

U R B A N
D E S I G N
B R I E F

DVB REAL ESTATE INVESTMENTS INC.
3016, 3020, 3026 & 3032 KIRWIN AVENUE &
3031 LITTLE JOHN LANE

CITY OF MISSISSAUGA

APRIL 2021
WESTON FILE # 7665-2

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INTRODUCTION

1.1 INTRODUCTION

This Urban Design Brief [herein referred to as the 'Brief'] has been prepared by Weston Consulting on behalf of DVB Real Estate Investments Inc., to illustrate the proposed design for the construction of a residential, mid-rise development. The development site is located at 3016, 3020, 3026 & 3032 Kirwin Avenue and 3031 Little John Lane in the City of Mississauga. The proposed development consists of a single residential, mid-rise building. The building will be 8 storeys in height, and will supply 152 residential units with associated amenity provision, landscaping, and 2 levels of underground parking for vehicular and bicycle parking.

This Brief is in support of applications for an Official Plan and Zoning By-Law Amendment to facilitate the proposed development. The Brief contains an overview of principal policies relating to built form, urban design and sustainability. The discussion chiefly concerns urban design criteria set out within the Mississauga Official Plan [MOP] and Crime Prevention Through Environmental Design guidelines [CPTED].

This application and supporting materials are submitted in accordance with communications received from the planning staff at the Pre-Application Meeting held on May 13th 2020.



Figure 1: Aerial of Proposed Development Site Location

1.2 GOALS AND OBJECTIVES

The leading goals and objectives of the proposed development are guided by the vision of the City as set out in key MOP and Strategic Plan policy and guidelines. The Mississauga Strategic Plan is the highest-level of strategic direction set out by the City to-date. As such, the proposal aims to contribute towards key objectives to further the overall development direction of the City:

1. The residential building will help to develop a well-connected, transit orientated City, supported by compact forms of human-scaled infill development.
2. The proposal will contribute to the formation of complete communities by providing an appropriate form of infill development which bridges an intensification area and neighbourhood.
3. The proposed building design and Site Plan promote active, 'green' lifestyles, providing options for pedestrian access to key municipal sidewalks, open space, transit facilities, and bike parking and storage.

The proposal seeks to fulfill the core urban design objectives of the MOP, developing a residential scheme that will:

- *Respect the experience, identity and character of the surrounding context;*
- *Ensure the sustainability of natural systems and urban living;*
- *Protect the quality of life of residents, employees and visitors;*
- *Ensure the connectivity and integration of surrounding uses; and*
- *Require properties to develop in a manner that contributes to the overall vision for the city.*

1.3 CONTEXT ANALYSIS

1.3.1 THE SITE

The Site is located approximately 40m northwest of the Dundas Street East and Kirwin Avenue intersection. The frontage of the site faces Kirwin Avenue, and is bounded by Little John Lane to the rear. Access to the site is currently located via the public roads of Kirwin Avenue and Little John Lane. The site is an a-typical rectilinear shape, consisting of 5 assembled parcels currently addressed as 2016 Kirwin Avenue, 3020 Kirwin Avenue, 3026 Kirwin Avenue, 3032 Kirwin Avenue and 3031 Little John Lane.

The assembled site has a total area of 6,385m² [0.64 hectares]. The proposed development limit is informed by the Credit Valley Conservation Authority [CVCA] regulation limit associated with the Cooksville Creek and watershed area, indicated on the Site Plan prepared by KFA Architects and Planners Inc. As such, the total developable area of the site has been determined as 3,923m² following discussions with CVCA Staff and the proponent.

The 5 parcels are currently vacant. The parcels at 2016, 3020, 3026, and 3032 Kirwin Avenue front directly onto Kirwin Avenue, and represent a sparse vegetated condition. The vacant residential dwellings previously occupying these parcels of land have been demolished. The larger parcel of land at 3031 Little John Lane contains a large amount of treed vegetation. The topography is relatively flat to the northeast, experiencing a drop in elevation of approximately 4m towards Little John Lane and the watershed zone.

Table 1. Key Site Statistics

Type	Statistics
Gross Site Area	6,385.0m ²
Conveyed Lands	2,450.0m ²
Road Widening Area	12.0m ²
Net Site Area	3,923.0m ²
Lot Frontage [Kirwin Avenue]	50.3m
Lot Depth	131.4m

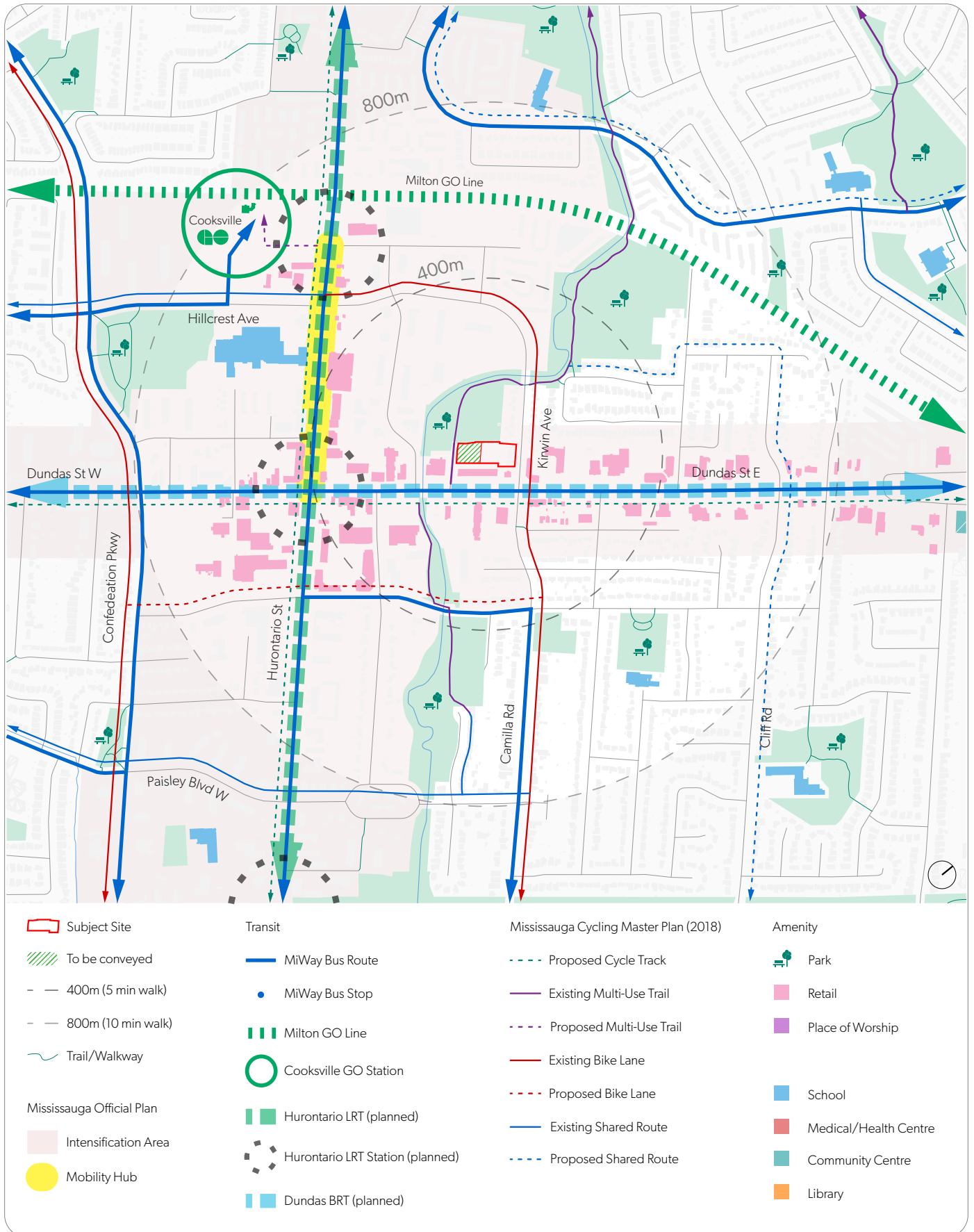


Figure 2: Surrounding Context Map, 800m

1.3.2 SURROUNDING CONTEXT

Transportation Networks & Transit

Kirwin Avenue is a Major Collector road that intersects with Hurontario Street and Dundas Street East. Little John Lane to the rear of the site serves as a laneway. The planned right-of-way width for Kirwin Avenue is 26m, in-line with the MOP. Hurontario Street and Dundas Street East are Arterial roads and are subject to a 35m right-of-way. As per Schedule 1C Urban Systems - Corridors of the MOP, Dundas Street East and Hurontario Street are designated as Intensification Corridors including a substantial portion of the lands to the east and west of the intersection. The site is currently served by a range of nearby transit services. Mississauga 'MiWay' bus routes run along Hurontario Street and Dundas Street East. The nearest stops to the site are located at this major intersection, approximately 100m from the site.

The area is subject to the *Dundas Connects Master Plan*, outlining how the street will develop. The street is outlined for intensification which will include improved transit infrastructure and increased services, public spaces and multi-modal street design accommodating bike lanes, clear pedestrian routes and public transit lines. The Hurontario Light Rail Transit [LRT] construction project is underway for both Hurontario Street and Dundas Street. A planned Bus Rapid Transit [BRT] route will provide services along Dundas Street East and West.

The Cooksville GO Train station is located within 1km of the site. The station connects to the network of Metrolinx destinations within the region, linking to the Greater Toronto Area Bus Route 21H and the Milton Rail Line. The station will connect with the future Hurontario LRT creating an integrated Mobility Hub north of Dundas Street along Hurontario Street [see Figure 2].

Active Transit

The Region of Peel intends to develop its existing network of multi-use trails throughout the region. The trail system is called 'Walk + Roll'. An existing paved multi-use trail runs along the southwest of the site, accessed via Little John

Lane and leading northwards through the John C. Price Park. This connects to other parks in the area, such as the Cooksville Park to the south of the site and the Richard Jones Park to the north. A dedicated bicycle lane currently runs along Kirwin Avenue directly fronting the site. This links to Hurontario Street, near to Cooksville Station and the future Mobility Hub area. A proposed multi-use trail will connect the existing cycling infrastructure to the station and LRT area.

Open Spaces

The site is located adjacent to the John C. Price park. The park offers walking trails linking to the wider natural heritage network in Peel, a children's play area and nearby outdoor pool and two tennis courts. The pathways through the park follow the Credit River network. The following parks are located within 800m of the site:

- John C. Price Park
- Cooksville Park
- Richard Jones Park
- Stonebrook Park
- Red Oaks Park

Land Use & Facilities

A number of community facilities are located at the intersection of Hurontario Street and Dundas Street. These include the Cooksville Library, the Peel District School Board T.L Kennedy Secondary Public School [PDSB], and a Region of Peel Public Health service facility. North of the site within 800m lies the Thornwood Public School [PDSB]. The school lies adjacent to Stonebrook Park with associated open space and tennis courts. The Team School private institution is also located within 800m of the site, adjacent to Red Oaks Park. A vast range of retail and commercial buildings line Dundas Street, with larger shopping complexes concentrated around the intersection with Hurontario street. These services are contained within large retail plazas with associated surface parking. The retail hub contains a number of large retailers including the supermarket chain Food Basics.

1.3.3 NEARBY DEVELOPMENT

Mid-Rise Built Forms

The lands immediately to the north of the site are characterized by low-rise residential buildings. To the north and east, a mix of low-rise buildings and high-rise, slab block apartment buildings are found. To the west, a number of high-rise apartment blocks overlook the John C. Price Park and can be accessed via Kirwin Avenue. To the south are predominantly single or two storey retail buildings contained within retail strip plazas.

There is moderate intensification underway within the area, with a number of existing mid-rise buildings from 5 to 11 storeys present [see the *Building Heights Map* Figure 6]. There are a cluster of 5 storey, mid-rise apartment buildings located along Jaguar Valley Drive to the west of the site, connecting with Kirwin Avenue [Figure 6]. A 10 storey building lies further north along Kirwin Avenue at 3121 [Figure 6 and Figure 3]. An 11/12 storey apartment building lies to the southeast of the site at 120 Dundas Street East [Figure 6].

At time of writing, there are a number of active development applications within approximately 1km of the site, particularly concentrated along Dundas Street and Hurontario Street. A 16 storey mixed-use building has been proposed south of the site at 86-90 Dundas Street East. The proposal consists of 334 dwelling units and 324m² of ground floor commercial space [see Figure 7 and Figure 4]. A similar 16 storey mixed-use development is proposed at 89-95 Dundas Street West.

Recently approved developments include an application for live/work townhouse units at 2560 & 2564 Confederation Parkway and a 40 storey mixed-use building at 3480 Hurontario Street [Figure 7].



Figure 3: Existing Building at 3121 Kirwin Avenue, Google Maps 2021



Figure 4: Active Development Application at 86-90 Dundas Street East, Studio JCI

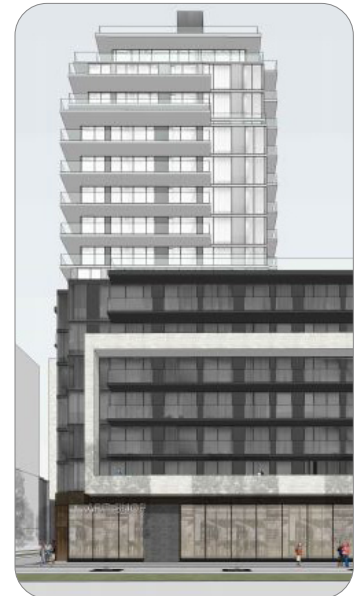
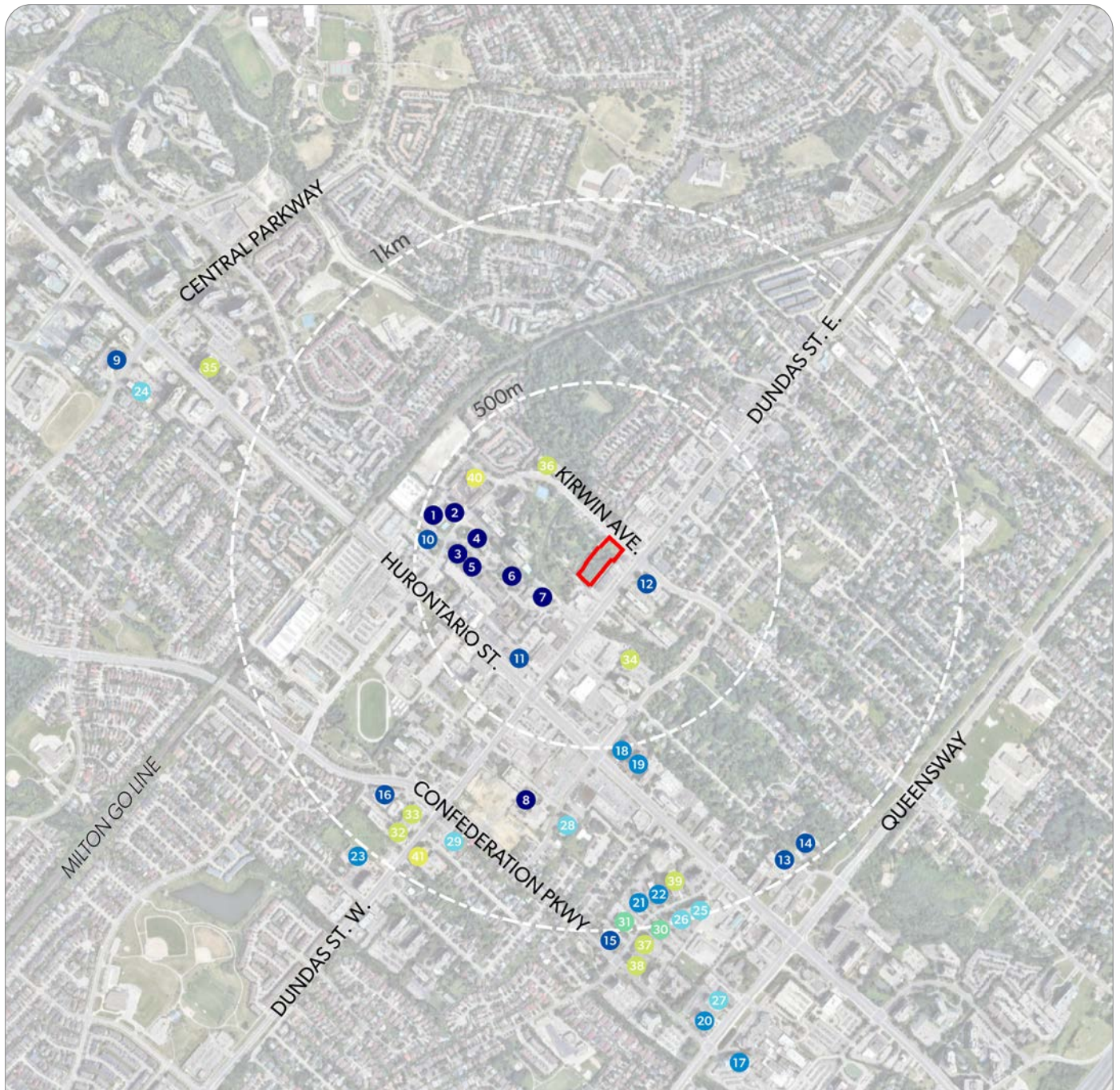


Figure 5: Active Development Application at 89-95 Dundas Street East, Studio JCI



LEGEND

▬ Subject Property

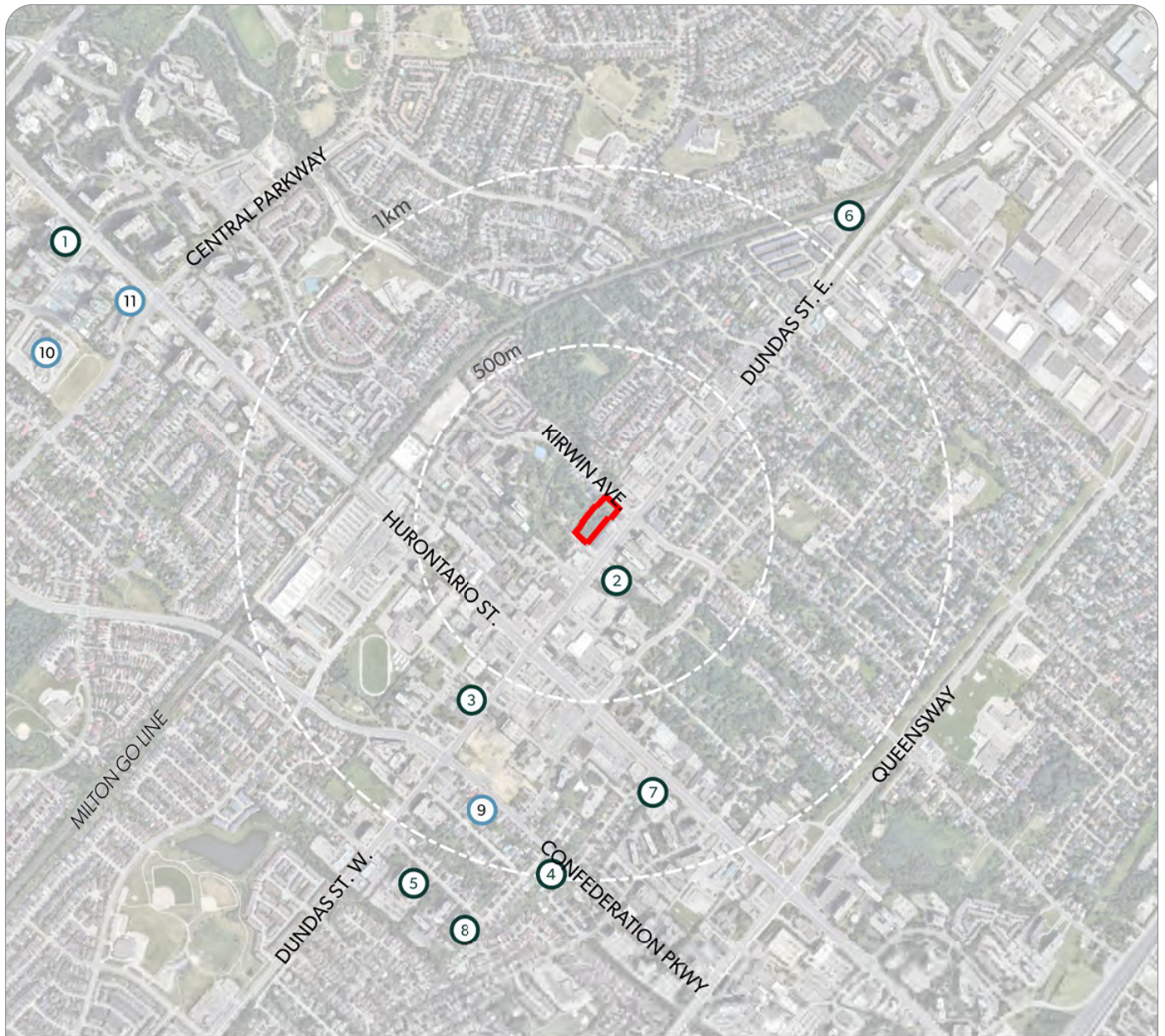
Mid-Rise Building Heights

- 5 Storeys
- 6 Storeys
- 7 Storeys
- 8 Storeys
- 9 Storeys
- 10 Storeys
- 11 Storeys


Figure 6: Surrounding Building Heights Map, 1km

Table 2. Nearby Mid-rise Buildings

#	Building Name	Address	Height [storeys]
1	N/A	3151 Jaguar Valley Drive	5
2	Whitecliff Apartments	3141 Kirwin Avenue	5
3	N/A	3130 Jaguar Valley Drive	5
4	N/A	3131 Jaguar Valley Drive	5
5	N/A	3112 Jaguar Valley Drive	5
6	N/A	3089 Jaguar Valley Drive	5
7	N/A	3041 Jaguar Valley Drive	5
8	Medical Arts Centre	71 King Street	5
9	Lotus Garden	33 Central Parkway West	6
10	N/A	3160 Jaguar Valley Drive	6
11	Hurontario Building	3025 Hurontario Street	6
12	Camilla Place	130 Dundas Street East	6
13	N/A	2340 Park Towers Avenue	6
14	N/A	2339 Park Towers Avenue	6
15	N/A	2425 Confederation Parkway	6
16	Beacon House International College	3050 Confederation Parkway	6
17	Trillium Health Centre-J Wing	100 The Queensway West	7
18	Luxor Apartments 2	2507 Hurontario Street	7
19	Luxor Apartments 1	2503 Hurontario Street	7
20	N/A	101 Queensway	7
21	Seville West	75 Paisley Boulevard West	7
22	Seville East	65 Paisley Boulevard West	7
23	Arbour Mills	3023 Parkerhill Road	7
24	The Omeath	30 Central Parkway West	8
25	N/A	20 Paisley Boulevard West	8
26	Paisley Apartments	50 Paisley Boulevard West	8
27	N/A	89 Queensway West	8
28	N/A	66 King Street West	8
29	Yarl Co-operative Homes	2595 Rugby Road	8
30	N/A	70 Paisley Boulevard West	9
31	Draydon Manor	95 Paisley Boulevard West	9
32	Millbrook Place	177 Dundas Street West	10
33	Dundas Tower	165 Dundas Street West	10
34	King Gardens Retirement Residence	85 King Street East	10
35	Fairview Place	15 Fairview Road East	10
36	N/A	3111 Kirwin Avenue	10
37	Linda Court Apartments	90 Paisley Boulevard West	10
38	N/A	2365 Confederation Parkway	10
39	Provenance Apartments	45 Paisley Boulevard	10
40	Ashworth Square Co-operative	3180 Kirwin Avenue	11
41	The Castlebrooke	2590 Rugby Road	11



LEGEND

 Subject Property

Active Applications (Ward 7)

-  16 Elm Dr
-  86 - 90 Dundas Street East
-  89 - 95 Dundas Street West
-  2476, 2482 Confederation Parkway
-  2570 - 2590 Argyle Road
-  473, 505 Hensall Circle
-  2444 Hurontario Street
-  2512 - 2532 Argyle Road

Approved Applications (<1 year)




-  9 2560, 2564 Confederation Parkway
-  10 100 Elm Drive West
-  11 3480 Hurontario Street

Figure 7: Recent Active and Approved Development Applications, 1km

2

S I T E
D E S I G N

2.1 SITE PLAN

2.1.1 SITE ORGANIZATION

The bow-shaped mid-rise building occupies the centre of the site, at 43% net site coverage. The placement of the building ensures full access by pedestrians around the entirety of the perimeter. The primary frontage at the east of the site provides for an expanded pedestrian circulation area adjacent to the public realm of Kirwin Avenue. Townhouse frontages with private patios and short term bike parking enliven the frontage. The north of the site is occupied by the main residential entrance area, driveway to visitor parking, ramp to underground parking and an outdoor amenity space. The rear of the site to the west is occupied primarily by a generous landscaped area, providing a setback from the proposed development limit. This also provides a landscaping treatment which responds sensitively to grade changes at the west of the site. Townhouse frontages wrap around the east and south elevations. Private patios and walkway connections link the frontages with primary pedestrian sidewalks.

2.1.2 ACCESS POINTS TO/FROM THE SITE

Vehicular

The sole vehicular entrance to the site is located via Kirwin Avenue at the northeast of the site. The access point leads to a 7m wide, two-way driveway. The entry point to the site contains a 12m² portion of lands dedicated for road widening.

Pedestrian

The frontage of the site is semi-porous, allowing pedestrians to access the interior walkways of the site from the municipal sidewalk along Kirwin Avenue at multiple points. A large paved sidewalk area occupies the primary frontage, with individual walkways leading to the three townhouse units facing Kirwin Avenue. A further direct walkway links to the public sidewalk along the north, leading to the indoor amenity accessed towards the rear of the site and remaining townhouse units.

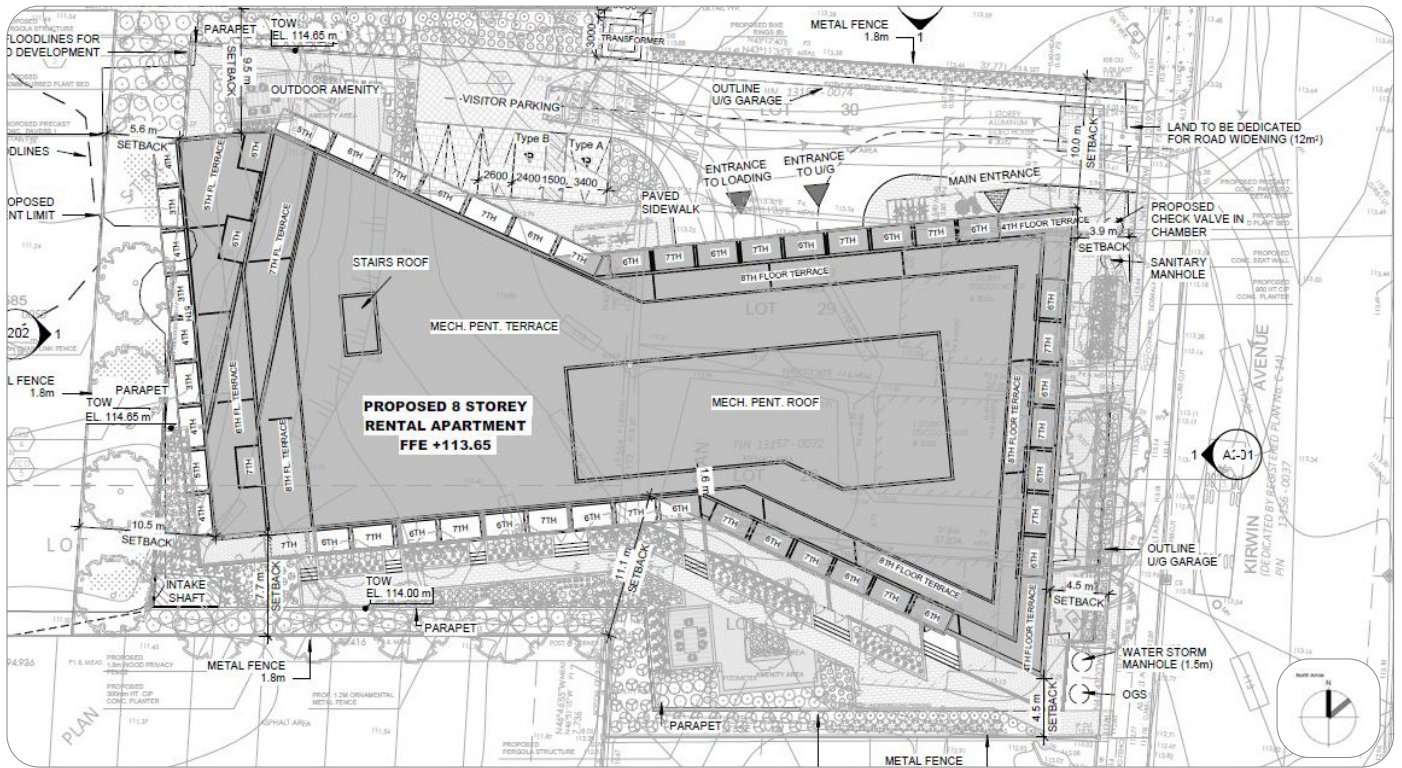


Figure 8: Proposed Site Plan, prepared by KFA Architects + Planners Inc.

Table 3. Proposal Statistics

BUILDING STATISTICS		
Building Footprint		1,703.0m²
Building Height		25.5m
Gross Floor Area [GFA]		11,120.0m²
Lot Coverage [Net Site Area]		43%
Floor Space Index [FSI - GFA/Net Site Area]		2.83
Gross Floor Area Breakdown	Ground Floor	930.0m ²
	TH Second Floor	600.0m ²
	Second Floor	1,525.0m ²
	Third Floor	1,628.0m ²
	Fourth Floor	1,448.0m ²
	Fifth Floor	1,367.0m ²
	Sixth Floor	1,297.0m ²
	Seventh Floor	1,265.0m ²
	Eighth Floor	1,060.0m ²
	Total	11,120.0m²
Total Residential Units	1 Bed	113 [76.4%]
	2 Bed	32 [21.6%]
	3 Bed	3 [2.0%]
	Total	148 [100%]
Parking Provided [estimate]	Residential	157
	Visitor	21
	Total	178
Bicycle Parking	Short Term Residential	14
	Long Term Residential	101
	Total	115
Landscaped Area	Soft Landscaping	912.0m ² [23%]
	Hard Landscaping	760.0m ² [19%]
	Green Roof	466.0m ² [12%]
	Total	2,138.0m² [54%]
Amenity [estimated]	Indoor [ground floor]	330.0m ²
	Outdoor [ground floor]	100.0m ²
	Outdoor [roof]	450m ²
	Total	880.0m²

Cycling

A dedicated bike lane currently runs along Kirwin Avenue, directly abutting the public sidewalk and site frontage. This provides opportunities for cyclists to access the site directly, and may utilize the vehicular entrance for access to temporary bike parking facilities. The vehicular entrance also leads to long-term bicycle storage areas via the ramp to underground garage.

2.1.3 ENTRANCES, DROP-OFF, LOADING AREAS, GARBAGE COLLECTION, SERVICES & MAJOR UTILITIES

The vehicular driveway provides access to a ramp leading to an underground parking garage, containing 2 levels of underground parking, bicycle storage area, locker rooms, mechanical rooms, stormwater tanks, electrical rooms and elevators with associated lobby areas. Loading and staging areas are located next to the parking ramp

at the north of the building. The driveway terminates in a visitor parking area and drop-off. This area contains visitor parking spaces, 2 of which are accessible spaces. The roadway provides access for loading and emergency vehicles. Emergency vehicles may access the southeast portion of the building via the existing fire route to the rear of the adjacent commercial properties at 99 - 131 Dundas Street East.

2.1.4 VEHICULAR PARKING & BICYCLE STORAGE AREAS

The 2 levels of underground parking contain a total of 173 parking spaces, with an additional 5 spaces at grade. A total of 157 residential parking space are provided, and 21 visitor parking spaces. Short-term bicycle parking spaces are provided at the north and east of the building within the site setback area, linked by paved areas and pedestrian sidewalks.

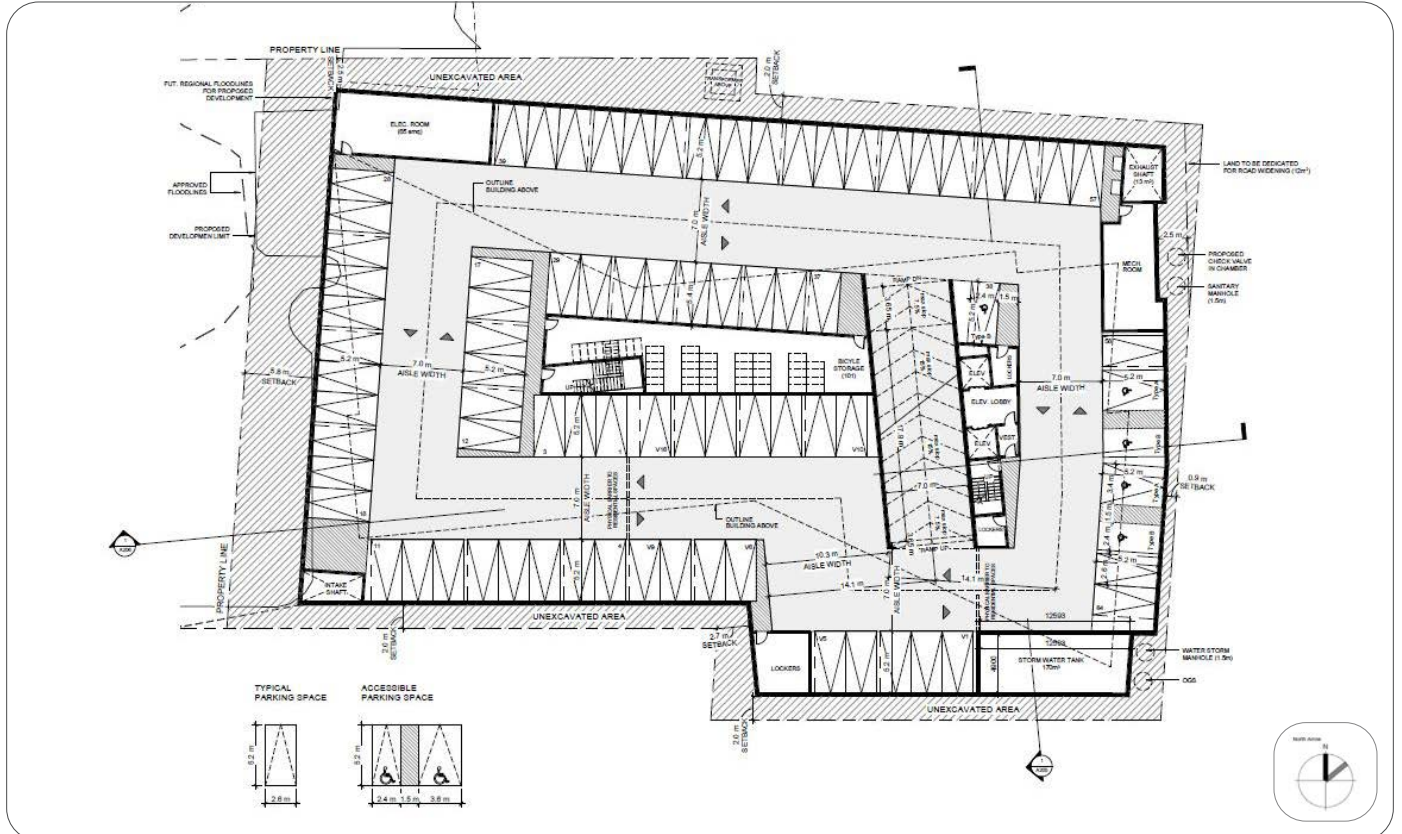


Figure 9: Underground Parking Garage Level 1, prepared by KFA Architects + Partners Inc.

2.2 BUILT FORM & USES

The proposed development is located within an intensification area and is a form of infill development. The a-typical building shape, placement and site organization propose a compact and efficient use of the site. The overall built form provides opportunities for increased setbacks from adjacent uses, and maximizes opportunities for pedestrian connectivity. In addition, the articulation of the facade increases visibility from apartment units onto the surrounding area, thereby maximizing informal surveillance potential [see Section 2.4.2]. Key project statistics are detailed in Table 3 of this Brief.

2.2.1 GROUND FLOOR PLAN & SETBACKS

Ground Floor

The total proposed gross floor area [GFA] of the proposed development is 11,120.0m². The ground floor of the 8-storey building provides 9 two-bedroom townhouse

units and 1 one-bedroom unit at grade. The upper storeys will contain a variety of apartment unit sizes from 1 bedroom to 3 bedroom. The ground floor is organized so that townhouse units front the south and east portion of the building, with 3 townhouse units fronting directly onto Kirwin Avenue. An internal corridor separates the units from other ground floor uses. A large lobby and lounge area is situated at the northeast corner of the building, with a consolidated mail room. A garbage room occupies the centre of the ground floor, accessed via the internal corridor and loading/staging area which is integrated within the building envelope. The garbage room also contains a bulk storage area. The northwest of the building is occupied by residential amenity space. The amenity theatre room is accessible from the interior corridor. The Gym and Party room is accessed from the exterior of the building. This entrance is connected to a pedestrian walkway which links to the primary frontage.



Figure 10: Rendering of Kirwin Avenue Frontage: KFA Architects + Partners Inc.

2.2.2 HEIGHT AND MASSING

Setbacks

The building maintains a front yard setback of between 3.9m to 4.5m. The portion of the building at the northeast corner housing the lobby and main entrance area, is further recessed from the street to maximize pedestrian circulation space and provides an area for temporary bicycle parking. The main entrance is setback 10m from the side property line. The north [side yard] and west [rear yard] directly abut the John C. Price Park and therefore maintain appropriate setbacks. The building is setback 5.6m from the rear property line, 9.5m at the north, and between 4.5m - 11.1m at the south abutting the existing commercial properties. See the Site Plan Figure 8.

The proposed height of the building is 8 storeys, 25.5m excluding the mechanical penthouse. The mechanical penthouse is proposed to be 3.5m in height. To minimize massing impacts on the adjacent park and low-rise dwellings to the north, the proposed building will step back at the 4th storeys along Kirwin Avenue. This forms a townhouse frontage, establishing a human-scaled, podium base in order to ground the mid-rise building and interact with the public realm.

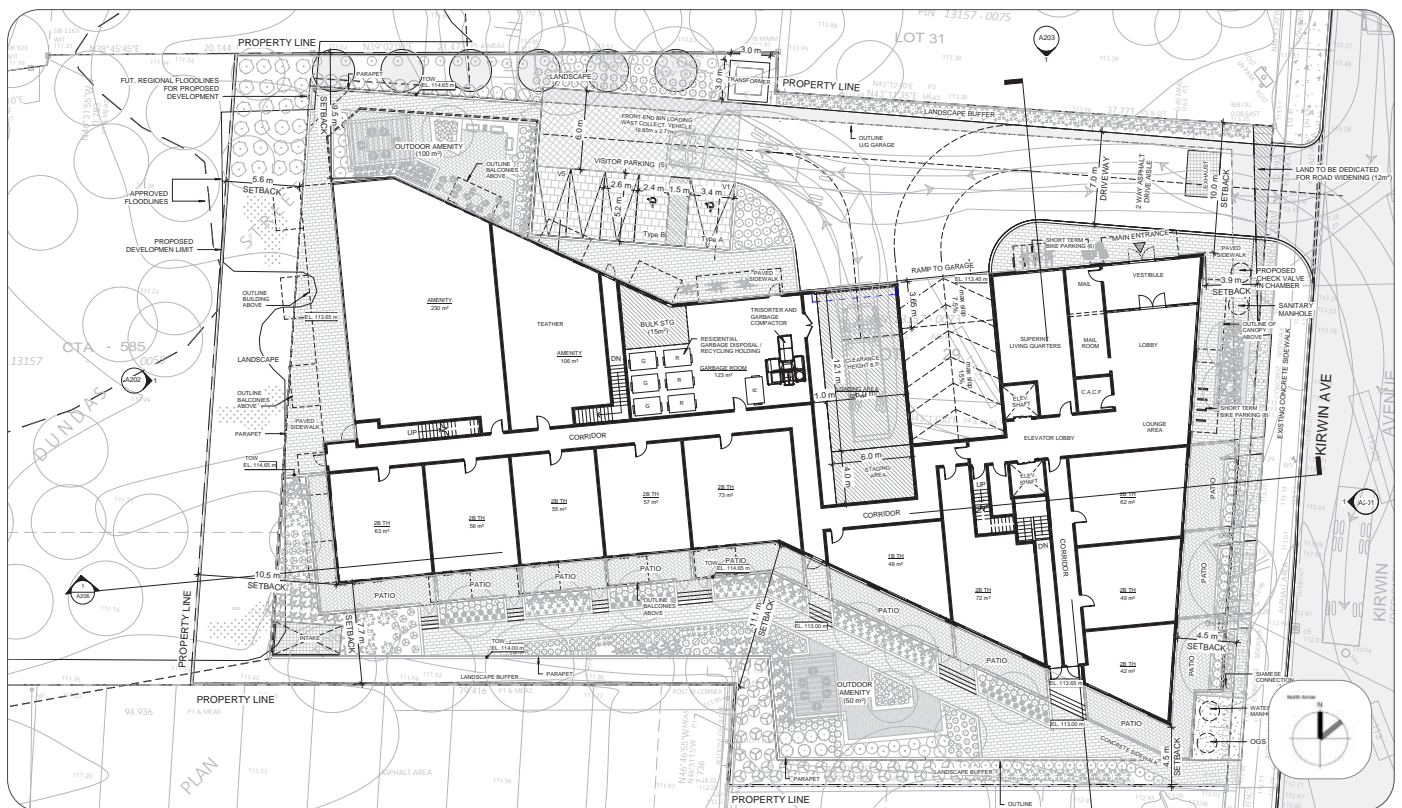


Figure 11: Ground Floor Plan, prepared by KFA Architects + Partners Inc.

2.2.3 TRANSITIONS TO ADJACENT USES

A number of reports have been prepared assessing the potential impacts of the proposed development on surrounding land uses and buildings. An overview of these reports are contained in Section 2.5 of this Brief. A Shadow Study prepared by Weston Consulting demonstrates how the proposed development adequately mitigates shadowing on surrounding properties. The proposed building will ensure access to sufficient sunlight and sky views from Kirwin Avenue and the adjacent park. Further details of wind and noise strategies are contained in Sections 2.5.1 and 2.5.3 of this Brief, prepared by Theakston Environmental and Acoustics Canada respectively.

The height and massing strategy proposed ensures that transitions to the adjacent parkland are appropriate. The building envelope is contained within a 45° angular plane, as demonstrated by the east/west Section Plan Figure 12. This is facilitated by an extended setback zone to the north, within which is contained the proposed driveway, landscaping areas and amenity space.

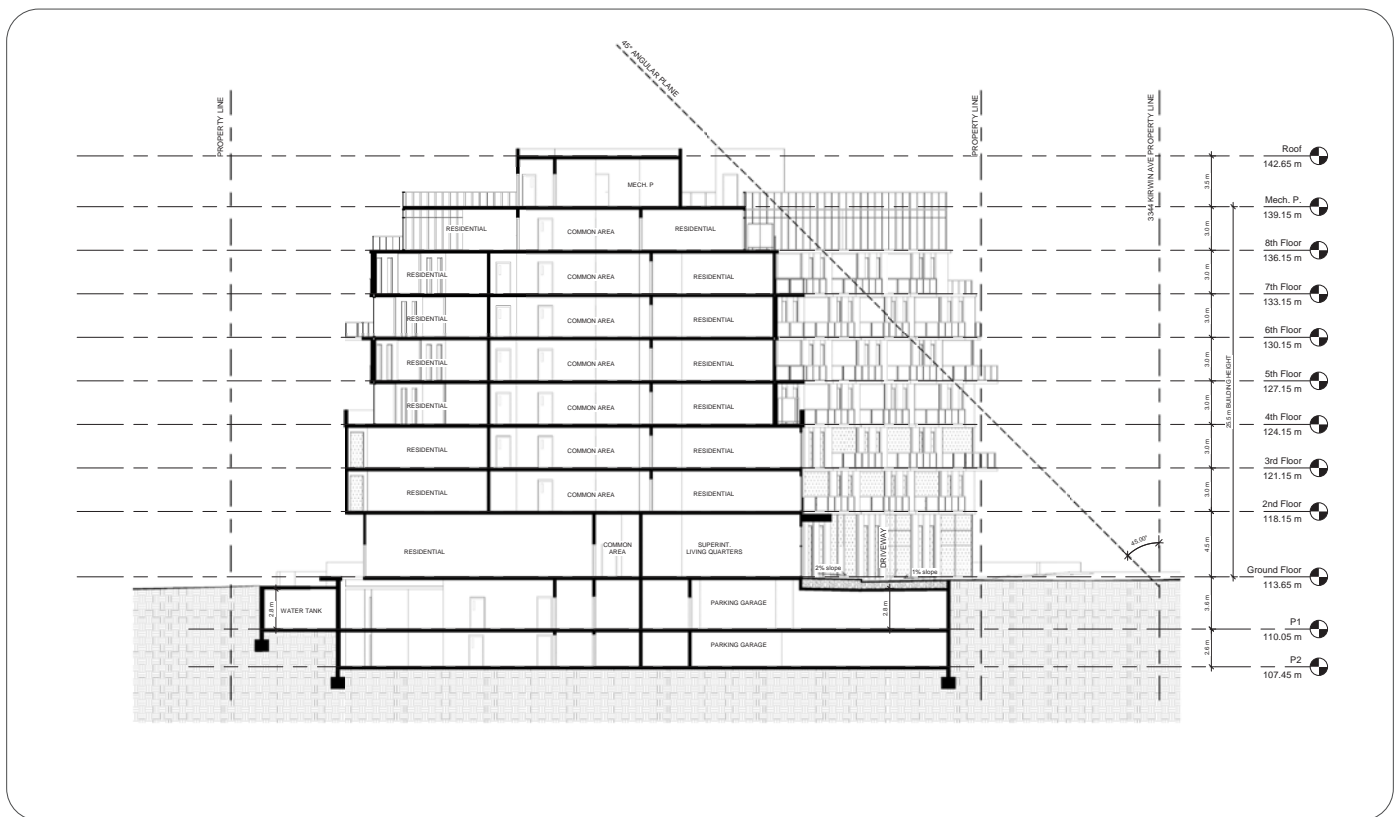


Figure 12: Section 1 East/West Angular Plane Diagram, prepared by KFA Architects + Partners Inc.

2.2.4 SUSTAINABLE BUILDING STANDARDS

The City of Mississauga adopted a Green Development Strategy in 2010 [GDS]. The *Green Development Standards - Going Green in Mississauga*, was subsequently prepared in 2012 outlining Stage 1 criteria for Site Plan and Zoning By-law development applications. The City encourages the incorporation of green sustainable elements into proposed building construction. The following relevant standards apply to the proposed built form:

6.1 Bird Friendly Glazing

The proposed glazing will be treated with bird-friendly design to prevent undue reflection, particularly within the first 10m - 12m of the building above grade. This standard provides further detailed technical specifications, relevant to more advanced stages of the development application process.

6.2 Site and Building Lighting

Exterior wall fixtures will be appropriately shielded and placed to prevent glare, and to sensitively illuminate transitional areas at the site perimeter. Up-lighting will be avoided. Similar to Standard 6.1, further details will be provided on building lighting and fixtures at more advanced stages of the development application process.



Figure 13: Primary Elevation Rendering, prepared by KFA Architects + Partners Inc.

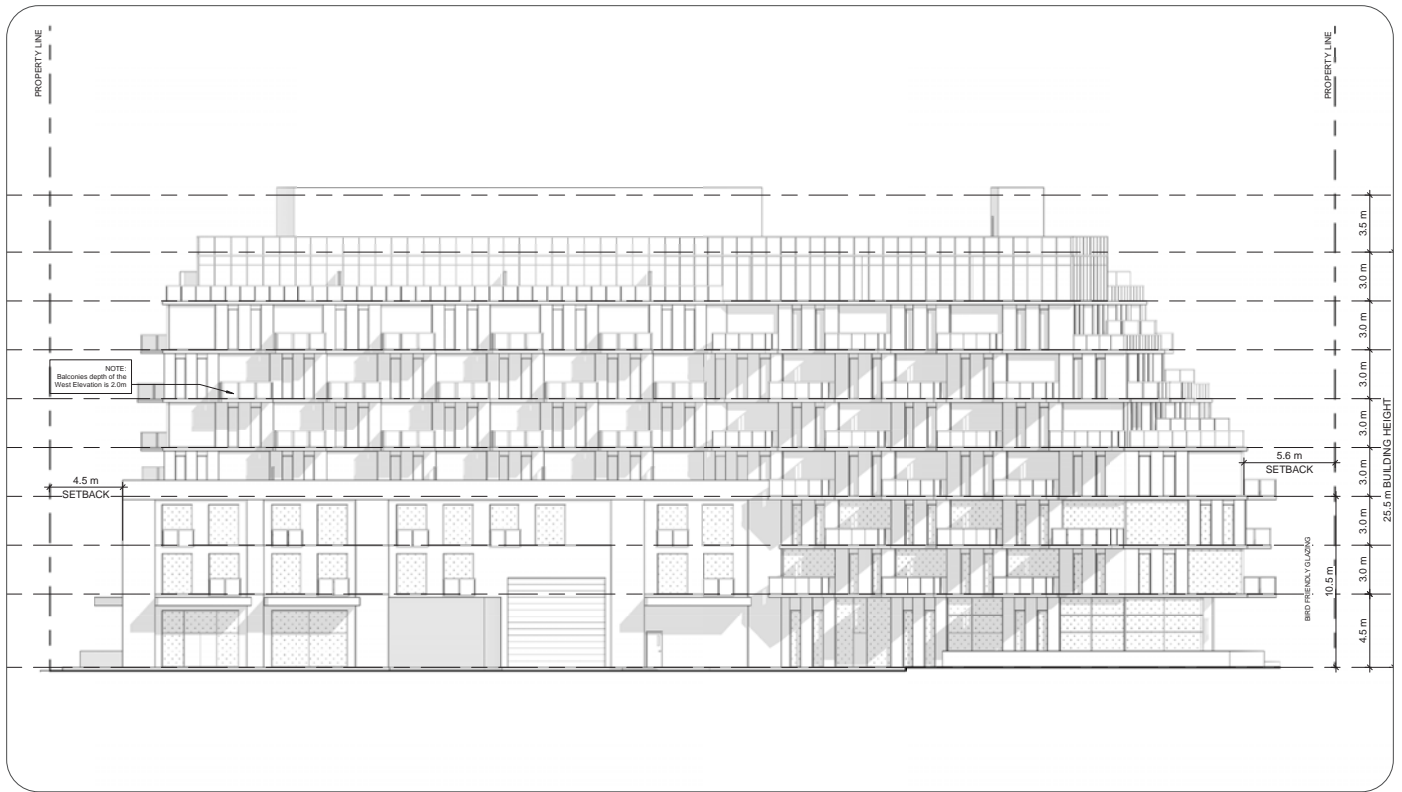


Figure 14: North Elevation, prepared by KFA Architects + Partners Inc.



Figure 15: South Elevation, prepared by KFA Architects + Partners Inc.

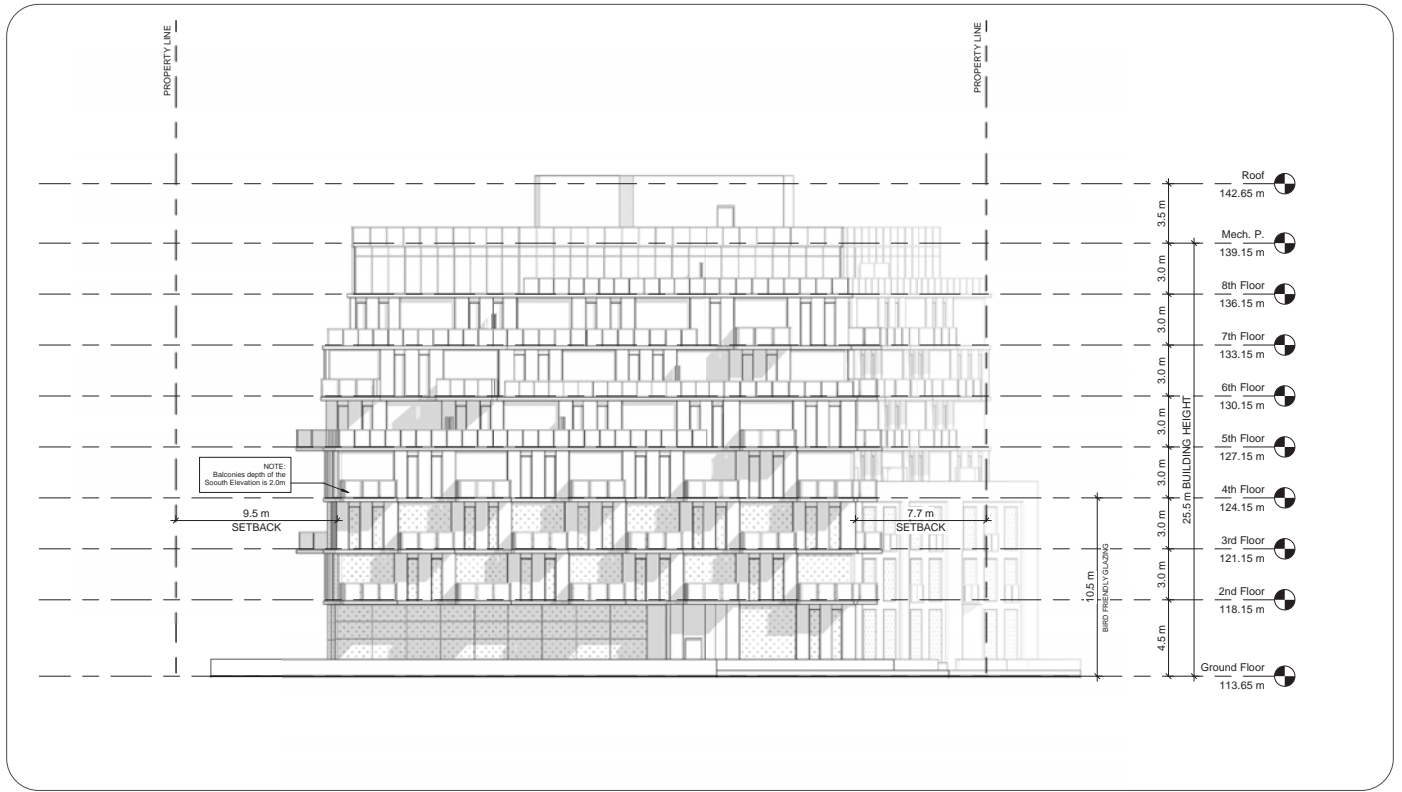


Figure 16: West Elevation, prepared by KFA Architects + Partners Inc.

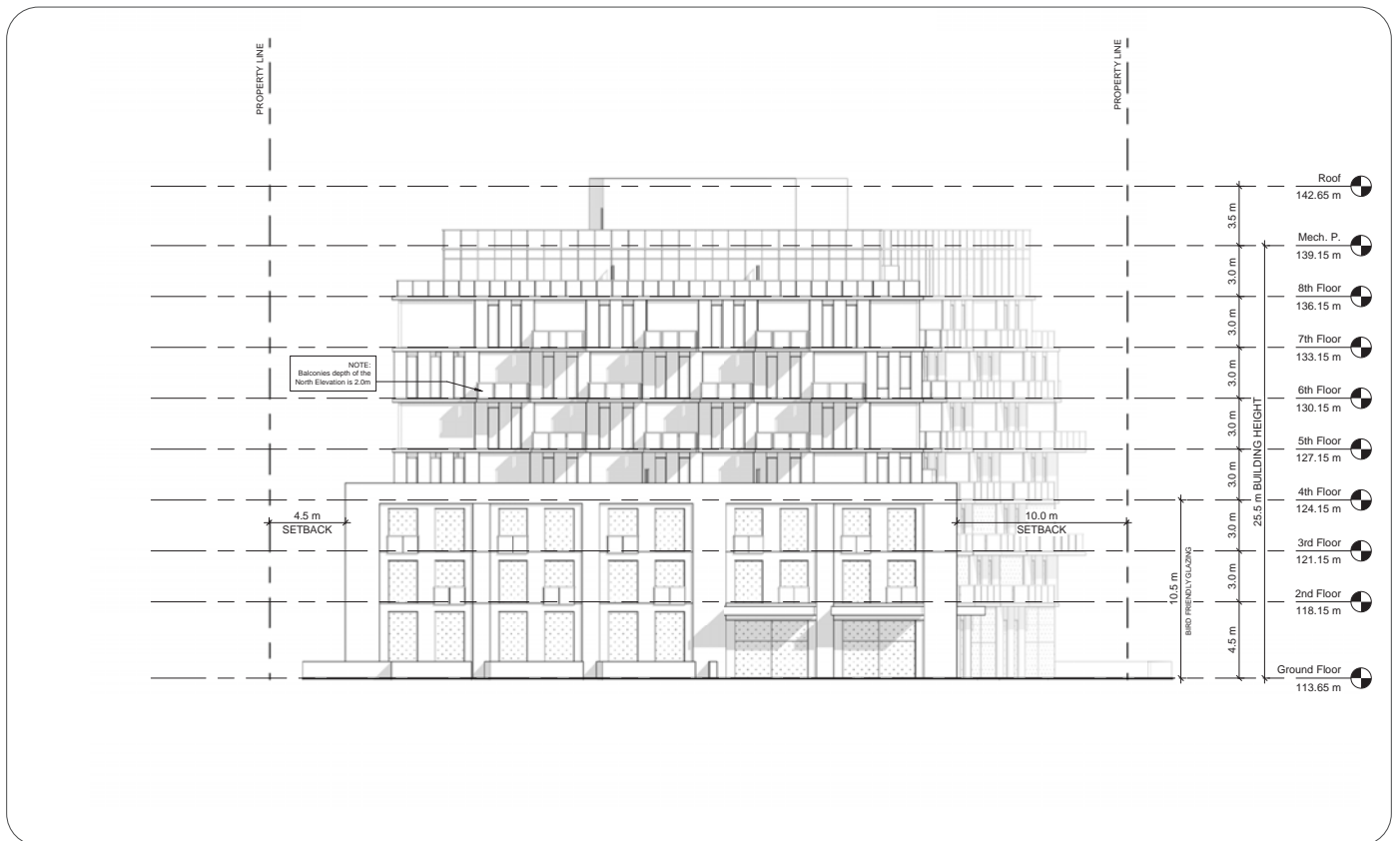


Figure 17: East Elevation, prepared by KFA Architects + Partners Inc.

2.3 AMENITY & LANDSCAPE

Overview

A Landscape Plan has been prepared by MSLA Landscape Architects to illustrate potential planting and programming strategies for outdoor and amenity spaces on site. The proposed development includes both indoor and outdoor amenity space for residential use. A paved outdoor amenity space is located at the northwest corner of the site at grade, an area of 100.0m². A further outdoor amenity area is located on the rooftop of the 8 storey building, an area of 450.0m². The indoor space may be programmed to consist of a gym, party room and theatre room. The rooms are proposed to be 230.0m² and 106.0m² in size. The amenity space provision has been calculated according to a ratio of 5.9m² per unit, an increase from the required 5.6m² per unit. The total amenity space provision proposed on site [indoor and outdoor], is 880.0m².

Planting

Setbacks provide for extensive landscaping at grade. The total landscaped area occupies 54% of the total site area, consisting of soft landscaping and planting [912.0m²], hard landscaping [760.0m²], and a green roof at the mechanical penthouse level [466.0m²].

The west landscape buffer will incorporate a large planting bed, with a variety of deciduous trees, shrubs and perennials, and other coniferous plants. The rear yard setback will accommodate deciduous tree planting, extending into the north and south setback areas. Deep planting beds frame the southern site perimeter, framing private at-grade patios and the pergola-covered amenity area. Street trees will front the building along Kirwin Avenue.

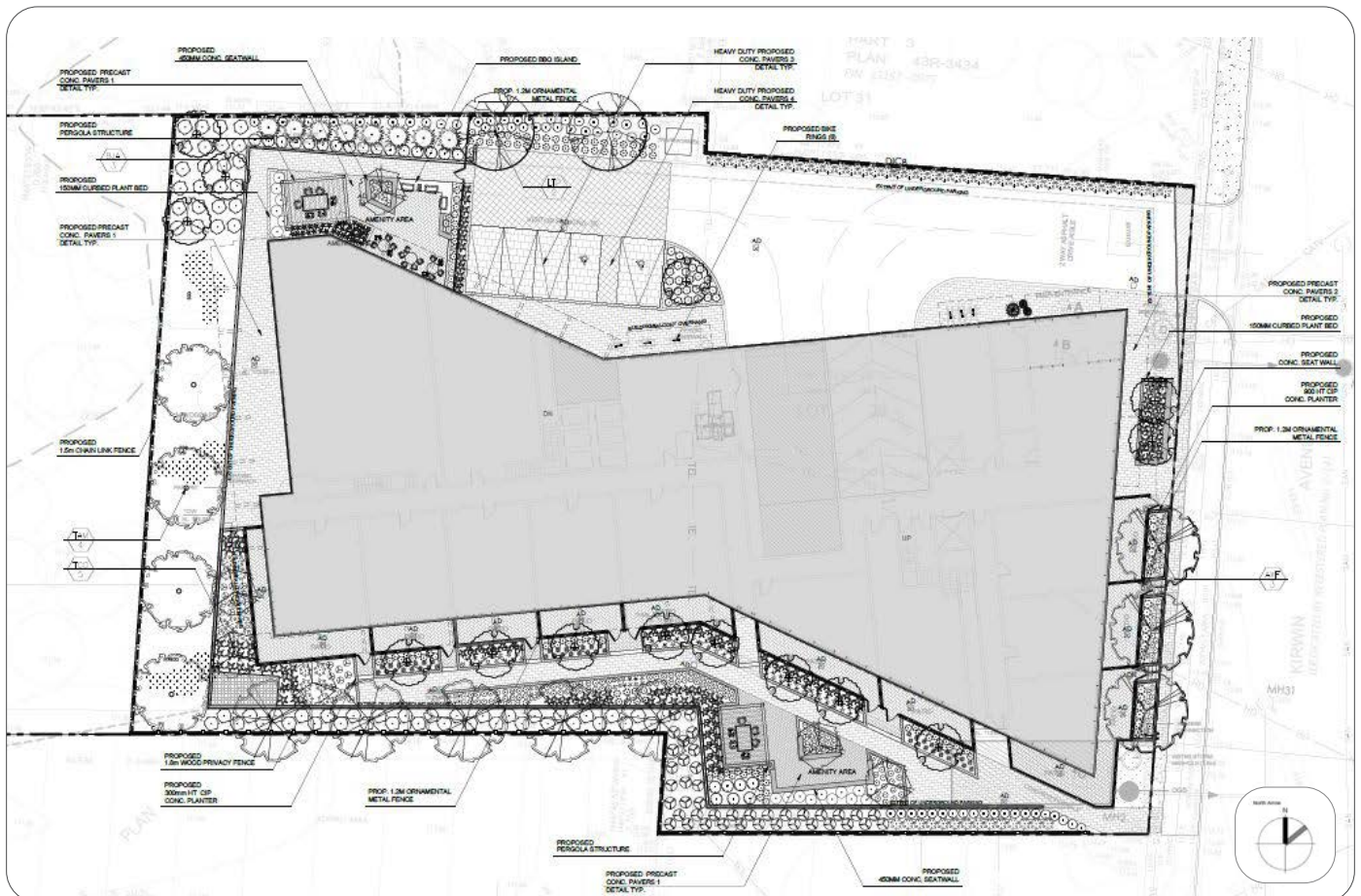


Figure 18: Landscape Plan, provided by MSLA Architects

Low planting will continue to frame the building near to the primary entrance, in conjunction with concrete planters for seasonal variety. The range and scale of proposed plant species is appropriate to their location on site, providing privacy and transitional foliage to adjacent open space where suitable.

A revised Arborist Report was prepared by Beacon Environmental in March of 2021 to reflect the proposed Site Plan, Grading Plan and Landscape Plan. The Report outlines recommendations for tree preservation, including outlining Tree Protection Zones. A total of 228 trees were inventoried and assessed as part of the Report. A total of 150 trees are located outside the development impact zone, and have been identified

for future preservation. The Report outlines that it will be necessary for the removal of 84 trees to facilitate the proposed development, 62 on-site, and 16 off-site along the site perimeter, with 13 of these associated with the John C. Price municipal park. The Landscape Plan provides a suggested Plant Materials List which includes 17 deciduous trees and 7 coniferous trees for potential planting on site.

Green Development Standards

The GDS provides guidance to encourage the application of Low Impact Development strategies for new construction. The following standards have been addressed by the landscape proposal:

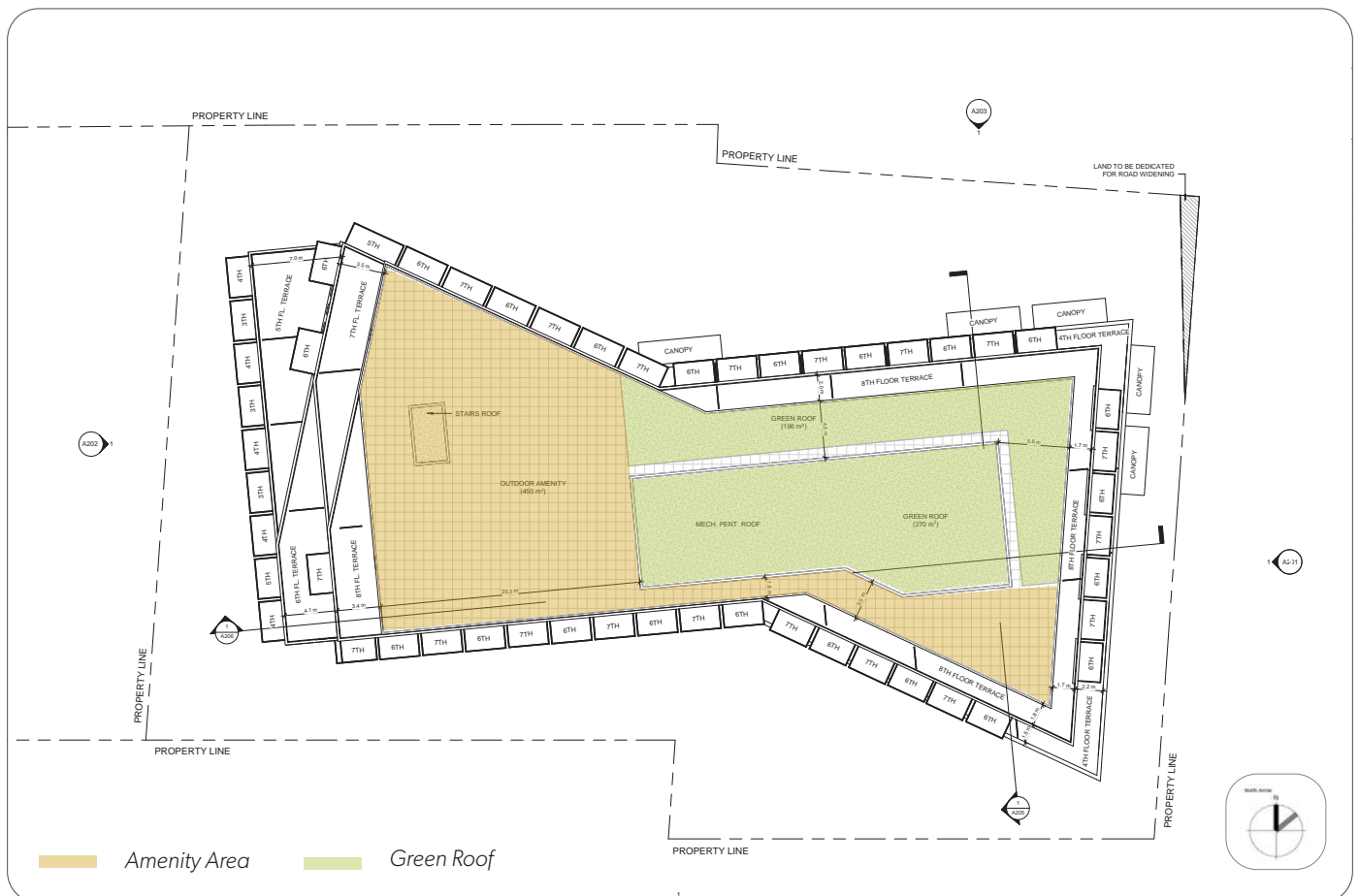


Figure 19: Roof Plan showing rooftop amenity and green roof of mechanical penthouse, prepared by KFA Architects + Partners Inc.

3.3 Permeable Pavement

The use of permeable paving will be considered for walkways and other hardscaped zones within the site. Permeable interlocking concrete paving, pervious concrete or porous asphalt are potential considerations.

3.4 Grass and Dry Swales

Vegetated areas which include the planting of grasses are included in the Suggested Plant Material List. These consist of several species of ornamental grasses, generally located near to the site perimeter and adjacent to residential amenity areas.

3.5 Green Roofs

A green roof is proposed on the mechanical penthouse level. The planting area occupies the northeast corner of the rooftop, framing the building edge. The rooftop of the mechanical penthouse will also support a green roof.

Green roofs improve the energy efficiency of buildings, support stormwater absorption and reduce the urban heat island effect. The green roof will provide additional visual amenity for the rooftop terrace accessible to residents.

4.2 Native Vegetation

The selection of native plant species will be proposed, where feasible.

5.1 Pedestrian Walkways

The design of the pedestrian walkways on the site are universally accessible, barrier free and maintain clear sightlines. Trees are located alongside walkways to provide shelter and shade.

5.3 Bicycle Parking

Over 50% of all bicycle parking is provided on Level P1, in secure, weather protected areas.



Figure 20: Precedent: Green Roof and Amenity



Figure 22: Precedent: Permeable Walkway Treatment



Figure 21: Precedent: Deciduous Tree Planting, White Birch

2.4 POLICY CONTEXT

2.4.1 MISSISSAUGA OFFICIAL PLAN

The MOP was most recently consolidated in November of 2019. It is currently undergoing a Municipal Comprehensive Review in order to meet the updated residential and employment intensification targets of the Provincial Policy Statement and the Growth Plan. This is anticipated to be completed by 2021. In consideration of the current status of the MOP, the policies outlined in the following discussion have relevance to the proposed development.

Section 5 of the MOP provides policy direction as it relates to growth management to appropriately direct growth and intensification within the City. The proposed development is considered a form of infill intensification and should be directed towards intensification areas as indicated in Section 5.1.4. The proposed development provides a high density, compact form of development within a mid-rise building that is transit supportive. This is due to its location in the vicinity of two major transportation corridors in-line with Section 5.1.6 of the MOP. The proposed development respects and achieves the following objectives for growth:

MOP Policy 9.1

The proposed development represents a compatible form of infill development, suited to the existing underutilized site condition. The site is also in a prime location near to a significant intersection. The character of the area will be strengthened by the proposal which seeks to revitalize the lands and diversify local building forms.

MOP Policy 9.1.2

The proposed development is both transit supportive and promotes active transportation through achieving a high-degree of connectivity attained through bicycle parking facilities, interconnected walkways and direct links to existing public sidewalks.

MOP Policy 9.1.7

The proposed site design is predicated on the protection and preservation of the surrounding natural heritage system. Appropriate setbacks preserve the setting of adjacent parks and open space.

MOP Policy 9.2

The development promotes a sustainable city pattern supporting complete communities, supporting Provincially Policy strategy and emerging MOP updates.

MOP Policy 9.2.1.1

The development seeks to create a distinctive landmark within an area outlined for intensification. High-quality and engaging architectural design will help define a visual character for the site, visible from the nearby major intersection.

MOP Policy 9.2.1.2

The unique form of the proposal will help to stimulate vibrancy within the wider area, while retaining a sensitivity to surrounding existing built form, enabling neighbouring properties to develop independently.

MOP Policy 9.2.1.3

Distinctive materiality at the primary frontage and massing strategies to reinforce the streetscape will help promote the significance of the intensification area.

MOP Policy 9.2.1.6

The lands have been assembled in a manner which creates an efficient development parcel, encouraging the consolidation of access along Kirwin Avenue. The configuration of the lands supports a built form which frames the neighbouring parkland, helping to identify entrance and egress points.

MOP Policy 9.2.1.22

The development directly faces the street and ensures all linkages are directly connected to the public sidewalk from main building entrances. This facilitates ease of access between active areas such as the lobby and transit facilities. This improves the integration of pedestrian and cycling routes.

MOP Policy 9.2.1.26

Windows facing directly onto Kirwin Avenue at grade consist of extensive glazing. This maximizes the interaction between the building and public realm.

MOP Policy 9.2.1.27

The height and massing of the proposed development establishes its role in creating a 'gateway', transitioning into areas outlined for intensification along Dundas Street.

MOP Policy 9.2.1.28

The primary frontage of the proposed building is integrated with the street line along Kirwin Avenue, providing compatible setbacks to expand the pedestrian realm. The massing of the townhouse frontage further supports appropriate scaling.

MOP Policy 9.2.1.32

The building utilizes innovative articulations to retain an overall envelope that corresponds with the site configuration. This ensures that the east elevation directly faces the street and clearly defines the transition from public to private space via prominent access points to the building.

MOP Policy 9.2.1.33

The ingenuity of the building form establishes a sense of enclosure around outdoor amenity areas, promoting social interaction.

MOP Policy 9.5.1.2

The following discussion related to how the proposed development has regard to the following:

- a. *Natural Heritage System;*
- b. *natural hazards (flooding and erosion);*
- c. *natural and cultural heritage features;*
- d. *street and block patterns;*
- e. *the size and configuration of properties along a street, including lot frontages and areas;*
- f. *continuity and enhancement of streetscapes;*
- g. *the size and distribution of building mass and height;*
- h. *front, side and rear yards;*
- i. *the orientation of buildings, structures and landscapes on a property;*
- j. *views, sunlight and wind conditions;*
- k. *the local vernacular and architectural character as represented by the rhythm, textures and building materials;*
- l. *privacy and overlook; and*
- m. *the function and use of buildings, structures and landscapes.*

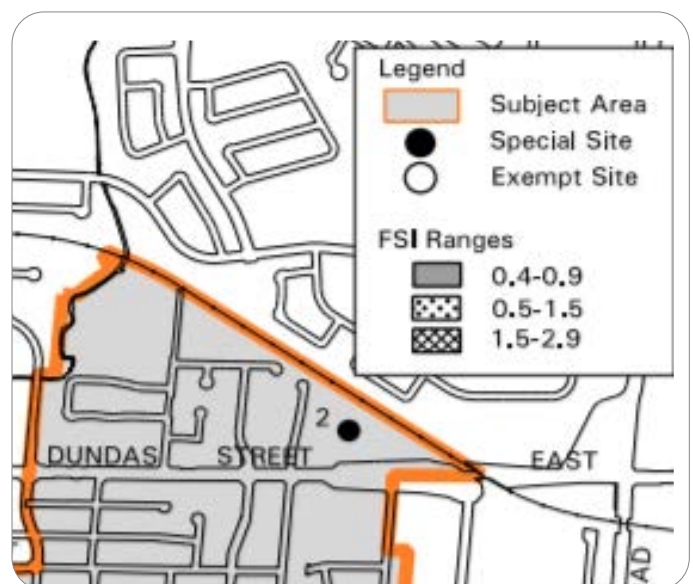


Figure 23: Excerpt from Cooksville Neighbourhood Study Area, Chapter 16 Neighbourhoods, MOP

MOP Policy 9.5.1.7

As a development located adjacent to parkland, the design will complement the open space and minimize negative effects through appropriate massing, step backs and overall articulation. The compact, self-contained nature of the design ensures the existing functionality of the open space is preserved.

MOP Policy 9.5.1.9

The development ensures that adequate privacy, sunlight access and sky view are maintained by establishing appropriate built form transitions. See the Pedestrian Wind Comfort and Safety Study and the Shadow Study summaries in Section 2.5 of this Brief.

MOP Policy 9.5.2.2

The Site Plan provides walkways that are connected to the public sidewalk. These will be clearly visible and unobstructed. Details of illumination and lighting will be outlined at future design phases. Main, shared entrances and private entrances incorporate opportunities for weather protection.

MOP Policy 9.5.2.4

Kirwin Avenue is designated as a *Major Collector*, with a ROW of 26m. Dundas Street East has a ROW of 35m, as per the prescribed width for *Arterial* roads. As such, several townhouse entrances are oriented towards the main street frontage, with the vehicular access point located at the north of the site along Kirwin Avenue, where several single family home driveways are currently located.

MOP Policy 9.5.2.7

Where appropriate, the development respects existing grades on site and incorporates best practice in storm water management.

MOP Policy 9.5.2.11

The development of the site will provide enhanced hard and soft landscaping to improve the streetscape experience. Non-invasive plant species are prioritized in the landscape design. In addition, planting is designed to complement the existing open space adjacent. This will significantly 'beautify' the site to augment the building form and establish a strong character for the area.

MOP Policy 9.5.3.10

The lower portion of the primary facade of the building is articulated in a manner which maintains a strong relationship with grade to support a pedestrian oriented environment.

MOP Policy 9.5.4.1

The building alignment and siting within the lands establish a desirable street edge condition.

MOP Policy 9.5.4.2

Appropriate setbacks and sidewalk connections help to develop an attractive and comfortable public realm, drawing activity in from Dundas Street East.

MOP Policy 9.5.5

Parking is located underground, screening vehicular activity from public view. Landscape buffering is provided to the north edge of the side, adjacent to the entry/exit driveway and access to the underground parking ramp. Entrances to loading areas are consolidated within the building envelope, near to the entryway to underground parking, increasing circulation efficiency. Secure, short-term bike parking is provided at the Kirwin Avenue frontage.

MOP Policy 9.5.6

Built form design should enhance pedestrian perception of safety. The site layout and building configuration is designed to promote Crime Prevention Through Environmental Design principles [CPTED], using the following methods:

2.4.2 CPTED PRINCIPLES

- A high degree of glazing is utilized throughout the building elevations to maximize natural surveillance. All pedestrian walkways are located near to building frontages and entrances, which will be illuminated.
- 'Entrapment areas' are avoided through the clear delineation of entrances and egress points, visible from the public realm. This is achieved through a staggered building facade to maintain sightlines. See Section 2.4.2 for further details.

MOP Policy 9.5.7

Appropriate signage will be placed throughout the site to delineate residential lobby areas, drop-off areas, and providing wayfinding for vehicular circulation.

MOP Policy 16.6 Cooksville: 16.6.2 Urban Design

Although the site lies just outside the subject area for the Cooksville Neighbourhood Study, certain urban design principles apply to the east side of Kirwin Avenue adjacent to the site frontage. The manner in which this area develops poses design considerations for the site. They are addressed through the following:

MOP Policy 16.6.2.1

The proposed development offers a transitional scale and density in an area within close proximity to Dundas Street East. This will support an incremental transition to the surrounding Character Area where a greater intensity of mixed-use development is to occur.

MOP Policy 16.6.3.1

A portion of the site is located within the floodplain associated with the Cooksville Creek, west of the property. The net developable area proposed will be entirely contained within an area previously evaluated and approved for development by the City in cooperation with the CVCA. As such, the two levels of proposed enclosed underground parking consider flood proofing measures and are designed in accordance with regulatory flood levels.

The City of Mississauga has prepared a guidance document outlining Crime Prevention Through Environmental Design Principles, January 2014 update [CPTED]. The key objectives of the guidelines is to provide principles and strategies to help create a safer and more livable City, engaging awareness of safety issues associated with urban environments. The following Design Strategies have been considered in the proposed design:

3.1 Natural Surveillance

The siting and orientation of buildings is critical to the optimization of natural surveillance opportunities to improve on-site safety. This includes promoting clear lines of sight from windows, doors and amenity areas, directing access so that potential intruders are observable, and ensuring that the site programming is legible. As such, walkways on site are designed with a clear circulation pattern, maintaining visibility of the public realm where possible and ensuring that an active visual relationship is maintained with the neighbouring park.

3.2 Natural Access Control

The layout of the site is designed for the easy transition of pedestrians around the building. Walkways are well-defined by landscaping and furniture treatments. The number of entry points to internal pedestrian pathways are limited to Kirwin Avenue, encouraging safe and limited access.

3.3 Territorial Reinforcement

Setbacks and landscape buffers provide a clear transition between spaces with different programming at grade, particularly between public to semi-public spaces, and private unit entrances. Although the site circulation is compact and self-contained, the broad interface with Kirwin Avenue ensures that the site is visually and physically integrated within the neighbourhood system.

2.5 SUPPORTING STUDIES

2.5.1 PEDESTRIAN WIND COMFORT AND SAFETY STUDY

A Preliminary Pedestrian Level Wind Study was undertaken by Theakston Environmental in February 2021. The study responds to criteria within the Pedestrian Wind Comfort and Safety Studies terms of reference [TOR 2014] set out by the City. The report finds wind conditions on and around the proposed development site are generally suitable for pedestrians in its current condition. The study concludes that with the inclusion of the proposed mid-rise building, pedestrian comfort will remain suitable, with several localized areas experiencing improved comfort conditions. This is due to the articulation of the building which *shelter[s] leeward areas that are currently exposed to dominant wind directions*. As such, the orientation and massing of the building can be generally seen to mitigate negative wind impacts for pedestrians. The report recommends further mitigation measures to improve the comfort of residents accessing the rooftop amenity space. For the full discussion, please see the study filed as part of these submissions under separate cover.

The proposed built form considers the following criteria contained within Section 4.2 *General Design Strategies for Wind Mitigation* in the Mississauga TOR for Pedestrian Wind Studies:

- Tall, wide building facades are avoided through the varied articulation of form.
- The ground floor is recessed to deflect downward wind flow and protect pedestrians as they enter and exit the building.
- The rooftop and base of the building accommodates landscaping to reduce wind impacts.
- The overall height and separation distance of the building from neighbouring properties ensures that the “wind canyon effect” is negated.

2.5.2 SHADOW STUDY

A Shadow Study was prepared by Weston Consulting in January 2021 to illustrate the shadow impacts for the proposed development. The Study was prepared according to the Mississauga Urban Design Terms of Reference for Shadow Studies [2014].

It has been demonstrated that the proposed height and massing of the building will not cause negative impacts upon sensitive surrounding areas. The Study includes an assessment of building impacts upon the public realm, residential private outdoor amenity space, communal outdoor amenity areas, turf and flower gardens, and upon building faces to allow for the possibility of using solar energy. The Criteria outlined in the Terms of Reference have been broadly met.

2.5.3 ENVIRONMENTAL NOISE FEASIBILITY STUDY

An Environmental Noise Feasibility Study was prepared in December 2020 by Acoustics Canada to assess potential sounds levels of the proposed development. This includes how the design of the building mitigates and isolates sounds from local sources, such as traffic. Other local noise sources include the commercial plaza at 99-131, and 157 Dundas Street East, and auto shop at 135 Dundas Street East located directly south of the site. The report further outlined design recommendations for establishing a suitable acoustic environment. The report concludes that the development is considered feasible, and will provide a good environment for occupants. Mitigation measures are recommended for noise generated from 99-131 Dundas Street East. The report notes that detailed mitigation strategies should be determined as part of future submissions. For the full discussion, please see the report filed as part of these submissions under separate cover.

2.5.4 PHASE II ENVIRONMENTAL SITE ASSESSMENT

An Environmental Assessment [ESA] was undertaken for the site by Azure Group Inc., in January 2021, following the previously prepared Phase One Environmental Site Assessment [Revised], and a Phase Two Environmental Site Assessment, Vacant Property, prepared by OHE Consultation in October 2017. The Phase Two Assessment is intended to investigate the Areas of Potential Environmental Concerns [APECS's] identified in the previous Phase One reports, assessing surficial and subsurface soil and groundwater conditions on the site.

The report investigates 3 APECS's near to the site: [1] potential impact from fill materials related to previous building structures; [2] potential impact from the dry cleaner located at 131 Dundas Street [3] potential impact from the auto service garage located at 135 Dundas Street East. The Phase Two ESA concludes that the site is suitable for the proposed development. For full details of these investigations, see the report submitted with these applications, filed under separate cover.

2.5.5 FUNCTIONAL SERVICING & STORMWATER MANAGEMENT REPORT

A Functional Servicing [FSR] and Stormwater Management Report [SWM] was prepared by LEA Consulting Ltd in March 2021. The report examines the potential water quality and water quantity impacts of the proposed development, and addresses impacts against City of Mississauga and Credit Valley Conservation [CVC] requirements. The report additionally reviews existing water supply, storm, sanitary services and proposes a site servicing plan.

The Stormwater Management Plan indicates that under current conditions, there are no existing on-site stormwater management facilities. On-site storage will be provided in the underground cistern and bio-swale. An on-site storage tank will be provided to control post-development 100-year stormwater flows to 2-year pre-development levels. In addition, a stormwater quality treatment facility is recommended to satisfy City requirements. Temporary erosion and sediment control measures will be provided before construction and maintained during construction following CVC management criteria.

3

CONCLUSIONS

The proposed development is considered to be a suitable response to the local context, adjacent uses and the site configuration itself as a result of parcel consolidation. The proposal respects the evolving urban hierarchy of Mississauga, in-line with provincial policy direction to deliver desirable density and built form in areas outlined for intensification. As such, the proposal is considered highly suited to its location within an Urban Growth Centre, adjacent to a Priority Transit Corridor and within close proximity of a Transportation Mobility Hub and the Cooksville GO Transit Station. The proposed development is an example of high-quality, compact infill development. The building and landscape design are context sensitive, and encourage activity related to their proximity to Dundas Street.

The viability and suitability of the proposed building for the location and scale of the site is supported by supplementary reports and studies undertaken as part of these applications. It has been demonstrated that the building will not pose negative impacts on the surrounding environment, and proposes a scheme which is innovative yet compatible. This compatibility extends to the natural environment and low-rise built forms adjacent to the site. Amenity and the promotion of active transit links will support the health and wellbeing of new residents. It can be concluded that the proposed development will make a positive contribution to the neighbourhood character and support the intensification strategy within Mississauga.



WESTON
CONSULTING

