placement of balconies and materials.

Separation & Placement

Placement of the towers on site was determined by calculating the suggested separation distances as per the Tall Building Guidelines. The formula for calculating these distances was done by multiplying the building's height by the length of the tower face, and then dividing that number by 200.

The resulting tower separation areas are shown in Figure 27, which demonstrates there are no issues with the proposed placement of towers in regard to separation. As noted above, design guidelines are to be followed with some flexibility recognizing various design responses can achieve the same quality of outcome. In cases where tower separations appear deficient, impacts can be offset by increased separations elsewhere. To further compensate, tower placements and orientations, and window locations can be offset to limit the impacts of proximity while still achieving high-quality design standards.

Stepbacks were created through the angular plane process and have been located strategically to balance the efficient design and height requirements. Due to their irregular shape and design, the proposed stepbacks of towers differs from the common 3-metre stepbacks provided in more typical designs. This has allowed for greater stepbacks of towers along the Mill Street edge, and for interesting amenity area geometry to be provided on rooftops.

Tower D is set back approximately 10.6 metres from the facade of its podium along Mill Street. Having this offset helps soften the compatibility with the surrounding neighbourhood and moves the taller tower height further inward to the site.

The lower portion of Tower E is setback a slightly further distance to the property line as Tower D. The upper portion of Tower E is setback even further and provides for a varied articulation along the street frontage.

Overlook is the overlap that exists between two neighbouring towers and is calculated as a percentage of tower width or length.

Initial concepts of tower placement shown during pre-consultation with City Staff have since been updated to better address concerns on overlook and compatibility. As such, Towers A to C have been all been oriented to run parallel to the railway corridor.

Figure 27 also demonstrates the **orientation** of floor plans within towers. Where there are potential conflicts with overlook, it should be noted that floor plans run parallel to the ION tracks in Towers A to C. As such, only end and corners units will have potential overlook issues, which reduces the number of units and views impacted.

As noted on Page 8 of the Tall Building guidelines, when overlook cannot be achieved on-site, developers should aim to incorporate other mitigating techniques such as physical separation, shape, placement orientation and relative heights.

Through the creative design of the podiums and towers, the proposed development is able to mitigate the issues of overlook by providing adequate tower separation, thoughtful floorplan orientation, and varying tower heights.



Figure 27: Tower Separation Diagram (NEO Architects, February 2023)

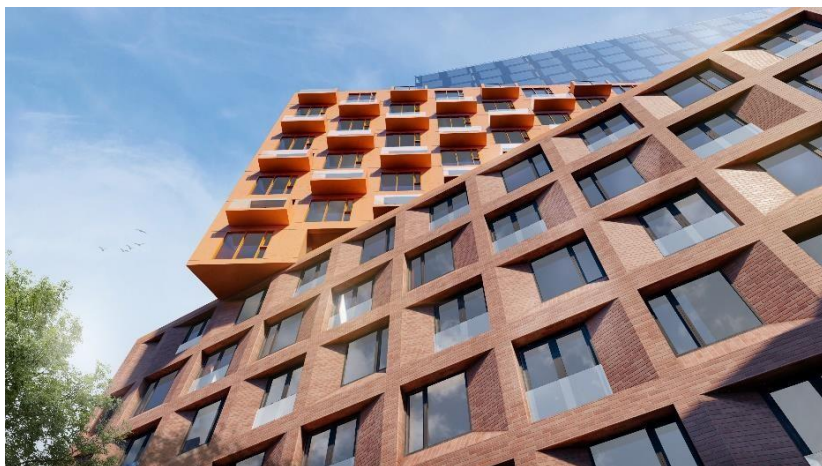


Figure 28: Tower Top Glazing Blends into Sky

5.1.3 Top Design

Tower tops are slightly offset in orientation from the middle tower sections, but generally follow the same parallelogram shape and floor plan layouts as the rest of the tower. The rooftop mechanical penthouse is located on the building's top floors. The top floorplate matches those below it to integrate with the overall building design.

5.1.4 Materials

Overall, materials and colour palette used throughout the Proposed Development have been inspired by the geometric and irregular shapes of the podiums and towers. These forms have a resemblance to the angular structures formed naturally by geodes and minerals. As such, a general colour and texture palette has been created based on these naturally occurring materials. Generally, heavier, natural materials will anchor the building to the ground. As the buildings rise, materials

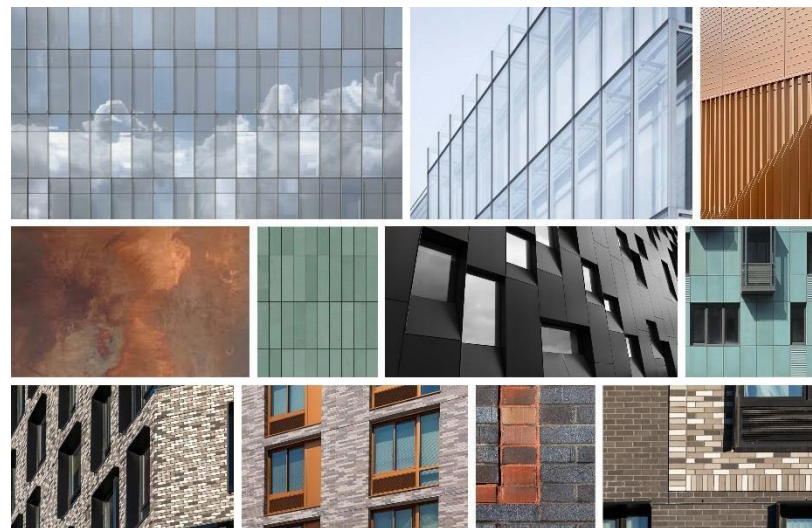


Figure 29: Architectural Material Palette

become lighter until they visually blend into the sky through the use of glass and glazing.

High-quality materials are proposed to be used throughout the site, with particular enhancements proposed at street level. Podiums will be designed with heavier, earth-toned materials such as bricks. Designing podiums in this way will also assist in achieving the recommendations of the *Noise & Vibration Feasibility Study* (see Section 5.9.2 of this Report). Furthermore, the use of brick at street level reflects the surrounding built form and low-rise dwellings, creating a compatible and visually integrated streetscape within the neighbourhood.

The podiums and ground floor level will incorporate transparent glazing into commercial and public spaces. Transparent glazing will promote ground activation and vibrancy making community surveillance possible.

The mid-sections of towers will feature slightly lighter materials, such as metals and unique patinas. Metal tones such as graphite, patinaed copper, and weathered steel, amongst others, will be used.

Tower tops will be fully glazed, blending them into the skyline. As seen in the conceptual renderings, the glazed tops will reduce the visual impact of the tower heights.

5.1.5 Articulation

Although specific architectural features and articulation have not yet been designed, it is anticipated that several features will be included at the time of detailed building design. Such features include:

- Residential balconies on podiums and towers which face the internal and external streets;
- Structural canopies over grade level pedestrian areas;
- Recessed building entrances for wind and weather protection;
- Enhanced building entrances with different design styles for public commercial entrances, residential access to podium and tower units, and residential access to built-in town home units;
- The angular design of podiums and towers; and
- The sectioning of towers into 'lower' and 'upper' sections, each with slightly skewed orientations.

Preliminary articulation and materials are shown as renderings in Figures 30 to 31, which are views of the streetscape along Mill Street and the internal Street B Promenade.



Figure 30: View 1 of Promenade (Neo Architects)



Figure 31: View 2 of Promenade (Neo Architects)

5.2 PEDESTRIAN CIRCULATION

In the City's urban design policies, pedestrian circulation relates to the provision of streets and block patterns that support: active transportation and public transit, pedestrian-focused and universal design, an integrated network of compact blocks and off-street paths, and convenient access to community amenities such as schools, parks, shopping, and transit.

The following policies are relevant to the Proposed Development:

- Official Plan 11.C.1.16, 11.C.1.33
- CWD 01.2.1 (inclusive design), 01.3.3 (site function)
- TBG (built form, streets and open space, compatibility, environment)
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- RICN (community & site design), 04.1.4 (Rockway)
- SP (built form, site design)

Pedestrian access to the Site is through the Entry Plaza; the north end of the Promenade; and the north and south ends of the Mill Station platform (Figure 32). Paths of travel through the Site provide circulation between three primary destinations; the Mill/Ottawa Street intersection; Mill/Sydney Street intersection; and, the southern platform of the Mill ION Station. An east/west connection through the Site is provided along Street A.

Primary pedestrian routes are flanked by active building frontages. Retail commercial uses front the Promenade and Station Plaza, with additional retail locations facing the Entry Plaza and Mill Street. Residential lobbies are accessed in various locations on these primary pedestrian routes as well.

Due to the close proximity of the ION station, and anticipated density of the proposed development, a high volume of pedestrians are expected on, and through, the Site. As such, internal walkways are at least 3.5 metres wide with some areas measuring up to 10 metres in width. These widths will comfortably accommodate a high volume of pedestrian traffic and for commercial uses to spill out into the streetscape.

Cyclists will circulate through the Site using Streets A and B. Given the narrow profile, varying materials and proximity to the significant pedestrian spaces flanking them, traffic will be calmed, and cyclists will comfortably share the road. Bicycle parking and storage will be available at grade level in each building podium. Please refer to Section 5.4 of this Report for further details.

Site Plan Approval will address safety and accessibility for all pedestrian walkways through the Site including lighting and signage.



Figure 32: Pedestrian Circulation Diagram

5.3 VEHICULAR CIRCULATION

The following policies are relevant to the Proposed Development in regard to vehicular circulation and parking:

- CWD 01.3.3 (site function)
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- RICN (community & site design), 04.1.4 (Rockway)
- TBG (built form)
- SP (built form & site design)

Vehicular circulation within the Site is provided by two private streets. Street A is accessed from Mill Street between Buildings A and D (Figure 33). It runs parallel to the LRT corridor, terminating at the east property boundary. The west end of the street is one-way only, whereas the east end is two-way. Street B aligns with the terminus of Sydney Street South at Mill Street, and extends to Station Plaza, intersecting with Street A. Street B forms part of the Promenade. The street network has been designed to accommodate two primary functions; to provide access to the parking structures and, provide a future connection to the balance of the City block, should the opportunity arise.

Two access driveways are provided along Mill Street, giving vehicular access to the Site for future residents, service vehicles and emergency vehicles. The main access to the Site will be from the intersection of Sydney and Mill Streets (between Buildings D & E) and will accommodate two-way traffic to and from the Site on an 8.0 metre wide road. This intersection will allow for vehicular turning from all directions. A smaller access will be provided to the west, closer to Ottawa Street between Buildings A & D, and will provide one-way traffic into the Site

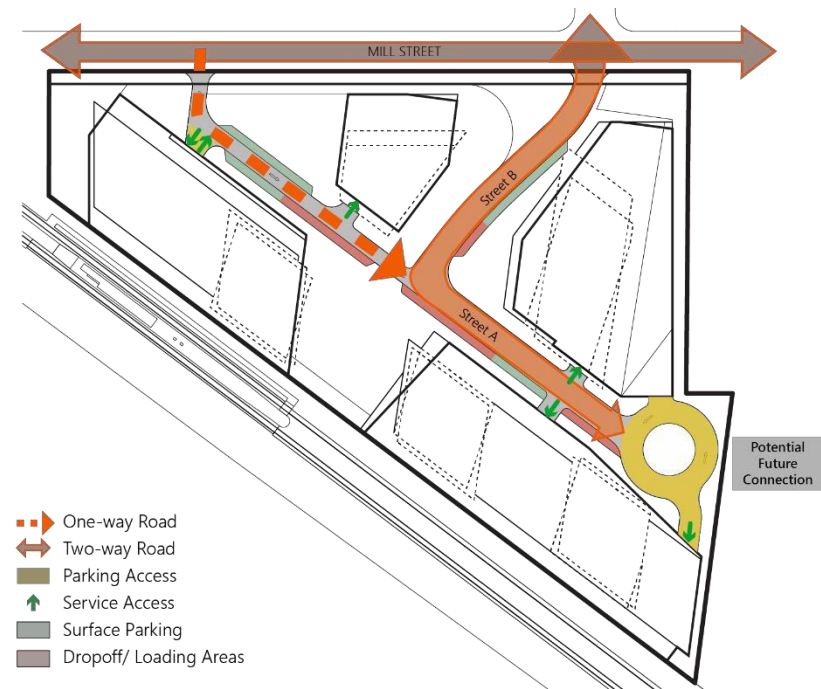


Figure 33: Vehicular Circulation Diagram

on a 4.6-metre-wide road. It will likely be accessed as right-turn only from east bound traffic along Mill Street.

As discussed in Section 3.3 of this report, the Proposed Development is anticipated to form the west half of a master-planned City block. Street B forms the beginnings of a vehicular loop that would extend from Sydney Street, through the block, ultimately connecting to the east end of Mill Street. Until a connection to the east is provided, a vehicle turn around has been provided at the property boundary.

Loading and Service Areas

The Proposed Development includes indoor service areas for each building, located away from public streets and amenity areas. Loading

and garbage functions are programmed within dedicated service rooms within the ground floor of each building podium.

5.4 BIKE STORAGE & VEHICLE PARKING

Bike Storage

The Proposed Development includes approximately 1,150 Class A and Class B bicycle parking spaces, distributed throughout the Site (Figure 34). Approximately 1,100 "Class A" indoor bicycle parking stalls are distributed through the building podiums on the ground floor.

A linear cluster of approximately 50 Class B parking stalls are proposed along the south side of Tower D, immediately adjacent the ION station and Station Plaza. The spaces will be located outdoors within a covered area. Additional "Class B" bicycle spaces will be distributed throughout the Site in secure locations within close proximity to residential entrances, commercial spaces and public amenity spaces.

Vehicle Parking

Approximately 1,150 parking spaces are provided on site, the vast majority of which are provided within parking structures (Figure 35). An underground parking structure is accessed from Street A through the podiums of Buildings A and C. The underground structure comprises two levels. The first level encompasses the entire Site area, while the second level occupies the southeast half only.

Parking levels are also provided within the podiums of Buildings A, B, C and E, all accessed from Street A.

Of the proposed parking, approximately 825 are proposed for residential use. The balance of the spaces will be utilized for guest

parking for both the residential and commercial units. Of these, approximately 16 are provided as on-street surface parking spaces.

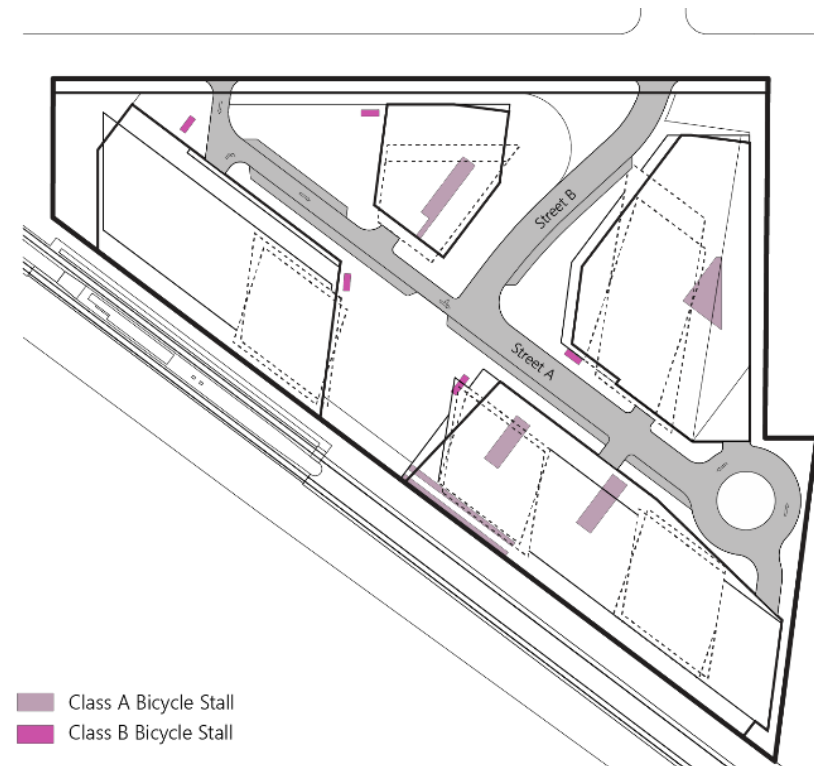


Figure 34: Bicycle Storage Locations

LEVEL P1



LEVEL P2

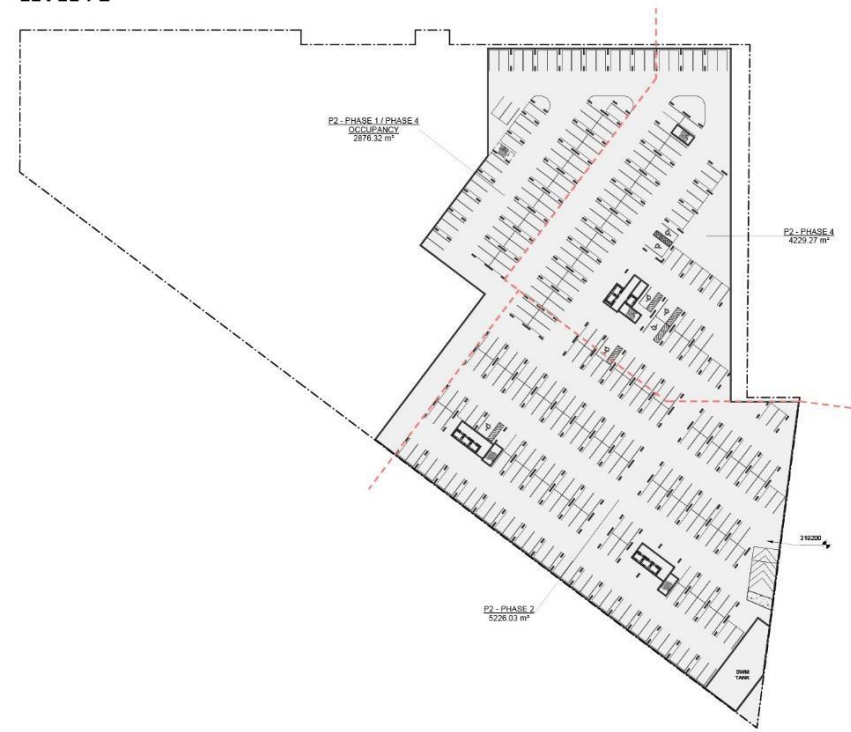


Figure 35: Underground Parking Levels (NEO Architects, July 2022)

5.5 STREETSCAPE DESIGN

The Official Plan and Urban Design Manual direct streetscapes to be human-scaled, varied, visually appealing and landscaped. Streets are to be pedestrian-oriented and encourage cycling, where feasible. Streetscapes should create a sense of place and provide a comfortable pedestrian experience any time of day, or season.

Attractive streetscapes are created through the coordination of site, building, and street design, employing landscaping to soften surfaces and maximize the tree canopy, and implementation of clear wayfinding strategies.

The following policies are relevant to the proposed development:

- Official Plan 11.C.1.11, 11.C.1.29, 11.C.1.30
- CWD 01.2.5 (street design)
- TBG (built form, streets and open space)
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- RICN (community & site design), 04.1.4 (Rockway)

Mill Street

Building podiums A, D and E front Mill Street, creating a street edge for over 52 metres (~27%) of the Site's frontage. Building A provides 35.2 metres of frontage at the west side of the Site. The building podium will include street-fronting commercial space onto Mill Street and the corner of Street A. Should the construction of the Entry Plaza be feasible, commercial frontage will continue to wrap around the building podium and front the plaza, as well. Building D provides 33.5 metres of frontage on Mill Street. The commercial units located within the podium are setback 3.1 metres from the Street. A play area has been provided

adjacent to Building D and Mill Street which will help to activate the street frontage. Building E provides 18.7 metres of frontage on Mill Street, setback 11.6 metres from the Street. Together, the building edges create opportunity for large, attractive streetscapes and pedestrian spaces to flank the Street, occupying both public and private spaces.

The Mill Street streetscape profile within the public right-of-way, after the required road widening, will be consistent across the length of the Site (Figure 35). From the new property line toward the street, the profile will consist of a 2.4 metre wide sidewalk, 1.3 metre landscaped strip, and a reconstructed 2.9 metre multi-use trail. A 0.85 metre wide buffer will be provided between the multi-use trail and Mill Street.

The front yard setback along Mill Street varies and provides opportunity to utilize the lands differently. The 3.1 metre setback to Building D will accommodate a mix of landscaping and hardscaping, providing access to the abutting commercial uses and opportunity for on-street seating. Building E has a larger setback from the Mill Street right-of-way, which is mirrored on the opposite side of Street A. Together, these spaces create an open space at the intersection with Sydney Street and provide an opportunity for a gateway feature to the community.

Collectively, the streetscape on Mill Street provides a dynamic, active space for pedestrians and cyclists. Active building frontages, a mix of landscaping and use of space creates an identifiable space and contributes to the character of the community.

Internal Streets

The internal streets are designed as shared spaces that prioritize the pedestrian experience (Figures 36 to 40). Wide sidewalks, ranging from 3.4 to over 10.0 metres in width, flank Streets A and B. Areas with exceptionally wide sidewalks form small, on-street amenity areas, together forming a central Promenade that is anchored by the Station Plaza. Sidewalks and amenity areas feature hard- and soft-scaped spaces, including planters, street furniture, open spaces and opportunities for public art.

Both Streets A and B have defined street edges created by the adjacent building podiums. Podiums will feature a mix of uses at ground level, including primary and secondary building accesses, as well as commercial spaces. Commercial spaces will primarily be located along the Street B Promenade and Station Plaza.

Streets A and B will provide vehicular and cycling circulation through the Site. While vehicles will circulate through the Site, their presence will be mitigated. Vehicle lane widths will be minimized to reduce speeds and emphasize pedestrian spaces. While the spaces will visually blend together, the pedestrian and vehicular spaces will be delineated by paving material, roll curbs, street furniture, and landscaping. On-street parking spaces will offer an additional buffer between people and cars.

Promenade

Street B (the “Promenade”) will be a central feature to the streetscape and outdoor public amenity of the Proposed Development. Pedestrians, cyclists and motor vehicles will all utilize the Promenade in different ways, but the intent is to keep functions safely integrated.

The Promenade will feature significant vegetation through the use of plants and landscaped spaces, creating a green spine through the

community. Hardscaped pedestrian spaces will provide opportunity for seating areas, including commercial patio spaces, and passive recreational opportunities. Due to the Site’s grading, there will be an ~1.0 metre height differential between the Promenade entrance at Mill Street and Station Plaza. This provides the opportunity for tiered garden beds and landscape features within the Promenade. All pedestrian paths will be accessible and barrier-free.

The flow and direction of pavement patterns are influenced by the nearby railway corridor. Long linear and radial lines will flow from the Station Plaza to Mill Street to help direct the flow of pedestrians and other traffic.

Further details regarding the Promenade are provided in Section 5.6.1 of this Report.



Figure 36: Mill Street Cross Section - 20m Right-of-Way (Land Art, February 2023)

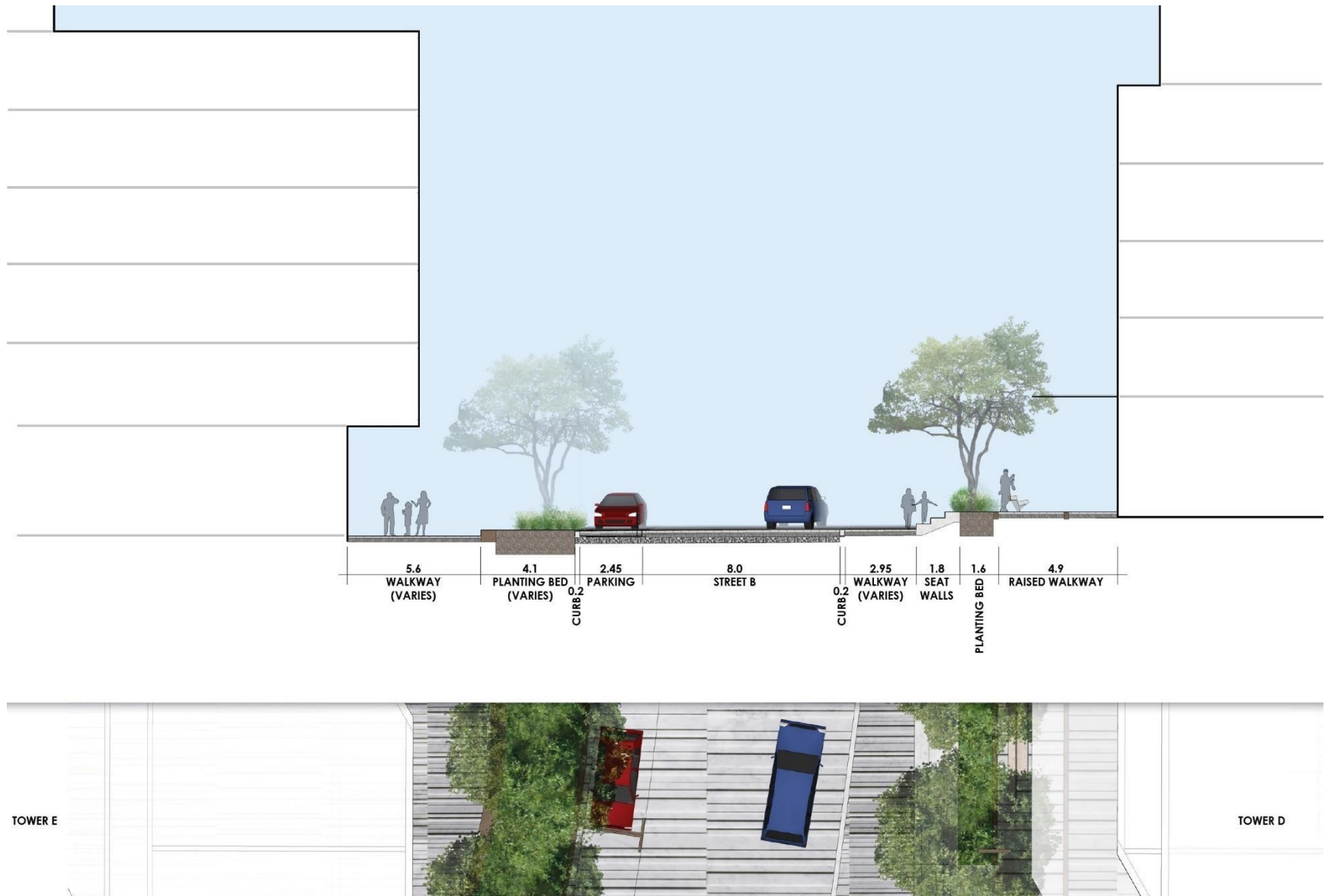


Figure 37: Cross Section of Street B - the Promenade (Land Art, February 2023)



Figure 38: Cross Section of Street A - One-way laneway (Land Art, February 2023)



Figure 39: Cross Section of Street A - Two-way Laneway (Land Art, February 2023)

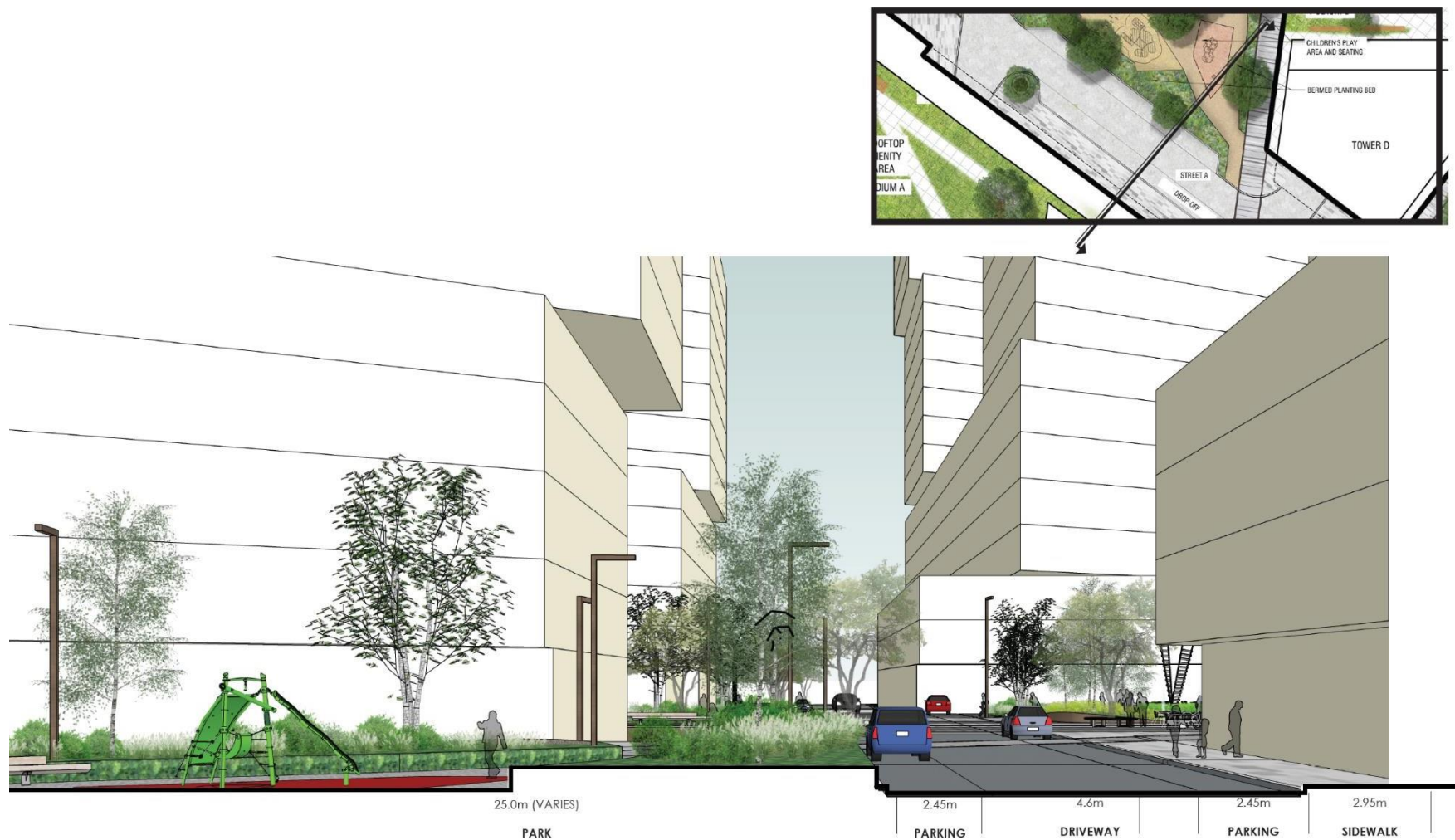


Figure 40: Internal Play Area and Street A (Land Art, February 2023)

5.6 PUBLIC AMENITY AREAS

Public amenity spaces form an important part of the public realm in that they provide community gathering and open spaces, functioning similar to public parks. Public amenity spaces include indoor and outdoor spaces that are accessible by the general public. Urban Design policies and objectives set out by the City of Kitchener encourage the creation of public amenities that are of high-quality design, are accessible to all people and offer a variety of functions. Public amenities areas within the Proposed Development will be privately owned public spaces (POPS).

The following policies are relevant to the proposed development:

- Official Plan 11.C.1.23 to 11.C.1.33
- CWD 01.2.6 (parks & open space), 01.3.2 (shared spaces)
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- TBG (built form, streets and open space, compatibility, environment)
- RICN (community & site design), 04.1.4 (Rockway)

5.6.1 Outdoor Public Amenities

Four outdoor public amenity areas are proposed for the Proposed Development (Figure 41). These four landscape features create memorable placemaking moments as organizing elements of the site plan. These include the:

- Station Plaza
- Promenade
- Play Area
- Entry Plaza

The Proposed Development is centred around Station Plaza and the Promenade, which form a central open space within the community. Station Plaza is a ~1,600 m² public space located at the south access to the Mill Street ION Station platform. The open space extends over Street A toward Sydney Street, forming a 28-metre wide promenade that straddles Street B. Station Plaza anchors the central open space. It is envisioned as a gateway to the neighbourhood and focal point within the Rockway community. Given its prominence, the space offers an opportunity for a major landscape feature such as an ice rink, fountain or public art. The plaza and promenade will feature significant landscaping throughout including street trees, landscaped areas and street seating.

The Conceptual Landscape Master Plan package is attached as Appendix B to this Report.

Station Plaza

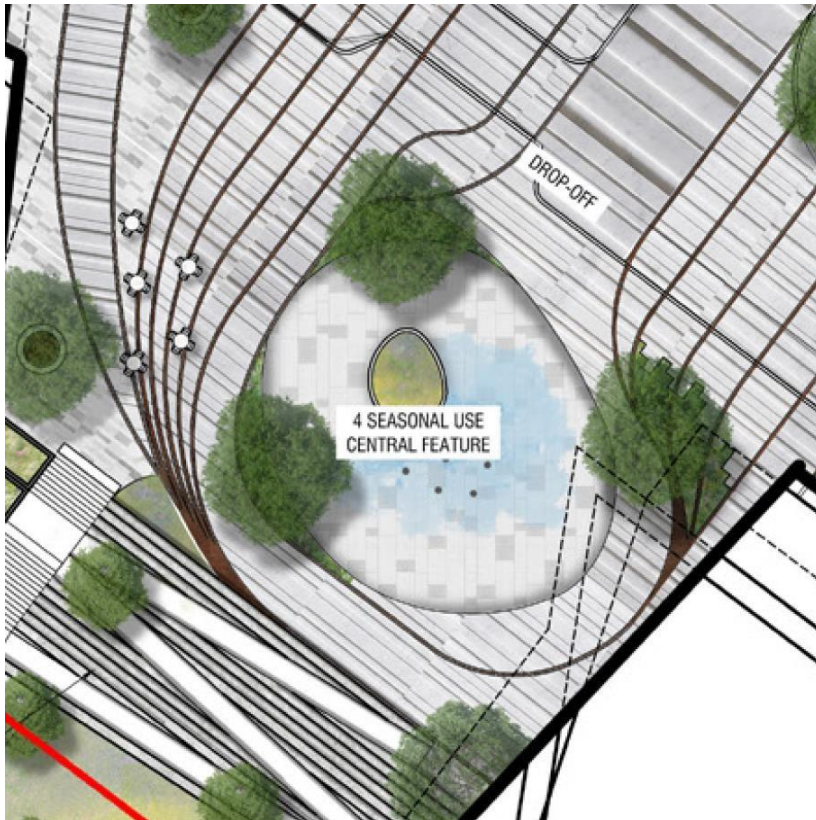


Figure 42: Preliminary Design for Station Plaza (Land Art, February 2023)

Station Plaza is located between Buildings A and B abutting the southern access to the Mill ION station. The ION station itself sits at a lower grade than the plaza and will be accessed via stairs and integrated ramp.

The space will be characterized by a central feature such as a fountain, ice rink and/or public art (Figures 42 to 44). The feature will be a definitive and recognizable presence within the Rockway community and contribute to the unique identity and sense of place. The feature will

provide 4-seasonal use and may evolve through the year between uses. The feature will provide animation and activity at a central location within the community.

The plaza will be bound by a mix of commercial frontages at the base of Buildings A and B. Highly glazed, active frontages will help animate the space. Commercial spill out along the edges of the spaces will provide further animation and visual interest by blending in the indoor and outdoor spaces.

A short-term drop-off space is provided on the north side of the Plaza.



Figure 43: Precedent images for Station Plaza (Land Art, July 2022)



Figure 44: Conceptual Station Plaza Visualization (Land Art, February 2023)

The Promenade

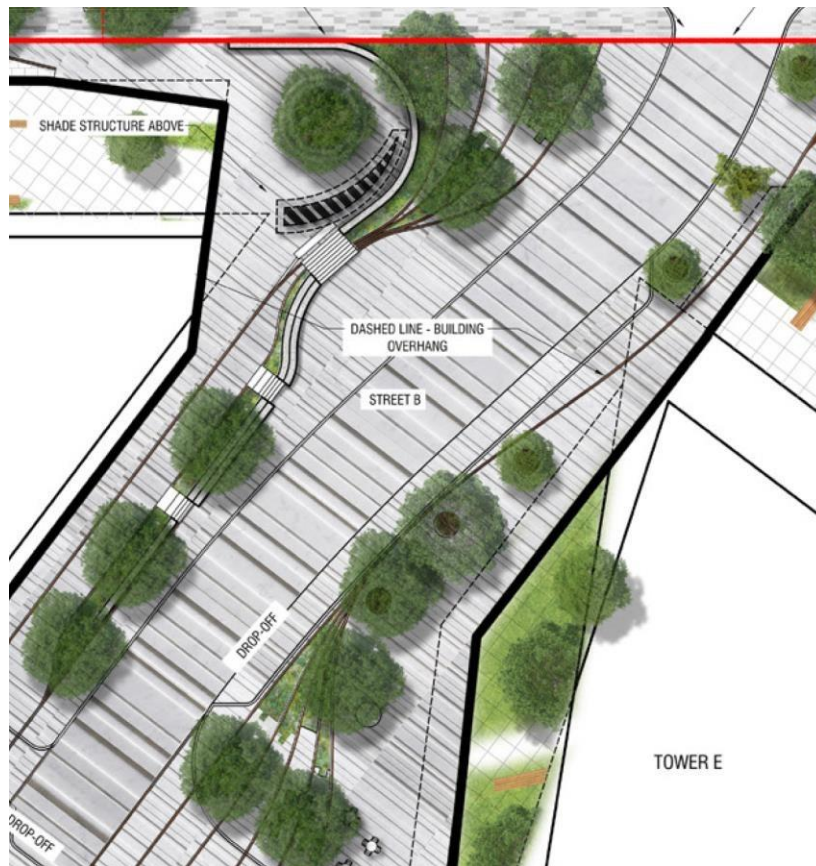


Figure 45: Preliminary Design for Promenade (Land Art, February 2023)

A 28.8 metre wide pedestrian Promenade will straddle Street B from Sydney Street to Station Plaza (Figures 45 to 47). The entry to the Promenade at Mill Street splays out to provide an open amenity area. Landscaping, street furniture and public art will be explored to create a distinctive and notable gateway to the community in these areas. The Promenade will be flanked by a range of uses including commercial and

primary building accesses. The Promenade will be highly landscaped with a mix of street trees and ground level vegetation. Vegetation will be provided within planter boxes and at-grade. Due to the Site's grade differential, planters will be used to create a tiered space both east to west, and north to south.

The Promenade will be anchored by Station Plaza at the northwest. While Streets A and B intersect at the point between the Promenade and the Plaza, paving materials, landscaping and other visual clues will carry across the streets to visually blend the spaces.

The Promenade will be a shared space between cars, cyclists and pedestrians, the pedestrian realm will be prioritized. The majority of the area will be allocated to pedestrian spaces with only Street B threading through the centre.



Figure 46: Promenade precedents (Land Art, July 2022)



Figure 47: Conceptual Promenade Visualization (Land Art, February 2023)

Play Area



Figure 48: Preliminary Design for Play Area (Land Art, February 2023)

The Play Area is proposed to primarily function as a children's playground and passive recreational space (Figures 48 to 50). The Play Area will be accessible to the public and provide a playground within the Rockway community.

The space will be characterized by green mounds and ramps that create a flowing form through the space and opportunity for adventure play. The mounding features will create a sheltered feeling within the space and separate it from the roadway. Additional play equipment, or a simple lawn space with benches, can also be integrated into the space.



Figure 49: Play Area precedents (Land Art, July 2022)



Figure 50: Conceptual Parkette Visualization (Land Art, February 2023)

Entry Plaza

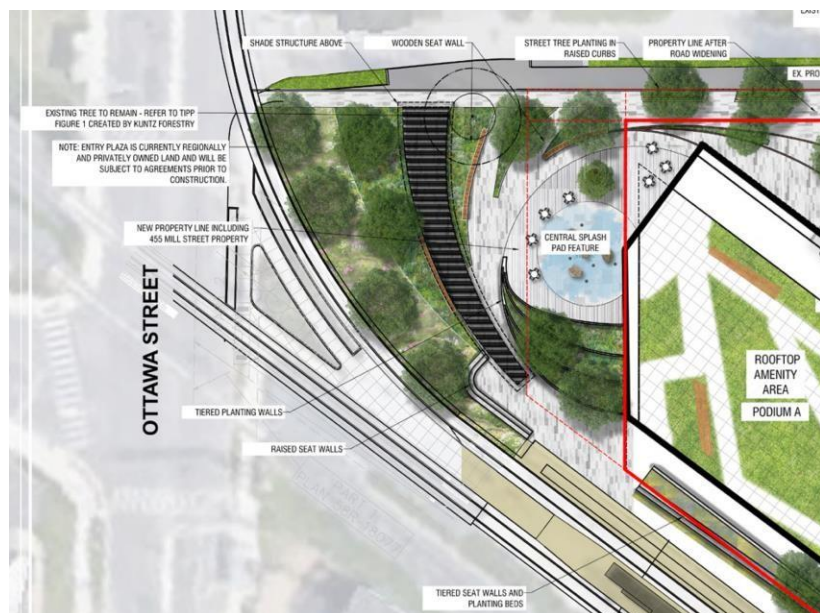


Figure 51: Preliminary Design for Entry Plaza (Land Art, February 2023)

The Entry Plaza is located on lands currently owned by the Region of Waterloo (451 Mill Street), however, they offer an opportunity to create a public open space at the intersection of Mill Street and Ottawa Street. Initial discussions regarding the acquisition and conveyance of these lands have begun with the Region. Should these negotiations progress, City and Regional staff have requested that these lands be contemplated as part of an overall Master Plan for the development. A landscape plan for the Site illustrates a potential design of the lands that could be incorporated into the overall Site Master Plan.

The Entry Plaza will act as a pedestrian gateway to the Proposed Development and will facilitate the movement of pedestrians and cyclists to and from the ION station to the Mill and Ottawa Street intersection (Figures 51 to 53). As such, the space will not be intensely programmed so movement is not impeded by more stationary uses. Seating and places of rest will be subtly incorporated along pathways and landscape retaining walls. Building podium A will provide commercial frontage onto the plaza.

The radial pattern of pathways in the plaza are inspired by the adjacent light rail transit tracks. The space is further influenced by the railway through the use of materials such as timber seat walls, metals resembling railway ties, and other uses of linear patterns in the materials.

Given the prominent location of the Entry Plaza, it will be a suitable location for a focal point such as public art or a water feature. Initial design concepts for the plaza show a water feature in front of Building A. Seating and tables could be available in this area as potential spill out from the commercial uses in Building A.

Natural materials will be used throughout the design, such as timber and large rocks for seating.



Figure 52: Entry Plaza precedents (Land Art, July 2022)



Figure 53: Conceptual Entry Plaza Visualization (Land Art, February 2023)

5.6.2 Commercial Spaces

Commercial spaces will line the Promenade and Station Plaza, as well as the City Park/Entry Plaza (if possible). Providing these spaces adjacent to outdoor amenity spaces will allow for a spill-out of activity onto the public realm as people move in and out of the spaces. Patios and places of rest will be incorporated along these active frontages.

Commercial Areas

The Proposed Development includes approximately 2,600 square metres of commercial space, divided into various zones within the Site (Figure 54). Commercial spaces within buildings have the potential to be subdivided into multiple units. These spaces are envisioned to accommodate a mix of restaurants, cafes, neighbourhood retail and personal service businesses, as per the MIX-3 Zone within Zoning By-law 2019-051. The ground floor level, including commercial spaces, have been assumed to have a minimum height of 4.8 metres.

Four (4) potential live-work units are proposed in the base of Building C and offer further opportunity to activate Street A.

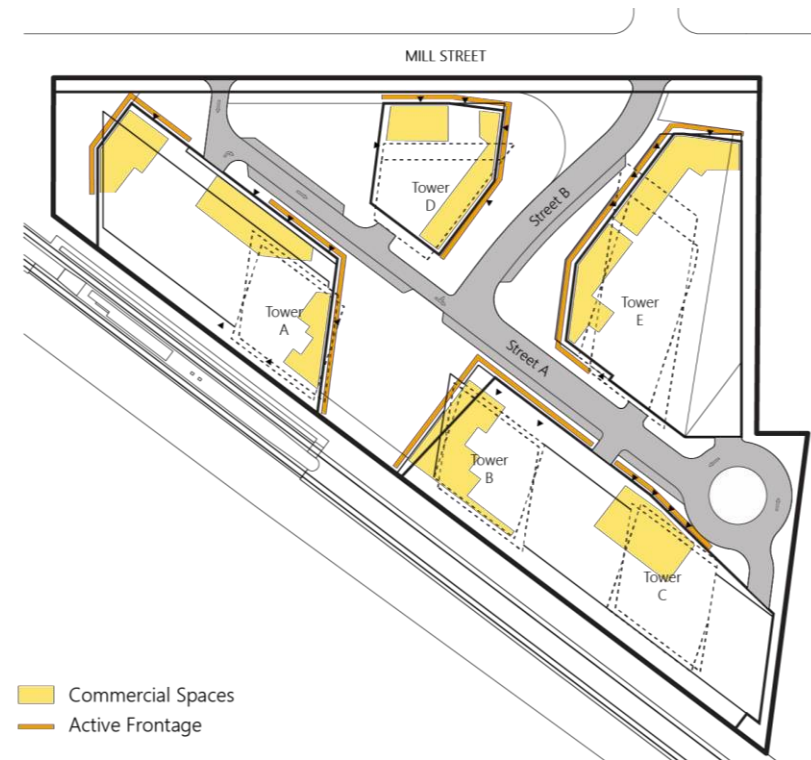


Figure 54: Highlight of Commercial Areas and Active Frontages

5.7 PRIVATE AMENITY AREAS

Private amenities are utilized by the residents of the development and are generally provided in the form of balconies and rooftop patio areas. These amenities are not accessible by the general public.

The following policies are relevant to the proposed development:

- CWD 01.2.6 (parks & open space), 01.3.2 (shared spaces)
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- RICN (community & site design), 04.1.4 (Rockway)

As described above, the outdoor areas at ground level will be privately-owned public spaces (POPS). As such, private amenity areas are provided above ground level. Given the Tower configurations and siting on the podium, the Proposed Development features significant opportunity for rooftop terraces. Individual rooftop amenity areas are proposed to be located on the podiums for all 5 towers. Rooftop terraces offer the opportunity to feature numerous amenities which may include BBQ areas, outdoor gathering and seating spaces, dog runs, games areas or movie screening areas.

Private amenity areas will also feature significant landscaping throughout. Natural landscaping features such as trees, ground level vegetation and ground cover will be integrated into the private spaces and contribute to the greenery of the Site, as a whole.

5.8 SAFETY AND ACCESSIBILITY

The City of Kitchener encourages the principles espoused through Crime Prevention Through Environmental Design (CPTED). CPTED principles include natural surveillance, access control, territorial reinforcement, and maintenance.

The following policies are relevant to the proposed development:

- Official Plan 11.C.1.13 to 11.C.16,
- CWD 01.2.1 (inclusive design)
- TBG
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- RICN (community & site design), 04.1.4 (Rockway)

Safety and AODA requirements will be reviewed and implemented through the detailed design process. The integration of CPTED principles into the Proposed Development will be explored through detailed design. Specific elements such as lighting, emergency signage and infrastructure will also be further incorporated into the development during the Site Plan Approval process.

5.9 MICROCLIMATIC IMPACT ANALYSIS

Microclimate refers to the environmental impacts created by tall buildings. Designs should consider the effects of sunlight, shadowing, heat islands, wind conditions and snow disposition on the surrounding lands. The following policies are relevant to the proposed development:

- CWD 01.2.4 (design for comfort)
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- RICN (community design)
- TBG (environment)

5.9.1 Pedestrian Wind Assessment

An updated *Pedestrian Wind Assessment* was prepared by RWDI, dated February 16, 2023, to assess the anticipated wind conditions at-grade around the Site. The updated report considered changes to the proposed development from the previous submission, such as the orientation of towers and removal of a tower. Wind conditions on most surrounding sidewalks are expected to be appropriate for the intended usage throughout the year. The proposed buildings will also provide some sheltering for the neighbouring areas to the east and west. Without wind control strategies, such as massing refinements (increased separation distances, stepped podiums, canopies, and street trees) and the addition of vertical porous wind screens, uncomfortable and potentially unsafe wind conditions are expected in the Station Plaza and area between towers A and B. As such, wind screens, additional walls, vegetation, and awnings will be explored at detailed design. Wind tunnel testing is recommended at a future stage of design. The findings of the *Pedestrian Wind Assessment* are included as **Appendix C** to this Report.

5.9.2 Noise & Vibration Impacts

Due to the proximity of the Proposed Development to the CN rail line, an analysis of noise impacts was required to understand any necessary mitigation measures. A *Noise and Vibration Feasibility Study* was prepared by HGC Engineering (dated July 13, 2022) to analyze stationary noise and vibration sources. A supplementary update letter was prepared February 16, 2023 which reviewed the revised concept.

The findings of the report conclude that there will be some noise impacts by the surrounding land uses (commercial areas, CN railway and Conestoga Parkway) on the Proposed Development. The predicted impacts will exceed Ministry of Environment, Conservation and Parks (MECP) guidelines, and as such, the following mitigation measures have been proposed:

- Central air conditioning is required so units are able to keep windows closed.
- Upgraded building and glazing construction is required for the proposed buildings, including podiums and towers. Brick veneer walls with insulated gypsum board partitions are recommended.
- Exterior sliding doors should meet the same glazing requirements as windows. Exterior swing doors should be insulated metal with proper seals.
- Measured levels of ground-borne vibrations were determined to be within MECP limits, and no further mitigation was recommended.

The report and letter also advise that the recommendations for building and glazing construction should be updated once detailed floor plans are developed.

5.9.3 Shadow Study Analysis

A Shadow Analysis has been prepared by NEO Architects Inc. to demonstrate the impact of the proposed tall buildings on the surrounding neighbourhood. The Tall Building Guidelines recommend at least 5 hours of cumulative direct sunlight to nearby sidewalks and open spaces under equinox conditions.

The Shadow Study modelling provided as part of the Architectural drawing package, attached as **Appendix A** of this Report, shows the potential shadowing scenario from the Proposed Development. It models the impacts in 2-hour intervals, starting at 10 am and generally ending at 6 pm (excluding the winter months). Shadows have been generated for each solstice and equinox on March 21, June 21, September 21 and December 21.

Table 6 provides an analysis of shadowing under equinox conditions. It has been determined that the impact on the public realm is minimal, and nearby sidewalks and open spaces will have at least 5 hours of cumulative sunlight throughout the day.

The sidewalk on the north side of Mill Street will have moving patches of sun and shadow cast throughout the day caused by tower tops. Towers have compact point footprints, which assists in casting smaller shadows that move off any location throughout the day. This is beneficial in providing pedestrians and the public with options of when they would like to enjoy sun or shade.

In the recent redesign of the proposed development, the number of towers was reduced from six (6) to five (5) which also produces more favourable shadow impacts throughout the site and on adjacent properties.

The future public park at 451 Mill Street is minimally impacted throughout the day in all seasons. Covered walkways and canopies will be incorporated into the design to provide some shade relief.

It should also be noted that through the future implementation of the Rockway Secondary Plan, the lands north of Mill Street will be permitted to redevelop up to 4 storeys in height. There are no additional impacts expected by the Proposed Development on this future built form.

Table 6 : Analysis of Shadows

Impacted Area	Equinox Conditions (March/September 21)
<i>Mill Street Sidewalks</i>	Partial, moving impacts throughout the morning with full sun in the late afternoons. Over 5 hours of cumulative sunlight provided.
<i>Residential Properties Across Mill Street</i>	Partial impacts in front yards from morning until 2 pm. Over 5 hours of cumulative sunlight provided.
<i>Public Parks and Open Spaces</i>	451 Mill Street impacted in early morning; shadows gone before noon. Full sun from noon until evening.
<i>Interior Parks and Open Spaces</i>	Play Area has a portion of sunlight from 10am until 2pm. Partial coverage of Station Plaza and Promenade throughout the day with full sunlight around 2pm.
<i>Rooftop Amenity Areas</i>	Partial coverage throughout the day. Over 5 hours of sunlight for rooftop areas facing the rail corridor. Most sunlight from noon to 6pm.

5.10 SUSTAINABLE DESIGN

Sustainable design choices have been integrated into the Proposed Development. Initiatives such as transit-oriented design, urban intensification, and the repurposing of underutilized brown field sites all contribute to the sustainable design of our communities.

A *Sustainability Statement* (dated July 2022) was prepared by The Butler Group Consultants Inc. to demonstrate the Proposed Development's conformity with the sustainable development policies of the Kitchener Official Plan. The report discusses strategies utilized within the development to encourage environmental sustainability, including proximity to amenities, encouraging a variety of transportation options, and construction that will meet or exceed contemporary energy-efficiency and waste diversion standards. Further investigation of the Proposed Development's sustainability initiatives will be conducted during detailed design.

The following policies are relevant to the proposed development:

- OP policies 7.C.4.4
- CWD 01.2.3 (design for sustainability)
- TBG
- MTSA 02.2.0 (community design), 02.3.0 (site design), 02.4.3 (PARTS Rockway)
- RICN (community & site design), 04.1.4 (Rockway)

The Proposed Development represents a compact and efficient, mixed-use development contributing to a broader strategy to create a more efficient, and sustainable City. The Site is a redevelopment project on existing, underutilized land. The Site is within an existing community and is connected to existing infrastructure and services.

The Proposed Development embraces the use of public transit and car-free living. Designing for active transportation and encouraging the use of public transit systems help to promote more environmentally friendly modes of transportation. Active transportation is encouraged on site through the creation of ample pedestrian walkways and encouragement of cyclists on Streets A and B. Bicycle parking will also be provided within the podium of the proposed buildings, scattered throughout the Site and behind Buildings B & C in a cluster community parking facility.

The use of public transportation is encouraged by making the ION station more accessible and inviting to the public. Having residential units in close proximity to the station will increase its usage and decrease the need for residents to own vehicles.

The building design will utilize best construction practices and will meet current energy efficient standards. Multiple measures consistent with LEED certification will be explored, however, LEED certification will not be pursued at this time. Rooftop water collection systems and on-site water storage will be considered.

In initial site modeling, the Wind Assessment identified areas of high wind levels throughout the winter months. In addition to the application of various wind mitigation measures for effected pedestrian areas, Polocorp is interested in exploring the incorporation of wind turbine features as potential public art. These turbines would also have a functional use and be able to generate renewable energy from the wind.

6.0 CONCLUSION

The Proposed Development includes five (5) residential towers, ranging in height from 15 to 44 storeys, and will include up to 1,500 residential units. Podium rooftop areas will include amenity spaces for residents while the ground level will be focused on the pedestrian realm.

This Urban Design Brief concludes that the Proposed Development has integrated urban design principles through the following:

- High quality urban design and architectural finishes;
- High quality and vibrant streetscapes;
- Consideration of skyline views;
- Consideration of safety and emergency access through the placement of buildings, streets and walkways;
- Ensuring barrier-free and universal accessibility by all citizens;
- Integration of public art and high-quality public spaces enhancing the quality of life for all residents in the broader context;
- Consideration of priority building locations along Mill Street and at site entrances (Mill & Ottawa Streets and Mill & Sydney Streets);
- Designing for year-round use and consideration for protection from sun, snow, heat and other environmental elements.

It is our opinion that the Proposed Development and associated applications for Official Plan and Zoning By-law Amendment reflect high-quality design and meet the intent of the City of Kitchener's Official Plan and Urban Design Guidelines regarding good design.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael Spaziani', written over a light blue circular stamp.

Michael Spaziani, B.E.S., B. Arch., OAA, FRAIC

APPENDIX A: ARCHITECTURAL PACKAGE

APPENDIX B:
CONCEPTUAL LANDSCAPE
MASTER PLAN PACKAGE

APPENDIX C: PEDESTRIAN WIND ASSESSMENT

March 22, 2023

City of Kitchener
Planning Division
200 King Street West, 6th Floor
P.O. Box 1118, Kitchener, ON N2G 4G7

Attention: Craig Dumart, MCIP, RPP
Senior Planner

**Reference: 455-509 Mill Street
Official Plan & Zoning By-law Amendments
Response to Parks and Cemeteries Comments**

Polocorp Inc has reviewed the comments received from Parks and Cemeteries, issued on March 16, 2022. In response to the provided comments, please see below:

Parkland Dedication

Polocorp understands that the required parkland dedication is deferred at the OPA/ZBA stage and will be assessed through the future Site Plan application. With that said, we note that the Parkland Dedication By-law, and its applicability to the proposed development, is currently under appeal by Polocorp Inc. As such, the ultimate dedication form and amount is subject to the on-going appeal.

Entry Plaza

The lands municipally known as 451 Mill Street are currently owned by the Region of Waterloo. These lands form part of the 'Entry Plaza' within the proposed development. As previously discussed with City and Regional staff, the concept contemplates for 451 Mill Street and 455 Mill Street to be conveyed to the City of Kitchener to, ultimately, comprise the Entry Plaza feature. The plaza would be City-owned. We note, however, that these discussions remain on-going and no formal decisions have been made. The lands remain Regionally-owned and the City has not provided confirmation of the proposal. As such, the lands could be more appropriately labelled as 'Potential City Park'.

Detailed Design

While the application package illustrated and discussed areas of the plan in some detail, they are largely conceptual. While the development plan will remain fundamentally the same, detailed planning and design will occur through the Site Plan approval stage. Detailed design will contemplate public and

private amenity areas, both indoor and outdoor, including landscaping, engineering and wind impacts. Any necessary considerations related to engineering, mitigations, cross sections or refinements to plans will be determined at that time. Amenity area programming will also be established through detailed design. Specific uses will be determined through consultation with staff, as well as based on market demand. To date, Polocorp has contemplated outdoor seating areas, BBQ areas, basketball courts, dog runs, etc as potential amenities within the private amenity areas. In addition to the outdoor amenity areas, residents will have access to a variety of indoor amenity spaces which could include party rooms, theatres, community lounges, a gym, etc. Collectively, the provision of these areas will help satisfy the demand for outdoor amenity areas by future residents.

I trust that the above information provides sufficient information to address the comments provided. Polocorp is committed to collaborating with staff at the appropriate time to address these, or any future comments, that may be provided. We look forward to continuing to work together to progress this application. Should you have any questions or comments, please feel free to contact the undersigned.

Regards,

Polocorp Inc.

A handwritten signature in black ink, appearing to read 'mwarzecha', is positioned above the printed name.

Matthew Warzecha

Director of Planning and Development

Cc: Joseph Puopolo, Polocorp Inc
David Butler, The Butler Group Consultants
Steve O'Melia, Miller Thomson LLP