

PO Box 1749 Halifax, Nova Scotia B3J 3A5 Canada

MEMORANDUM

TO: Chair and Members of the Design Advisory Committee
FROM: Sean Audas, Principal Planner & Development Officer, Current Planning
DATE: March 10, 2021
SUBJECT: Case # 23203: Level II Site Plan Approval Application for 186-190 Portland St, Dartmouth, N.S.

Background:

The applicant has submitted a Level II Site Plan Approval under the <u>Regional Centre Land Use Bylaw</u> (LUB) for three properties located at 186, 188, and 190 Portland St, Dartmouth, N.S. (PIDs #00114389, # 00114397, #00114405). A pre-application has been completed and the proposal has been deemed compliant with the requirements of the LUB.

The applicant is seeking a recommendation from the Design Advisory Committee on the design requirements, as required by the LUB. Public consultation has not yet been completed for this project.

Existing Use: 186 and 188 Portland St are formerly parking lots to support Moffatt's Pharmacy (184

Portland St) and South Vaccuum Rebuilders (190 Portland Street). 190 Portland St is formerly a commercial and low-density residential building. The abutting lots on either side contain more parking lots and a vacant lot (192 Portland St) where there was formerly a low-density residential building. Directly across the street is St. James Church, St. James Church Hall, and three more vacant lots, two of which are presently used as another parking lot.

Zoning: D (Downtown) under the Regional Centre Land Use Bylaw.

Proposal:

The proposal before the Committee is for a 7-storey, 37-unit residential building with one level of commercial space and two levels of parking. The proposed building is classified as a tall mid-rise building under the LUB (20-26 metres in height).

Input Requested from Design Advisory Committee:

In accordance with the requirements of the LUB and the Terms of Reference for the Design Advisory Committee, the Committee is being asked to provide a recommendation to the Development Officer regarding the design requirements of Part VI. No variations have been requested. The following chapters of Part VI are relevant to this proposal:

Current Planning - Planning & Development

Chapter 1: General Site Plan Approval Design Requirements	Chapter 1 sets out the requirement for site plan approval. There are no criteria to be satisfied.
Chapter 2: At-Grade Private Open Space Design Requirements	 The Landscape Plan and the Site Plan illustrate the design requirements of this chapter. The site will contain at-grade private open space at the front of the building, along Portland St. This space will abut an existing public sidewalk. The required 2 metre-wide connection for pedestrian access has been provided along the abutting sidewalk. The at-grade private open space incorporates barrier-free access and permanent seating. The proposed groundcover is pavers. The proposed weather protection is a cantilever over the main residential entrance.
Chapter 3: Building Design Requirements	 The Elevation Drawings and Building Renderings illustrate the design requirements of this Chapter. Streetwall articulation has been provided using change in colours, materials, projections and recesses. Pedestrian entrances are distinguished using changes in materials, and projections and recesses. The ground floor commercial unit has clear glass glazing along the street wall between the required 50%-80%. Weather protection has been provided for the building entrance through canopied entrances. Exposed foundation/underground parking has cladding consistent with the exterior façade. Building top distinction is accomplished with a change in materials and a recessed seventh (top) floor. Rooftop mechanical features are visually integrated into the design of the building and concealed from the public view at the streetline.
Chapter 4: Parking, Access, and Utilities Design Requirements	 A pedestrian connection connects the public sidewalk to the at-grade private open space on the site. The motor vehicle parking is internal to the building and its access is not proposed in the streetwall. Utility features are enclosed within a projection or recess or hidden with opaque screening.
Chapter 5: Heritage Conservation Design Requirements	 Not applicable – the subject property is not a heritage property and is not within a heritage conservation district.
Chapter 6: Other Design Requirements	 Building entrances, walkways and at-grade private open spaces will be illuminated. The subject site is not a View Terminus Site.
Chapter 7: Variation Criteria	- No variations have been proposed.

Any recommendations made by the Committee will be considered by the Development Officer prior to approval or refusal of the Site Plan Approval application. Any changes to the building informed by the recommendation of the Committee must meet the requirements of the Land Use Bylaw.

Current Planning – Planning & Development

Attachments:

Please refer to the digital building plans package for all renderings, floor plans, landscaping, and design rationale.





SITE SUMMARY:

• Existing Zone: D

Site Boundary - - - Adjacent Property Boundary Existing Internal Boundary







PROJECT NO. 20-026

Designer: K.WATTERS Planner: C.WALLACE





SHEET: 11x17 Bwb. A01 SILE



Zwicker Zareski architecture +

planning

1 Canal Street Dartmouth NS B2Y 2W1 ZZap.ca

•••

Portland & Canal Street, Dartmouth, NS

LANDSCAPE A			
3008 Oxford Street Sulle 203 Halifax, Nova Scotla Canada B3L 2WS	Tel 902 422 6514 Fax 902 425 0402 Info@vollickmckee.com www.vollickmckee.com	0 5 Scale: 1 250	



LE	GEND
+148.19	EXISTING ELEVATION
_[10.15] TC/BC	TOP OF CURB/ BOTTOM OF CURB
С9.10_СВ/МН	CATCH BASIN/MANHOLE
	LOCAL HIGH POINT/ LOCAL LOW POINT
~~~>	DRAIN ARROW
S	NEW DECIDUOUS TREE
$\sim$	PLANTING
RD	ROOF DRAIN
[	BIKE RACK
	METAL FENCE
	PROPERTY BOUNDARY



# DING

## PROJECT NO. 20-026

Drawn by: SLI & AEM Checked: ISSUED FOR SITE PLAN APPROVAL Date: DECEMBER 17 2020

L01











Drawn by: SLI & AEM Checked: ISSUED FOR SITE PLAN APPROVAL DECEMBER 17 2020 Date:

L02





SCHEDULE					
	SIZE	CONDITION	SPACING	STAKING	REMARKS
	100cm	CG#5	As shown	-	<u> </u>
	40cm	CG#3	0.9m o.c.	-	<u></u>
	80cm	CG#3	1.0m o.c.	-	
	80cm	CG#3	1.2m o.c.		
	80cm	CG#3	1.0m o.c.	-	
ron	60cm	CG#3	1.0m o.c.	-	
Rose	60cm	CG#3	1.0m o.c.	-	
	60cm	CG#3	0.9m o.c.	2003	
	80cm	CG#3	1.0m o.c.	378	10013
	80cm	CG#3	1.2m o.c.	June, A	<u>.</u>
5	80cm	CG#3	0.8m o.c.		
	30cm	CG#2	0.5m o.c.		<u></u>
e unle	SS WRITTEN	PERMISSION HA	S BEEN OBTAI	NED FOR SPECI	es / variety,



Drawn by: SLI & AEM Checked: ISSUED FOR SITE PLAN APPROVAL DECEMBER 17 2020 Date:













Drawn by: SLI & AEM Checked: ISSUED FOR SITE PLAN APPROVAL DECEMBER 17 2020 Date:

L04



M **SITEWORKS L7 - PLANTING PLAN** Zwicker Vollick McKee Petersmann **MOFFAT'S DEVELOPMENT - PHASE I** Zareski / Lap LANDSCAPE ARCHITECTURE SITE PLANNING PROJECT MANAGEMENT architecture + Portland & Canal Street, Dartmouth, NS 3008 Oxford Street Sulte 203 Halifax, Nova Scotla Canada B3L 2W5 Tel 902 422 6514 Fax 902 425 0402 Info@vollckmckee.com www.vollckmckee.com planning Scale: 1 250 1 Canal Street Dartmouth NS B2Y 2W1 ZZap.ca







## PROJECT NO. 20-026

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L05











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SLI & AEM Drawn by: Checked: ISSUED FOR DECEMBER 17 2020 Date:



LOT AREA	FAR	GFA ABOVE GROUND	RENTABLE	UNIT #		PARKING OUTDOOR
912 m2 \ 9,816 SF	3.8	37,730 SF	31,130 SF	37	29	

$\frac{4m}{P} = \frac{ROOF}{ROOF} =$ $\frac{8m}{8m} = \frac{LVL}{ROOF} =$ $\frac{18m}{P} = \frac{LVL}{6} =$ $\frac{19m}{P} = \frac{LVL}{5} =$ $\frac{9m}{P} = \frac{LVL}{5} =$	9'-6" 9'-6" 13'-8"	RESIDENTIAL RESIDENTIAL RESIDENTIAL		LVL 7 LVL 6 LVL 5	GFA \ SF 2,880 5,620 5,620	RENTABLE \SF           2,360           4,980	AMENITY	UNIT COUNT 2 7	В - 1	1 BR - 4	<b>2 BR</b> 2 2
		RESIDENTIAL RESIDENTIAL		LVL 6	5,620						
^{18m} \$ <u>LVL_6_</u>	,6 ,6,	RESIDENTIAL		÷		4,980		7	1	4	2
9 ^m • <u>LVL</u> <u>-</u> _				LVL 5	5 400						
⁹ m∳- <u>LVL</u> 4	.,9-,6	DECIDENTIAL	PS 2277 S 2.5	13	5,620	4,980		7	1	4	2
Ť	·	RESIDENTIAL	· _ · _ ·	LVL 4	5,620	4,980		7	1	4	2
9m <u>LVL 3</u>	,	RESIDENTIAL		LVL 3	5,620	4,980		7	1	4	2
5mLVL_2	"8-,6	RESIDENTIAL		LVL 2	6,240	5,620		7		5	2
⁺™ 🛧 LVL G	13'-8"	COMMERCIAL \ AMENITY		LVL G	6,130	3,280	1,570	-	-	-	-
Υ 6m⊥ IVIP1	11'-0"	12 PARKING STALLS		LVL P1	6,110				4	21	12
Ψ	10'-0"	17 PARKING STALLS		LVL M2	7,250				11%	51%	32%
φ	к —										
+1	^m ∳ <u>LVL</u> 2	m ← _ LVL 2	RESIDENTIAL RESIDENTIAL COMMERCIAL \ AMENITY LVL G LVL P1 12 PARKING STALLS 17 PARKING STALLS	RESIDENTIAL	model     LVL 3	mode       LVL 3       RESIDENTIAL       LVL 2       6,240         mode       LVL 2       6,130       LVL G       6,130         mode       LVL 9       LVL 9       12 PARKING STALLS       LVL P1       6,110         LVL P1       12 PARKING STALLS       LVL P2       7,250         17 PARKING STALLS       17 PARKING STALLS       LVL P2       7,250	Imp     LVL 3       mp     LVL 2       mp     LVL 2       mp     LVL 2       mp     LVL 6         mp     LVL P1         12 PARKING STALLS         17 PARKING STALLS         17 PARKING STALLS	Imp     LVL 3       mo     LVL 2       mo     LVL 6       mo     LVL 9       mo     LVL 91       mo     LVL 91       mo     LVL 91       mo     LVL 92       mo     17 PARKING STALLS	Imp     LVL 2     No     RESIDENTIAL       Imp     LVL 2     6.240     5.620     7       Imp     LVL 6     6.130     3.280     1.570     -       Imp     LVL P1     12 PARKING STALLS     LVL P1     6.110       IVL P1     17 PARKING STALLS     17 PARKING STALLS     LVL P2     7.250	Imp     LVL 2     RESIDENTIAL       Imp     LVL 2     6,240     5,620     7     -       Imp     LVL 6     6,130     3,280     1,570     -     -       Imp     LVL 9     12 PARKING STALLS     LVL 9     10     4       IVL 9     17 PARKING STALLS     17 PARKING STALLS     11%	LVL 2       12       6.240       5.620       7       -       5         LVL 2       6.240       5.620       7       -       5         LVL 2       6.130       3.280       1.570       -       -         LVL 6       12 PARKING STALLS       LVL P1       6.110       4       21         LVL P1       11       12 PARKING STALLS       LVL P2       7.250       11%       57%



AMENITY SPACE PROVIDED 1,570 SF - INDOOR & 1,430 SF - OUTDOOR

BIKE PARKING CLASS A - 15 & CLASS B - 4 & 2







Portland & Canal Street, Dartmouth, NS



1Canal Street, Dartmouth, NS B2Y 2W1 | ZZap.ca

## EXTERIOR MATERIALS LEGEND

- 1 MASONRY VENNEER TYPE I
- 2 MASONRY VENNEER TYPE II
- 3 ALUMINUM CURTAIN WALL
- HIGH TRANSPARENCY GLAZING
- PREFINISHED ENGINEERED CLADDING A
- 6 PREFINISHED ENGINEERED CLADDING B
- PREFINISHED ENGINEERED CLADDING C
- 8 ALUMINUM FRAMED GLASS GUARD





BUILDING ELEVATIONS

40'









	EXTERIOR MATERIALS LEGEND
1	MASONRY VENNEER
2	stone veneer
3	ALUMINUM CURTAIN WALL
4	HIGH TRANSPARENCY GLAZING
5	PREFINISHED ENGINEERED CLADDING - A
6	PREFINISHED ENGINEERED CLADDING - B
7	PREFINISHED ENGINEERED CLADDING - C
8	ALUMINUM FRAMED GLASS GUARD
9	PVC WINDOW
10	PATIO DOOR
11	ARCHITECTURAL CONCRETE







	EXTERIOR MATERIALS LEGEND
1	MASONRY VENNEER
2	STONE VENEER
3	ALUMINUM CURTAIN WALL
4	HIGH TRANSPARENCY GLAZING
5	PREFINISHED ENGINEERED CLADDING - A
6	PREFINISHED ENGINEERED CLADDING - B
7	PREFINISHED ENGINEERED CLADDING - C
8	ALUMINUM FRAMED GLASS GUARD
9	PVC WINDOW
10	PATIO DOOR
11	ARCHITECTURAL CONCRETE





















Portland & Canal Street, Dartmouth, NS



PORTLAND STREET



**MOFFATT'S DEVELOPMENT - PHASE I** 

Portland & Canal Street, Dartmouth, NS



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PORTLAND STREET



# **MOFFATT'S DEVELOPMENT - PHASE I**

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PORTLAND STREET



**MOFFATT'S DEVELOPMENT - PHASE I** 

Portland & Canal Street, Dartmouth, NS











PORTLAND STREET



# **MOFFATT'S DEVELOPMENT - PHASE I**

Portland & Canal Street, Dartmouth, NS







PORTLAND STREET



# **MOFFATT'S DEVELOPMENT - PHASE I**

Portland & Canal Street, Dartmouth, NS





NOTE: THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH LANDSCAPE DESIGN DRAWINGS

PROJECT NO. 20-026 DRAWN BY: NVC

ISSUED FOR SPA - REV 1

DATE: Dec 18, 2020



40'





Portland & Canal Street, Dartmouth, NS

PORTLAND STREET PERSPECTIVE

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Portland & Canal Street, Dartmouth, NS

STREETSCAPE PERSPECTIVE

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Portland & Canal Street, Dartmouth, NS

PORTLAND STREET PERSPECTIVE NIGHTIME









Zwicker Zareski Architecture + Planning

1 Canal Street, Dartmouth NS B2Y 2W1

## SHADOW IMPACT STUDY: MOFFATT'S DEVELOPMENT PHASE I, Dartmouth, NS Application #: 23203

Submitted to:	Claire Tusz
	Planner I
	Land Development & Subdivision
	Halifax Regional Municipality
Submitted by:	Joe Zareski, M. Arch, MRAIC, NSAA
	Principal
	ZZap Consulting Inc.

This shadow study consists of the written report together with attached Shadow Study Diagram dated December 8, 2020.

Site latitude and longitude used for this study are based on the latitude and longitude of the Regional Centre as follows:

Latitude: 44° 39'50" N (44.6639° N) Longitude: 63° 35' 05" W (63.5847° W)

Time Zone: Atlantic Standard Time (UTC-03:00)

**Site Location:** The astronomic bearings of the site are shown on a plan of survey dated December 8, 2020, by SDMM Ltd.

## **Base Mapping:**

The background mapping was obtained from Opendata_HRM_Building Outlines, Opendata_HRM,_HRM Parks, Provincial property mapping.

This shadow study analysis is based on an assumed flat ground floor plane at elevation 26.71' (8.14m). Building heights relate to this datum.

## Test Date and Times:

The shadow test times between 8:00 am and 6:00 pm with 2-hour increments for September 21 been compiled into single drawing sheet to illustrate compliance with the shadow criteria.

## Shadow Criteria:

Shadow impact from proposed developments should not cause fewer than 6 hours of sunlight, and no more than 4 continuous of shade, on any portion of an area of Starr Park.

This criterion is met in such that shadows of proposed development do not reach the park in any study time.

## Joe Zareski, M. Arch, MRAIC, NSAA



Principal

ZZap Consulting Inc.







dated December 8, 2020, by SDMM Ltd.



Telephone: (519) 787-2910 Facsimile: (519) 787-2918 www.theakston.com spollock@theakston.com

September 30, 2020

# Preliminary Pedestrian Level Wind Study Portland Street & Canal Street – Phase I Dartmouth, Nova Scotia

**Theakston Project No. 20660** 

Submitted To:

Alec Chedrawe Anchor Group Management Ltd. 8 Anchor Drive, Suite 104 Halifax, Nova Scotia B3N 0C2

Submitted By:

Theakston Environmental Consulting Engineers 596 Glengarry Crescent Fergus, Ontario N1M 3E2

Stephen Pollock, P.Eng.

# **1. EXECUTIVE SUMMARY**

Based upon our analysis, wind conditions on and around the proposed Portland Street & Canal Street Phase I site are considered generally suitable for walking or better in winter and activities requiring longer exposures during the balance of the seasons, in the existing setting.

The Proposed Development is located in the City of Dartmouth, Nova Scotia, and occupies a portion of a block of land bounded by Portland Street to the north, Canal Street to the west, Maitland Street to the east, and the Dartmouth Cove of the Halifax Harbour to the south. The Development site is currently occupied by one 2 storey commercial building that will be removed and surface parking. The development site shares the block with low-rise commercial/residential buildings and related surface parking.

The Portland Street & Canal Street Phase I Development involves a proposal to construct a 7 storey mixed-use building accommodating a retail pharmacy at-grade and residential above. The main residential and retail entrances will be accessed via Portland Street. At-grade Outdoor Amenity Spaces are proposed to the southeast and northwest of the building.

With inclusion of the proposed development, prevailing pedestrian comfort conditions are predicted to remain comfortable and suitable for walking, standing, or better, year-round under normal to high ambient wind conditions. Several areas will realise an upset to pedestrian comfort conditions that is for the most part well managed by the proposed Development's wind mitigative design features. Additional mitigation may be applied along the eastern and western façades of the building in order to mitigate winds flowing through the gaps between the subject and neighbouring buildings. The at-grade Outdoor Amenity Areas are predicted to realise wind conditions that are unsuitable for their intended use at times, and a mitigation plan is recommended for the spaces in order to achieve seasonally appropriate conditions.

Comfort conditions expected at the proposed Development Site are considered suitable to the context, based upon qualitative analysis.

Should you have questions or comments, please do not hesitate to call.

Kindest regards,



Stephen Pollock, P.Eng



# 2. INTRODUCTION

We have been retained to conduct a preliminary pedestrian level wind study for the proposed Phase I mixed-use Development at Portland Street & Canal Street in Dartmouth, Nova Scotia, herein referred to as the proposed Development. The assessment is based upon project plans prepared by Zwicker Zareski architecture + planning. The objective of this primary analysis is to estimate pedestrian level wind conditions resulting from inclusion of the proposed Development, relative to comfort and safety. The analysis is based upon the historical wind conditions and our experience with similar microclimatic analyses that were conducted on other properties in the area and/or on similar projects. This assessment approach is in accordance with the requirements of Appendix 1 of the Regional Centre Land Use Bylaw. The qualitative assessment utilises numerical analysis of local wind data predicted at the site and provides a synopsis of pedestrian comfort conditions anticipated on, and adjacent to, the property. It is a precursor to physical scale model testing, the quantitative analysis that will further define anticipated wind conditions, and mitigation, should such measures be required.

## 3. SITE INFORMATION & PROPOSED DEVELOPMENT

The proposed Development is located in the City of Dartmouth, Nova Scotia, and occupies a portion of the block of land bounded by Portland Street to the north, Canal Street to the west, Maitland Street to the east, and the Dartmouth Cove of the Halifax Harbour to the south. The Development site is currently occupied by one 2 storey commercial building that will be removed and surface parking (Figure 1). The development site shares the block with lowrise commercial/residential buildings and related surface parking.

It is proposed that the site be redeveloped to include a 7 storey mixed-use building accommodating a retail pharmacy at-grade and residential above. The main residential and retail entrances will be accessed via Portland Street. At-grade Outdoor Amenity Spaces are proposed to the southeast and northwest of the building. The site and immediate surroundings slope slightly to the south.

# 4. SURROUNDING AREA

Low to mid-rise residential and commercial development, related surface parking, and mature vegetation, surround the site to all compass directions, as indicated in Figure 1.

Lands to the immediate west of the Development site, within the City block, accommodate a 2 storey commercial building with surrounding surface parking. A 7 storey office building and low to mid-rise residential and commercial buildings are to the west beyond Canal Street.



To the east of the Development site, also within the City block, are low-rise commercial and residential buildings fronting Portland Street. Further low to mid-rise residential buildings occupy lands beyond, to the east of Maitland Street.

To the north of the proposed Development, on the north side of Portland Street, is St. James United Church and low-rise residential and commercial buildings as well as related mature vegetation and surface parking.

To the immediate south of the Development site is mainly surface parking space with 1 storey warehouse buildings beyond. The Dartmouth Cove of the Halifax Harbour is approximately 300m to the south of the site and the site and immediate surroundings slope slightly to the south. The site and surrounds are depicted in Figure 1.



Portland Street & Canal Street Phase I Development Site Looking Southwest from Portland Street (Google)

## 5. METEOROLOGICAL DATA

For this study in the City of Dartmouth, historical weather data recorded at the Halifax Shearwater Airport from 1988 through 2018 was used. The Development site is approximately 6km to the northwest of the airport.

From the Halifax Shearwater Airport historical wind data, wind roses were created to present wind directionality, velocity and frequency for Annual, Winter and Summer winds. Winter


was assumed as November through April and Summer as May through October. These wind roses are depicted in Figure 3. According to these figures prevailing winds during the summer are most frequent from south by southeast through southwest and the northwest quadrants, with westerly winds commanding secondary and easterly tertiary consideration. Winter winds display a greater propensity towards the northwesterly quadrant with secondary and tertiary consideration applied to winds emanating from the southwesterly and easterly quadrants, respectively.

The velocities presented in the wind roses were measured at Halifax Shearwater Airport at an elevation of 10m. Thus, representative ground level velocities at a height of 2m, for an urban macroclimate, are 52% of the mean values indicated on the wind rose, (for suburban and rural macroclimates the values are 63% and 78% respectively). The macroclimate for this area is dependent upon wind direction and varies with direction but is considered suburban.

The Figures also depict wind velocity categories relative to directionality at the airport with strong winds, greater than 30 km/h, 8.3m/s, occurring approximately 2.4% of the time during the summer and 9.7% during the winter, and emanating from the aforementioned quadrants during both the winter and summer seasons. Calm conditions occur approximately 14% of the time (Figure 3).

# 6. COMFORT CRITERIA

The assignment of pedestrian comfort takes into consideration pedestrian safety and comfort attributable to mean and gust wind speeds. Gusts have a significant bearing on safety, as they can affect a person's balance, while winds flowing at or near mean velocities have a greater influence upon comfort. The effects of mean and gust wind conditions are described as suitable for Sitting or Standing or Walking over 80% of the time. In order for a point to be rated as suitable for <u>Sitting</u>, for example, the wind conditions must be less than 10 km/h. The rating would include conditions ranging from calm up to wind speeds that would rustle tree leaves or wave flags slightly. As the name infers, the category is recommended for outdoor space such as terraces and patios where people might sit for extended periods and generally applied to the summer months.

The <u>Standing</u> category is slightly more tolerant of wind, including wind speeds from calm up to 14km/h. In this situation, the wind would rustle tree leaves and, on occasion, move smaller branches while flags would be partially extended. This category would be suitable for locations where people might sit for short periods or stand in relative comfort, such as building entrances and drop-off areas. The <u>Walking</u> category includes wind speeds from calm up to 19km/h. These winds would set tree limbs in motion, lift leaves, litter and dust, and the locations are suitable for sidewalks and parking. The <u>Uncomfortable</u> category covers a broad range of wind conditions, including wind speeds above 19km/h. These winds would set trees in motion, cause inconvenience when walking, and are not generally suitable to activities.



Safety concerns are associated with wind speeds that are beyond the uncomfortable category, being sufficient to affect a person's balance.

Many variables contribute to a person's perception of the wind environment beyond the seasonal variations presented. While people are generally more tolerant of wind during the summer months, than during the winter, due to the wind cooling effect, people become acclimatized to a particular wind environment. Persons dwelling near the shore of an ocean, large lake or open field are more tolerant of wind than someone residing in a sheltered wind environment.

## 7. PEDESTRIAN LEVEL WIND ASSESSMENT

Variables beyond the orientation and conformation of a proposed development must be considered in predicting wind speed and occurrence at a given location. These include the previously discussed historical wind climate, surrounding terrain, and neighbouring buildings, each of which is quantified and/or analysed in the microclimatic analysis of pedestrian level winds. The results of such quantitative analyses have afforded a knowledge base that allows an estimation of pedestrian level wind conditions.

The site and the surrounds, in the present circumstances as a mix of suburban residential neighbourhoods, commercial and industrial developments, and open spaces, have a sympathetic relationship with the existing wind climate. Urban development provides turbulence inducing surface roughness that can be wind friendly, while open settings afford wind the opportunity to accelerate as the wind's boundary layer profile thickens at the pedestrian level, owing to lack of surface roughness. Transition zones from open to urban settings can prove problematic, as winds exacerbated by the open setting are redirected to flow over, down, around and between buildings.

High-rise buildings may exacerbate wind conditions within their immediate vicinity, to varying degrees, by redirecting wind currents to the ground level and along streets and open areas. In general, wind will split upon impact with a high-rise building, with portions flowing down the face of the building to the pedestrian level as downwash, where it is deflected, or otherwise redirected to flow along the building and around its corners, creating localized zones of increased pedestrian level wind. Conversely, points situated to the leeside, or in the wake of buildings will often enjoy an improvement in pedestrian comfort. As such, it is reasonable to expect inclusion of the proposed development will alter wind conditions under specific wind directions and velocities from those of the existing site condition, resulting in an improvement over the existing



conditions at some points, with more windy conditions at others.

#### **Discussion of Northerly Winds**

#### **Existing Setting**

Northerly winds and northerly winds with westerly components tend to be of moderate to higher velocity, and make up a significant percentage of the prevailing wind climate, particularly during the winter months.

The mainly low-rise buildings in the surrounds present a relatively coarse approach to northerly winds, inducing turbulence into the wind's streamlines, and reducing the wind's energy at the pedestrian level. The low-rise buildings to the immediate north of the Development site will direct winds to flow up and over the Development site, without consequence, and/or, to a lesser extent, around and down the buildings towards the pedestrian level. This will ultimately result in relatively comfortable conditions along portions of Portland Street proximate to the Development site. With winds from the north, the comfort conditions are expected to be suitable for sitting or standing along Portland Street proximate to the intersection with Alderney Drive/Prince Albert Road, are exposed to northerly winds that approach from over more open lands and in approximate alignment with the aforementioned streets, and as such will realise windy conditions, likely suitable for walking through the winter months.

Canal Street and Maitland Street are less protected from northerly winds by the low-rise surrounds and as such are susceptible to winds from the north flowing along the streets, resulting in windy conditions from time to time, proximate to building corners. In the existing setting, Canal Street and Maitland Street are expected to realise conditions suitable for walking or standing in the winter months, and for activities requiring longer exposure times through the balance of the seasons.

#### **Proposed Setting**

With inclusion of the proposed Development, winds emanating from the north that formerly flowed over the low-rise site will be redirected by the proposed building. Northerly winds that contact the proposed 7 storey building will flow down and around the north façade of the building and ultimately along portions of Portland Street. Downwash is well mitigated by the various steps and balconies in the northern façade that will interrupt downwash at elevations well above the pedestrian level. Downwash that finds it way to the pedestrian level will flow along Portland Street and ultimately around the northeast and northwest corners of the proposed building. As discussed above, downwash will be well mitigated and as such introduction of the proposed Development is not expected to have an appreciable impact on northerly wind conditions. Portland Street, proximate to the proposed Development, is expected to remain suitable for standing, or better, year-round.



With inclusion of the proposed Development, gaps will be created between the subject building and neighbouring buildings to the east and west of the site. On the occasion of strong northerly winds, these areas may realise windy conditions as winds are redirected to accelerate along the eastern and western façades of the Development and through the gaps. These conditions will not be inordinate and will remain suitable for walking or standing as northerly winds are well mitigated by the low-rise surrounds. Inclusion of landscape design features along the eastern and western façades would introduce roughness into wind streamlines flowing through the gaps, resulting in more comfortable conditions, on the occasion of high ambient northerly winds.

Canal Street and Maitland Street are sufficiently removed from the site such that introduction of the proposed Development is not expected to impact the existing comfort conditions for northerly winds.

## **Discussion of Westerly Winds**

#### **Existing Setting**

Westerly winds and westerly winds with northerly components make up a significant percentage of the prevailing wind climate and they also tend to be of higher velocity. The surroundings to the west of the Development site are relatively open, comprised of mainly open parking areas and the open lands associated with the intersection of Portland Street and Alderney Drive/Prince Albert Road. To the immediate west of the site is a 2 storey commercial building along Portland Street with a 7 storey office building at 176 Portland Street further to the southwest. Given the prevailing wind climate and the relatively open setting, windy conditions will be realised proximate to the site on the occasion of high ambient westerly winds.

Winds from westerly directions that are in approximate alignment with Portland Street will have opportunity to accelerate along the open lands of the street. This will result in localised windy areas proximate to windward corners of buildings such as the northwest corner of the neighbouring 2 storey building at 184 Portland Street and the northwestern corner of the existing building on site. Localised windy conditions will also be noted at the intersection with Alderney Drive/Prince Albert Road. As such, Portland Street is mainly rated suitable for standing, year-round, with localised areas realising windier conditions that are suitable for walking, as described above.

Canal Street and Maitland Street, as well as southern portions of the Development site, are more exposed to westerly winds given the relatively open surrounds. Areas of Canal Street, proximate to the neighbouring 7 storey office building at 176 Portland Street, will be susceptible to westerly and northwesterly winds flowing down and around the building, creating windswept areas at or near the building corners. As such, comfort conditions



along Canal Street and Maitland Street, on the occasion of westerly winds, are expected to be suitable for walking or standing, with lower activity levels expected through the summer months.

#### **Proposed Setting**

Similar to northerly winds, westerly winds approaching in higher streamlines will come into contact with the west facade of the proposed 7 storey building and flow down and around the facade towards the pedestrian level.

Winds flowing along Portland Street that formerly came in contact with the existing building will be similarly interrupted by the proposed building, creating windswept conditions at the northwest corner as the winds split to flow around the northern and western facades. The flow along the Portland Street facade of the proposed Development will be moderate, resulting in windy conditions along the sidewalk adjacent to the proposed Development from time to time, however, a rating as suitable for walking during the winter months and for standing during the summer is expected and as such the area remains suitable to the intended purpose.

Similar conditions will also be noted proximate to the southwestern corner of the proposed Development as winds from the west that have a greater opportunity to accelerate over the more open surrounds come in contact with the proposed building. The area will remain suitable for walking, or better, and appropriate for the intended use. The Landscaped Podium at the northwest corner of the Development site is well-positioned to ameliorate westerly winds in the area. Further landscaping proximate to the southwestern corner of the Development may be desired to improve conditions along the driveway.

Canal Street and Maitland Street are sufficiently removed from the site such that introduction of the proposed Development is not expected to cause an appreciable change to the existing comfort conditions for westerly winds.

### **Discussion of Southerly Winds**

### **Existing Setting**

Southerly winds make up a significant percentage of the prevailing wind climate, and tend to be of lower frequency during the winter, relative to summer, but remain of high velocity. Winds from the south approach from over relatively open lands with few large low-rise buildings that present a fairly smooth terrain, allowing much of the wind climate to accelerate on approach. The Dartmouth Cove of the Halifax Harbour is approximately 300m to the south of the site and the site and immediate surroundings slope slightly to the south.

The southerly wind climate will pose a significant influence upon pedestrian comfort conditions realised at the site, due to the open surrounds.



Large portions of Portland Street will be in the aerodynamic shade region of the flanking low-rise buildings, resulting in comfortable conditions for southerly winds, suitable for sitting or standing much of the time. Localised areas of Portland Street to the immediate west of the site and proximate to the intersections with Canal Street and Alderney Drive/Prince Albert Road are more exposed to winds from the south and as such will realise windier conditions on occasion. Winds from the south that accelerate along the western façade of the existing building will create windswept conditions proximate to the northwest corner of the building as they flow around the corner and dissipate along Portland Street. The windier conditions remain suitable for walking, or better, year-round and suitable for the intended use.

Canal Street and Maitland Street are exposed to southerly winds accelerating from over open lands and flowing in approximate alignment with the streets, resulting in windy conditions from time to time, proximate to building corners. In the existing setting, Canal Street and Maitland Street are expected to realise conditions suitable for walking or standing year-round, on the occasion of southerly winds.

#### **Proposed Setting**

With inclusion of the proposed Development, winds emanating from the southern directions that formerly flowed over the low-rise building on site will be redirected by the proposed building. Winds at higher streamlines that come in contact with the upper levels of the southern façade will downwash towards the pedestrian level, but for the most part, will be intercepted by the steps in the southern façade. Downwash that finds it way to the pedestrian level will be relatively limited, and as such is not predicted to cause a significant influence upon pedestrian comfort conditions along the southern boundary of the site.

Winds emanating from the south that formerly contacted the existing low-rise building on site, will split upon contact with the proposed Development and flow along the east and west façades of the building, through the gaps between the neighbouring buildings. This will contribute to windy conditions through the gaps and at localised portions of Portland Street beyond, however the conditions will not be inordinate and are expected to remain suitable for walking during the winter months, and for activities requiring longer exposures during the summer months. Inclusion of landscape design features along the eastern and western façades of the building would introduce roughness into wind streamlines flowing through the gaps, resulting in more comfortable conditions, on the occasion of high ambient southerly winds.

Canal Street and Maitland Street are sufficiently removed from the site such that introduction of the proposed Development is not expected to cause an appreciable change to the existing comfort conditions for southerly winds.



## **Discussion of Easterly Winds**

#### **Existing Setting**

Easterly winds are infrequent, as indicated by the historical weather data, however they can be strong, and northeasterly winds are often associated with storms. Low-rise residential buildings and mature vegetation dominate the surrounds to the east of the Development site.

The proposed Development site is for all intents and purposes well protected by the abovementioned low-rise buildings and mature vegetation to the east, however southerly portions of the site are more exposed to open surroundings. The site and neighbouring buildings in the immediate neighbourhood, will enjoy relatively comfortable conditions along Portland Street, Maitland Street, and Canal Street, proximate to the Development site, suitable for standing or better on the occasion of easterly winds, year-round.

#### **Proposed Setting**

With inclusion of the proposed Development, winds at higher streamlines emanating from the east will come in contact with the upper levels of the eastern façade and downwash towards the pedestrian level. Portions of the downwash will be intercepted by the step and balconies in the eastern façade and the neighbouring low-rise buildings to the east. Relatively limited downwash will find its way to the pedestrian level and is not predicted to cause an appreciable influence upon pedestrian comfort conditions.

As the proposed Development is leeward of the low-rise surrounds for easterly winds, only a minor realignment of winds will be realised proximate to the site. Winds emanating from the east that formerly flowed over the existing low-rise building on site will mainly flow up and over the proposed Development, with streamlines closer to the pedestrian level flowing along the northern and southern facades. On the occasion of strong easterly winds, a slight upset in winds may be realised along areas of Portland Street that are proximate to the proposed Development, however the upset will likely be minor, and the street will remain comfortable and suitable for the intended use.

The overall upset to existing pedestrian comfort conditions with easterly winds will be moderated by the windward terrain which, when considered along with the proposed Development's wind mitigative design features, will result in the building causing limited influence upon pedestrian comfort conditions realised along the flanking streets and at neighbouring properties for easterly winds. The pedestrian comfort conditions are predicted to remain suitable for standing, most of the time, and as such remain appropriate to the areas' intended purpose.



### **Discussion of Ordinal Winds**

Ordinal Winds approaching from northwesterly, northeasterly, southeasterly, and southwesterly directions will contact the façades of the proposed development at angles slightly more skewed than those discussed above. As such, a downwash of wind to the pedestrian level is not likely with ordinal winds, but may occur with wind emanating from directions near perpendicular to the building's façades. The magnitude of the resulting downwash is dependent upon several variables; those commanding primary consideration are the building height, and the effective width of the proposed building reduce the propensity for downwash, and the proposed Development will display a marked tendency to deflect wind to flow over and around, as opposed to down the building, for these directions.

## **Discussion of Outdoor Amenity**

An Outdoor Amenity Area is proposed to the northwest of the building at-grade. The area is exposed to large portions of the wind climate that are redirected by the proposed Development to flow around the northwesterly corner and through the gap between the proposed and neighbouring building to the west. These effects are mainly caused by northerly, westerly, and southerly winds that make up the majority of the prevailing wind climate, and as such the area will realise windy conditions year-round. The space is expected to be suitable for walking in the winter and shoulder months and standing through the summer. A mitigation plan will be required for the Amenity Area in order to accommodate activities requiring longer exposure times. This should include wind screens, raised planters, trellises, and others, that will moderate winds in the area and result in pedestrian comfort conditions that are seasonally appropriate to the area's intended use.

An Outdoor Amenity Area is also proposed to the southeast of the building at-grade. The area is better protected from westerly winds, however it is also exposed to winds from the north and south that are directed to flow through the gap between the proposed building and the neighbouring building to the east. As the space is located to the south of the gap, the area is not expected to realise inordinate conditions, and is predicted to be suitable for standing through the winter and shoulder months and sitting through the summer. A mitigation plan is recommended for the space in order to accommodate activities requiring longer exposure times through the shoulder seasons. This may include wind screens, raised planters, trellises, and others, that will moderate winds acting in the area and result in pedestrian comfort conditions that are seasonally appropriate to the area's intended use.

With implementation of appropriate mitigation plans, the at-grade amenity areas are expected to be comfortable and seasonally suitable for the intended uses.



## **Discussion of Entrances**

The main residential entrance to the proposed Development is accessed via Portland Street, set back into the northwesterly corner. Portland Street and the northwest corner of the proposed Development are predicted to realise windy conditions, suitable for walking through the winter months. However, the entrance is well set back from the street, in a notch in the façade, and set beneath an overhang of the building above. Additionally, the entrance incorporates a vestibule. As such, the entrance will be protected from winds flowing along and down the building facades and is removed from much of the wind climate. The main residential entrance is predicted to realise conditions suitable for standing year-round.

A retail entrance is also proposed along the north façade of the building, accessed from Portland Street. The entrance accommodates a canopy and is located in the centre of the façade, therefore removed from winds flowing down and around the corners of the building. As such, the retail entrance is predicted to experience moderately comfortable conditions, suitable for standing year-round.

Comfort conditions appropriate for standing are preferable at entrances, and as such the residential and retail entrances to the proposed Development will be comfortable and suitable for the intended uses.

# 8. MITIGATION STRATEGIES

The Portland Street & Canal Street Phase I Development plans establish a context for development in terms of height, massing, and location that allow the prediction of wind issues/problems that may persist once built.

The proposed Development employs wind mitigative design features that include:

- retaining walls •
- balconies
- overhangs
- stepped massing
- landscaping

and others, that will increase surface roughness apparent to the wind.

Additional mitigation may be applied along the eastern and western façades of the building in order to mitigate winds flowing through the gaps between the subject and neighbouring buildings. A mitigation plan is recommended for the at-grade Amenity Areas in order to achieve conditions that are seasonally suitable for the intended uses. Comfort conditions expected at the proposed Development site are considered suitable to the context, based upon qualitative analysis.



# **Figure 1: Site Aerial Photo**





# Figure 2: Site Plan





# Figure 3a: Annual Wind Rose - Shearwater Airport.

Historical Directional Distribution of Winds (@ 10m height) (1988 - 2018)





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# Figure 3b: Winter Wind Rose - Shearwater Airport. November through April (1988 - 2018)



Figure 3c: Summer Wind Rose - Shearwater Airport. May through October (1988 - 2018)

	Speed Range	Probability (%)
	Calm	14%
	1 - 1 <b>0km/</b> h	35%
$\bigcirc$	11 - 20 <i>km/h</i>	41%
$\bigcirc$	<b>2</b> 1 - 30 <i>km/h</i>	8%
$\bigcirc$	31 - <b>4</b> 0km/h	2%
$\bigcirc$	>40 <i>km/h</i>	>1%





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# Regional Centre Land Use By-Law: Site Plan Approval Design Requirements and Design Rationale

SECTION	DESIGN REQUIREMENT	DESIGN RATIONALE
113	Contribution to Open Space Network: Where one or more at-grade private open space(s) are proposed, at least one shall contribute to the Regional Centre's network of open spaces by: (a) abutting an existing public open space that is not a public sidewalk; (b) abutting an existing public sidewalk; (c) abutting an existing mid-block at-grade private open space; or (d) establishing a new mid-block at-grade private open space.	Proposed private open space abuts existing public sidewalk (b).
114	At-Grade Private Open Spaces Abutting a Public Sidewalk: At-grade private open spaces that abut public sidewalks shall provide pedestrian access by having at least one contiguous connection of not less than 2.0 metres wide, from the at-grade private open space to the public sidewalk.	Contiguous connection of minimum 2.0 metres wide provided between the at- grade private open spaces and the public sidewalk.

115	At-Grade Private Open Spaces – Medium Scale: At-grade private open spaces with a contiguous area of 15 square metres or greater, and dimensions of not less than 3.0 metres by 5.0 metres shall: (a) provide (i) barrier-free access, and (ii) permanent seating; and (b) provide one or more of the following materials for groundcover (i) vegetation, (ii) brick pavers, stone pavers, or concrete pavers, or (iii) wood, excluding composites.	<ul> <li>(i) barrier-free access</li> <li>(ii) permanent seating</li> <li>Groundcover material provided:</li> <li>(i)vegetation</li> <li>(ii)pavers (unit block)</li> </ul>
116	Open Spaces – Medium Scale: At-grade private open spaces with a contiguous area of 15 square metres or greater, and dimensions of not less than 3.0 metres by 5.0 metres shall offer weather protection to its users through at least one of the following: (a) a new deciduous tree that is not a shrub or the retention of an existing tree that is not a shrub with a minimum base caliper of 100 millimetres; (b) canopies or awnings on abutting façades; (c) recessed entrances of abutting façades; (d) cantilever(s) of a building on the same lot; or (e) structures such as gazebos, pergolas, or covered site furnishings.	minimum base caliper of 100 millimetres;

117	At-Grade Private Open Spaces – Large Scale: In addition to meeting the requirements of Sections 115 and 116, at-grade private open spaces with a contiguous area exceeding 400 square metres and with an average depth exceeding 2.5 metres, shall provide at least three of the following: (a) an additional deciduous tree that is not a shrub or the retention of an existing tree that is not a shrub with a minimum base caliper of 100 millimetres; (b) a permanent table and chair(s); (c) a public art piece, a cultural artifact, or a commemorative monument; (d) a structure such as a gazebo or pergola; or (e) a planter or planting bed.	N/A
118	<b>Existing Access to Public Open Spaces:</b> At-grade private open spaces shall maintain existing accesses to abutting public open spaces.	N/A
119	Privacy for Grade-Related Units: At-grade private open spaces which are 2.5 metres deep or greater, as measured perpendicularly from the streetline, and which are located between the streetline and a grade-related unit, shall provide privacy for the residential units by using a minimum of one of the following elements per grade-related unit: (a) a deciduous tree that is not a shrub with a minimum base caliper of 50 millimetres; (b) a minimum of two shrubs, each no less than 1.0 metre in height; (c) planters ranging in height from 0.25 to 1.0 metres; or (d) masonry walls ranging in height from 0.25 to 1.0 metres.	N/A – no grade-related unit proposed
120	Walkways to be Hard-Surfaced: Walkways within at-grade private open spaces shall be hard-surfaced, excluding asphalt.	Design uses unit pavers for walkways within at-grade private open space.

Building D	esign Requirements	
121	Streetwall Articulation: Streetwalls shall be divided into distinct sections no less than 0.3 metres in width and not exceeding 8 metres in width, from the ground floor to the top of the streetwall, with each section differentiated by using at least two of the following: (a) colour(s); (b) material(s); or (c) projections and recesses not less than 0.15 metres in depth.	Streetwall is divided into distinct sections not exceeding 8 metres wide from the ground floor to the top of the streetwall with each section differentiated by: (a) colours (b) materials (c) projections and recesses at entrances not less than 0.15 metres in depth.
122	Articulation of Non-Streetwalls Fronting an At- Grade Private Open Space: Any exterior wall within the podium that is not a streetwall, and fronts an at-grade private open space abutting a public right-of-way, shall meet the requirements of Section 121 as if it was a streetwall.	Exterior wall within the podium that is not a streetwall, and fronts an at-grade private open space abutting a public right-of-way is differentiated by: (b) materials (c) colours
123	<b>Side Façade Articulation:</b> Where a side yard is proposed or required, the side yard façade shall continue the streetwall articulation for a depth greater than or equal to the width of the side yard, as measured at the streetline, using the same options chosen to achieve the design requirement in Section 121.	The side yard façade continues the streetwall articulation for a depth greater equal to the side yard, as measured at the streetline using: (a) colour(s); (b) material(s)
124	Pedestrian Entrances Along Streetwalls: (1) Subject to Subsection 124(2), pedestrian entrances in the streetwall shall be distinguished from the remainder of the streetwall by using at least two of the following: (a) changes in colour; (b) changes in materials; or (c) projections and recesses not less than 0.15 metres in depth. 2) Canopies or awnings shall not be used to meet the requirements of Subsection 124(1).	Pedestrian entrances in the streetwall are distinguished by: (b) changes in materials. (c) recesses not less than 0.15m in depth

125	Pedestrian Entrances Along Non-Streetwalls Fronting an At-Grade Private Open Space: Any exterior wall within the podium that is not a streetwall, and fronts an at-grade private open space, shall meet the requirements of Section 124 as if it was a streetwall.	Pedestrian Entrances Along Non- Streetwalls Fronting an At-Grade Private Open Space are distinguished by: (b) changes in materials. (c) changes in colour
126	Number of Pedestrian Entrances Along Streetwalls: Streetwalls shall provide: (a) a minimum of one pedestrian entrance per storefront; or (b) a minimum of 2 pedestrian entrances where the storefront is greater than 24 metres wide.	At least one pedestrian entrance provided. Storefront is less than 24 metres wide.
127	<b>Ground Floor Transparency – Commercial</b> <b>Uses:</b> For at-grade commercial uses in the streetwall, between 50% and 80% of the building's ground floor façade dedicated to commercial uses shall consist of clear glass glazing.	50% of ground floor façade dedicated to commercial uses consists of clear glass glazing.
128	Ground Floor Transparency – Grade-Related Unit Uses: For grade-related unit uses in the streetwall, between 25% and 80% of the building's ground floor façade dedicated to grade- related unit uses shall consist of clear glass glazing.	N/A – no grade-related units proposed.
129	Access Ramps Along Streetwalls: Where a ramp for barrier-free access is provided between a streetwall and a sidewalk, no portion of the access ramp shall exceed a width of 2.0 metres and depth of 2.0 metres.'	Access ramp between streetwall and sidewalk does not exceed a width or depth of 2 metres.

130	Weather Protection: (1) Subject to Subsection 130(2), where entrances for commercial uses or multi-unit dwelling uses are proposed in the streetwall, weather protection for pedestrians shall be provided above the entrances and shall consist of at least one of the following: (a) canopies; (b) awnings; (c) recessed entrances; or (d) cantilevers. (2) Subsection 131(1) shall not apply to the entrances of grade-related units.	Weather protection for pedestrians is provided above the entrances to the multi-unit building through recesses.
131	<b>Exposed Foundations and Underground</b> <b>Parking Structures:</b> Exterior foundation walls and underground parking structures the height of which exceeds 0.6 metres above grade shall be clad in a material consistent with the overall design of the same exterior façade.	Exterior foundation walls of underground parking structures are cladded in a material consistent with the overall design of the same exterior façade.
132	<ul> <li>Building Top Distinction:</li> <li>(1) Subject to Subsection 132(2), a portion of the top third of a building shall be differentiated from lower portions of the same building, by using two or more of the following:</li> <li>(a) colour(s);</li> <li>(b) material(s); and</li> <li>(c) projections and recesses not less than 0.15 metres in depth.</li> <li>(2) The minimum height of the differentiated portion shall be no less than:</li> <li>(a) 0.5 metres in height for a low-rise building or mid-rise building;</li> <li>(b) 1.0 metres in height for a tall mid-rise building; and</li> <li>(c) 3.0 metres in height for a high-rise building.</li> </ul>	<ul> <li>(1) A portion of the top third of a building is differentiated from lower portions of the same building, by:</li> <li>(b) material(s).</li> <li>(c) penthouse is recessed not less than 0.15 metres in depth.</li> <li>(2) The differentiation exceeds 1.0 metre in height.</li> </ul>
133	<b>Penthouses:</b> Penthouses shall be visually integrated into the overall design of the building.	Penthouses are visually integrated into the overall design of the building by being recessed from the north, east and south roof edge.

134	<b>Rooftop Mechanical Features:</b> Rooftop mechanical features shall be visually integrated into the design of the building and concealed from the public view at the streetline.	Rooftop mechanical features are visually integrated into the design of the building and concealed from the public view at the streetline.
Parking, A	Access, and Utilities Design Requirements	
135	Pedestrian Connections: Where pedestrian connections are proposed on the site, at least one shall connect: (a) one public street to another public street; (b) one public street to a public open space; (c) one sidewalk to another sidewalk; or (d) one public street or a sidewalk to an at- grade private open space that is located on the site.	Pedestrian connection conforms with: (d) one public street or a sidewalk to an at-grade private open space that is located on the site.
136	Pedestrian Connections Through Accessory Surface Parking Lots: (1) Pedestrian connections within accessory surface parking lots shall be no less than 2.0 metres wide. (2) Pedestrian connections within accessory surface parking lots shall be delineated by raised walkways, no less than 0.15 metres high, and consisting of: (a) poured concrete; (b) brick pavers; (c) stone pavers; or (d) concrete pavers. (3) Where a pedestrian connection crosses a driving aisle, the surface of the aisle shall be raised to meet the elevation of the abutting pedestrian connection and delineated with a change of colour or material from the driving aisle. (4) A pedestrian connection shall provide a direct route between parking areas, building entrances, and the nearest sidewalk.	N/A – no accessory surface parking lots proposed.

137	Motor Vehicle and Service Accesses: (1) Motor vehicle and service accesses in the streetwall shall be minimized by using the same colours or materials chosen for the streetwall. (2) All motor vehicle and service accesses shall: (a) not exceed the height of the ground floor or 4.5 metres, whichever is less; and (b) be completely enclosed with a door(s).	<ul> <li>(1) N/A – motor vehicle access is not proposed within the streetwall.</li> <li>(2) The motor vehicle access does not exceed the height of the ground floor and is completely enclosed with a door.</li> </ul>
138	Parking Internal to a Building or Within a Parking Structure: Where parking internal to a building is located within the streetwall, it shall be screened from public view from any public right-of-way or park.	Parking is located underground below the streetwall. Therefore, it is not visable from public view from the public right-of-way
139	Visual Impact Mitigation for Utility and Mechanical Features: The visual impact of utility features and mechanical features, including vents and meters, shall be minimized by concealing them from public view at the streetline by: (a) using opaque screening; or (b) enclosing them within a projection or recess in the building.	Mechanical features are located on the roof the building and are enclosed within projections and recesses of the penthouse building form.
140	Heat Pumps and Other Heating and Ventilation Equipment for Individual Units: Heat pumps and other heating and ventilation equipment for individual units are permitted on balconies, unenclosed porches, and verandas if they are concealed from public view at the streetline by: (a) using opaque screening; or (b) enclosing them within a projection or recess in the building.	Heat pumps and other heating and ventilation equipment/systems are located within the building or on the rooftop and are screened.

Heritage Conservation Design Requirements		
141	<b>Conservation of Character-Defining Elements:</b> Character-defining elements of registered heritage buildings shall be conserved and remain unobstructed.	N/A
142	New Windows and Doors: New window and door openings on registered heritage buildings shall match established patterns (materials, design, detail, and dimensions).	N/A
143	<b>Preservation of Architectural Elements:</b> Architectural elements on registered heritage buildings shall be preserved, such as pilasters, columns, cornices, bays, and parapets.	N/A
144	<b>Use of Archival Evidence:</b> Archival evidence shall be used to support the rehabilitation and restoration of character-defining elements on registered heritage buildings, or on registered heritage properties.	N/A
145	Historic Building Façades: Historic building façades on registered heritage buildings shall be retained and rehabilitated, or restored using traditional materials	N/A
146	Materials: Brick or masonry façades shall be maintained and restored on registered heritage buildings. The painting of brick or masonry façades is prohibited.	N/A

147	Maintenance of Same or Similar Cornice Line Height for New Developments in a Heritage Context: The podiums or streetwalls of new developments in a heritage context shall maintain the same or similar cornice line height established by abutting registered heritage buildings, except where the maximum streetwall height permitted under the Land Use By-law is lower than the cornice of the registered heritage buildings.	N/A
148	Streetwall Stepback for Taller Portions of New Developments in a Heritage Context: Subject to Subsection 93(4), any portions of new developments in a heritage context that are taller than the cornice line of an existing abutting registered heritage building shall be stepped back from the streetwall.	N/A
149	Side Wall Stepback for Taller Portions of New Detached Buildings in a Heritage Context: Where a detached building constitutes a new development in a heritage context and where it abuts the same streetline as the registered heritage building, any portions of the new development that are taller than the cornice line of the registered heritage building shall be stepped back 3 metres on the side that abuts the heritage building.	N/A

150	Architectural Elements of Existing Heritage Buildings to be Used as a Reference in the Design of New Development in a Heritage Context: Architectural elements of existing abutting registered heritage buildings shall be used as a reference in the design of new development in a heritage context, by: (a) Incorporating articulation established by vertical and horizontal architectural elements of the registered heritage buildings (i.e. columns, pilasters, cornice, architectural frieze, datum lines, etc.); (b) Incorporating proportions and vertical spacing of the registered heritage buildings' windows; and c) Where new development in a heritage context is located at the ground level, maintaining the proportions and transparency of the registered heritage buildings' storefront and façade elements.	N/A
151	Awnings and Canopies: (1) If proposed on a registered heritage building, awnings and canopies shall be: (a) Designed to fit within the dominant horizontal structural elements of the lower façade and not obscure significant architectural features; (b) Located between vertical columns or pilasters to accentuate and not to obscure these elements; (c) Designed to complement the fenestration pattern of the registered heritage building; and (d) Constructed using heavy canvas fabric or similar material in either a solid colour or striped. The use of retractable awnings is encouraged. Vinyl and high gloss fabrics and internally-illuminated awnings shall be prohibited. (2) Metal or glass awnings or canopies may be permitted on a registered heritage building, if designed to complement historic architectural elements.	N/A

152	Lighting Hardware: Lighting hardware shall be located so that it does not disfigure or conceal any significant architectural feature of the registered heritage building. Where it is not possible to hide lighting hardware, it shall be compatible with the building's architecture and materials.	N/A			
153	Directing Lighting to Accentuate or Emphasize Architectural Features or Signage: Lighting shall be directed to accentuate or emphasize the architectural features of registered heritage buildings or their signage.	N/A			
Other Design Requirements					
154	General Lighting: The following features shall be illuminated: (a) common building entrances; (b) walkways; (c) accessible at-grade private open space; (d) parking lots; and (e) off-street loading spaces.	The common building entrances, walkways and at-grade private open spaces will be illuminated.			
155	Emphasis of View Terminus Sites: View terminus sites, as shown on Schedule 5, shall be emphasized perpendicular to and visible from a view line, by at least one of the following approaches: (a) subject to Subsection 93(5), extending the height of a portion of the streetwall; (b) locating a clock tower, bell tower, rooftop cupola, spire, steeple, or minaret on the top of the building; (c) providing an at-grade private open space; or (d) locating a public art installation, a landmark element, or a cultural artifact on a portion of the streetwall, or in an at-grade private open space.	N/A			

<ul> <li>Parking Areas, Accessory Surface Parking Lots, Off-Street Loading Spaces, and Site Utilities on View Terminus Sites:</li> <li>Parking areas, accessory surface parking I off-street loading spaces, or site utilities sho not be visible within a view terminus as sho on Schedule 5.</li> </ul>	II IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
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#### Closing

Thank you taking the time to review the above design rationale. If you have any questions or clarifications regarding the content of this document, please do not hesitate to contact the undersigned.

Sincerely,	1	Λ
/		
Connor Wallac	e, MCI	P, LPP
Principal		
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