

Design Review Panel Submission Package

2481 Barton St E, Hamilton

April 21, 2023



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Introduction

SRM Architects + Urban Designers is pleased to present this Design Review Panel Submission Package in support of a Zoning By-law Amendment application for 2481 Barton Street East, Hamilton (the 'Site'). The applicant is proposing the development of a 17-storey mixed-use building with 5-storey podium on the Site, with 207 residential units, 475 square meters of ground floor commercial space, and a total gross floor area of 15,797 square meters.

The Site is located on Barton Street East, to the east of the intersection with Centennial Parkway East in eastern Hamilton. The property is rectangular in shape and is approximately 0.37ha, with 72.5m of frontage on Barton Street East and a depth of 51.9m. The majority of the Site is currently vacant and is being used for the parking of construction vehicles. A small garage is located at the eastern lot line and is proposed to be demolished. The Site contains no topographic constraints.

In order to facilitate the Proposed Development, a Zoning By-law Amendment is required to rezone the property from Restricted Light Industrial District (JJ) Zone (By-law 6493) to the Mixed Use High Density (C4) Zone (By-law 05-200). In addition two site-specific modifications are required:

Regulation	Permitted	Proposed
Max. Height	40.0m	53.0m
Interior Side Yard (West)	7.5m	3.0m

In order to effectively review and evaluate the Proposed Development, this Submission Package includes the following information:

- An analysis of the Site's immediate and surrounding context within 400m.
- An overview of the design vision and evolution of the Proposed Development;
- A detailed summary of the Proposed Development, including site organization & circulation, built form & massing, building base design, tower design, potential impacts & mitigation, amenity areas, sustainable design;
- A review of the relevant urban design policy and the Site's conformity;
- Appendices containing the relevant architectural and engineering drawings, and supporting Pedestrian Wind Assessment and Shadow Impact Study;

Of note, the immediate site context does not include any open spaces, significant views, or heritage resources. As such, the context analysis will not address these elements.



Introduction

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Context Analysis and Policy Framework



Immediate Context

The Site is located within a mixed commercial, and light industrial area. Commercial uses are generally clustered along Centennial Parkway North with light industrial uses behind. Residential uses are located to south east at the edge of the immediate context. Overall, the surrounding neighbourhood has an auto-oriented character, with large surface parking lots and buildings set back from the street edge.



Urban Structure

The Site is located within the Centennial Neighbourhood Secondary Plan area and is designated:

Official Plan

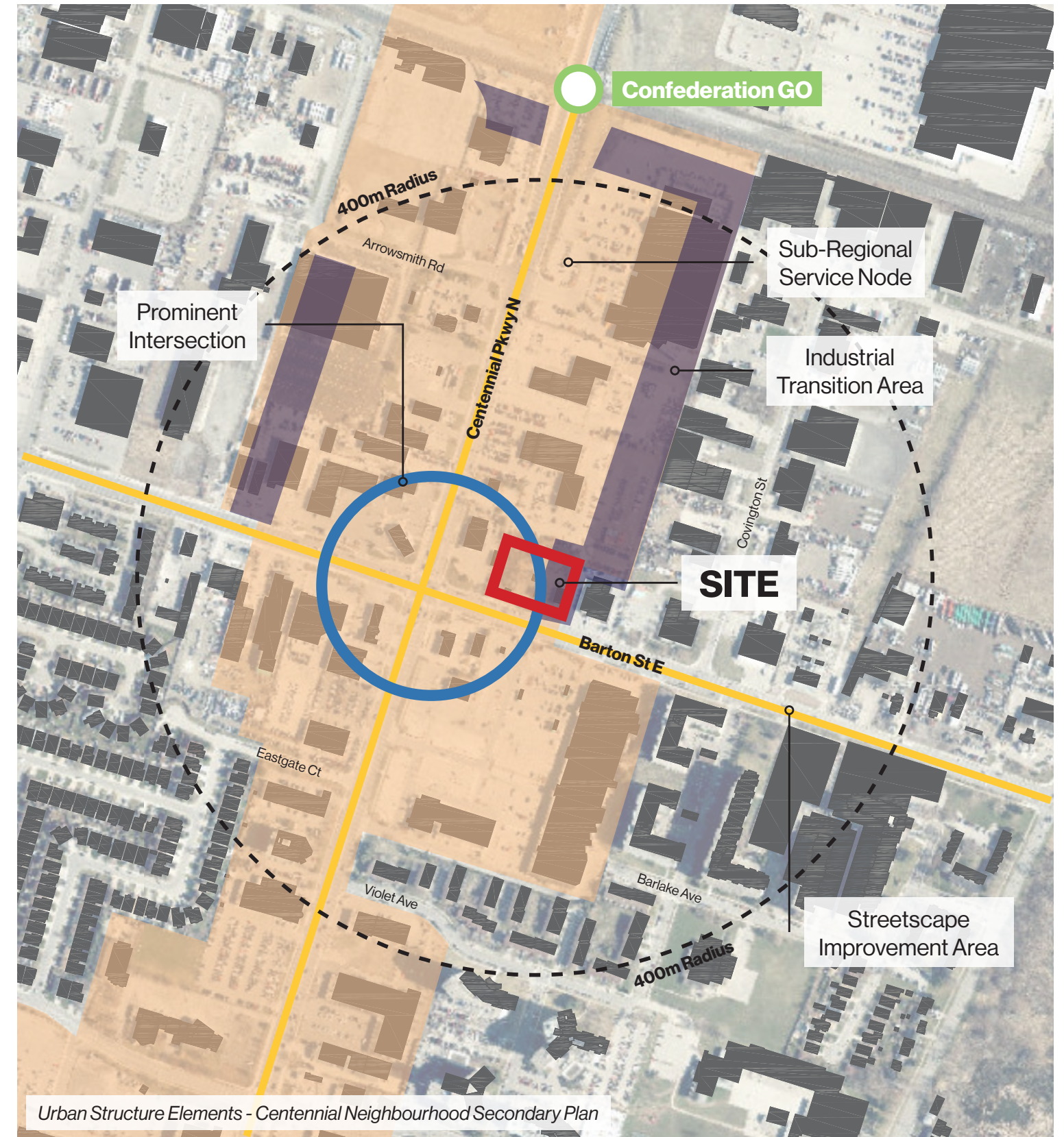
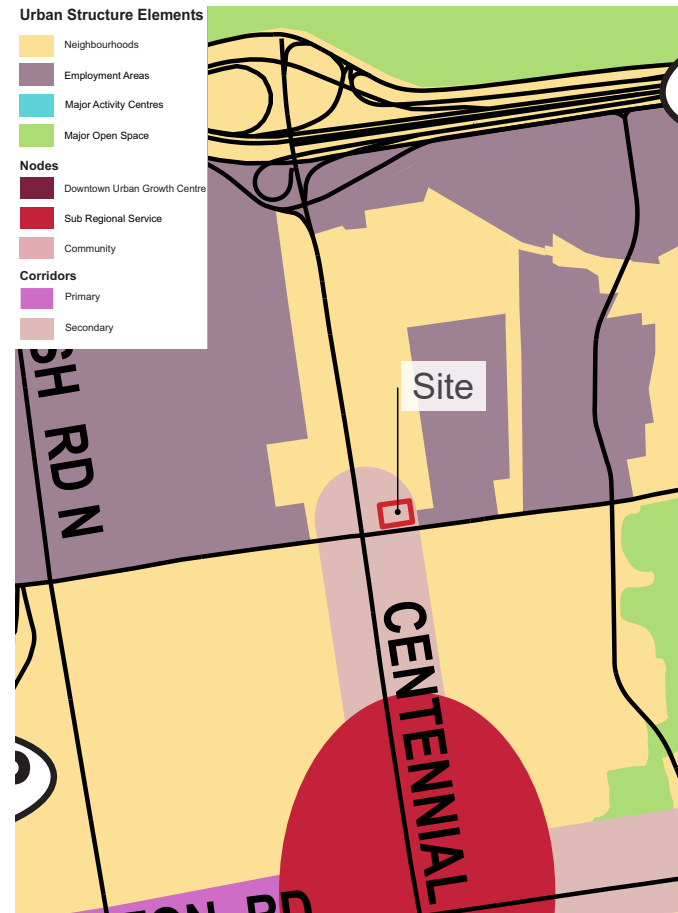
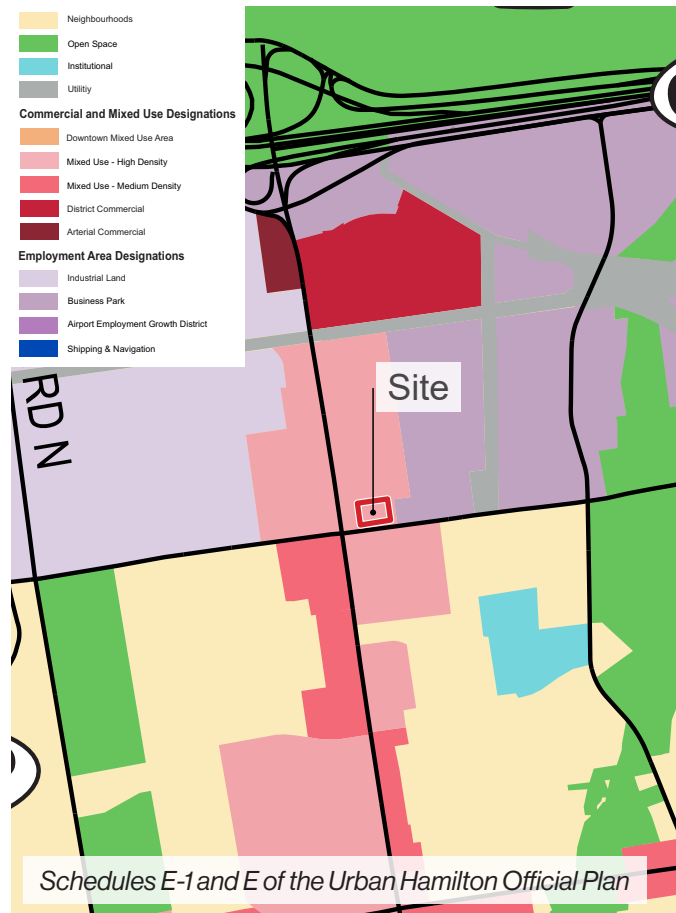
- Mixed Use High Density
- Secondary Corridor

Centennial Neighbourhood Secondary Plan

- Sub-Regional Service Node
- Prominent Intersection
- Streetscape Improvement Area
- Industrial Transition Area

These designations combine to create the following performance standards:

- Maximum Height - 17 storeys
- Node Density - 100-150 people and jobs per hectare
- 70m Setback from Industrial Uses
- Urban streetscape condition along Barton St



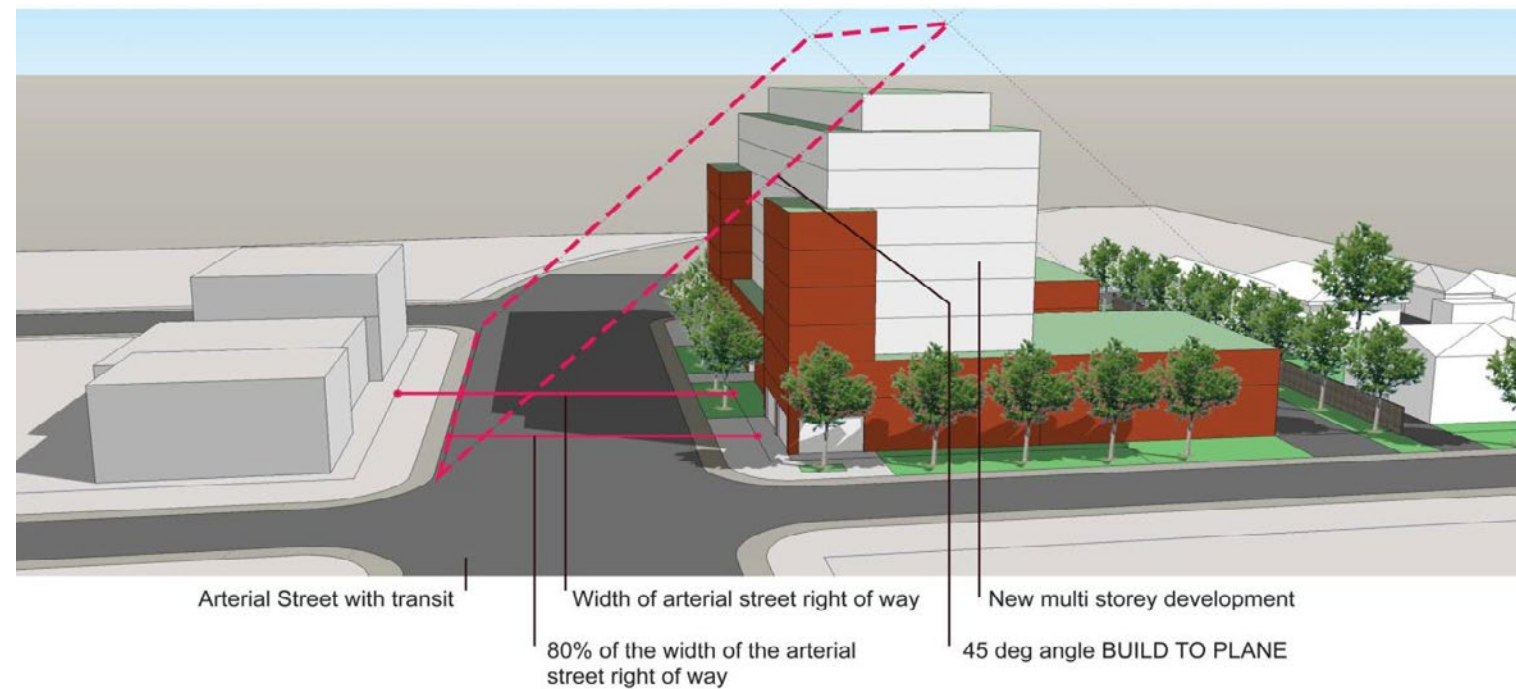
City-Wide Corridor Planning Principles and Design Guidelines

The City-Wide Corridor Planning Principles and Design guidelines provide direction for designated corridors in the city. These guidelines are applicable for development applications along Centennial Parkway, together with other applicable city design guidelines.

Section 4.0 outlines the design guidelines for development along corridors. The following sections of policies are relevant and referred as part of the proposed design: Maximum building height (4.3), Minimum building height (4.4), Landscaping (4.5), Parking and loading (4.6), Street relationship (4.7), Side yards, walls and step-backs (4.8), Sidewalks and streetscapes (4.10), Land assembly (4.11), Shadow Impacts (4.12).

Specific angular plane measurements are also included for developments along arterial streets (see image), measured from 80% of the abutting right-of-way at 45 degrees.

A detailed analysis of these policies in relation to the Proposed Development is contained in the Urban Design Brief prepared by GSP Group (December 2022).



Front Build to Plane (City of Hamilton)

Tall Building Guidelines

The Downtown Hamilton Tall Building Guidelines implement the design direction for buildings over 12 storeys in Downtown Hamilton. Although the Site is not captured within the Guidelines' study area, the Guidelines have been referenced as a set of relevant best practices.

The Guidelines provide direction related to contextual considerations, building form and articulation, and public realm relationships in the arrangement and design of tall buildings. The following sections of the Guidelines are relevant and referenced as part of the proposed design: Neighbourhood transition (3.2), Vibrant streets (3.4), Transit proximity (3.5), Site organization and building base (4.2), Building tower (4.3), Streetscape and landscape design (5.1).

The Guidelines also provide the following recommended minimums for point tower development:

- Point Tower Site Dimensions 35m x 45m
- Point Tower Height 13+ storeys, 50m+

A detailed analysis of these policies in relation to the Proposed Development is contained in the Urban Design Brief prepared by GSP Group (December 2022).

RECOMMENDED* FRONTAGE	RECOMMENDED* LOT DEPTH	RECOMMENDED* # STOREYS	RECOMMENDED* HEIGHT	
5 - 30m	20 - 90m	2 - 6 str (max)	22m (max)	LOW-RISE INFILL
30m + (min)	30 - 45m (min)	7 - 12 str (max)	25.5 - 44m (max)	MID-RISE
35m + (min)	45m + (min)	13 + str	50m +	POINT TOWER
80m + (min)	80m + (min)	13 + str	50m +	HYBRID

*These numbers are estimated values; depending on context, some sites may not be able to comply with the guidelines, and therefore may be considered inappropriate locations for tall buildings regardless of the lot dimensions.

Site Dimensions for Tall Buildings (City of Hamilton)

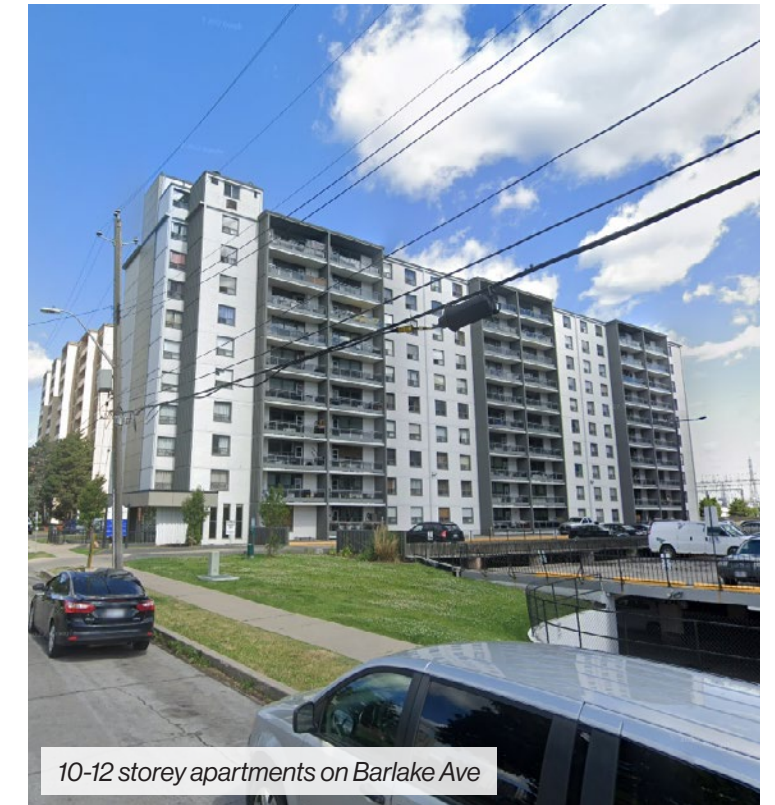
Height Analysis & Surrounding Proposals

While the immediate context is characterized by low-rise commercial and light industrial, the residential neighbourhood further south contains a mix of low-, mid-, and high-rise buildings. Existing heights range from 1 to 3 storey single detached and townhouse dwellings, to multiple dwellings of 7 to 16 storeys in various slab tower forms. The multiple dwellings are grouped in clusters of two to five buildings.

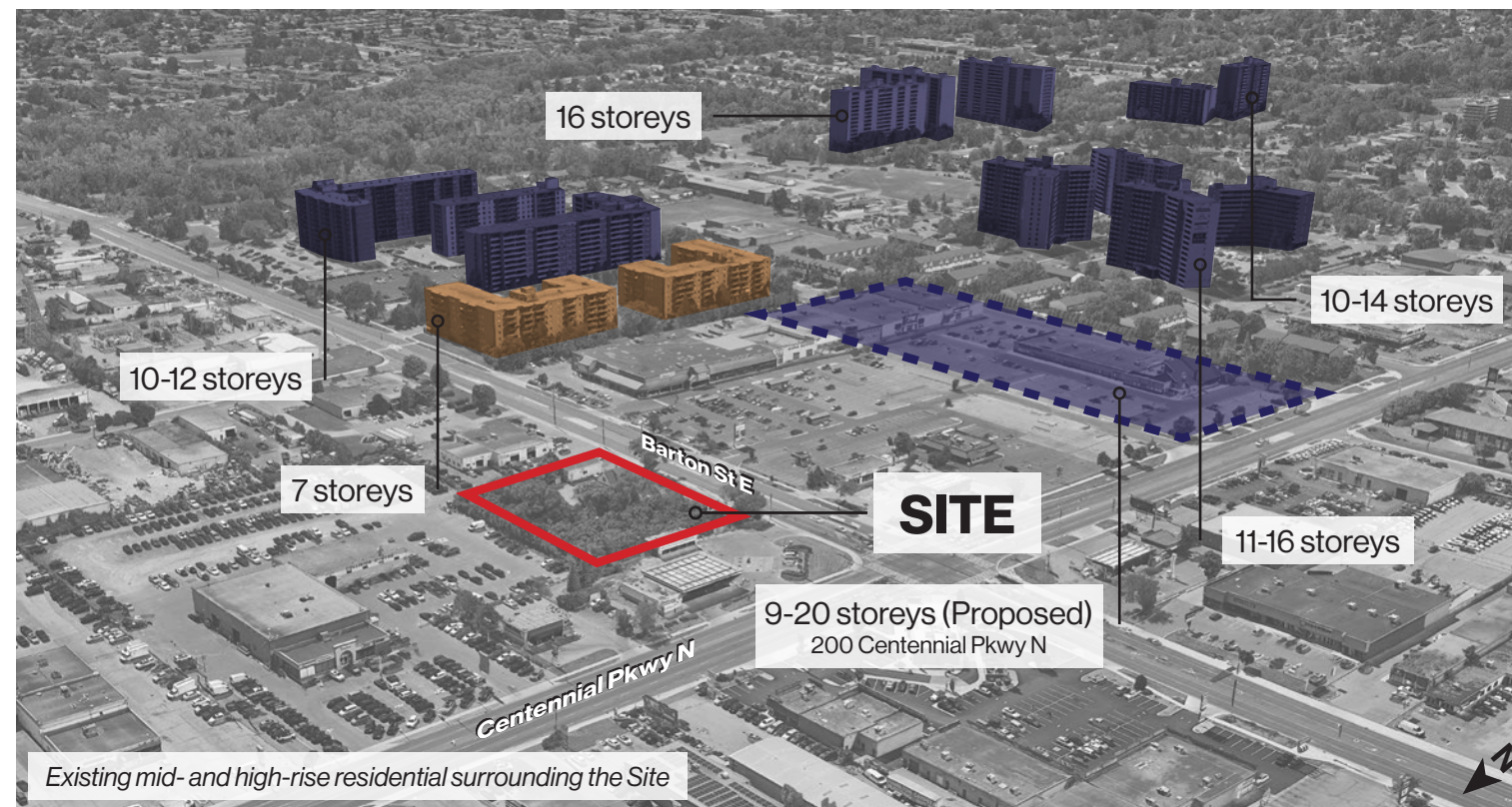
In addition, a 6-tower, mixed-use development is proposed for a portion of the commercial plaza at 200 Centennial Parkway North. The towers range in height from 9 to 20 storeys with 4 to 6 storey podiums. The height is concentrated to the east and west ends of the site, with the tallest towers along Centennial Parkway North. Ground floor commercial is proposed facing the existing plaza. Renderings and elevations are included below. Additional development proposals in the surrounding area are limited to commercial and light industrial uses, including new and expanded auto dealerships, and a new cold storage facility.



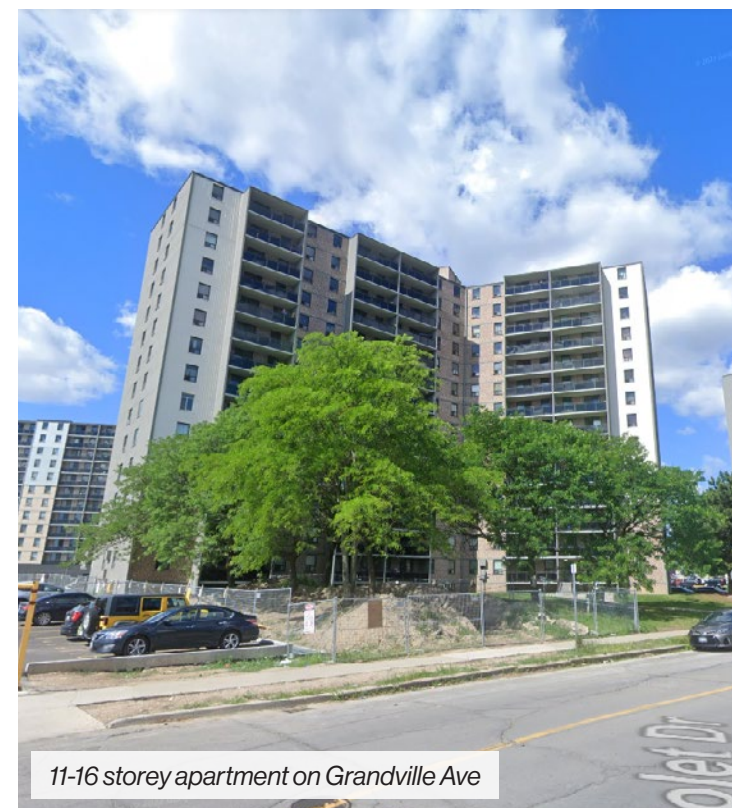
Mid-rise apartments along Barton St E



10-12 storey apartments on Barlake Ave



Existing mid- and high-rise residential surrounding the Site



11-16 storey apartment on Grandville Ave



Proposed 20-storey tower at 200 Centennial Pkwy N

Context Analysis & Policy Framework

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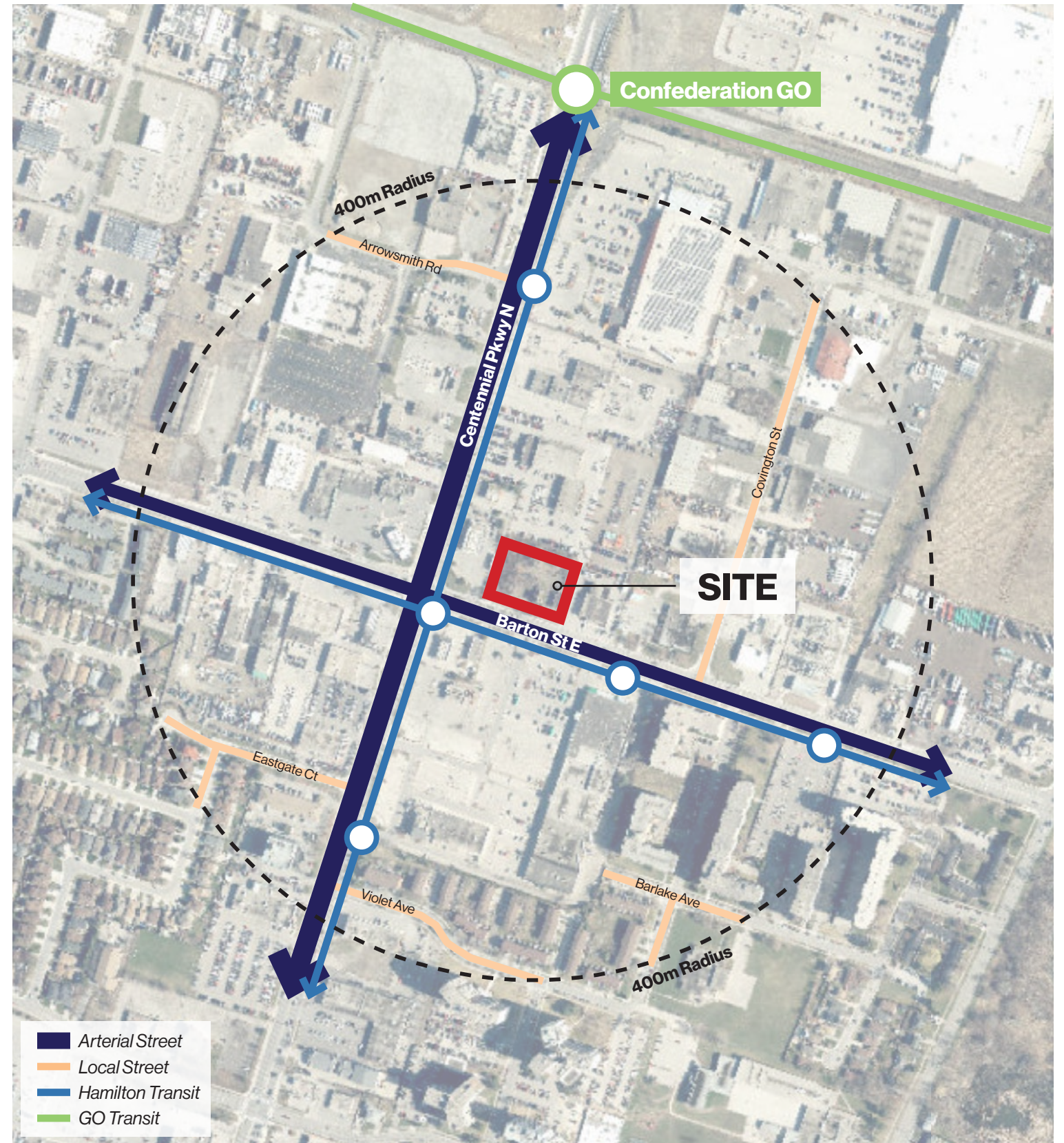


Transportation

Barton Street East is a Minor Arterial and Centennial Parkway North is a Major Arterial. Both roads have a five lane cross section, a mix of sod boulevards and curb-face sidewalks, and no cycling infrastructure. The local street network is sparse, owing to the large-lot commercial and light industrial nature of the area. A more fine-grained network appears to the south, along Eastgate Court and Violet Avenue, as the area transitions to primarily residential uses. The immediate area contains no significant open space corridors or active transportation networks beyond the existing sidewalks. However, Barton Street East is proposed to be part of the Primary Cycling Network with a future bike lane, according to the City's preferred long-term cycling network.



Typical 5 lane cross section on Barton St E



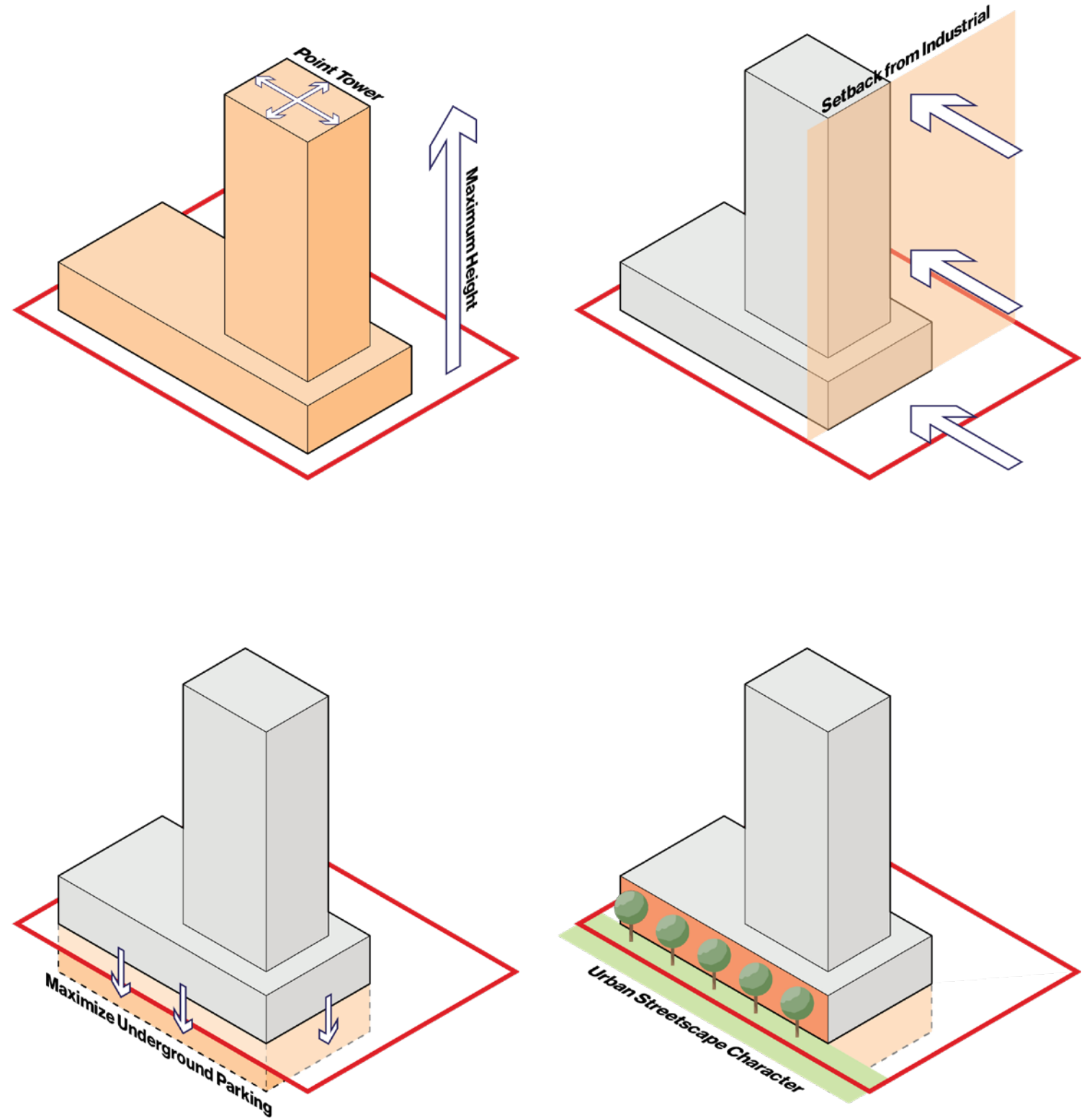
Proposed Development



Design Vision

In response to the location and planned context of the Site, SRM and the consultant team developed a set of design principles to guide the site plan's development. The guiding principles are as follows:

- Create a tower and podium form that aligns with the Secondary Plan height limits**
- Contribute to the development of an urban streetscape character along Barton Street East through a continuous street wall and ground floor retail**
- Develop a point tower form with setbacks from Barton Street East to limit impacts on the public realm and adjacent properties**
- Provide an appropriate setback from the industrial lands to the east**
- Locate underground parking where feasible**
- Utilize high-quality materials and finishes**



Proposed Development

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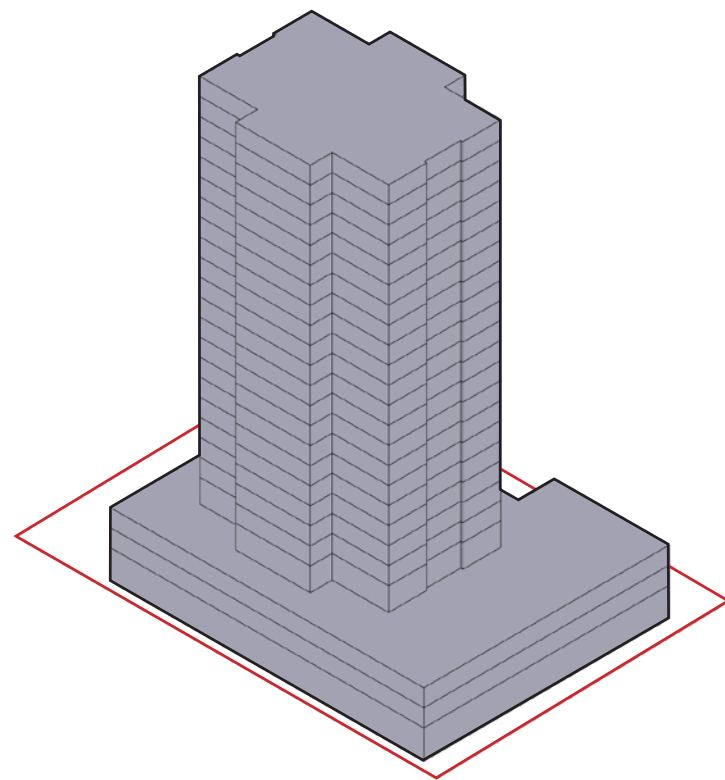


Design Evolution

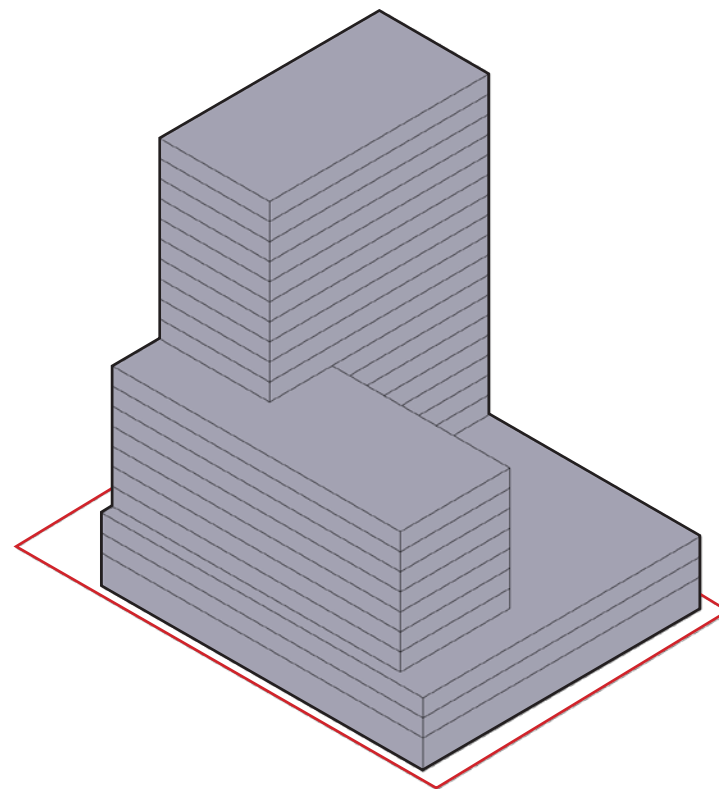
The massing of the Proposed Development has evolved throughout the design process. Initial concepts for a central 25 storey tower were revised to an L-shaped tower of 10 and 20 storeys which was submitted for Pre-Consultation. Through consultations with staff and the client, the design was converted to a 17 storey point tower with 5-storey podium. Since this concept was submitted as part of the initial Zoning By-law Amendment application, the building has been further refined in the following ways:

- Reduce the building height to provide better massing transition and mitigate shadow impacts on the Site and surrounding areas;
- Re-design the site layout to provide 75m buffer from industrial use as per the industrial transition zone guidelines;
- Increase outdoor amenity area and bring it closer to the building;
- Provide safer vehicular entry and exit to the Site by moving the access away from intersection;
- Add more active commercial frontage along Barton St. E.;
- Create direct and safe access to at-grade outdoor amenity area;
- Add a direct pedestrian entrance from Barton St. E.

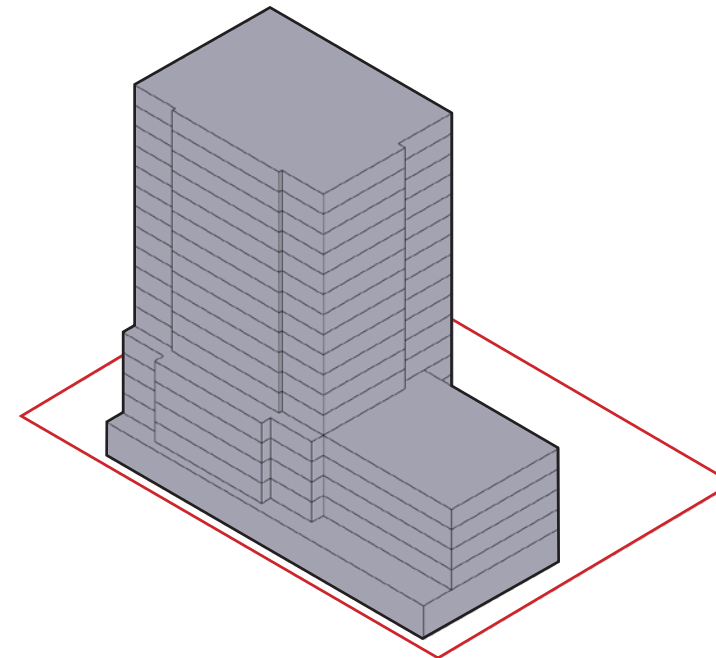
The revised proposal better addresses the relevant urban design guidelines and Secondary Plan policies.



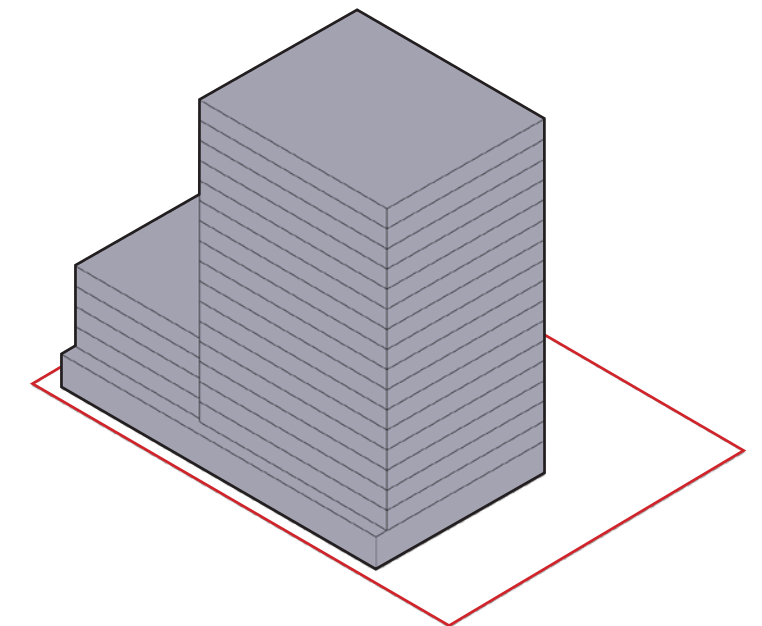
Initial Concept
25 Storeys with 3 Storey Podium



Pre-Consultation Submission
20 and 10 Storeys with 3 Storey Podium



Initial ZBA Submission
17 Storeys with 5 Storey Podium



Current ZBA Submission
17 Storeys with 5 Storey Podium

Proposed Development

2481 Barton Street East, Hamilton

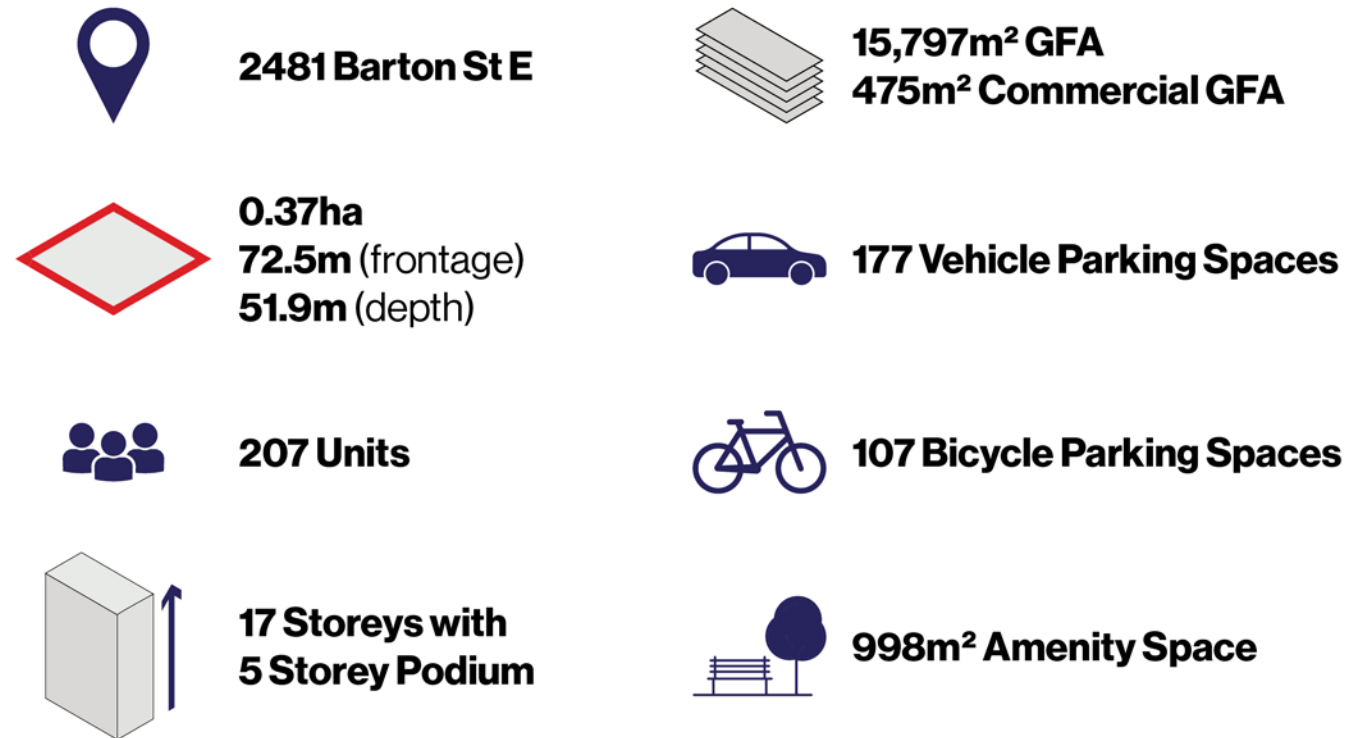
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Proposed Development

The Proposed Development combines the principles of the design vision to create a 17-storey mixed use building with a 5-storey podium base. The Proposed Development contains 207 dwelling units, 475 square meters of ground floor commercial, 177 vehicle parking spaces and 107 bicycle parking spaces are provided for residents and visitors, as well as 998 square meters of amenity space for resident use.

The Proposed Development will contribute to the transformation of the Centennial Node from a single-storey automotive-oriented built environment to a multiple-storey mixed-use area.

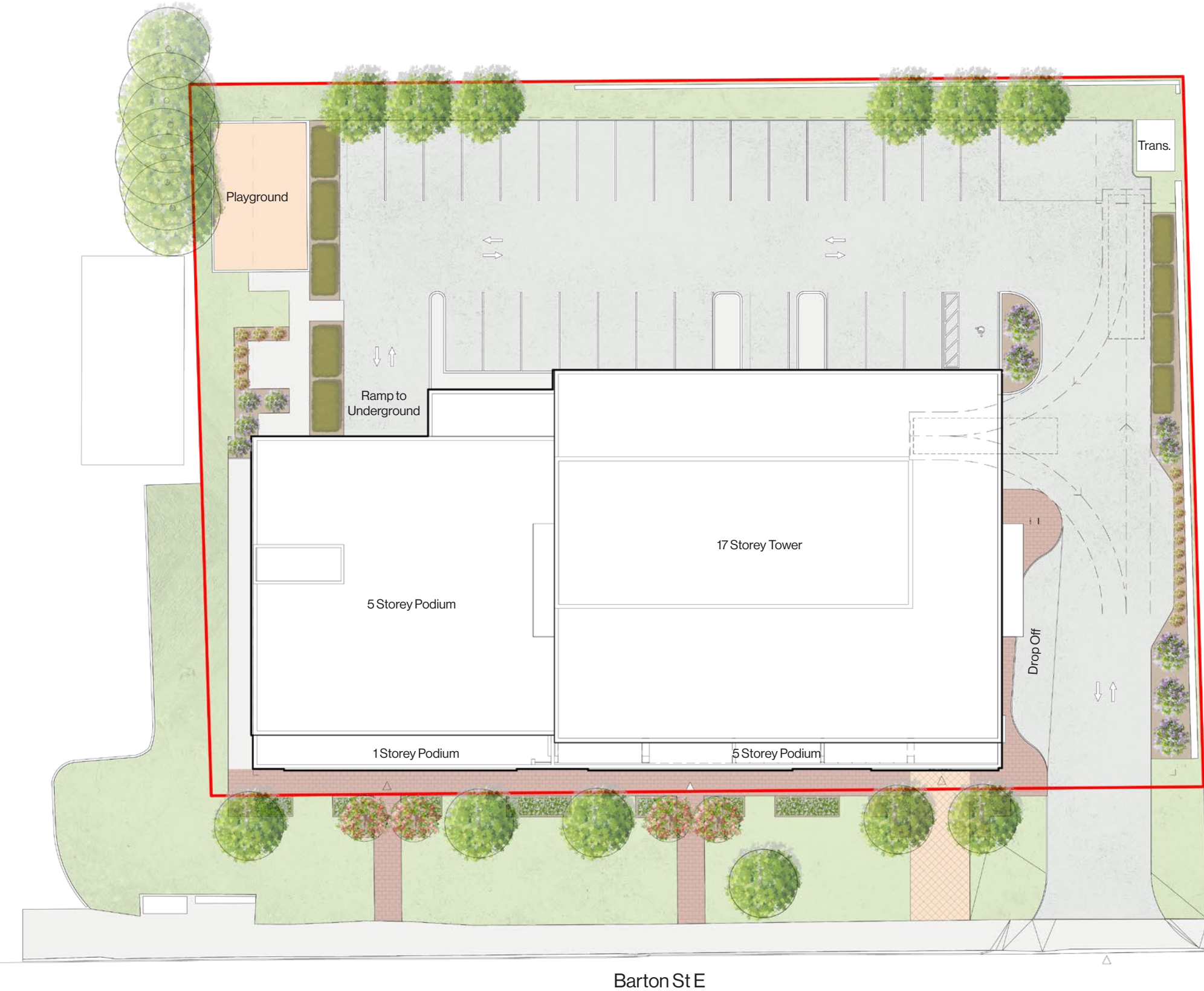


Proposed Development

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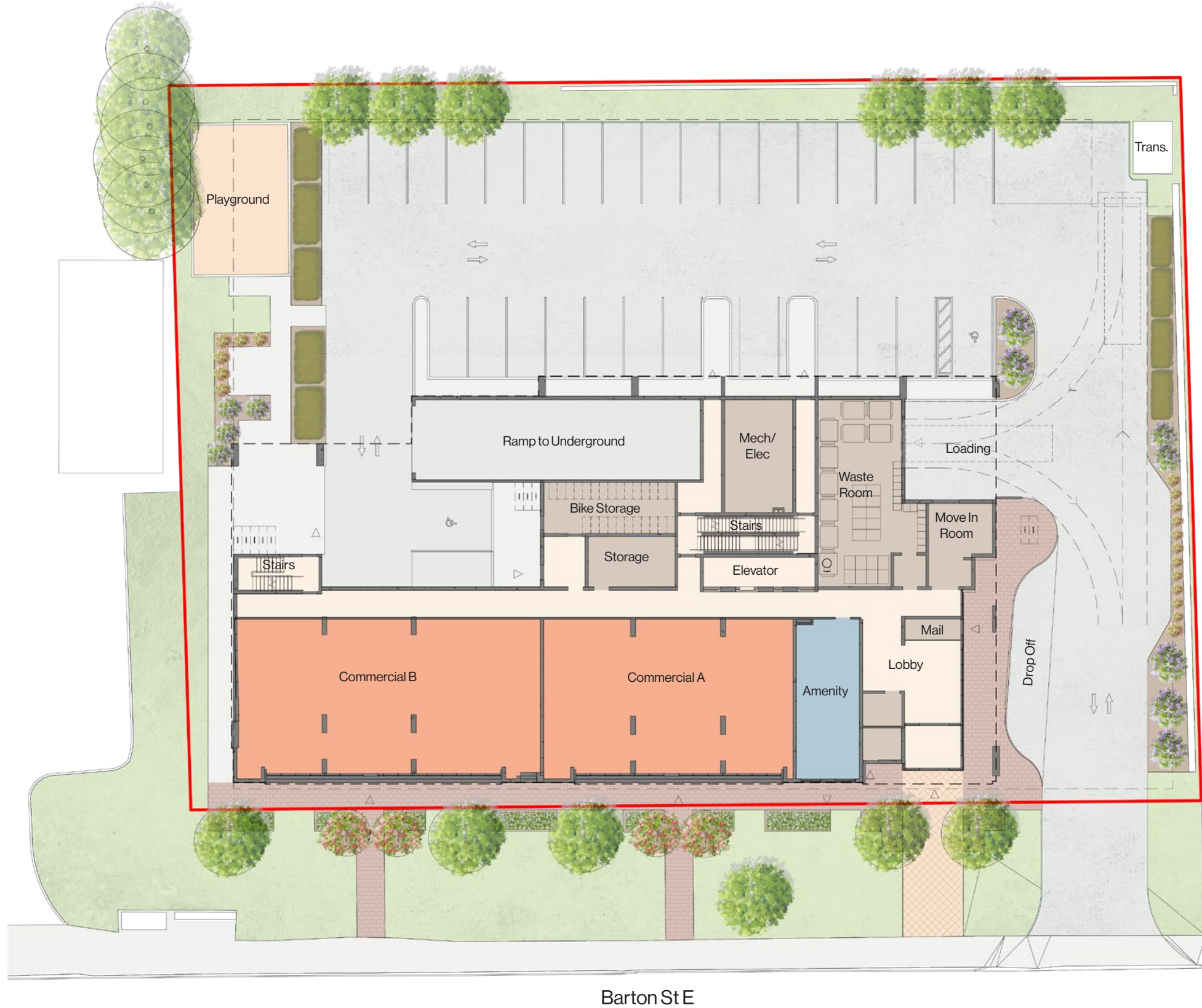
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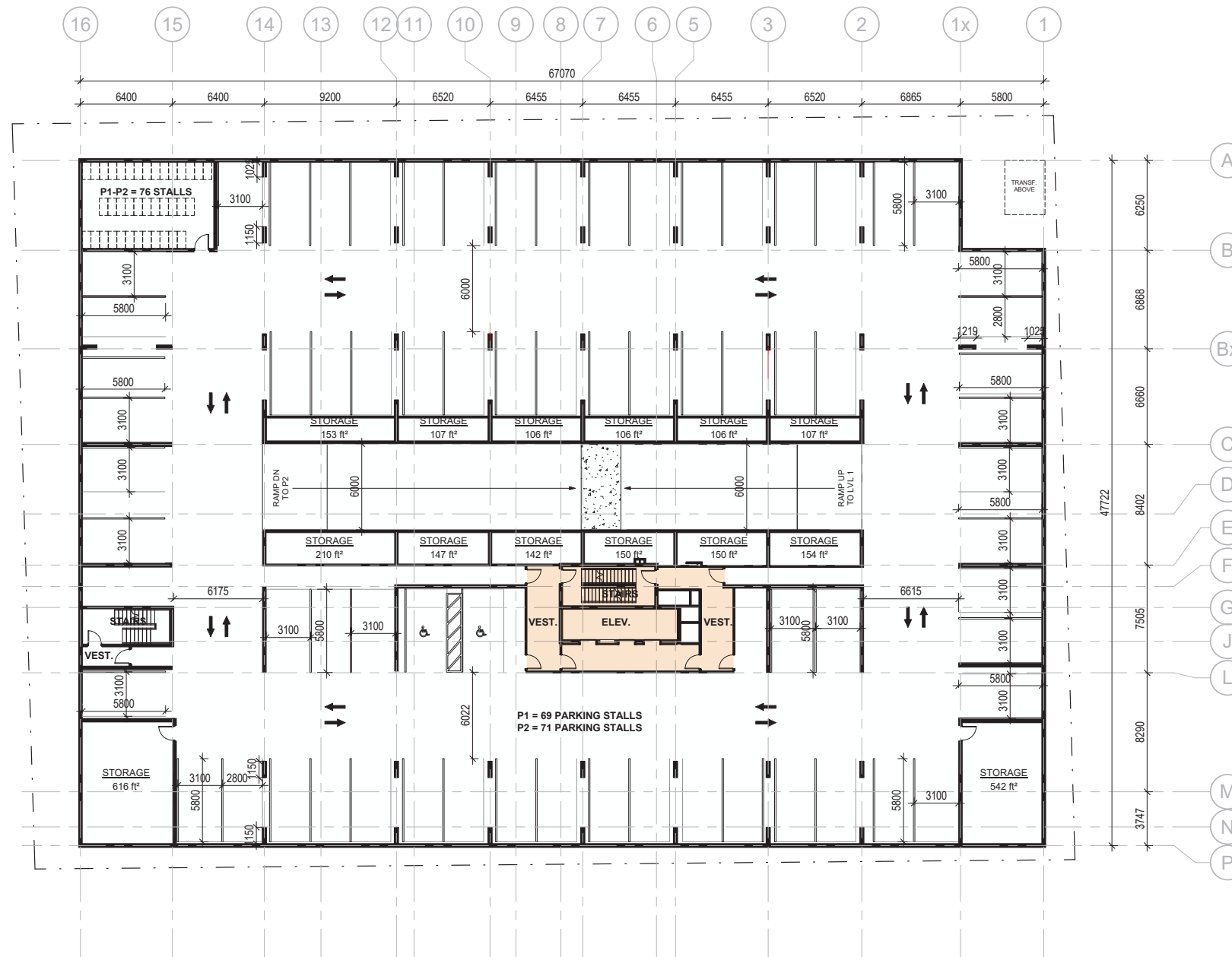
SITE DATA 2481 Barton, Hamilton, ON		
DATA	REQUIRED	PROVIDED
ZONING		ZONING - C4
LOT AREA (m ²)	N/A	3,758 (m ²)
SETBACKS	FRONT YARD (m)	4.5 (m)
	INTERIOR SIDE YARD (m) - W	7.5 (m)
	INTERIOR SIDE YARD (m) - E	7.5 (m)
	REAR YARD (m)	7.5 (m)
BUILDING DATA		
DATA	REQUIRED	PROVIDED
TOTAL DENSITY (# of units)	N/A	207 UNITS STUDIO < 50m ² = 28 (13.5%) 1BD + D > 50m ² = 104 (50.2%) 2 BEDS = 71 (34.3%) 3 BEDS = 4 (1.9%)
BUILDING AREA (m ²)	N/A	13,661 ft ² (1,269 m ²)
GROSS FLOOR AREA (m ²)	N/A	170,042 ft ² (15,797 m ²)
CONSTRUCTION FLOOR AREA (m ²) (including underground)	N/A	239,322 ft ² (22,233 m ²)
NUMBER OF STOREYS	N/A	17 STOREY
BUILDING HEIGHT (m)	11m MIN. 40m MAX.	53 m
COMMERCIAL/RETAIL AREA (m ²)	N/A	COM. A = 2,299 ft ² (214 m ²) COM. B = 2,810 ft ² (261 m ²) TOTAL = 5,109 ft² (475 m²)
AMENITY AREA (m ²)	1,186 m ²	INDOOR 1,360 ft ² (126 m ²) OUTDOOR 9,388 ft ² (872 m ²) BALCONIES 21,916 ft ² (2,036m ²) TOTAL = 26,061 ft² (2,421 m²)
LANDSCAPE AREA (percentage)	N/A	18.4 %
LANDSCAPE AREA (m ²)	N/A	7,433 ft ² (690 m ²)
VEHICLE PARKING DATA		
DATA	REQUIRED	PROVIDED
RESIDENTIAL PARKING Units >50 m ² = 1 / unit MIN. Units <50 m ² = 0.3 / unit MIN.	Units >50 m ² = (179*1.0/ unit) 179 stalls Units <50 m ² = (28*0.3 / unit) 8.4 stalls 179 + 8.4 = 187	Units >50 m ² = (179 x 1.0/ unit) 179 stalls Units <50 m ² = (28 x 0.3 / unit) 9 stalls *(-10% Bicycle Parking) 187 - 18.7 = 168.3 (168) Provided stalls = 170 stalls
BARRIER FREE PARKING (included)	1 + 3% = 6 stalls (MIN.)	6 stalls (included above)
VISITOR PARKING	0.X / units	TBC
COMMERCIAL PARKING	2 Commercial units <450 m ² = 0 stalls	0 stalls
PARKING PROVIDED	177 stalls	UG TOTAL = 140 stalls SURFACE = 30 stalls
TOTAL	159 STALLS*	170 STALLS
BICYCLE PARKING DATA		
DATA	REQUIRED	PROVIDED
SHORT TERM PARKING	10 STALLS	10 STALLS
LONG TERM PARKING	90 STALLS**	102 STALLS

* required vehicular parking with 10% reduction for long term bicycle parking
 ** 90 long term bicycle stalls required for 10% reduction in vehicular parking



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1 LEVELS P1-P2 FLOOR PLAN
1 : 200

Source: SRM Architects (Dec 14, 2022)

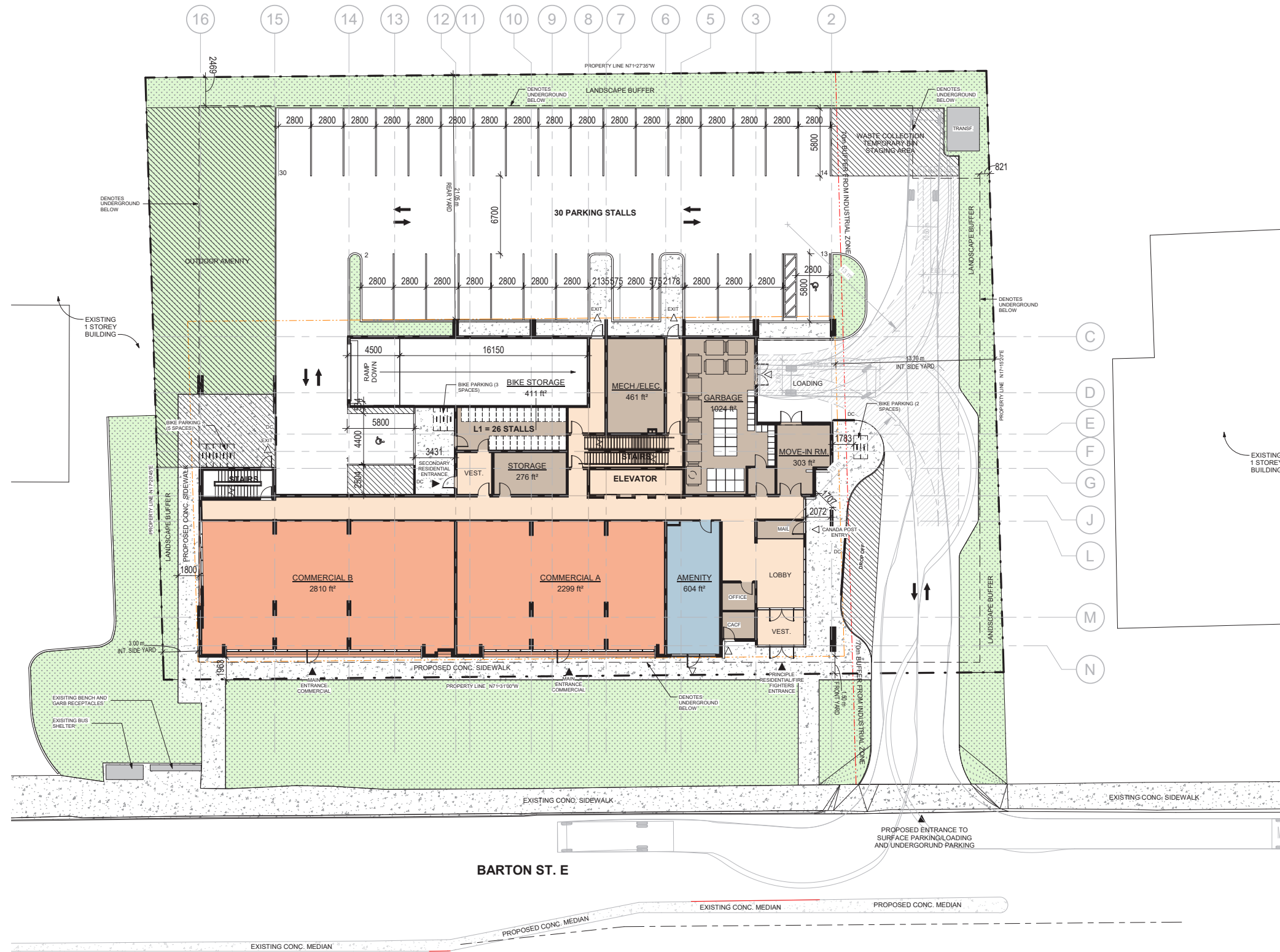
Floor Plans - Levels P1 & P2

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Source: SRM Architects (Dec 14, 2022)

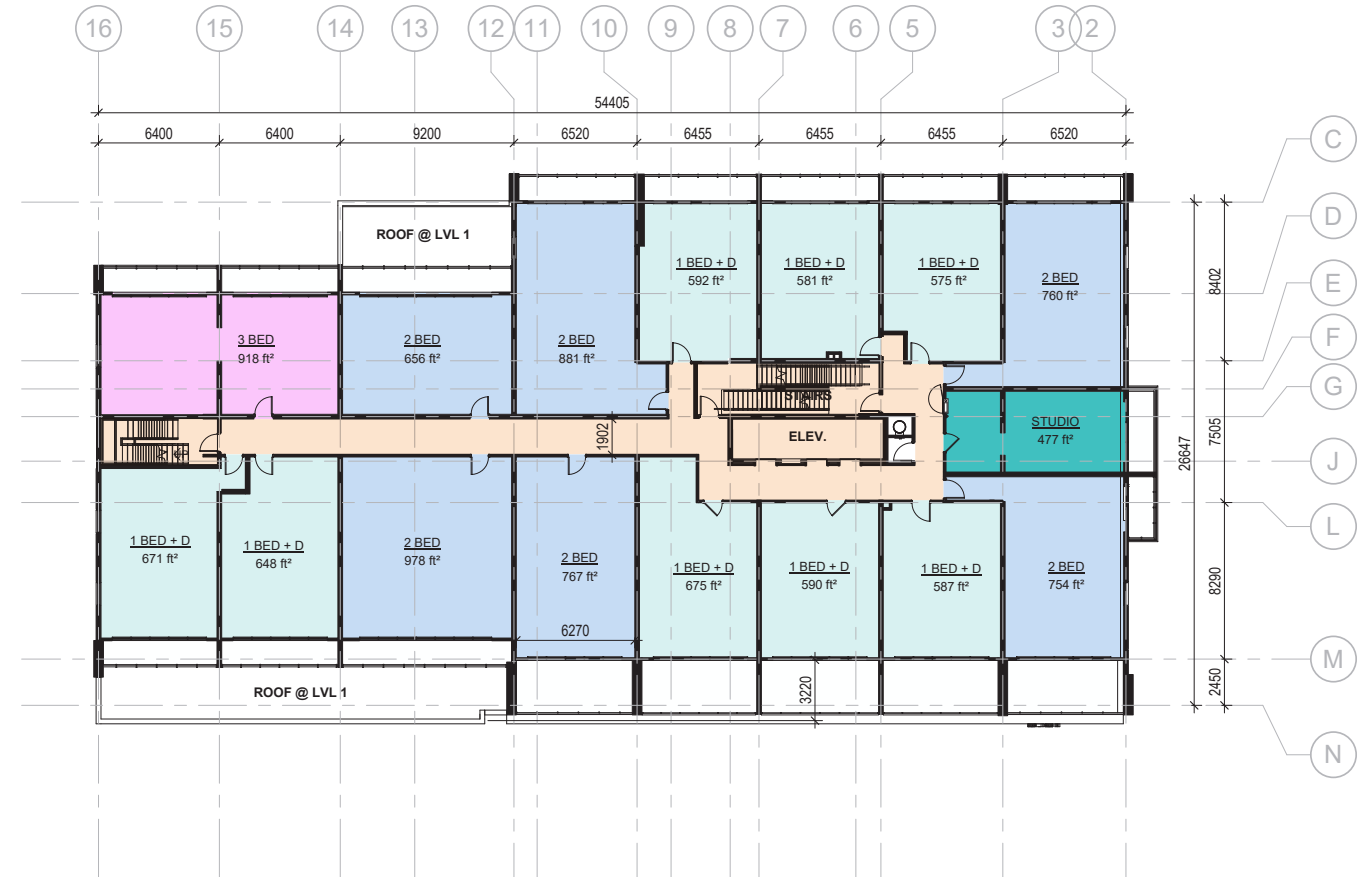
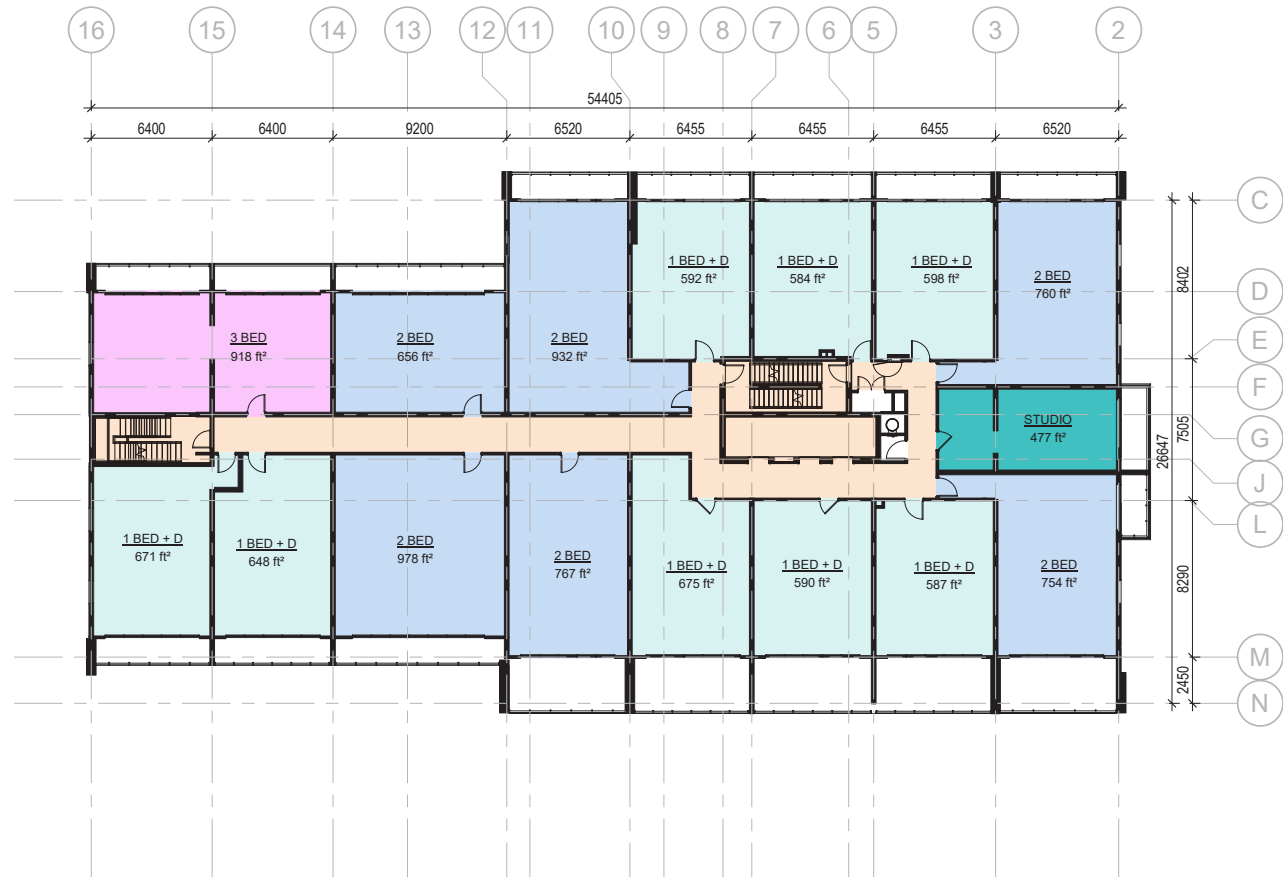
Floor Plans - Level 1

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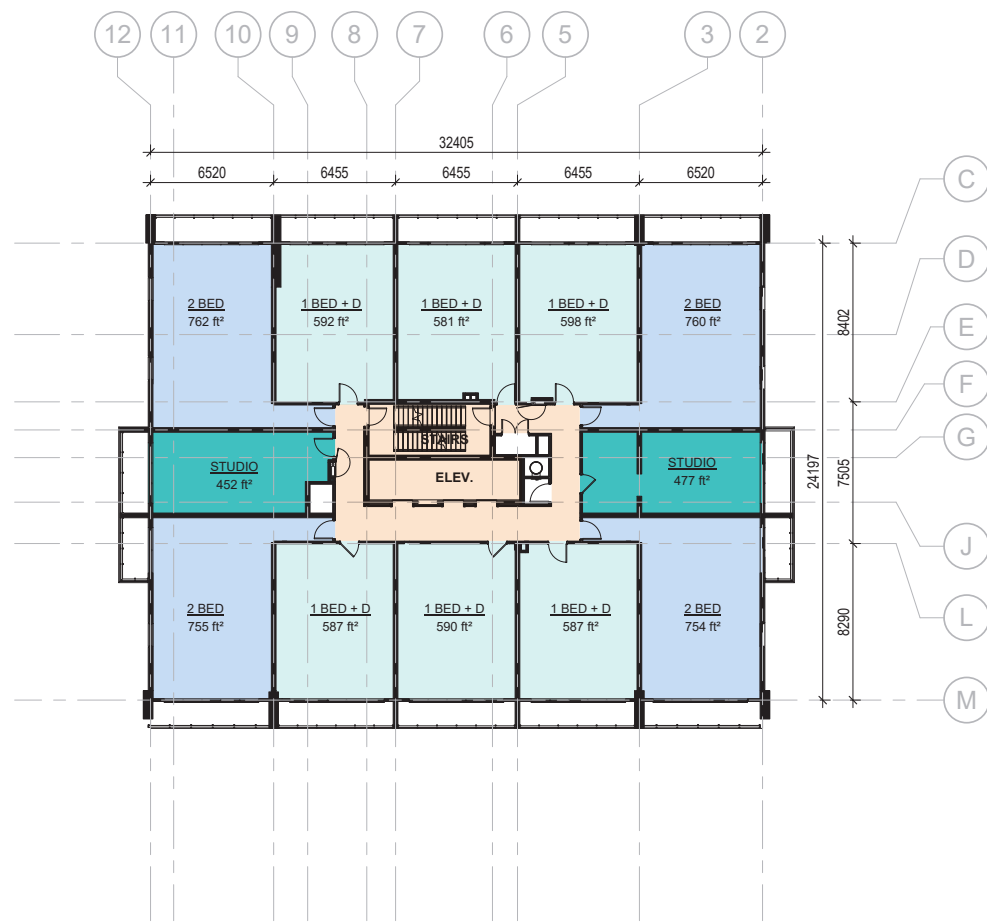
Floor Plans - Levels 2-5

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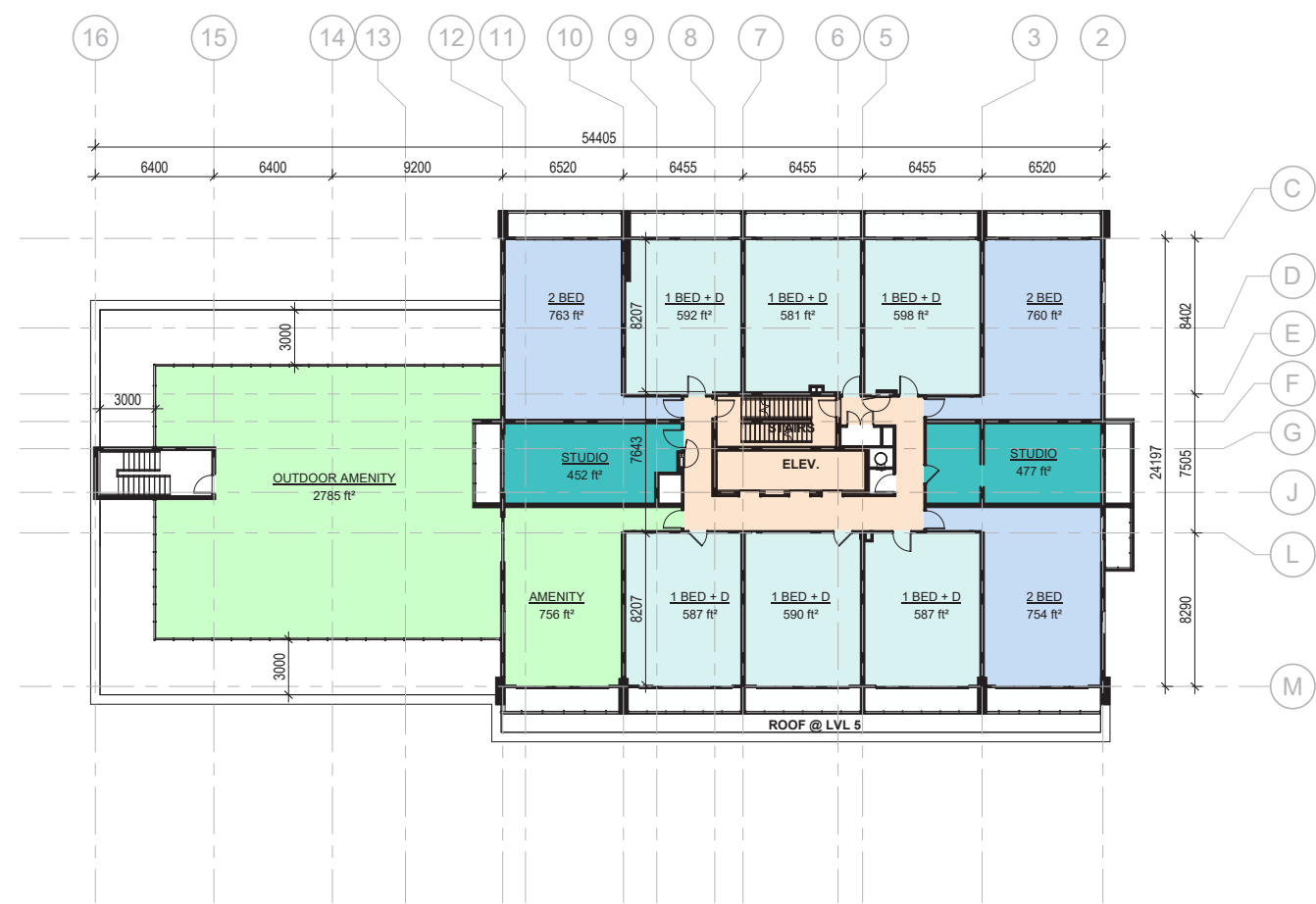
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2 LEVEL 7-17 FLOOR PLAN
1:200



1 LEVEL 6 FLOOR PLAN
1:200

Source: SRM Architects (Dec 14, 2022)

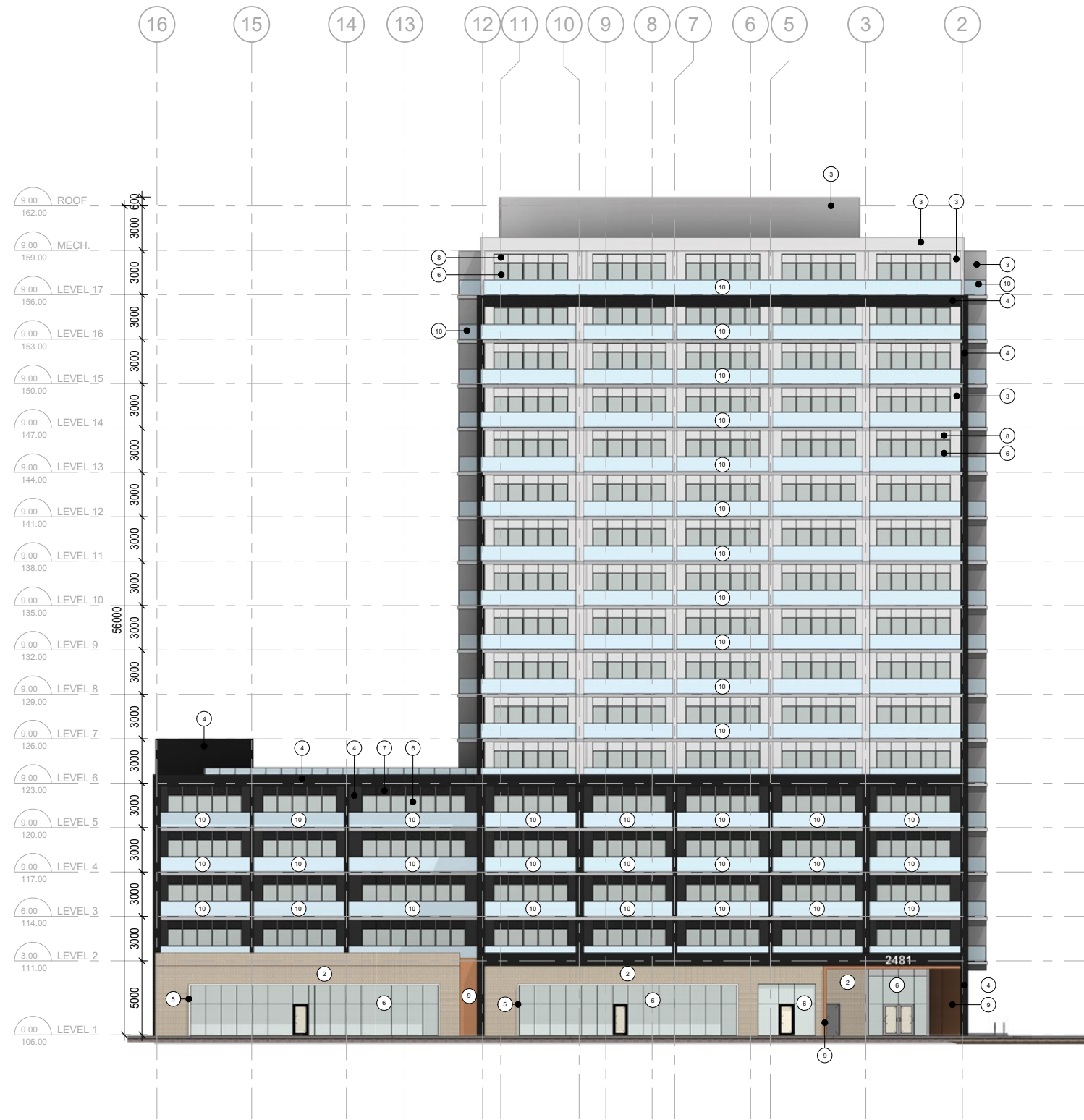
Floor Plans - Levels 6-17

2481 Barton Street East, Hamilton

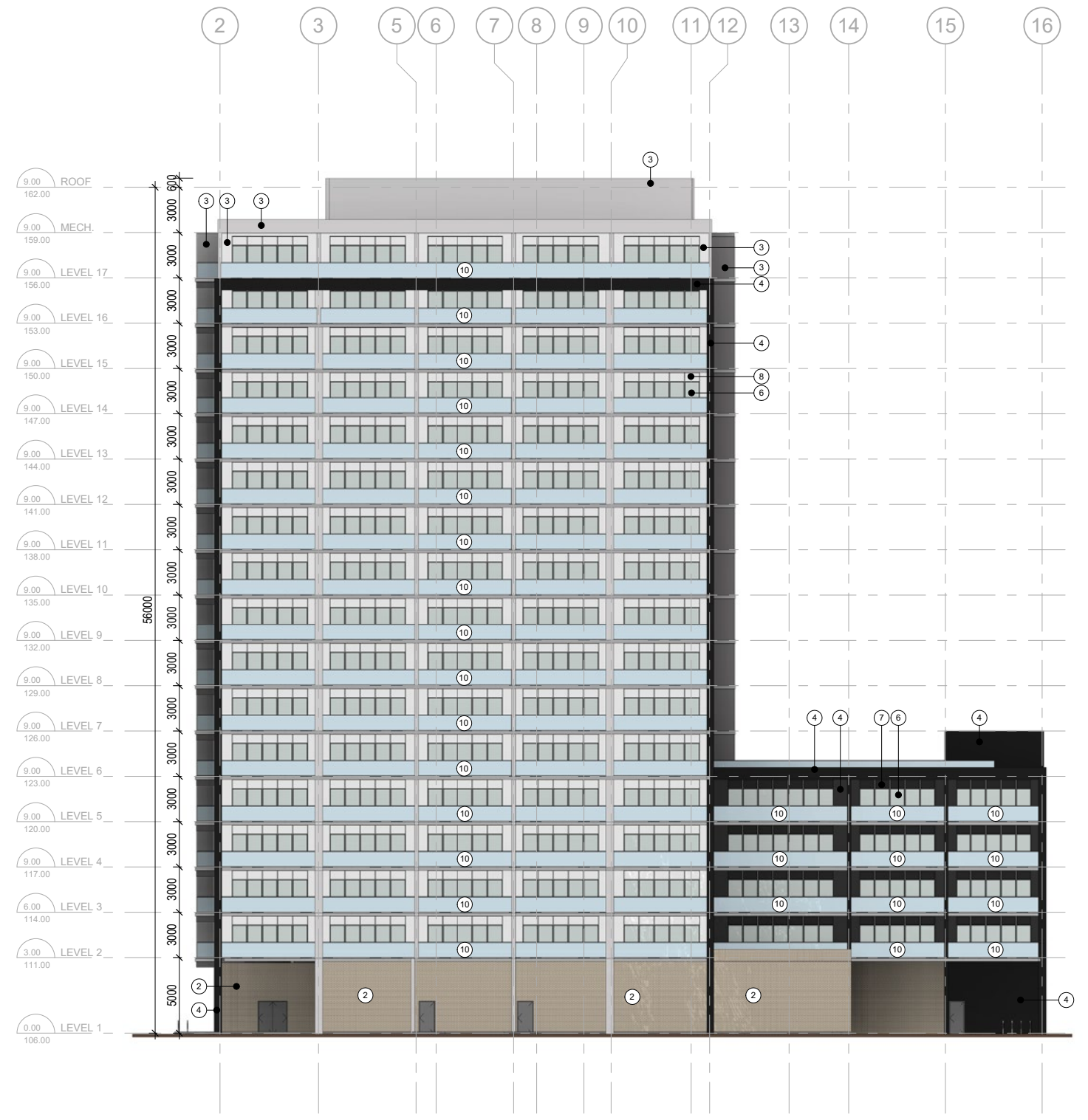
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2 ELEVATION - SOUTH
1:200

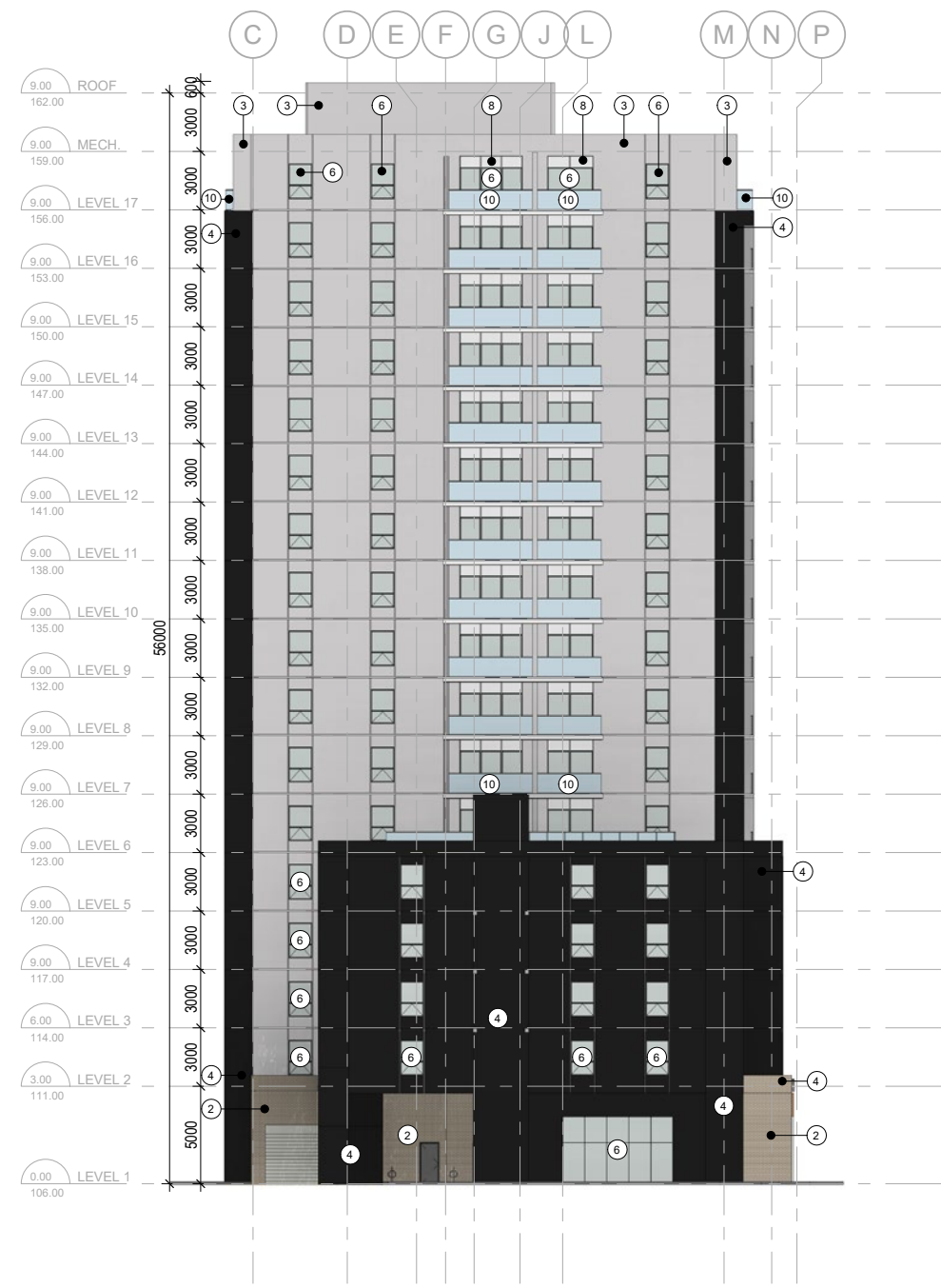


1 ELEVATION - NORTH
1:200

Source: SRM Architects (December 14, 2022)



2 03 A3 ELEVATION - WEST
1:200



1 03 A3 ELEVATION - EAST
1:200

Source: SRM Architects (December 14, 2022)

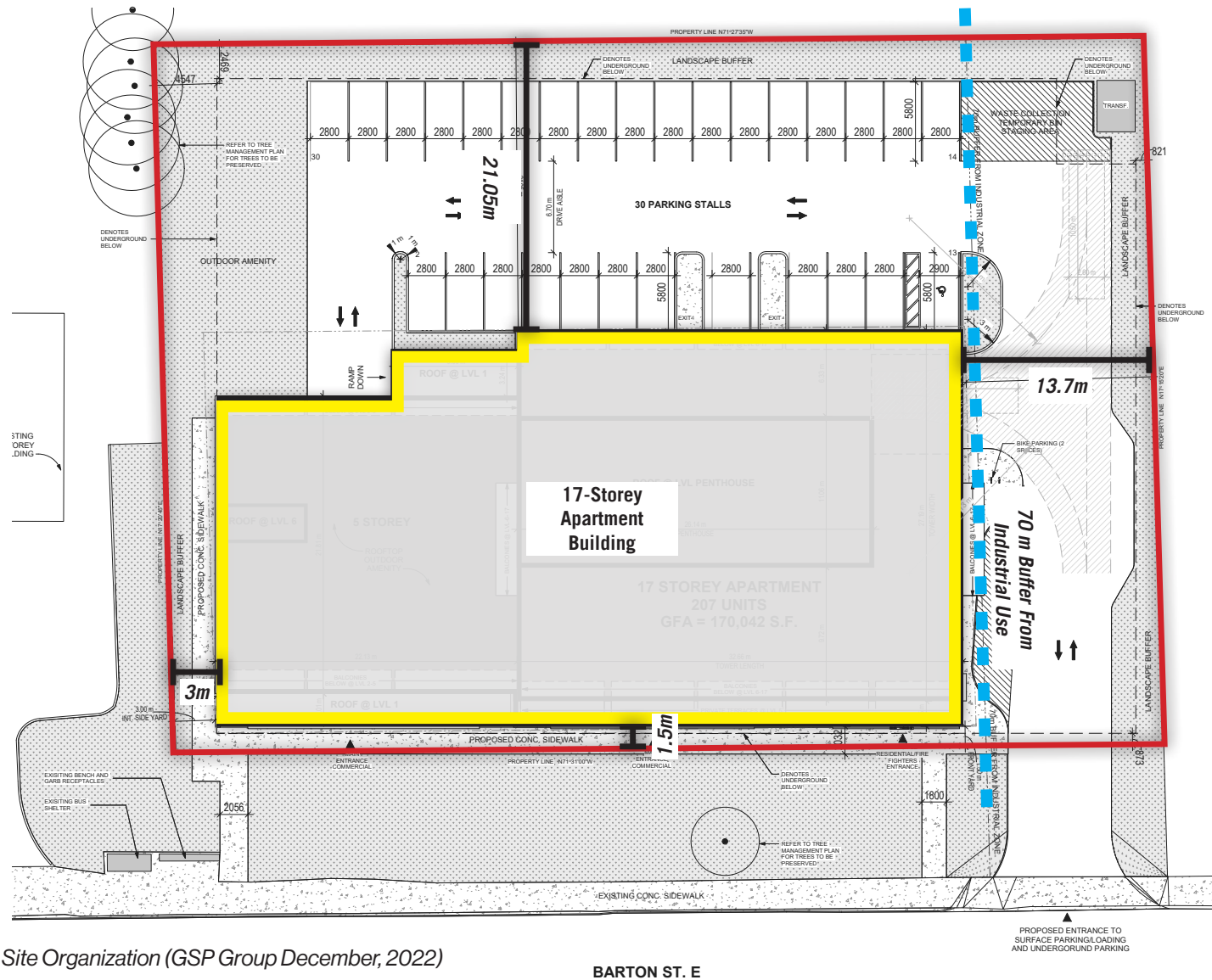
Site Organization & Circulation

The proposed building is placed along Barton Street East with a minimal 1.5m front yard setback. The podium extends for the majority of the street frontage, with a 3m western side yard setback and 13.7m eastern side yard setback. The eastern side yard setback provides vehicle access to the Site and ensures a 70m buffer from the adjacent industrial uses.

Vehicle parking is located to the rear of the Site, with access to the underground garage at the podium western end. Pedestrian access to the residential lobby and commercial units is provided directly from Barton Street East, with

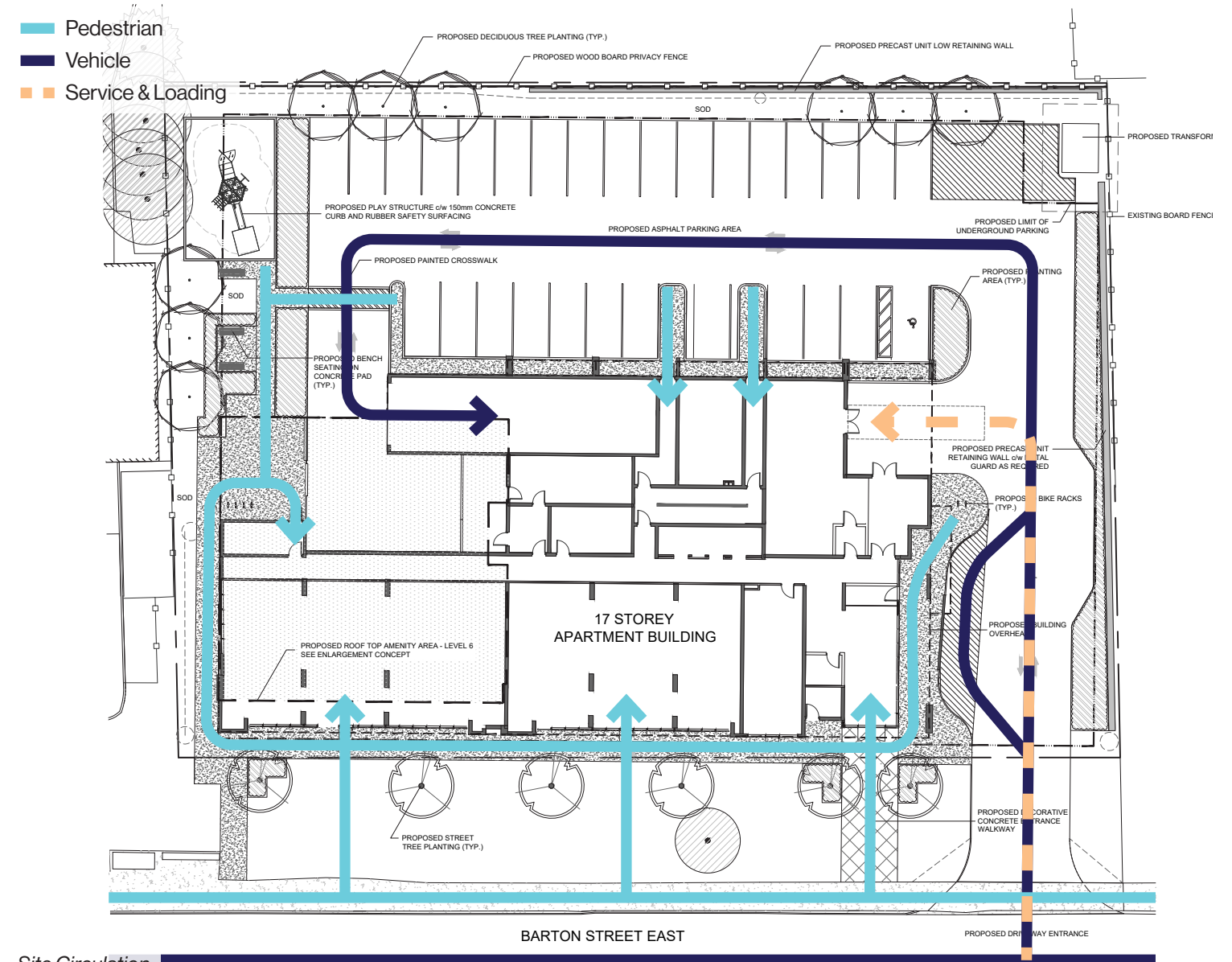
secondary residential entrances to the rear. Short-term bicycle parking is provided near the residential entrances with long-term parking located within the building envelope. Access for loading and servicing is located at the podium's eastern edge, with waste storage located inside the building.

An outdoor amenity area is provided at the northwest corner of the Site, with pedestrian access from the rear secondary entrances. The rear and side yards also include landscape buffers to provide appropriate screening from adjacent land uses.



Site Organization (GSP Group December, 2022)

BARTON ST. E



Site Circulation

Proposed Development
2481 Barton Street East, Hamilton

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Built Form & Massing

A podium and point tower form is utilized to create a massing that fits within the Site as well as the existing and proposed context.

The Site's size meets the minimum recommended site dimensions for a point tower, as prescribed in the Tall Building Guidelines. The tower footprint of 783 square meters slightly exceeds the Guidelines' maximum of 750 square meters, however the accompanying shadow and wind studies demonstrate a minimal impact on the surrounding properties.

The proposed height of 17 storeys conforms with both the Centennial Neighbourhood Secondary Plan and the Tall Building Guidelines. The tower height also matches with the existing and proposed high-rise residential in the surrounding community.



Site Area

Guideline Min.
Proposed

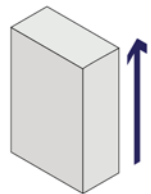
35m x 45m
72.5m x 51.9m



Tower Footprint

Guideline Max.
Proposed

750sqm
783 sqm



Tower Height

Guideline Min.
Secondary Plan Max.
Proposed

13 storeys & 50m
17 storeys
17 storeys & 53m



Proposed Development and surrounding massing context facing north west



Proposed Development and surrounding massing context facing south east

Proposed Development

2481 Barton Street East, Hamilton

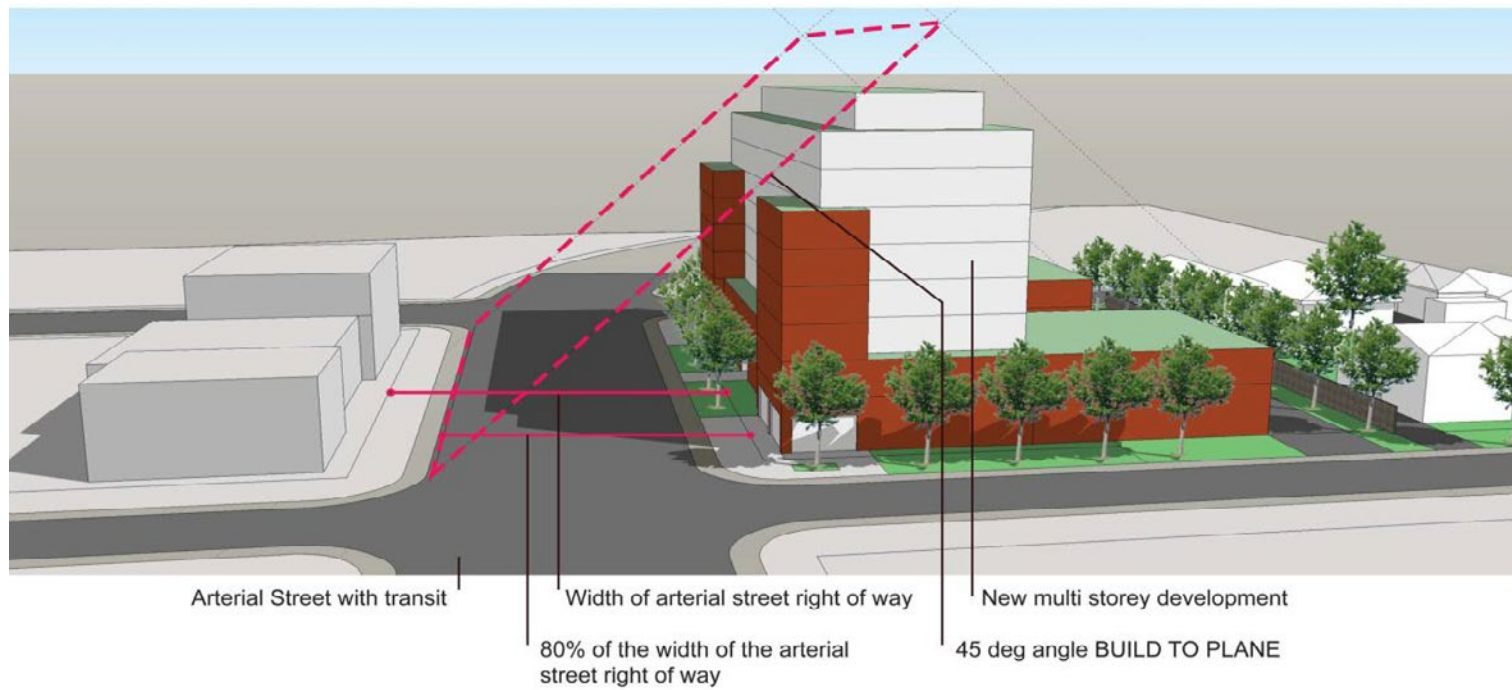
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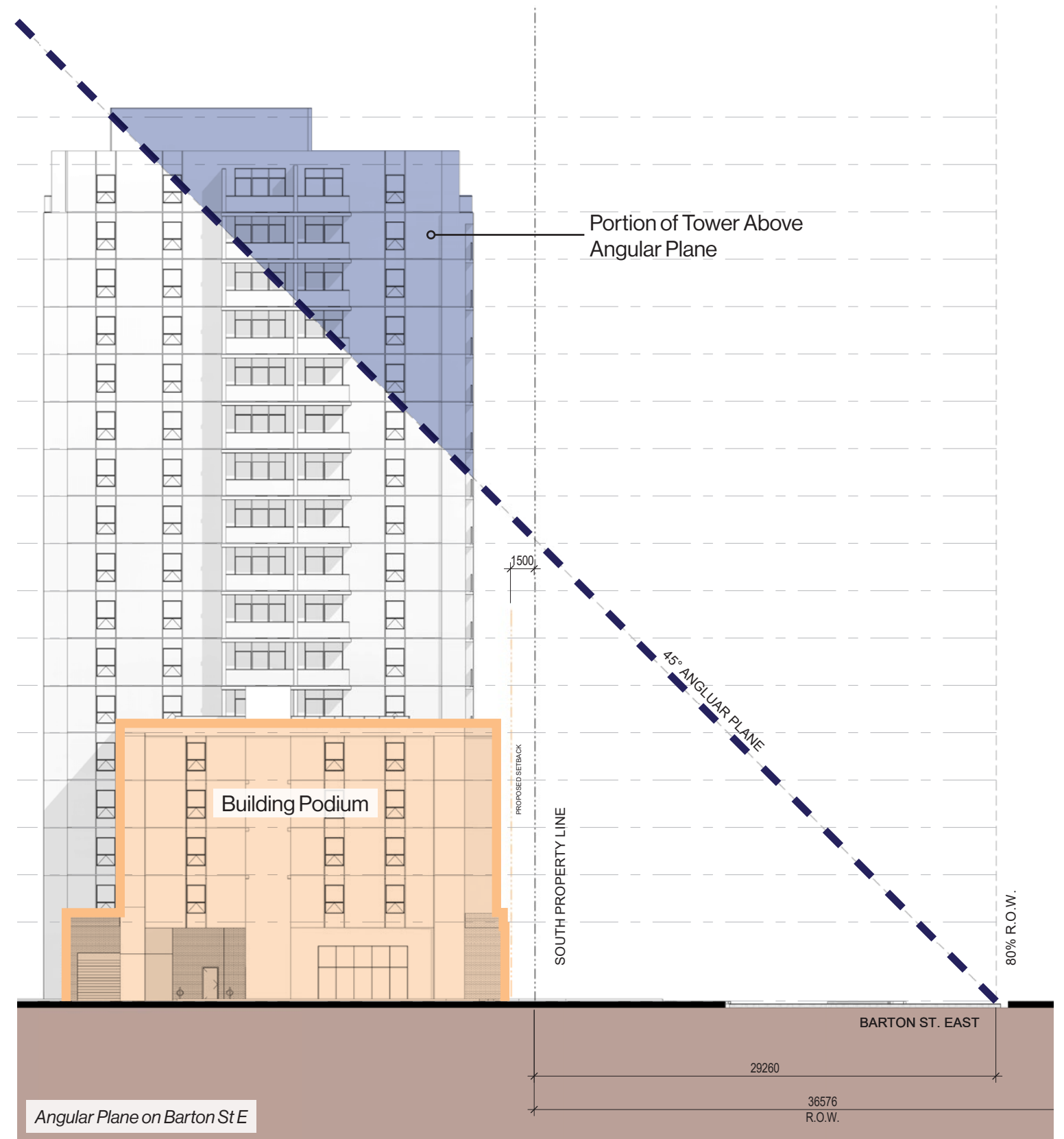
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Built Form & Massing - Angular Plane

The proposed 5-storey podium defines the building's base, creating a pedestrian-scaled street wall that defines a new urban character along Barton Street East. The podium's height fits within the required 45 degree angular plane, as established by the Corridor Planning Principles and Design Guidelines. The upper 6 storeys of the proposed tower cross through the angular plane, however the impact to the surrounding public realm is minimized due to the point tower form and stepback from the podium facade. As the tower is located on the north side of Barton Street East, the tower will not cast shadows onto the street.



Build to Plane from City of Hamilton Corridor Planning Principles and Design Guidelines (April 2012)



Proposed Development

2481 Barton Street East, Hamilton

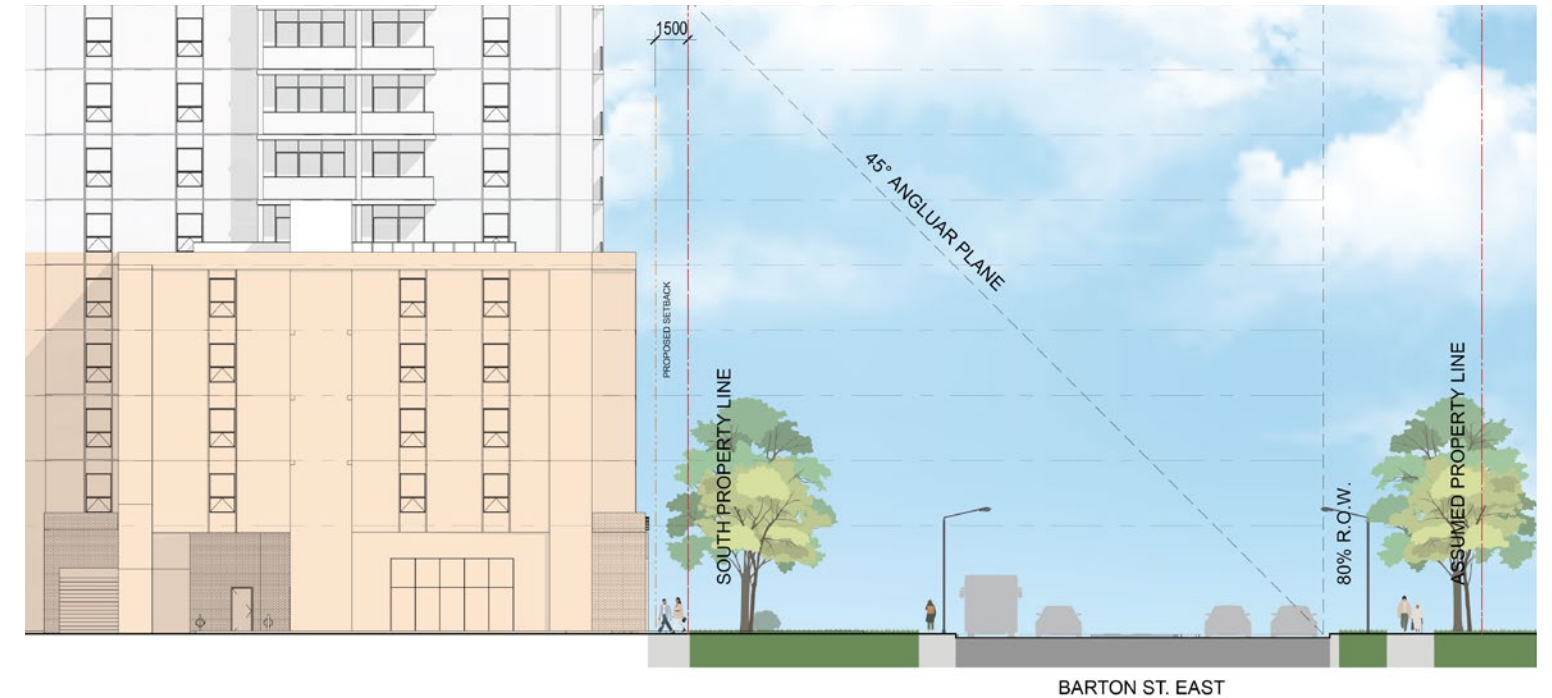
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Building Base Design

The podium is designed to create an active streetscape along Barton Street East. A ground floor height of 4.5m and large windows allow light and views between retail spaces, amenity spaces, and the street. Direct street entrances are provided to commercial and residential areas. The primary residential entrance is recessed to provide legibility and weather protection.

The ground floor is distinguished from the remainder of the podium and tower through a unique material palette and fenestration pattern. A brick facade with wood detailing references the surrounding residential community and creates an anchored building base. The facade is divided into three wide bays, denoting the commercial and residential components. The upper podium, above the ground floor, is stepped back to create a distinct form. The material palette is unified with the tower above, using grey pre-cast panels with white detailing. The regular rhythm of recessed balconies, together with the recessed facade of the west podium, serves to break up the massing and contributes to a human-scaled character along Barton Street East.



Podium scale in relation to Barton St E

Proposed Development

2481 Barton Street East, Hamilton

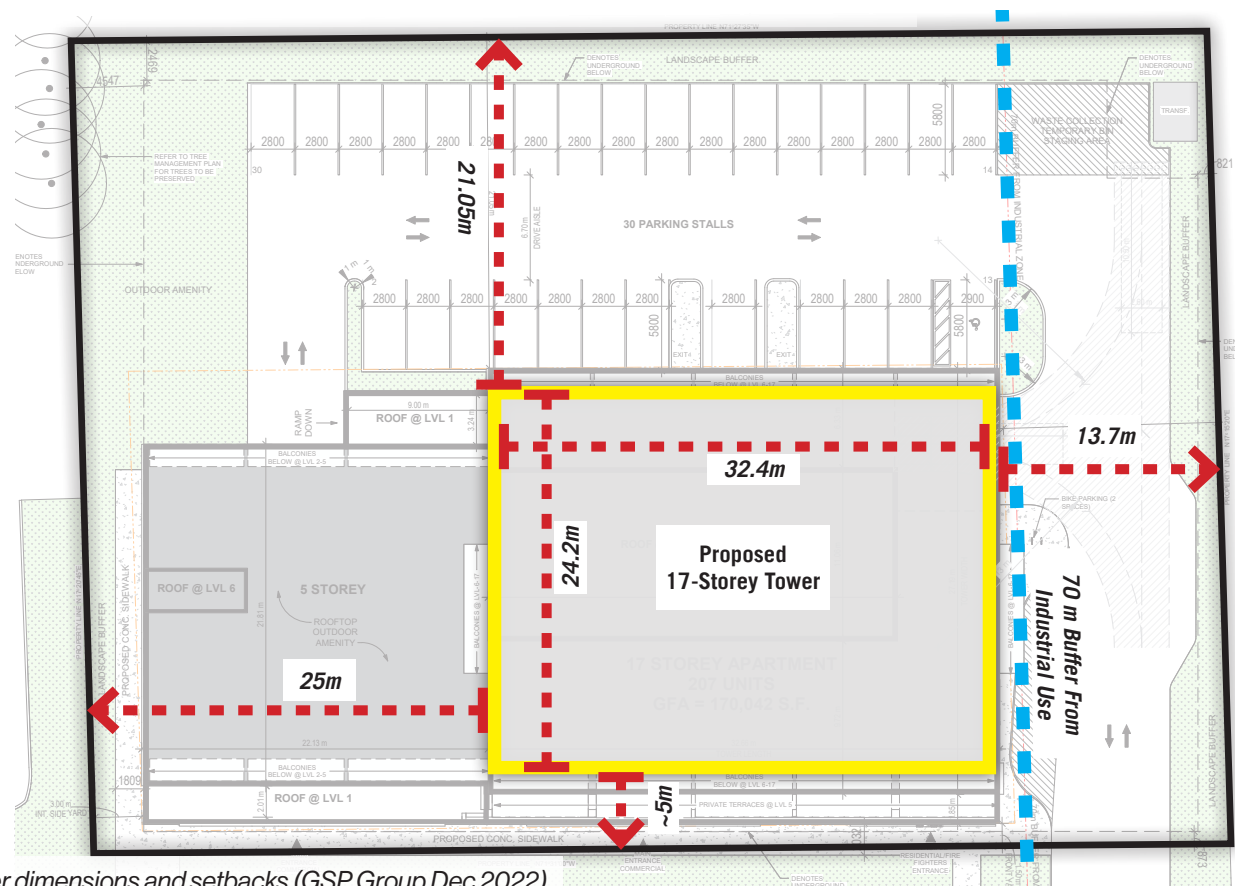
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Tower Design

The proposed tower is placed along the Barton Street East frontage, ensuring a 70m separation distance from the adjacent industrial uses and maximizing the setbacks from the north and rear property lines. The tower is stepped back from the podium edge on the south and west sides. The placement creates an urban character along Barton Street East and allows sufficient setbacks for the future development of adjacent parcels. A point tower form is utilized, with a 783 square meter floor plate.

The proposed materials match the upper podium design with a reversed palette. The white pre-cast panels with black accents create a lighter design to reduce the perceived size. The regular pattern of windows and balconies is consistent with the podium and creates a uniform rhythm across the facade. The rooftop mechanical penthouse is setback from the roof edge and clad with light materials to diminish views from the street.



Proposed Development

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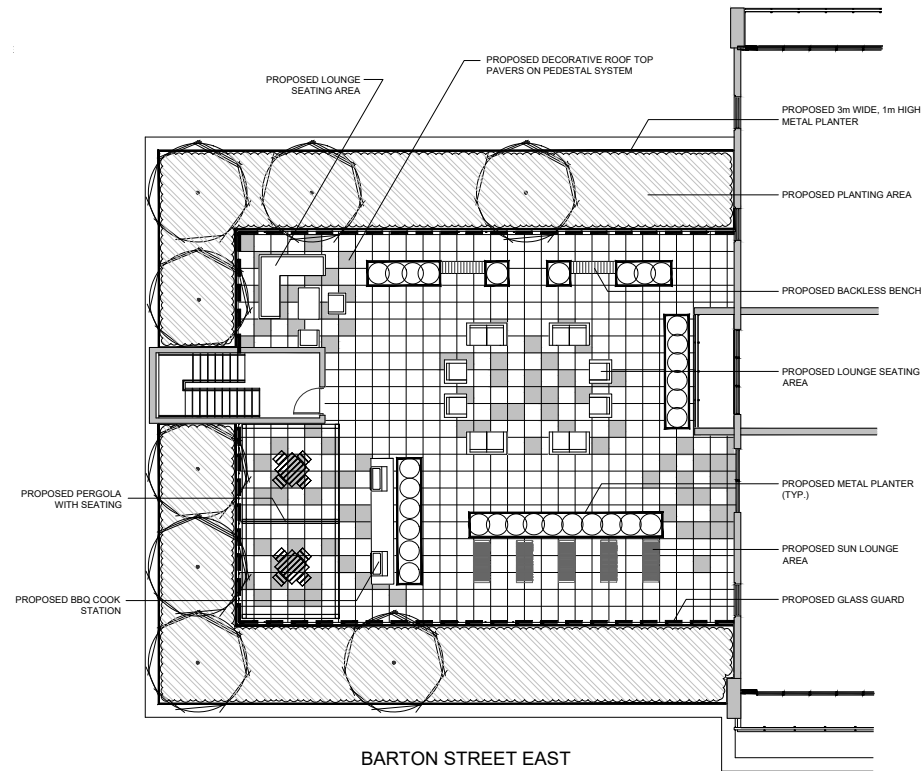
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Landscape Design & Amenity Areas

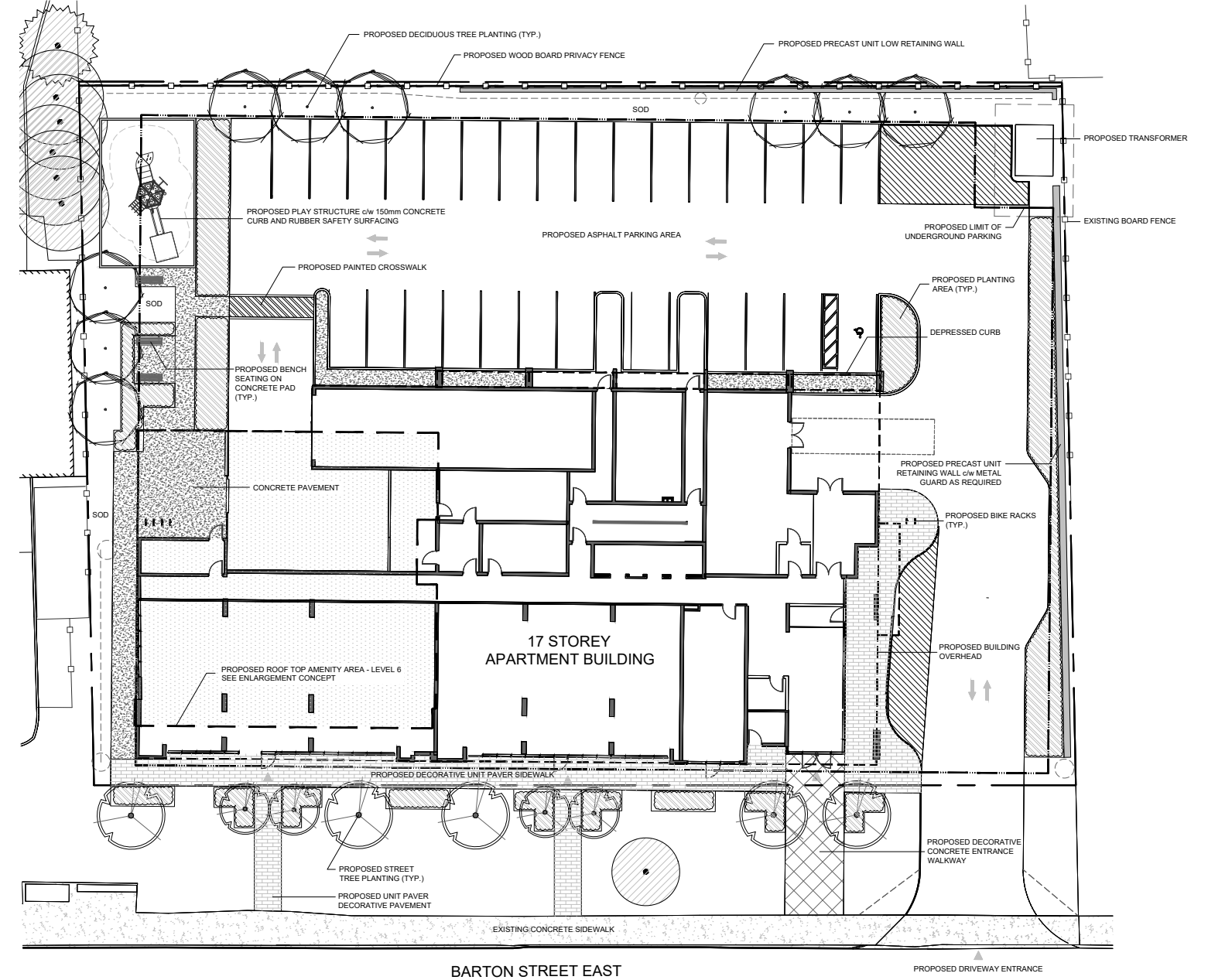
The proposed Conceptual Landscape Plan provides direct sidewalk access for the residential lobby and ground floor retail units, with decorative concrete and unit pavers highlighting the pedestrian circulation areas along the frontage and drop-off area. Buffer plantings are provided along the property lines to create a sense of enclosure and screen from surrounding uses.

Approximately 278 sqm of at-grade outdoor landscaped amenity area is proposed at the rear of the building and can be easily accessed by the residents. These areas include seating, a play structure, and generous planting beds.. Further landscaping details will be discussed in the landscape plan at the Site Plan stage.

On the 6th floor, a large outdoor roof-top amenity area is proposed in conjunction to an indoor amenity area with access to washrooms, common seating and landscaping. Common indoor amenity areas are proposed on the ground floor, which provide easy and barrier free access to the residents and visitors. These areas are proposed to have higher ceiling height and large windows allowing natural light penetration and enhancing human comfort. Private balcony is proposed for each unit and they are large enough to be a usable space and accommodate furniture. The proposal meets the required amenity space requirement as per the zoning bylaw.



2 ROOF TOP AMENITY AREA - LEVEL 6 ENLARGEMENT
1:125



2 GROUND LEVEL LANDSCAPE CONCEPT
1:200

Source: Hill Design (April 13, 2023)

Proposed Development

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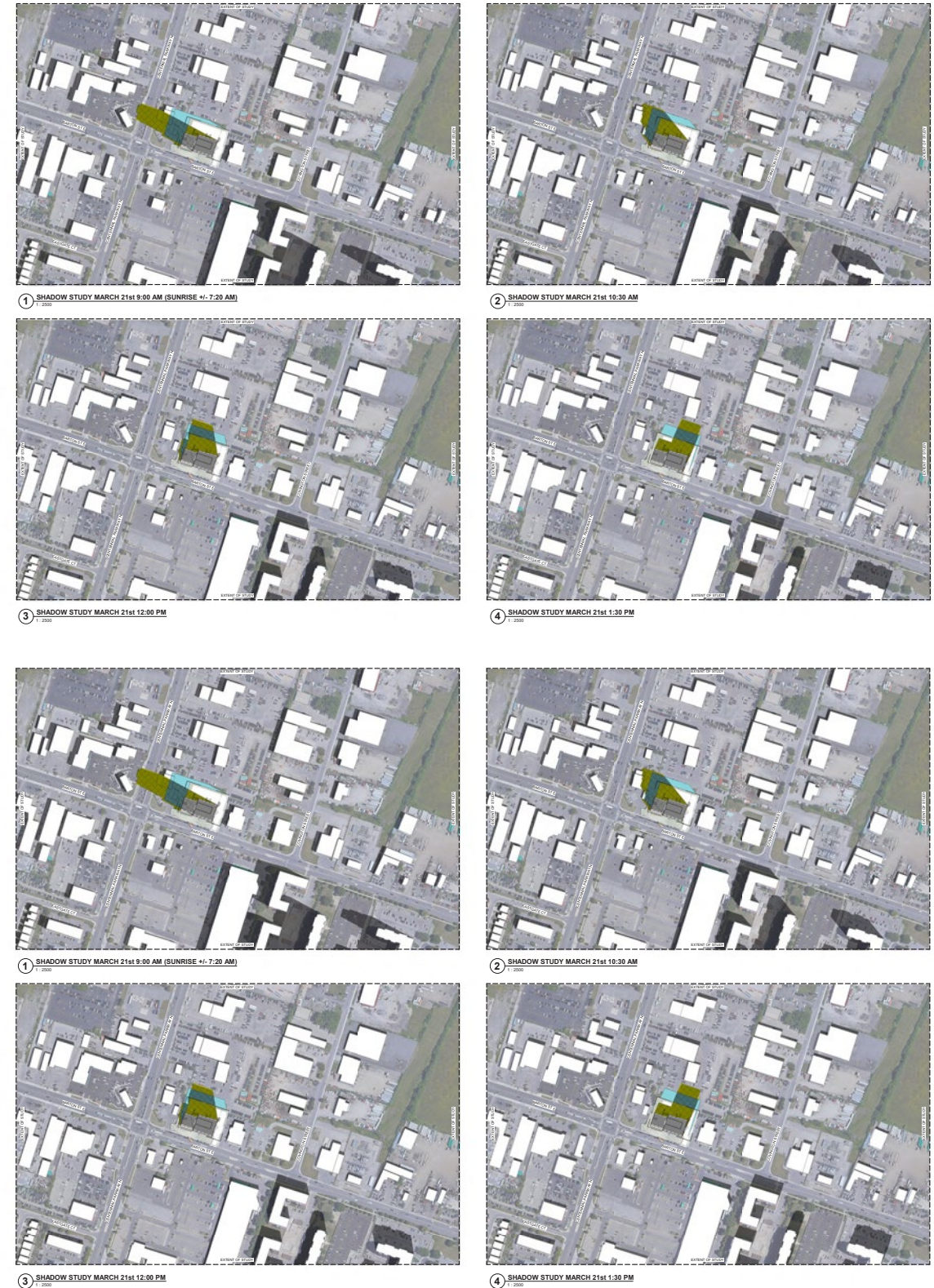
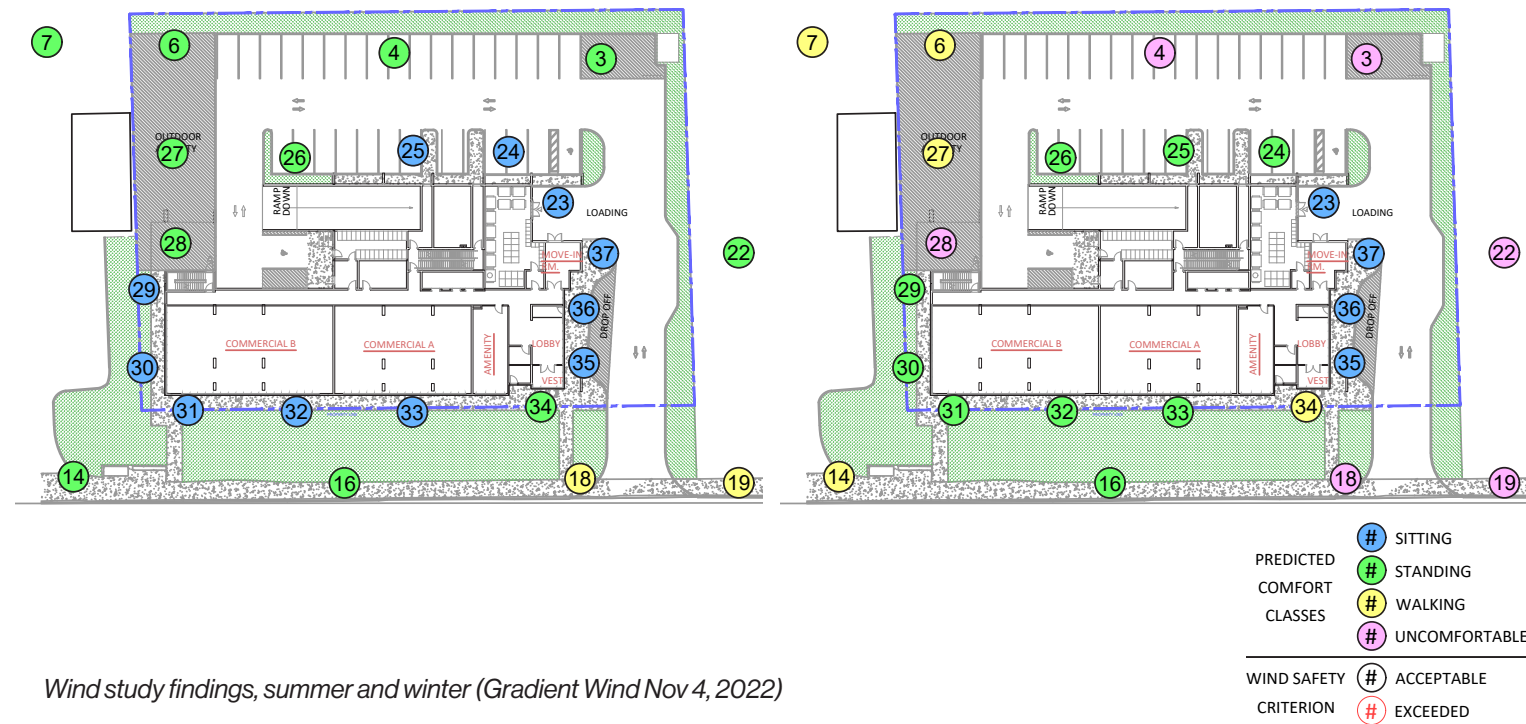
Potential Impacts & Mitigation

The Noise Impact Study prepared by dBA Services Inc. concludes that road noise can be adequately controlled through upgraded wall and window glazing design. Noise screening to outdoor amenity areas is not required.

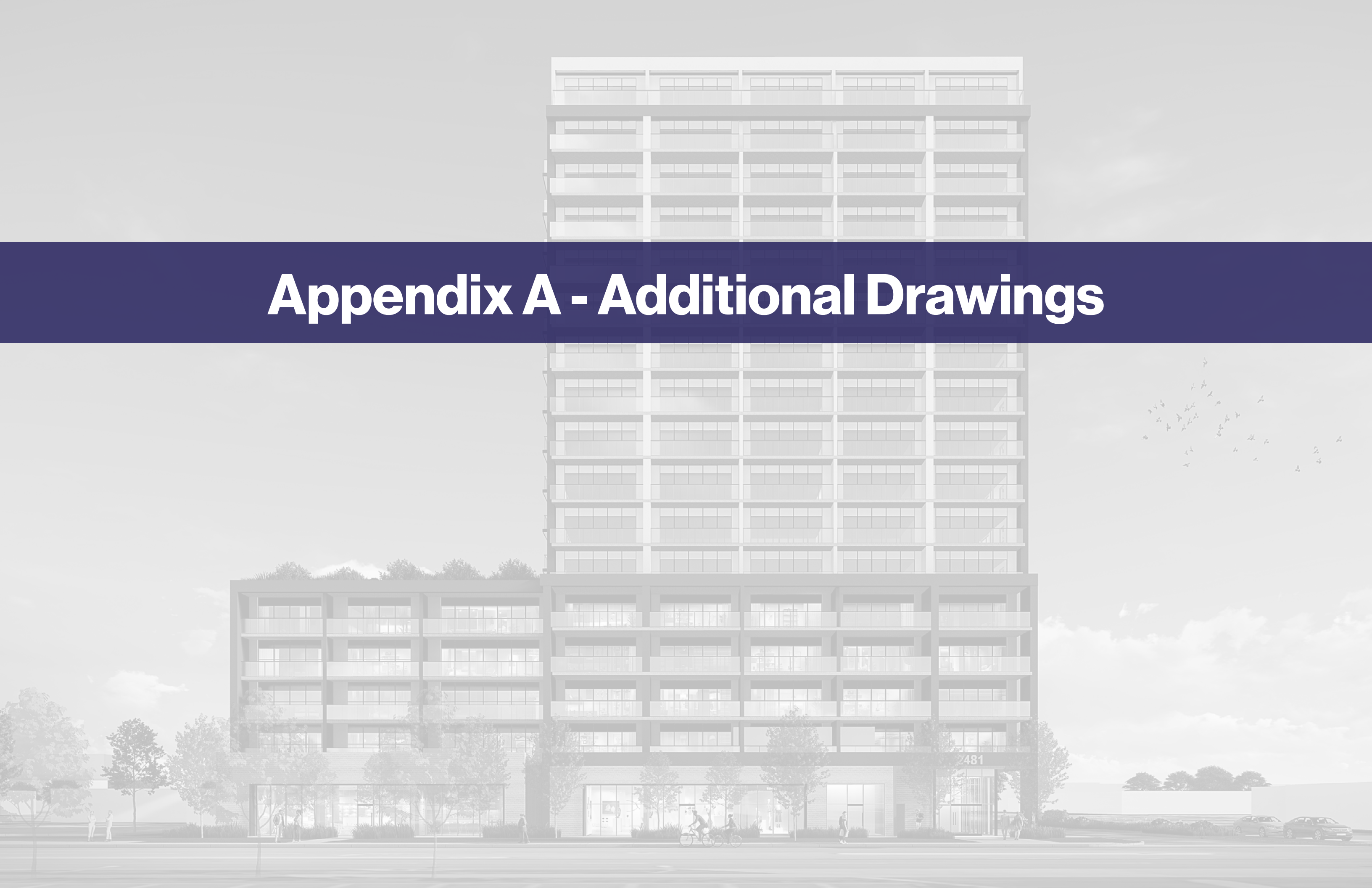
The Pedestrian Wind Assessment prepared by Gradient Wind Engineers and Scientists concludes the proposed building form and massing satisfies all wind safety criteria and wind conditions for intended usage on most of the surrounding public sidewalks, surface parking, landscaped areas and building entrances. Mitigation through addition of 2m vertical wind barriers or landscape barriers are proposed to the design. No areas over the study site were found to experience wind conditions that are considered unsafe.

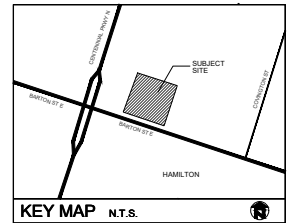
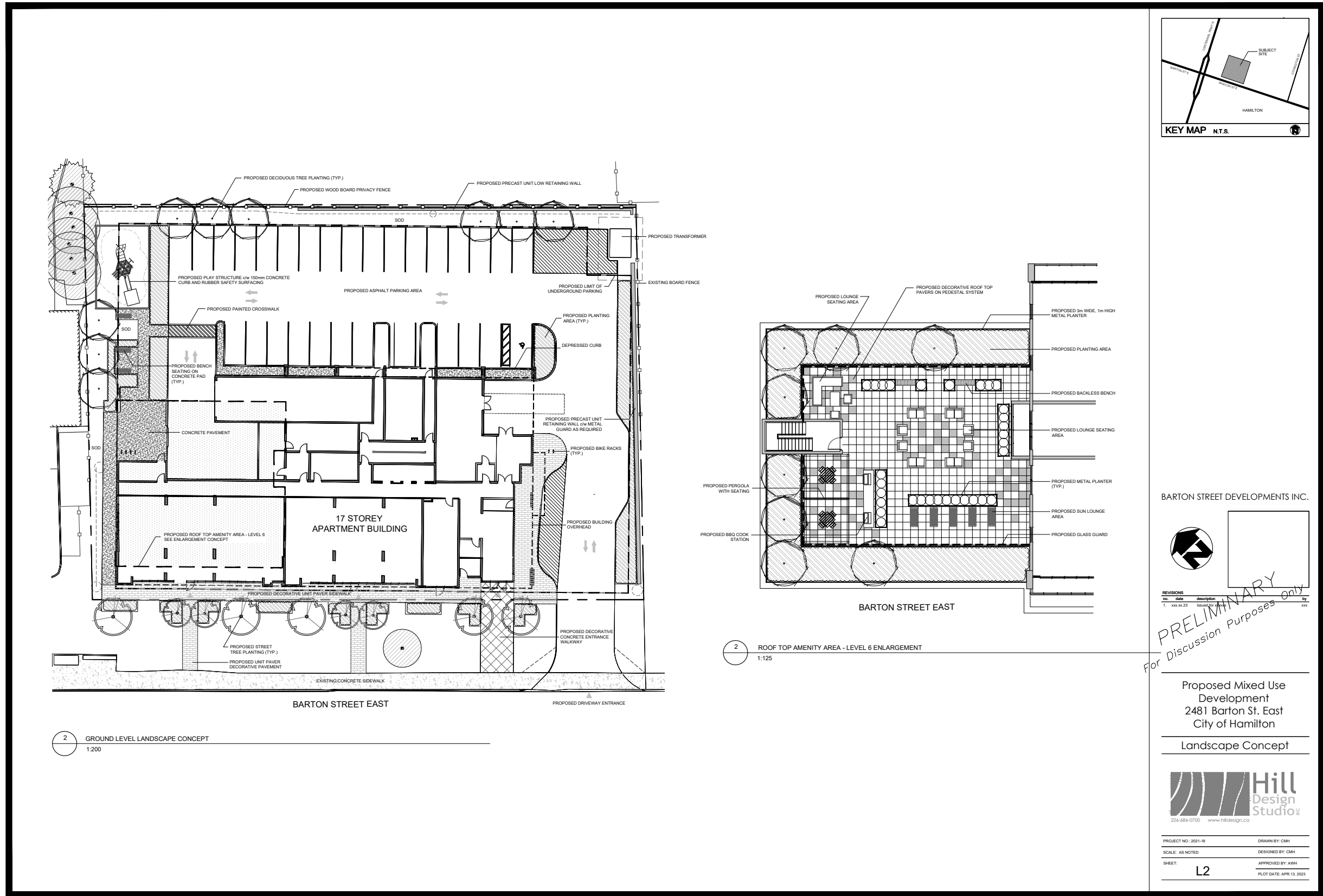
The Shadow Impact Study prepared by SRM Architects Inc. concludes that the proposed development will have minimal shadow impact as per the guidelines referenced in the City of Hamilton's Development Application Guidelines: Sun Shadow Study.

The Shadow Impact Study and Pedestrian Wind Assessment are included in Appendix B and C.



Appendix A - Additional Drawings





BARTON STREET DEVELOPMENTS INC.



REV.	DATE	DESCRIPTION	BY
1.	xxx.xx.23	Issued for review	xxx

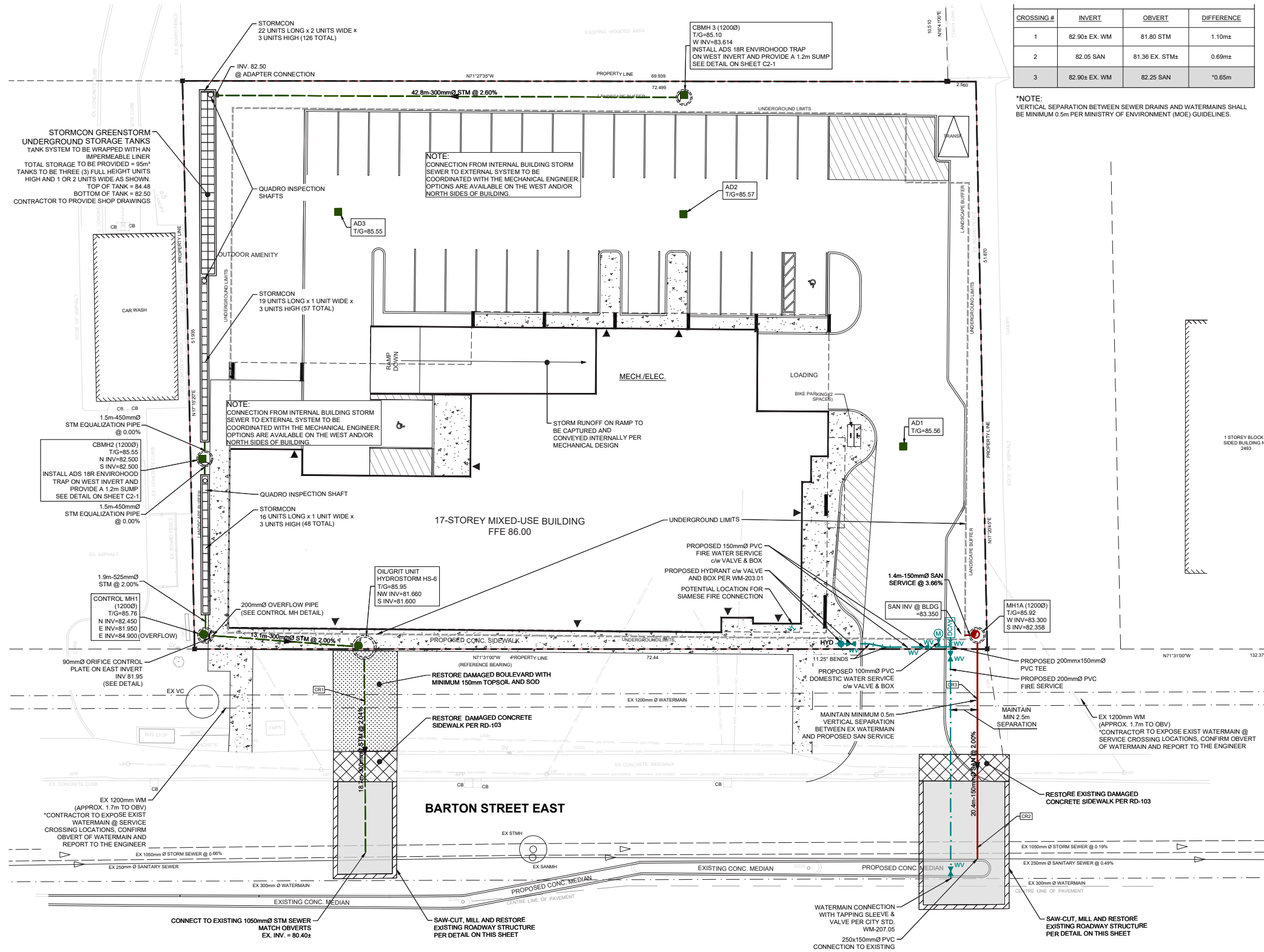
PRELIMINARY
For Discussion Purposes only

Proposed Mixed Use Development
2481 Barton St. East
City of Hamilton
Landscape Concept



PROJECT NO: 2021-18	DRAWN BY: CMH
SCALE: AS NOTED	DESIGNED BY: CMH
SHEET: L2	APPROVED BY: AMH
	PLOT DATE: APR 13, 2023

Source: Hill Design (April 13, 2023)

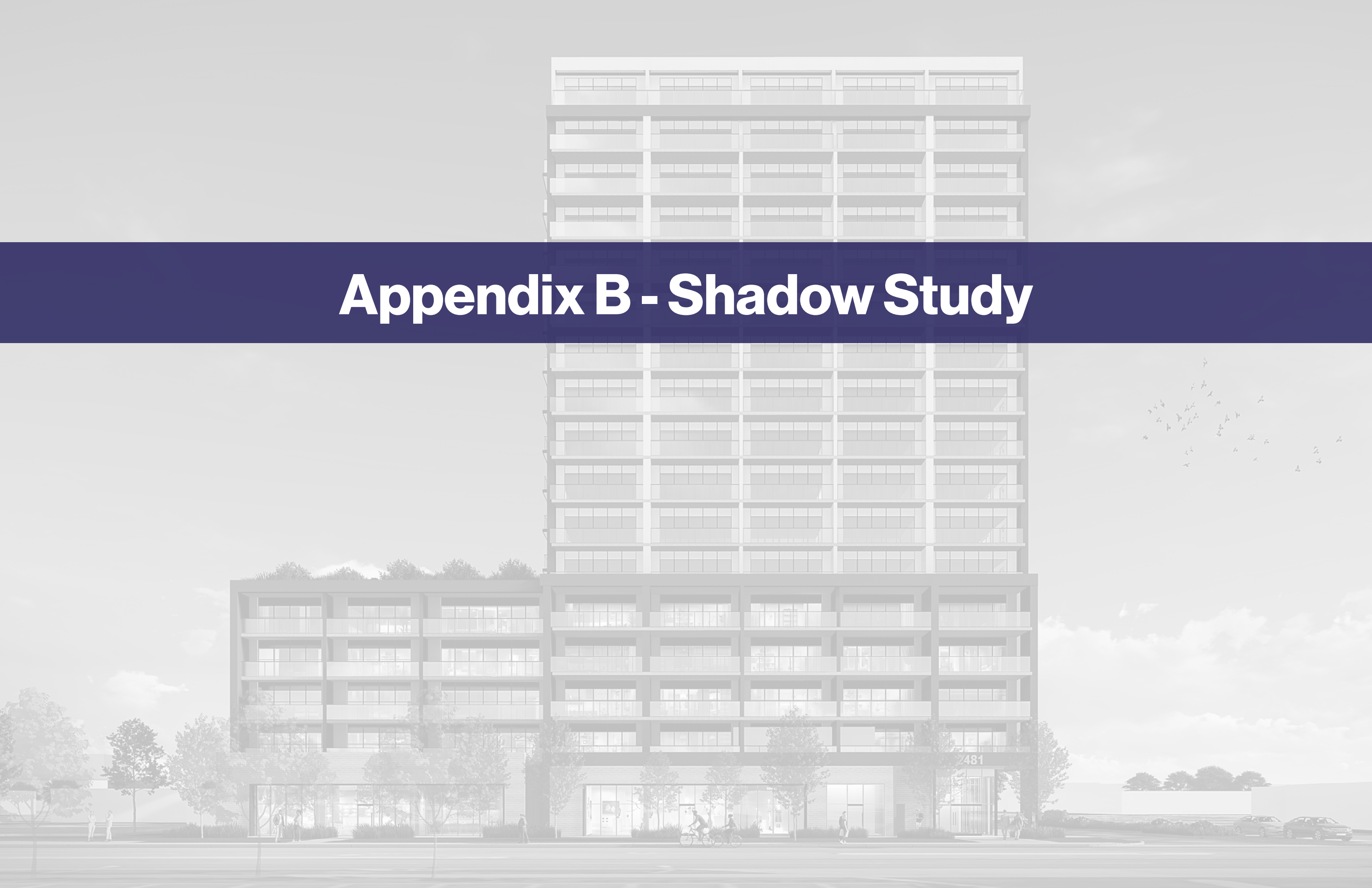


CROSSING #	INVERT	OVERT	DIFFERENCE
1	82.90± EX. WM	81.80 STM	1.10m±
2	82.05 SAN	81.36 EX. STM±	0.69m±
3	82.90± EX. WM	82.25 SAN	0.65m

*NOTE:
VERTICAL SEPARATION BETWEEN SEWER DRAINS AND WATERMAINS SHALL BE MINIMUM 0.5m PER MINISTRY OF ENVIRONMENT (MOE) GUIDELINES.

Source: WalterFedy (Sept 8, 2022)

Appendix B - Shadow Study





1 SHADOW STUDY MARCH 21st 9:00 AM (SUNRISE +/- 7:20 AM)
1:2500



2 SHADOW STUDY MARCH 21st 10:30 AM
1:2500









3 SHADOW STUDY MARCH 21st 12:00 PM
1:2500



4 SHADOW STUDY MARCH 21st 1:30 PM
1:2500

SHADOW STUDY LEGEND

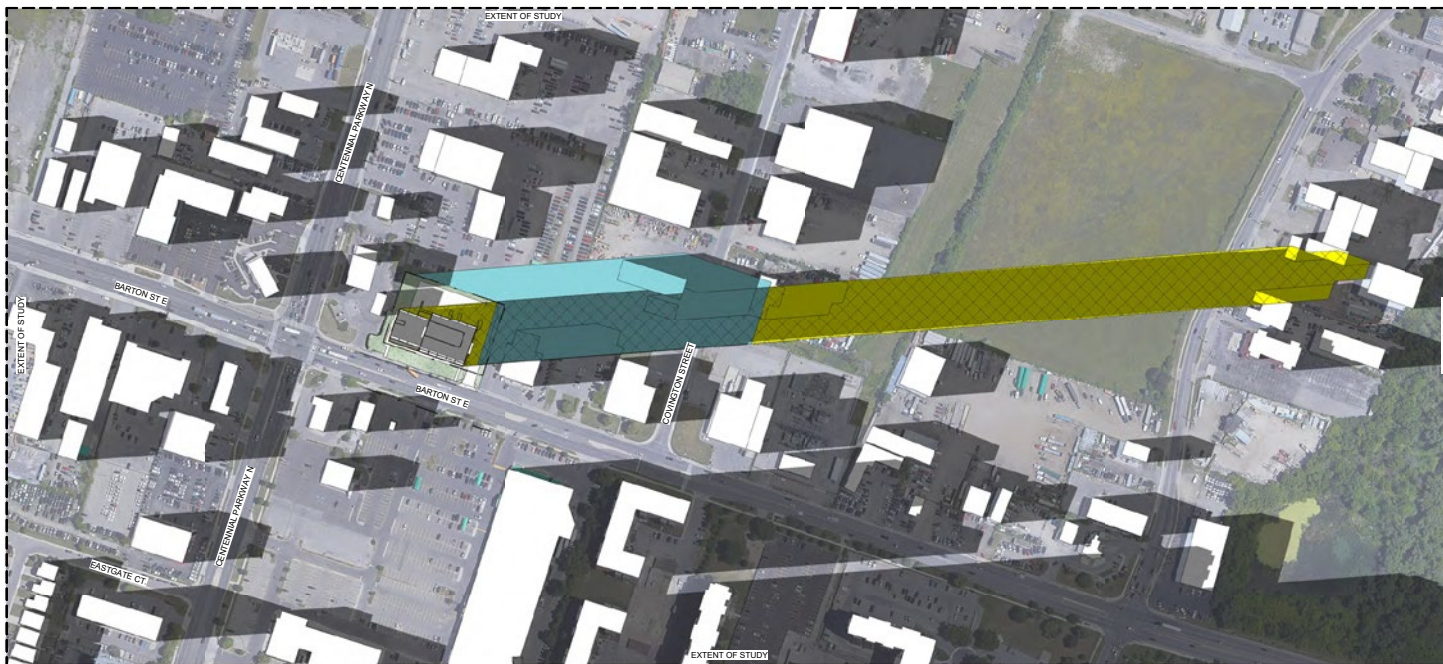
	AS-OF-RIGHT SHADOW (4 STOREY, 17m HEIGHT)		PROPERTY LINE
	PROPOSED DEVELOPMENT SHADOWS (17 STOREY, 53m HEIGHT)		EXTENT OF SHADOW STUDY
	NEW NET SHADOWS	NOTE: TIMES HAVE BEEN ADJUSTED FOR DAYLIGHT SAVINGS.	
	PROPOSED BUILDING FOOTPRINT		



1 SHADOW STUDY MARCH 21st 3:00 PM
1:2500









2 SHADOW STUDY MARCH 21st 4:30 PM
1:2500



3 SHADOW STUDY MARCH 21st 6:00 PM (SUNSET @ 7:30 PM)
1:2500

SHADOW STUDY LEGEND

 AS-OF-RIGHT SHADOW (4 STOREY, 17m HEIGHT)	 PROPERTY LINE
 PROPOSED DEVELOPMENT SHADOWS (17 STOREY, 53m HEIGHT)	 EXTENT OF SHADOW STUDY
 NEW NET SHADOWS	NOTE: TIMES HAVE BEEN ADJUSTED FOR DAYLIGHT SAVINGS.
 PROPOSED BUILDING FOOTPRINT	

Observed Shadow Impacts:

- The proposed development has no impact on Barton Street East on March 21st.
- The proposed development has no impact on the Centennial Parkway North from +/-10:00am to sunrise.
- The proposed development has no impact on the Covington Street from sunrise to +/- 5:00pm.
- The proposed development has minor impact on the adjacent commercial / industrial plazas from sunrise to sunset.

Shadow Study Conclusions - March 21

- No impact on public realm, plaza, parks or green spaces.
- Proposed development is not located within the Downtown Hamilton area.
- Adjacent car dealership is not greatly impacted and receives more than 50% sun coverage, i.e. 7 hours of sunlight within a typical day (not including sunlight caused by existing buildings).
- Adjacent gas station is not greatly impacted and receives more than 50% sun coverage, i.e. 7 hours of sunlight within a typical day (not including sunlight caused by existing buildings).
- Adjacent industrial property is not greatly impacted and receives more than 50% sun coverage, i.e. 7 hours of sunlight within a typical day (not including sunlight caused by existing buildings).
- Sidewalk adjacent to Barton Street is not impacted by shadows.
- Sidewalk adjacent to Centennial Parkway receives around 11 hours of sunlight a day.
- The proposed development does not have any impact on any existing surrounding residential buildings

Source: SRM Architects (Dec 14, 2022)

Shadow Study - March 21

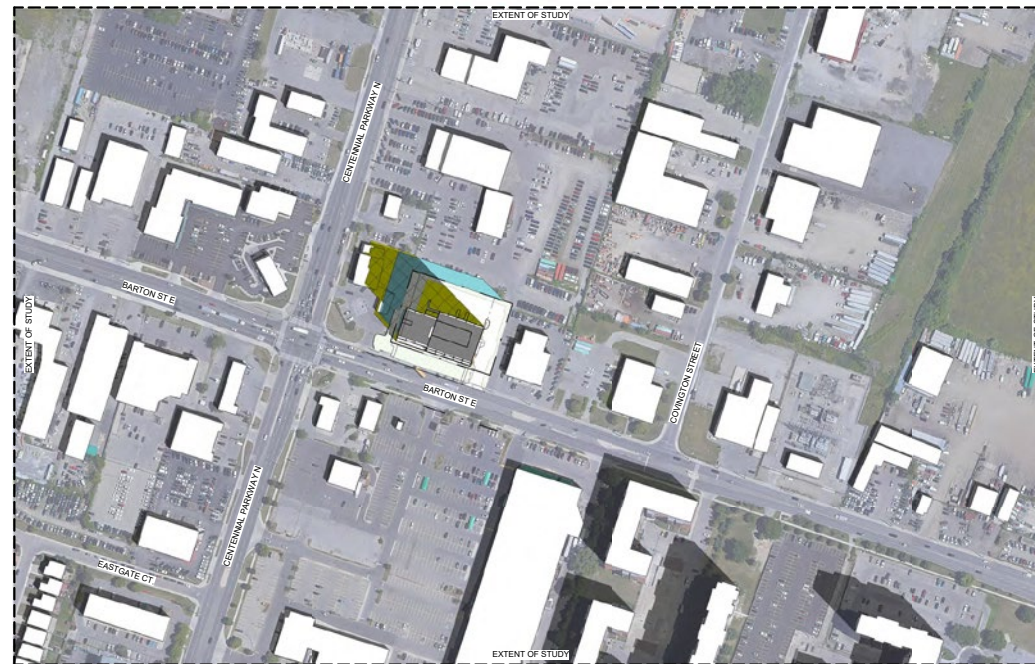
2481 Barton Street East, Hamilton

21033
April 21, 2023
Design Review Panel Submission Package





1 SHADOW STUDY SEPTEMBER 21st 8:30 AM (SUNRISE +/- 7:00 AM)
1: 2500



2 SHADOW STUDY SEPTEMBER 21st 10:00 AM
1: 2500









3 SHADOW STUDY SEPTEMBER 21st 11:30 AM
1: 2500



4 SHADOW STUDY SEPTEMBER 21st 1:00 PM
1: 2500

SHADOW STUDY LEGEND

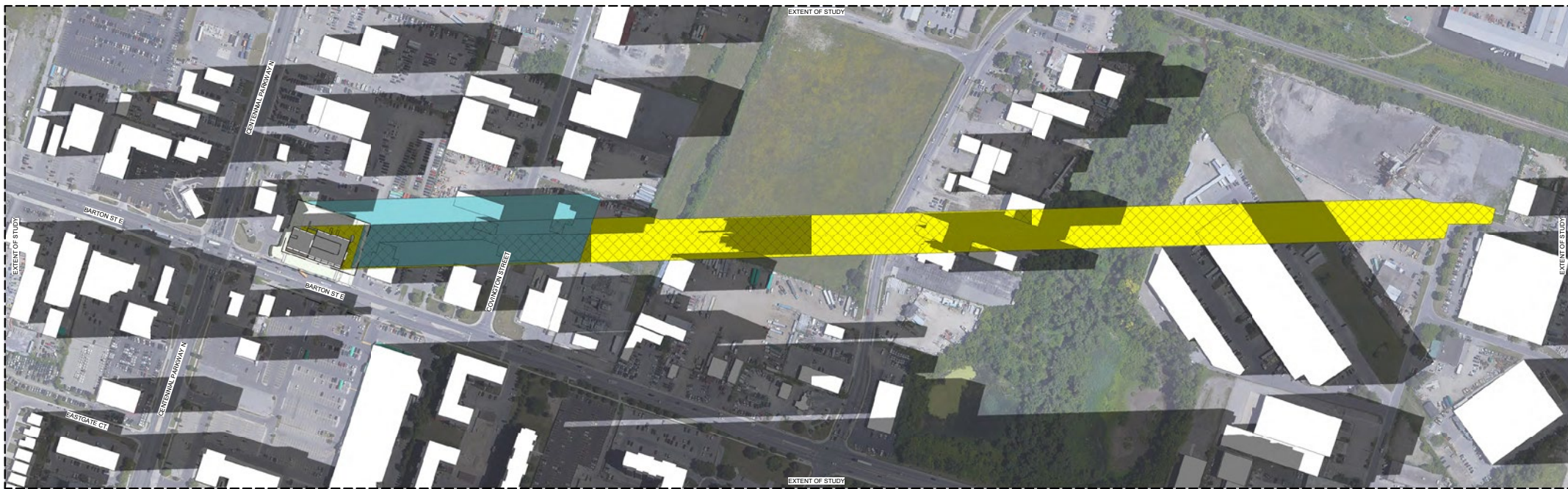
	AS-OF-RIGHT SHADOW (4 STOREY, 17m HEIGHT)		PROPERTY LINE
	PROPOSED DEVELOPMENT SHADOWS (17 STOREY, 53m HEIGHT)		EXTENT OF SHADOW STUDY
	NEW NET SHADOWS	NOTE: TIMES HAVE BEEN ADJUSTED FOR DAYLIGHT SAVINGS.	
	PROPOSED BUILDING FOOTPRINT		



1 SHADOW STUDY SEPTEMBER 21st 2:30 PM
1: 2500









2 SHADOW STUDY SEPTEMBER 21st 4:00 PM
1: 2500



3 SHADOW STUDY SEPTEMBER 21st 6:00 PM (SUNSET @ 7:18 PM)
1: 2500

SHADOW STUDY LEGEND

 AS-OF-RIGHT SHADOW (4 STOREY, 17m HEIGHT)	 PROPERTY LINE
 PROPOSED DEVELOPMENT SHADOWS (17 STOREY, 53m HEIGHT)	 EXTENT OF SHADOW STUDY
 NEW NET SHADOWS	NOTE: TIMES HAVE BEEN ADJUSTED FOR DAYLIGHT SAVINGS.
 PROPOSED BUILDING FOOTPRINT	

Observed Shadow Impacts:

- The proposed development has no impact on Barton Street East on September 21st.
- The proposed development has no impact on the Centennial Parkway North from +/-10:00am to sunrise.
- The proposed development has no impact on the Covington Street from sunrise to +/- 4:30pm.
- The proposed development has impact on the adjacent commercial / industrial plazas from sunrise to sunset.

Shadow Study Conclusions - September 21st

- No impact on public realm, plaza, parks or green spaces.
- Proposed development is not located within the Downtown Hamilton area.
- Adjacent car dealership is not greatly impacted and receives more than 50% sun coverage, i.e. 7 hours of sunlight within a typical day (not including shadow from existing buildings).
- Adjacent gas station is not greatly impacted and receives more than 50% sun coverage, i.e. 7 hours of sunlight within a typical day (not including shadow from existing buildings).
- Adjacent industrial property is not greatly impacted and receives more than 50% sun coverage, i.e. 7 hours of sunlight within a typical day (not including shadow from existing buildings).
- Adjacent commercial plaza is not greatly impacted and receives more than 50% sun coverage, i.e. 8 hours of sunlight within a typical day (not including shadow from existing buildings).
- Sidewalk adjacent to Barton Street is not impacted by shadows.
- Sidewalk adjacent to Centennial Parkway receives approximately 11 hours of sunlight a day.
- The proposed development does not have any impact on any existing surrounding residential building

Source: SRM Architects (Dec 14, 2022)

Appendix C - Pedestrian Wind Study



EXECUTIVE SUMMARY

This report describes a pedestrian level wind study undertaken to assess wind conditions for a proposed mixed-use development located at 2481 Barton Street East in Hamilton, Ontario. The study involves wind tunnel measurements of pedestrian wind speeds using a physical scale model, combined with meteorological data integration, to assess pedestrian comfort at key areas within and surrounding the study site. Grade-level areas investigated include sidewalks, surface parking, laneways, landscaped areas, transit stops, outdoor amenity areas, and building access points. Wind comfort is also evaluated over the Level 6 amenity terrace. To evaluate the influence of the proposed development on the existing wind conditions surrounding the site, two massing configurations were studied: (i) existing conditions without the proposed development, and (ii) conditions with the proposed development in place. The results and recommendations derived from these considerations are summarized in the following paragraphs and detailed in the subsequent report.

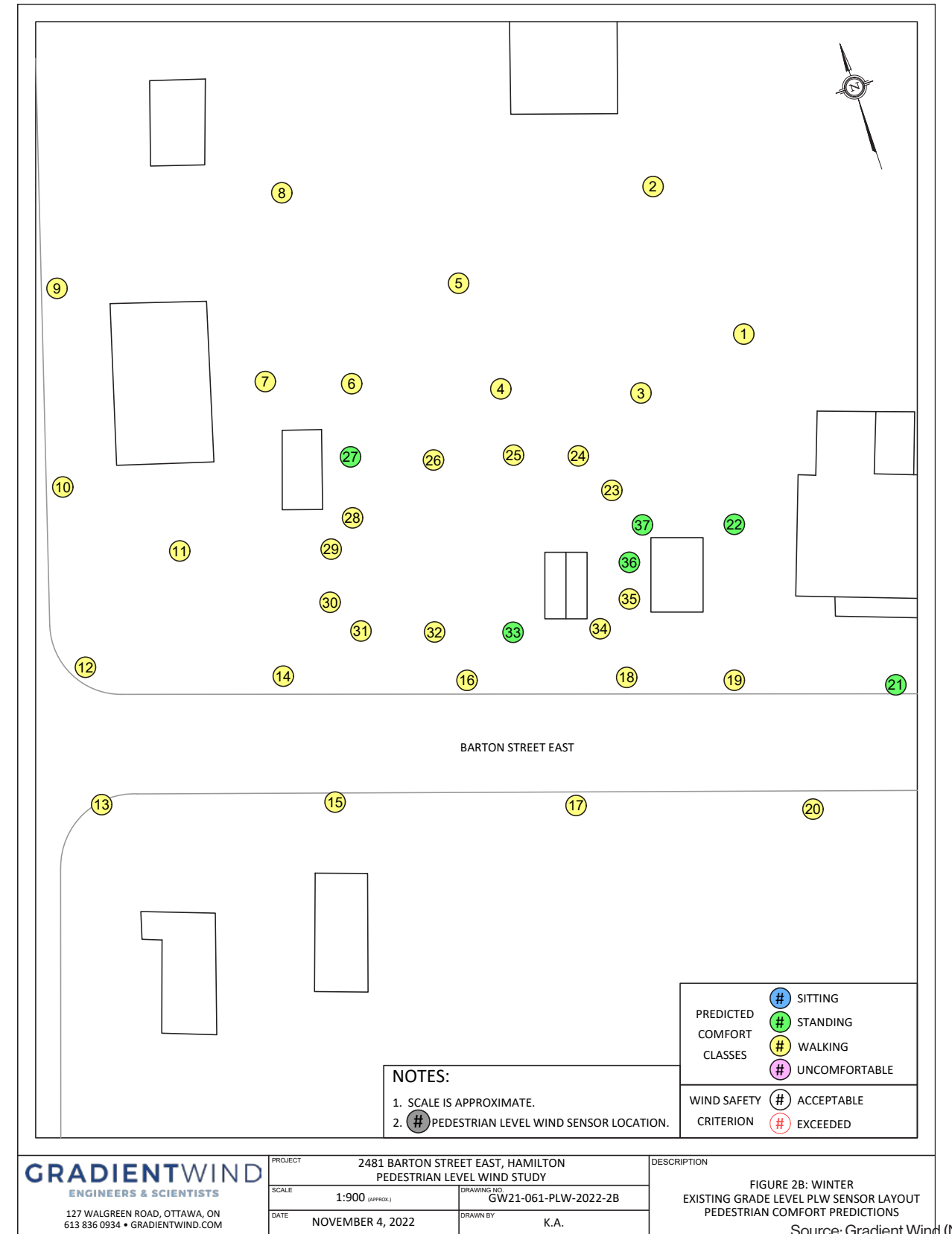
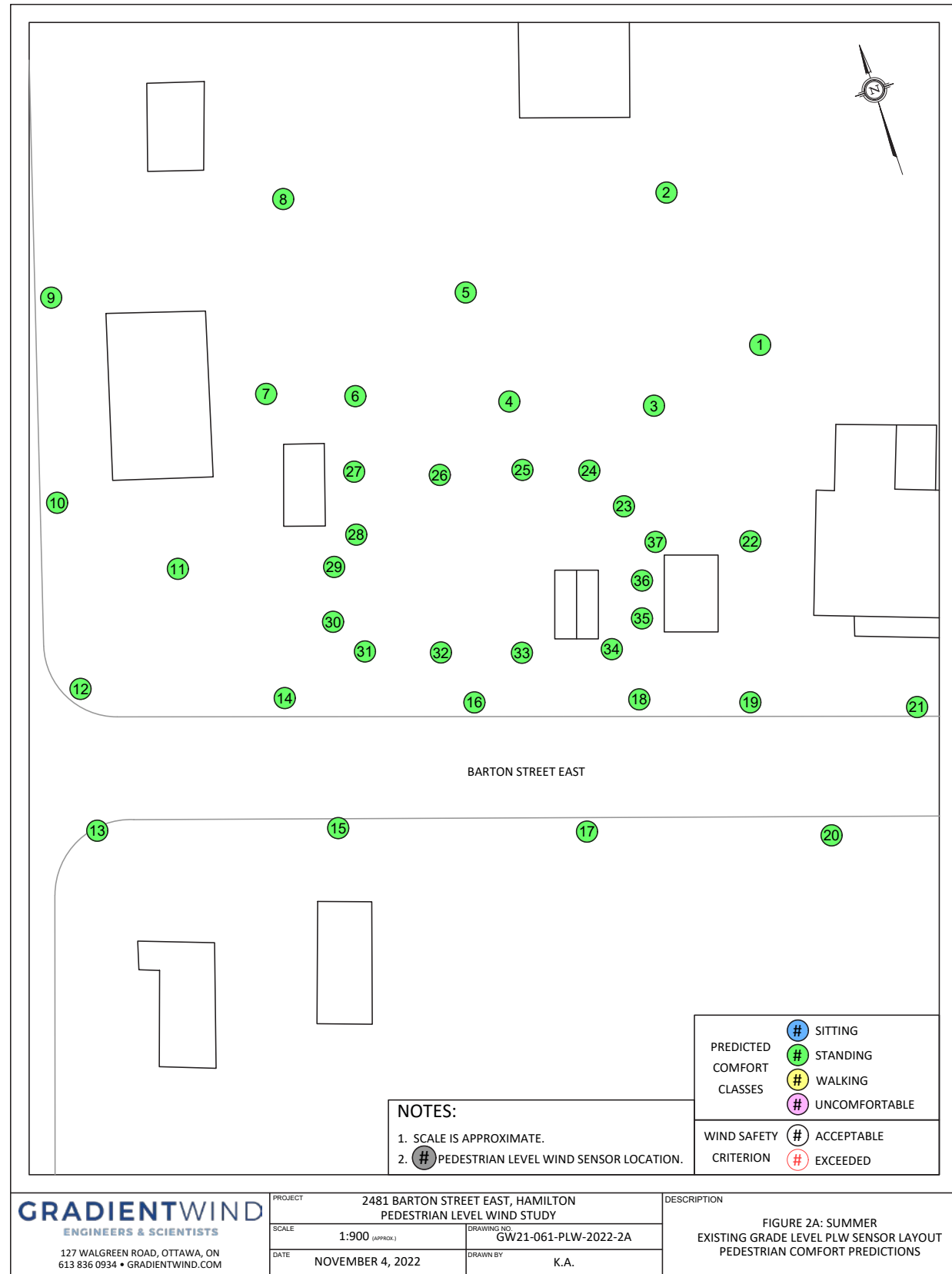
Our work is based on industry standard wind tunnel testing and data analysis procedures, City of Hamilton wind criteria, architectural drawings provided by SRM Architects Inc. in September 2022, surrounding street layouts, as well as existing and approved future building massing information and recent site imagery.

A complete summary of the predicted wind conditions is provided in Section 5.2 of this report, and is also illustrated in Figures 2A-4B, as well as Tables A1-A2 and B1-B2 in the appendices. Based on wind tunnel test results, meteorological data analysis, and experience with similar developments in the area, we conclude that conditions over most pedestrian-sensitive areas within and surrounding the development site will be acceptable for the intended pedestrian uses on an annual and seasonal basis. Exceptions include the residential lobby entrance and the grade-level outdoor amenity at the northeast corner of the site, for which mitigation is recommended, as described in Section 5.2.

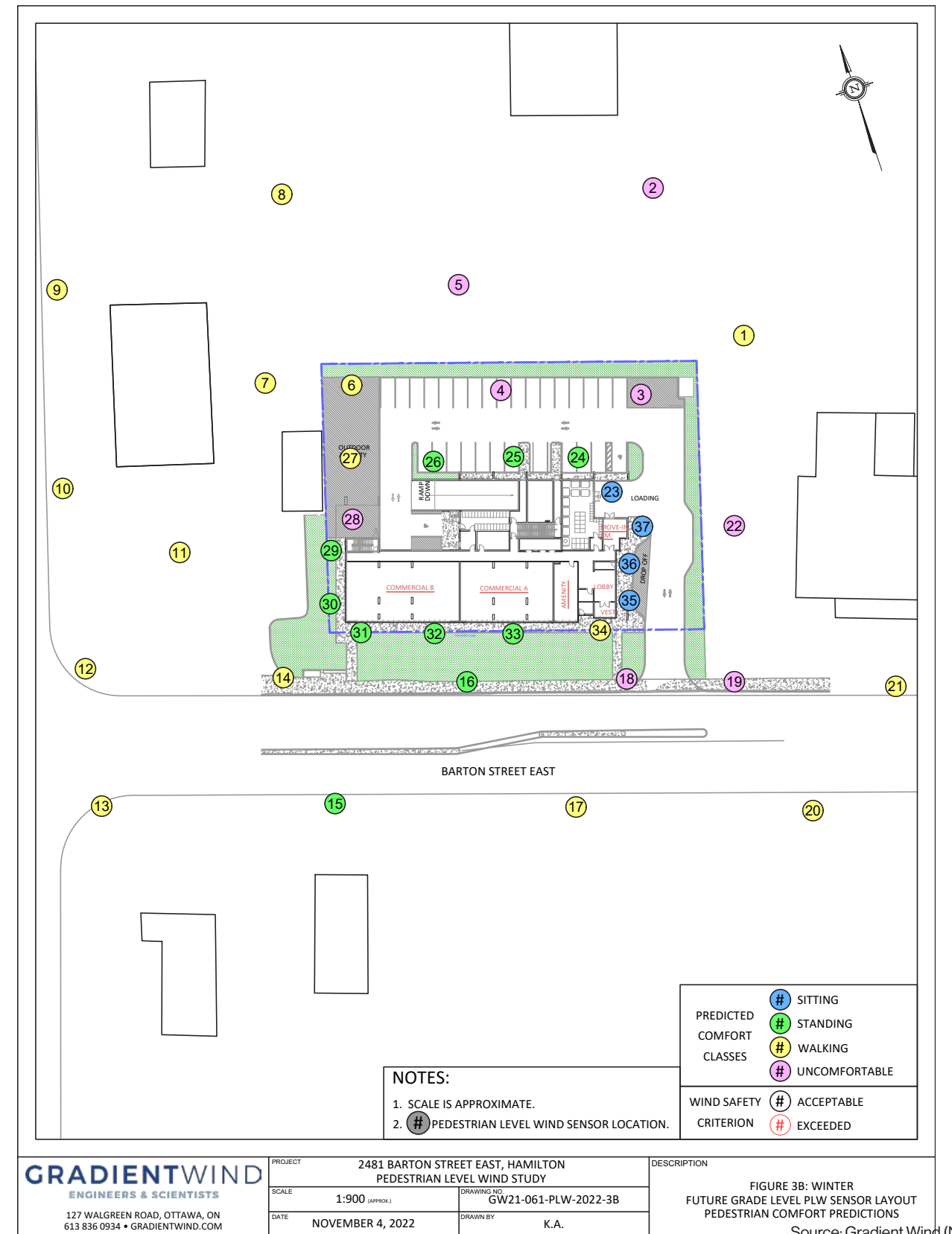
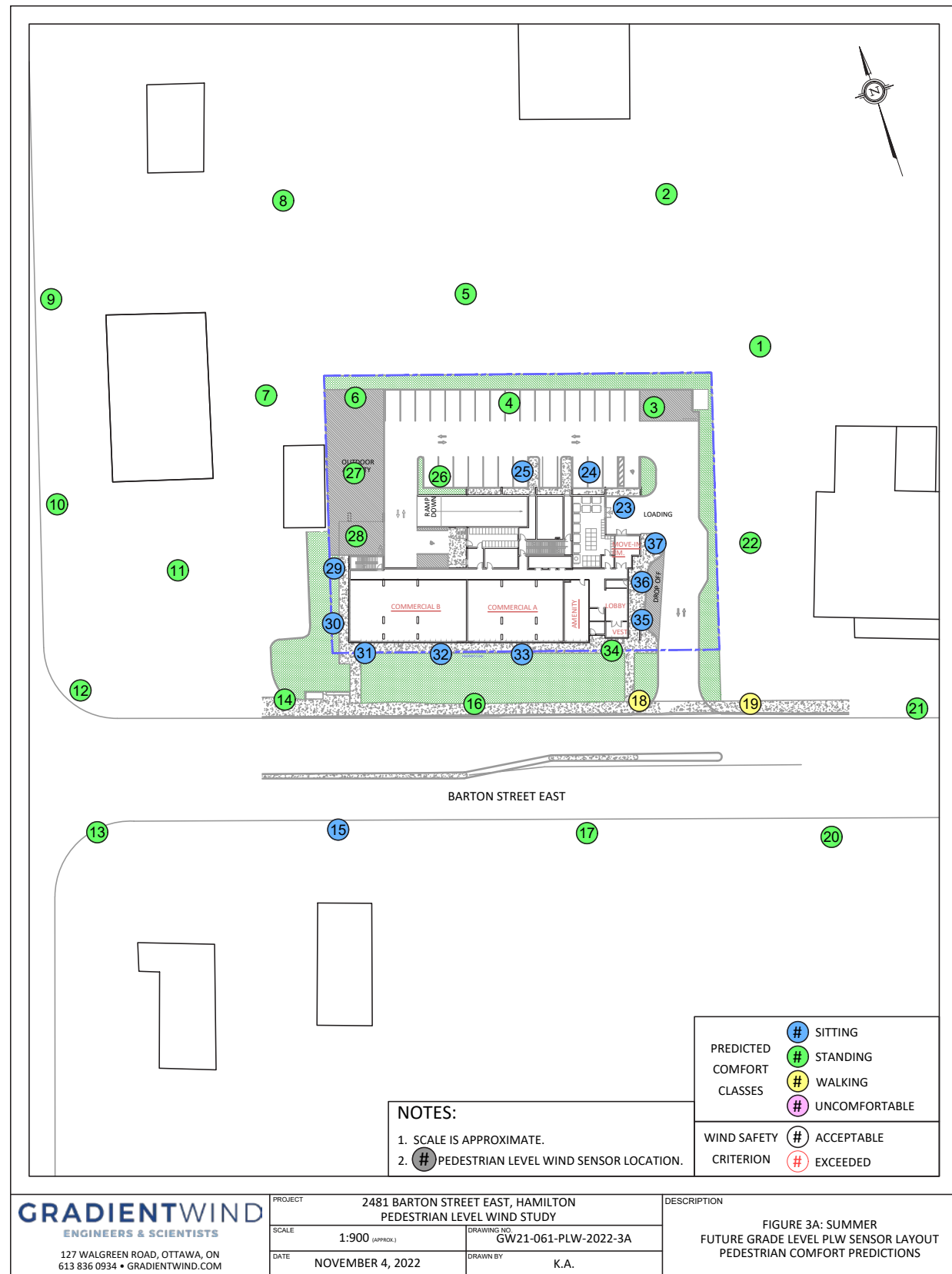
Regarding the Level 6 outdoor amenity, to ensure conditions comfortable for sitting or more sedentary activities throughout the terrace during the summer months, mitigation is recommended, as described in Section 5.2.

Within the context of typical weather patterns, which exclude anomalous localized storm events such as tornadoes and downbursts, no areas over the study site were found to experience conditions that could be considered unsafe.

Source: Gradient Wind (Nov 4, 2022)



Source: Gradient Wind (Nov 4, 2022)



Source: Gradient Wind (Nov 4, 2022)

