REPORT

2076 OLD LAKESHORE ROAD

BURLINGTON, ONTARIO

PEDESTRIAN WIND STUDY

RWDI # 2510999

September 5, 2025

SUBMITTED TO

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EXECUTIVE SUMMARY

RWDI was retained to conduct a pedestrian wind assessment for the proposed 2076 Old Lakeshore Road in Burlington, Ontario. The assessment was based on the wind-tunnel testing conducted for the proposed development under the Existing, Proposed, and Future configurations of the site and surroundings (Images 2A through 2C). In accordance with the *Pedestrian Level Wind Study Guidelines and Terms of Reference* (March 2020 - Guideline) published by the City of Burlington, the wind tunnel test results were analyzed using wind climate records from Hamilton International Airport (Image 3) and evaluated against the Wind Comfort and Safety Criteria specified in the local guidelines. The predicted wind conditions are presented in Figures 1A through 3C and Table 1, and are summarized as follows:

- The existing wind conditions on and around the site are comfortable for the intended pedestrian use throughout the year, except one location near the southwest side of the existing building on site where conditions are uncomfortable during the winter.
- With the proposed building in place, wind conditions are expected to be comfortable for the intended pedestrian use at all assessed areas during the summer and at most areas in the winter. Overall, increased wind speeds are predicted around the west side of the building. In winter, due to seasonally stronger southwesterly winds, uncomfortable conditions are expected locally at the western corner of the building.
- Wind conditions at the main entrances are predicted to be suitable for pedestrians to linger year-round.
- Wind speeds on the amenity area on Level 2 terrace are expected to be comfortable for sitting and standing during the summer and winter, respectively, suitable for the intended patron use.
- The addition of the known future developments around the site is expected to create similar or slightly improved wind conditions around the proposed development at grade, and slightly increased speeds along the sidewalks of the Old Lakeshore Road.
- The pedestrian wind safety criterion is met at most of the assessed areas in the Existing configuration except for two locations. With the addition of the proposed development, this criterion is expected to be exceeded at a few grade-level locations. The addition of future developments is expected to improve wind conditions, eliminating all wind safety concerns.
- Please note the wind conditions as tested for this report do not include any existing or proposed hard and soft landscaping features which would improve wind conditions.

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1 INTRODUCTION

RWDI was retained to conduct a pedestrian wind assessment for the proposed 2076 Old Lakeshore Road development in Burlington, Ontario. This report presents the project objectives, approach and the main results from RWDI's assessment and provides conceptual wind control measures, where necessary. Our Statement of Limitations as it pertains to this study can be found in Section 4 of this report.

1.1 Project Description

The proposed development site is located on the east corner of the Old Lakeshore Road and Pearl Street, along the shores of Lake Ontario (Image 1). The development will consist of a 23-storey mixed use development containing 154 hotel rooms (floors 1-14), shared amenity space (floor 2-3) and 50 residential units (floors 15-23) with 4 levels of semi-automated parking below grade located at 2076 Old Lakeshore Road in Burlington, Ontario.

1.2 Objectives

The objective of the study was to assess the effect of the proposed development on local conditions in pedestrian areas on and around the study site and provide recommendations for minimizing adverse effects, if needed. This quantitative assessment was based on wind speed measurements on a scale model of the project and its surroundings in one of RWDI's boundary-layer wind tunnels. These measurements were combined with the local wind records and compared to appropriate criteria for gauging wind comfort and safety in pedestrian areas. The assessment focused on critical pedestrian areas, including nearby public sidewalks, building entrance, above grade patio and amenity area.



Image 1: Aerial View of Site and Surroundings (Source: Google™ Earth)

2 BACKGROUND AND APPROACH

2.1 Wind Tunnel Study Model

To assess the wind environment around the proposed project, a 1:400 scale model of the project site and surroundings was constructed for the wind tunnel tests of the following configurations:

A - Existing: Existing site with existing surroundings (Image 2A),

B - Proposed: Proposed project with existing surroundings (Image 2B), and,

C - Future: Proposed project with existing and future surroundings (Image 2C).

The wind tunnel model included all relevant surrounding buildings and topography within an approximate 480 m radius around the study site. The wind and turbulence profiles in the atmospheric boundary layer beyond the modelled area were also simulated in RWDI's wind tunnel. The wind tunnel model was instrumented with 38 specially designed wind speed sensors to measure mean and gust speeds at a full-scale height of approximately 1.5 m above local grade in pedestrian areas throughout the study site. The placement of wind measurement locations was based on our experience and understanding of the pedestrian usage for this site. Wind speeds were measured for 36 directions in 10-degree increments. The measurements at each sensor location were recorded in the form of ratios of local mean and gust speeds to the mean wind speed at a reference height above the model.

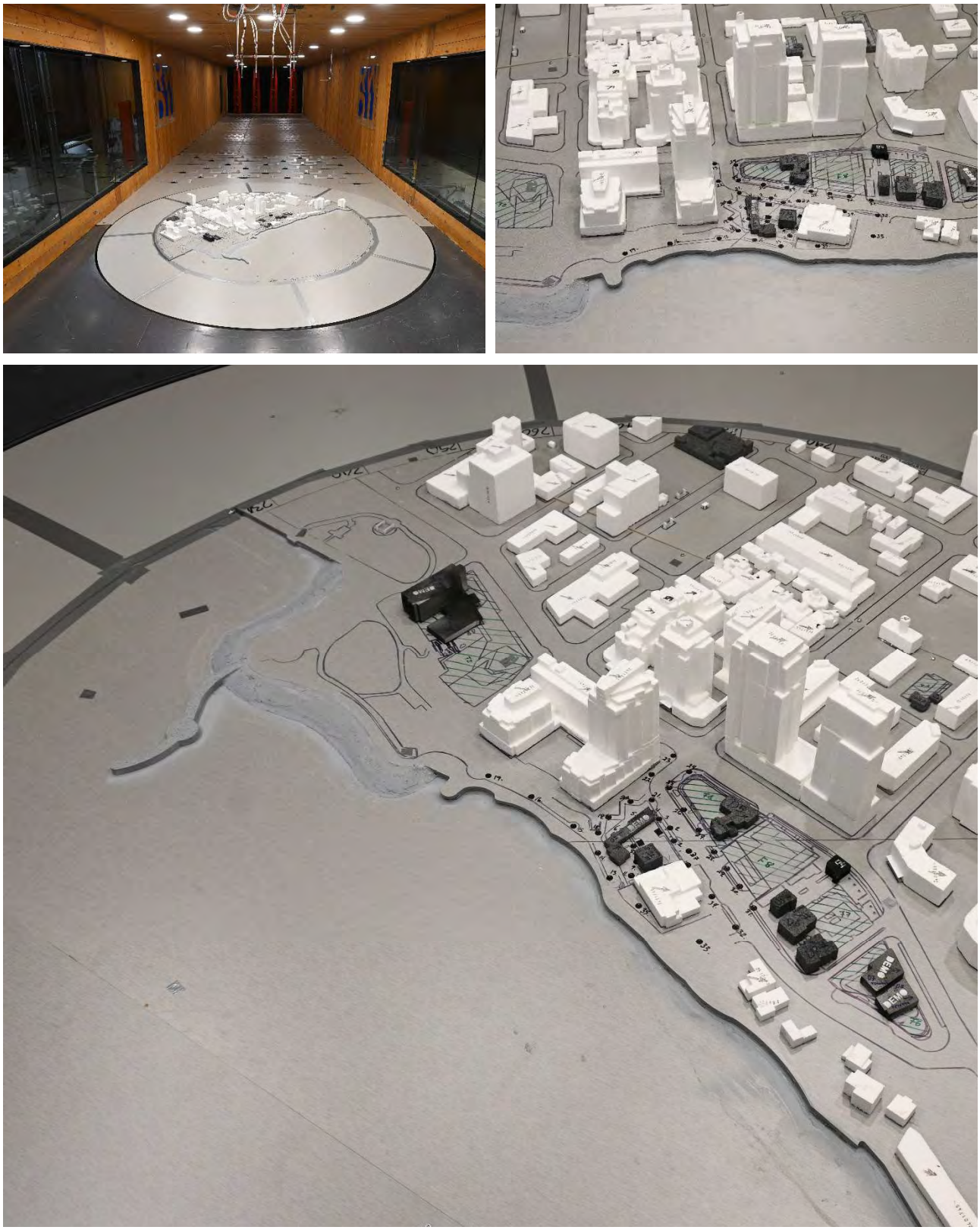


Image 2A: Wind Tunnel Study Model - Existing Configuration

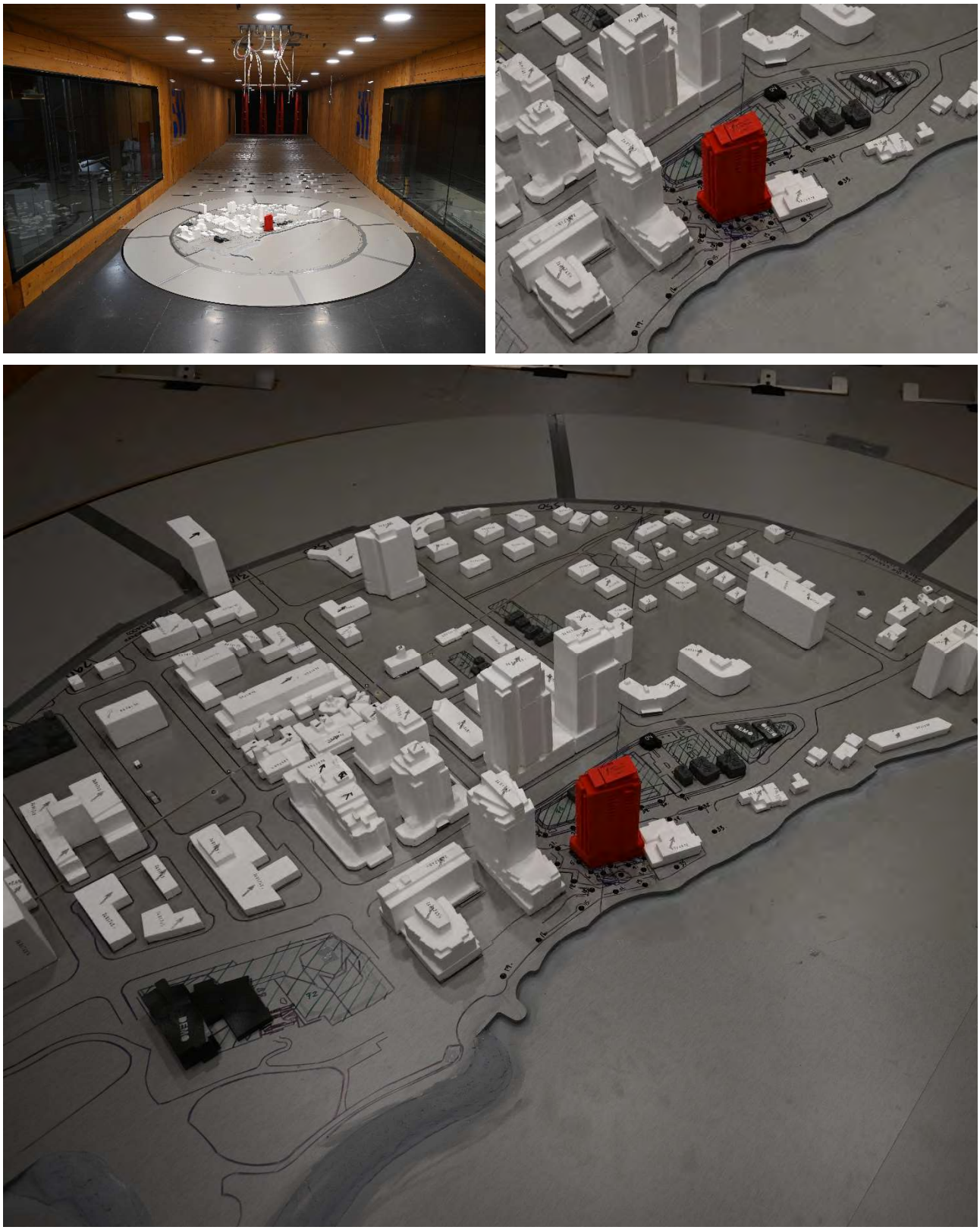


Image 2B: Wind Tunnel Study Model – Proposed Configuration

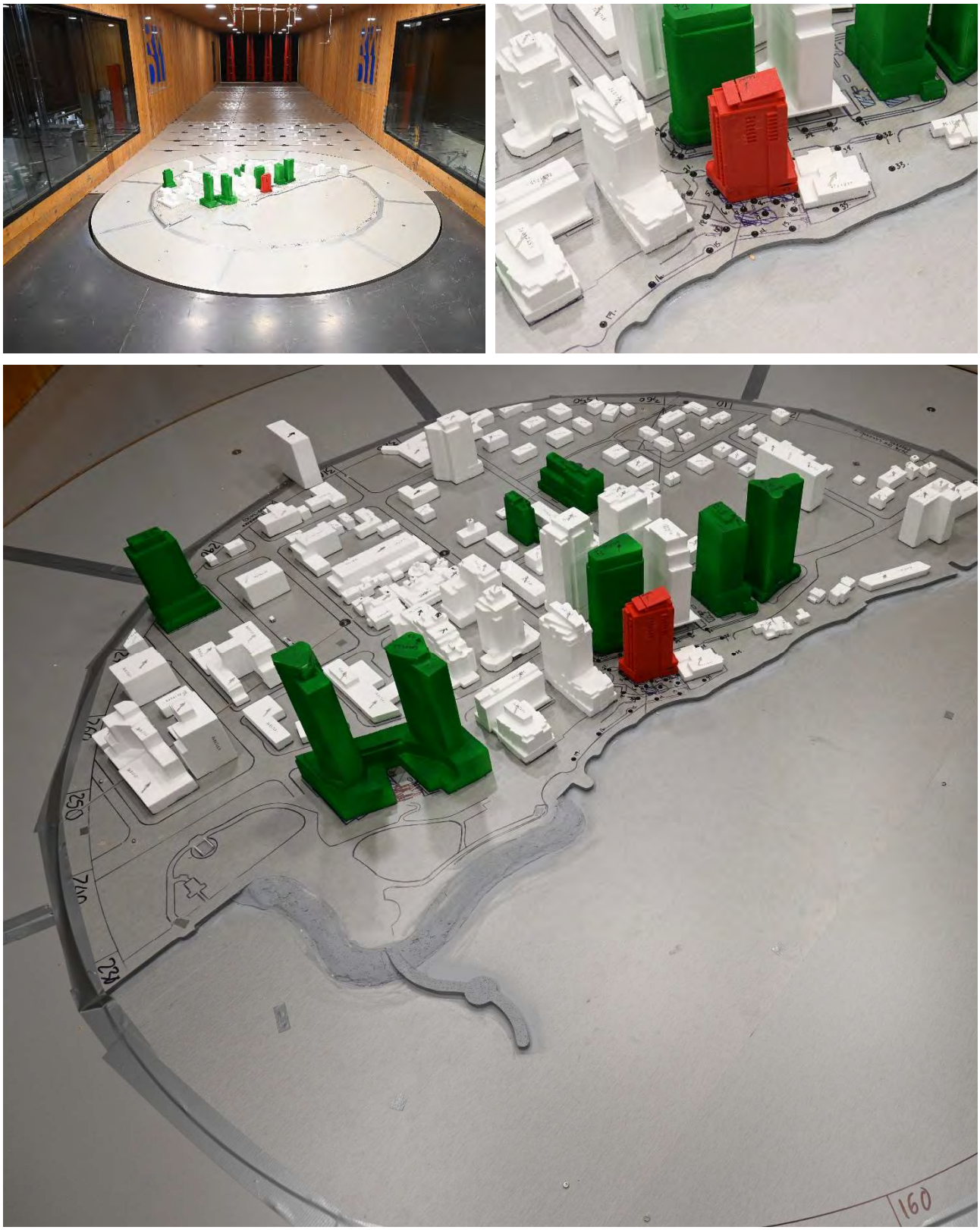
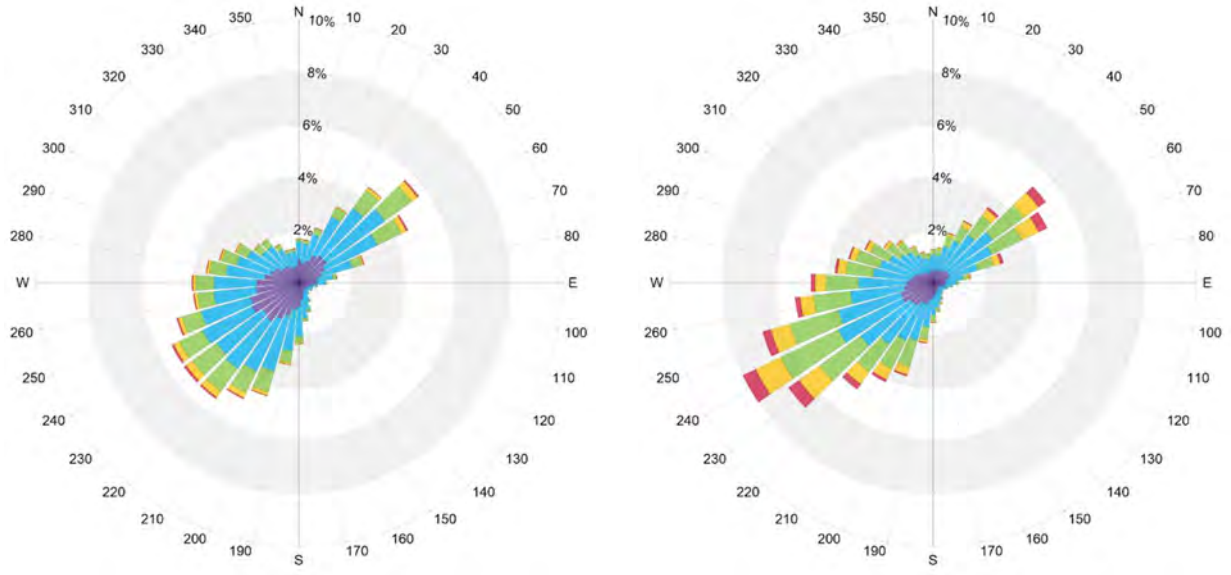


Image 2C: Wind Tunnel Study Model – Future Configuration

2.2 Wind Climate Data

Wind statistics recorded at Hamilton International Airport between 1994 and 2024, inclusive, were analyzed for the summer (May through October) and winter (November through April) seasons. Image 3 graphically depicts the directional distributions of wind frequencies and speeds for these two seasons. Winds from the northeast and southwest directions are predominant in both summer and winter, as indicated by the wind roses. Strong winds of a mean speed greater than 30 km/h, measured at the airport (at an anemometer height of 10 m), occur for 3.4% and 12.0% of the time during the summer and winter seasons, respectively.

Wind statistics were combined with the wind tunnel data to predict the frequency of occurrence of full-scale wind speeds. The full-scale wind predictions were then compared with the wind criteria for pedestrian comfort and safety.



Wind Speed (km/h)	Probability (%) Summer	Winter
Calm	3.4	2.1
1-10	35.1	22.3
11-20	42.6	39.3
21-30	15.4	24.3
31-40	2.7	8.7
>40	0.7	3.3

Image 3: Directional Distribution of Winds Approaching Hamilton International Airport between 1994 and 2024

2.3 Wind Comfort and Safety Criteria

The criteria specified in the Pedestrian Level Wind Study Guidelines and Terms of Reference (March 2020) (Guideline) prepared by the City of Burlington are presented below. The criteria consider pedestrian comfort (pertaining to common wind speeds conducive to different levels of human activity) and safety (pertaining to infrequent but strong gusts that could affect a person's footing).

Comfort Category	GEM Speed (km/h)	Description
Sitting	≤ 10	Calm or light breezes • Appropriate for dedicated seating areas such as cafés, patios, and outdoor amenity areas
Standing	≤ 14	Gentle breezes • Appropriate for main building entrances, bus stops, and other places where pedestrians may linger
Leisurely Walking	≤ 17	Moderate winds • Appropriate for shopping and strolling along retail streets and parks
Fast Walking	≤ 20	Relative higher speed winds • Appropriate for areas where pedestrians are walking, running, or cycling without lingering
Uncomfortable	> 20	Strong winds • Inappropriate due to nuisance for all pedestrian activities • Wind mitigation measures required

Notes:
Notes:
(1) GEM is defined as the maximum mean wind speed or gust speed divided by 1.85 (whichever is larger). Gust speed can be directly measured in a wind tunnel or represented by mean wind speed + 3*RMS (Root Mean Square) wind speed.
(2) GEM speeds listed above are based on a seasonal exceedance of 20% of the time between 06:00 and 23:00. The criterion has been met if the wind speeds occur at least four out of five days.

Safety Criterion	Gust Speed (km/h)	Description
Exceeded	> 90	• Excessive gust speeds • Adverse effect on pedestrian's balance and footing • Wind mitigation is required

Notes:
(1) Based on an annual exceedance of 9 hours or 0.1% of the time for 24 hours a day.
(2) Gust speed can be directly measured in a wind tunnel or represented by mean wind speed + 3*RMS wind speed.

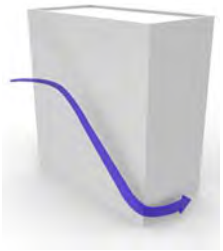
2.4 General Wind Flow Mechanisms

In the discussion of wind conditions, reference is made to the following wind flow mechanisms (Image 4):



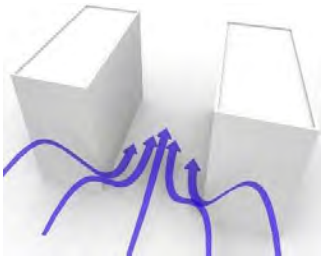
DOWNWASHING

Tall buildings tend to intercept the stronger winds at higher elevations and redirect them to the ground level. This is often the main cause for wind accelerations around large buildings at the pedestrian level.



CORNER ACCELERATION

When wind moves around the buildings a localized increase in the wind activity or corner acceleration can be expected around the exposed building corners at pedestrian level. The effect is intensified when the wind approaches at an oblique angle to a tall façade and are deflected down and around the exposed corners.



CHANNELLING EFFECT

Wind flow tends to accelerate through the space between buildings, under bridges or in passages through buildings due to channelling effect caused by the narrow gap. The effect is intensified if the channel is aligned with the predominant wind direction.

Image 4: General Wind Flow Mechanisms

If these building/wind combinations occur for prevailing winds, there is a greater potential for increased wind activity. Design details such as setting back a tall tower from the edges of a podium, deep canopies close to ground level, wind screens, tall trees with dense landscaping, etc. (Image 5) can help reduce wind speeds. The choice and effectiveness of these measures would depend on the exposure and orientation of the site with respect to the prevailing wind directions and the size and massing of the proposed buildings.

Podium/tower setback, canopy, landscaping, and wind screens (left to right)

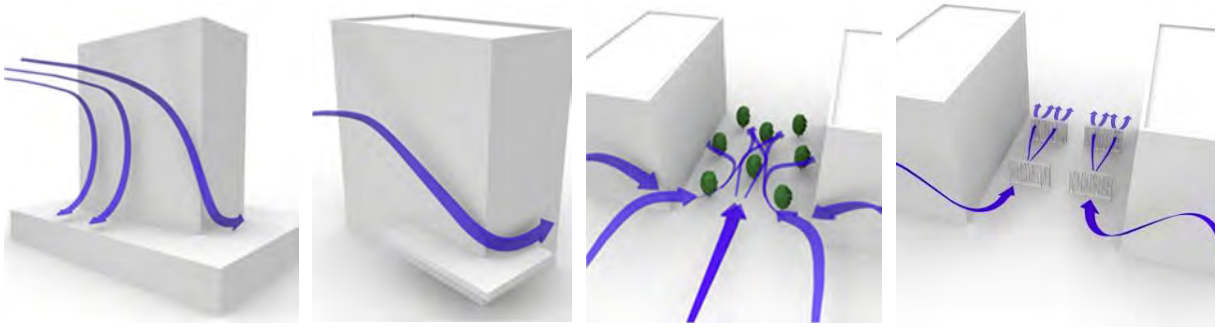


Image 5: Common Wind Control Measures

3 RESULTS AND DISCUSSION

The predicted wind conditions are shown on site plans in Figures 1A through 3C located in the "Figures" section of this report and the associated wind speeds are presented in Table 1, located in the "Tables" section of this report.

Wind conditions comfortable for leisurely walking or fast walking are appropriate for sidewalks and walkways as pedestrians will be active and less likely to remain in one area for prolonged periods of time. Lower wind speeds conducive to standing are preferred at main entrances where pedestrians are apt to linger. Wind speeds comfortable for sitting are preferred for areas intended for passive activities, such as balconies, terraces, and dining areas in outdoor amenities, especially in the summer when these areas would be more frequented. The following is a detailed discussion of the suitability of the predicted wind conditions for the anticipated pedestrian use of each area of interest.

3.1 Existing Configuration

Wind conditions at all assessed locations on and around the existing site are comfortable for the intended pedestrian use, sitting, standing, or leisurely walking during the summer (Figure 1A). In the winter (Figure 2A), due to the seasonal wind climate in Burlington, higher wind speeds are expected across the site. The resulting conditions are mostly comfortable for standing, leisurely walking or fast walking at most locations. An exception is an area close to the pathway (Location 19), between the existing 2076 Old Lakeshore Road and 2063 Lakeshore Road, where borderline uncomfortable wind conditions are anticipated (Figure 2A).

Wind conditions are expected to meet the wind safety criterion at most areas assessed (Figure 3A), with the exception of two locations, one at Location 19, between the existing 2076 Old Lakeshore Road and 2063 Lakeshore Road, and the other at the southeast corner of the intersection of Lakeshore Road and Pearl Street (Location 23).

3.2 Proposed Configuration

The proposed development is expected to maintain similar wind conditions to the Existing Configuration during the summer season (Figure 1B), while in the winter season, higher wind speeds are generally predicted at several areas around the site (Figure 2B).

3.2.1 Grade Level (Locations 1 through 37)

During the summer season, wind conditions on and around the site are predicted to be comfortable for leisurely walking or better (Figure 1B), which is suitable for the intended use. Fast walking wind conditions are expected at the western corner of the development (Location 4).

During the winter, seasonally stronger winds are expected to cause increased wind speeds across the site (Figure 2B). Wind conditions at most sidewalks and walkways are expected to be comfortable for fast walking or better. Uncomfortable wind speeds are predicted at one isolated area to the western corner of the building along Old Lakeshore Road (Location 4).

Main entrances to the proposed development are situated near Locations 1, 3, and 8 in Figures 1B, 2B and 3B. Wind conditions at all entrances during the summer and winter are expected to be comfortable for sitting or standing, which is appropriate for entrance locations.

Wind speeds at most assessed locations meet the pedestrian wind safety criterion (Figure 3B), with the exception of four areas, Locations 9 and 12 to the southeast of the building, which are marginally above the 90 km threshold and Locations 4 and 19 to the west and southwest. Note Location 19 is an existing safety exceedance.

3.2.2 Above-Grade Area (Location 38)

It is generally desirable for wind conditions on balconies or terraces intended for passive activities to be comfortable for sitting or standing more than 80% of the time in the summer.

During the summer, wind conditions on Level 2 outdoor terrace (Location 38) are anticipated to be comfortable for sitting aligning with the intended pedestrian use of the area (Figure 1B). During the winter, wind conditions are expected to be slightly higher and to be comfortable for standing (Figure 2B). This area is not expected to be frequently used during the winter, and the increased wind activity is considered appropriate.

3.3 Future Configuration

The addition of the future buildings in the area, particularly those along the Old Lakeshore Road, is expected to reduce the wind speeds on-site, except for a few localized areas at the northwest side of the building (Locations 1, 2, and 37).

During the summer, wind conditions at most locations around the proposed building are improved and expected to be comfortable for leisurely walking or better (Figure 1C). Similarly, during the winter season, conditions are anticipated to be comfortable for leisurely walking or better (Figure 2C), except for an isolated area at the west corner of the intersection of Old Lakeshore Road and Pearl Street (Location 25), where conditions are expected to meet the fast-walking criterion.

With the addition of future development wind conditions improve, eliminating all existing and proposed safety exceedances at all grade and above grade areas assessed (Figure 3C).

3.4 Wind Control Strategies

To mitigate the wind impact of the proposed development, the use of wind screens and evergreen/marcescent landscaping elements throughout the east side of the building (outdoor amenities) and southwest of the building (the sidewalk adjacent to the pool), is recommended to diffuse the energy of accelerating winds. Examples of the proposed wind control solutions are shown in Image 6.



Image 6: Wind Control Features Applicable to the Ground Level

4 STATEMENT OF LIMITATIONS

Limitations

This report entitled 2076 Old Lakeshore Road dated August 06, 2025, was prepared by Rowan Williams Davies & Irwin, Inc. ("RWDI") for 1959025 Ontario Inc. ("Client"). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein ("Project"). The conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared.

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

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

Design Assumptions

RWDI confirms that the pedestrian wind assessment (the "**Assessment**") discussed herein was performed by RWDI in accordance with generally accepted professional standards at the time when the Assessment was performed and in the location of the Project. No other representations, warranties, or guarantees are made with respect to the accuracy or completeness of the information, findings, recommendations, or conclusions contained in this Report. This report is not a legal opinion regarding compliance with applicable laws.

The findings and recommendations set out in this report are based on the following information disclosed to RWDI. Drawings and information listed below were received from NEUF ARCHITECT(E)S and used to construct the scale model of the proposed 2076 Old Lakeshore Road ("**Project Data**")

File Name	File Type	Date Received (dd/mm/yyyy)
2025-06-15_2076 OLSR_13159_ARC_R22_TO DaW_SITE+ BUILDING MODEL.dwg	CAD	16/06/2025
2025-06-10_ALL NEW DEVELOPMENTS_LATEST_EOD	Sketchup	16/06/2025
25-069 2076 Old Lakeshore_Landscape (2025-06-20)	CAD	16/07/2025

The recommendations and conclusions are based on the assumption that the Project Data and Climate Data are accurate and complete. RWDI assumes no responsibility for any inaccuracy or deficiency in information it has received from others. In addition, the recommendations and conclusions in this report are partially based on historical data and can be affected by a number of external factors, including but not limited to Project design, quality of materials and construction, site conditions, meteorological events, and climate change. As such, the conclusions and recommendations contained in this report do not list every possible outcome.

The opinions in this report can only be relied upon to the extent that the Project Data and Project Specific Conditions have not changed. Any change in the Project Data or Project Specific Conditions not reflected in this report can impact and/or alter the recommendations and conclusions in this report. Therefore, it is incumbent upon the Client and/or any other third party reviewing the recommendations and conclusions in this report to contact RWDI in the event of any change in the Project Data and Project Specific Conditions in order to determine whether any such change(s) may impact the assumptions upon which the recommendations and conclusions were made.

5 REFERENCES

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FIGURES



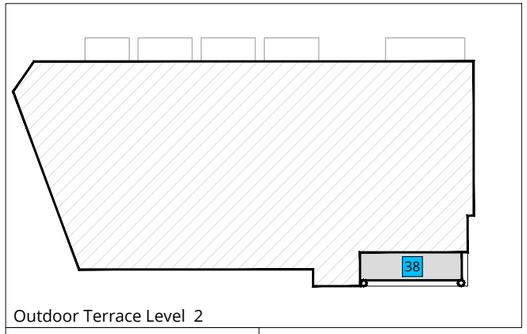
Pedestrian Wind Comfort Conditions
Existing Configuration
Summer (May to October, 6:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

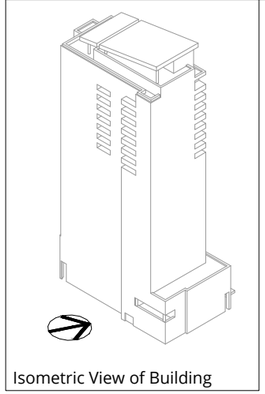
True North

Project #2510999

Drawn by:	NRA	Figure:	1A
Approx. Scale:	1:600		
Date Revised:	July 23, 2025		



Outdoor Terrace Level 2



Isometric View of Building

LAKESHORE ROAD

PEARL STREET

OLD LAKESHORE ROAD

LAKE ONTARIO

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Leisurely Walking
- Fast Walking
- Uncomfortable

- Grade Level Sensor
- Outdoor Terrace Level Sensor
- Building Above Removed for Clarity
- Main Entrance Location

0 10 25m

Pedestrian Wind Comfort Conditions

Proposed Configuration

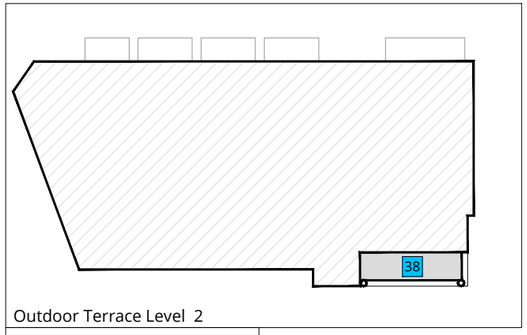
Summer (May to October, 6:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

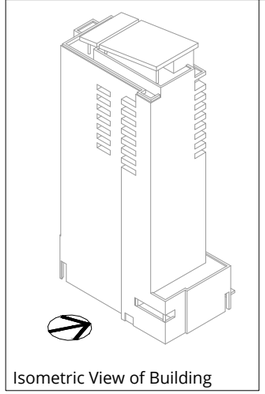
True North

Project #2510999

Drawn by:	NRA	Figure:	1B
Approx. Scale:		1:600	
Date Revised:		July 23, 2025	



Outdoor Terrace Level 2



Isometric View of Building

LAKESHORE ROAD

FUTURE BUILDINGS

PEARL STREET

OLD LAKESHORE ROAD

LAKE ONTARIO

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Leisurely Walking
- Fast Walking
- Uncomfortable

- Grade Level Sensor
- Outdoor Terrace Level Sensor
- Building Above Removed for Clarity
- Main Entrance Location

0 10 25m

Pedestrian Wind Comfort Conditions

Future Configuration

Summer (May to October, 6:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

True North

Project #2510999

Drawn by:	NRA	Figure:	1C
Approx. Scale:		1:600	
Date Revised:		July 23, 2025	



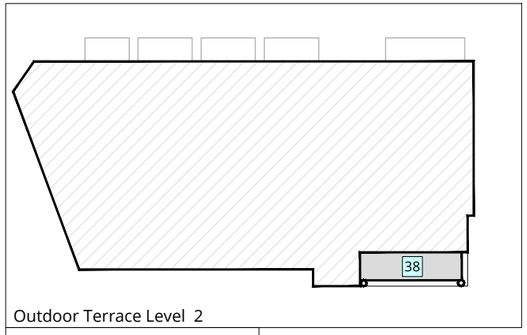
Pedestrian Wind Comfort Conditions
Existing Configuration
Winter (November to April, 6:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

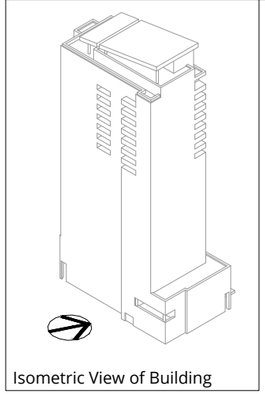
True North

Project #2510999

Drawn by:	NRA	Figure:	2A
Approx. Scale:	1:600		
Date Revised:	July 23, 2025		



Outdoor Terrace Level 2



Isometric View of Building

LAKESHORE ROAD

PEARL STREET

OLD LAKESHORE ROAD

LAKE ONTARIO

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Leisurely Walking
- Fast Walking
- Uncomfortable

- Grade Level Sensor
- Outdoor Terrace Level Sensor
- Building Above Removed for Clarity
- Main Entrance Location

0 10 25m

Pedestrian Wind Comfort Conditions

Proposed Configuration

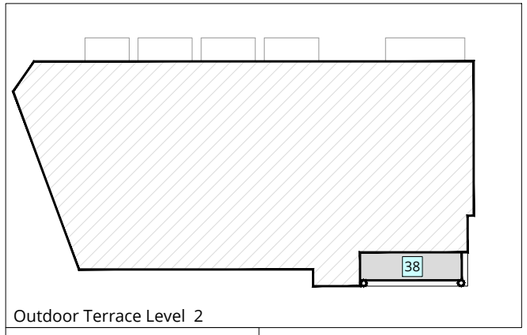
Winter (November to April, 6:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

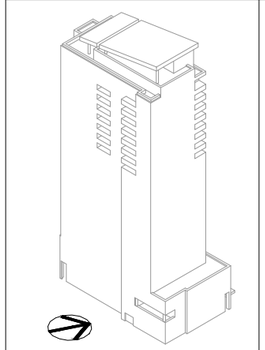
True North

Project #2510999

Drawn by:	NRA	Figure:	2B
Approx. Scale:		1:600	
Date Revised:		July 23, 2025	



Outdoor Terrace Level 2



Isometric View of Building

LAKESHORE ROAD

FUTURE BUILDINGS

PEARL STREET

OLD LAKESHORE ROAD

LAKE ONTARIO

LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Leisurely Walking
- Fast Walking
- Uncomfortable

- Grade Level Sensor
- Outdoor Terrace Level Sensor
- Building Above Removed for Clarity
- Main Entrance Location

0 10 25m

Pedestrian Wind Comfort Conditions

Future Configuration

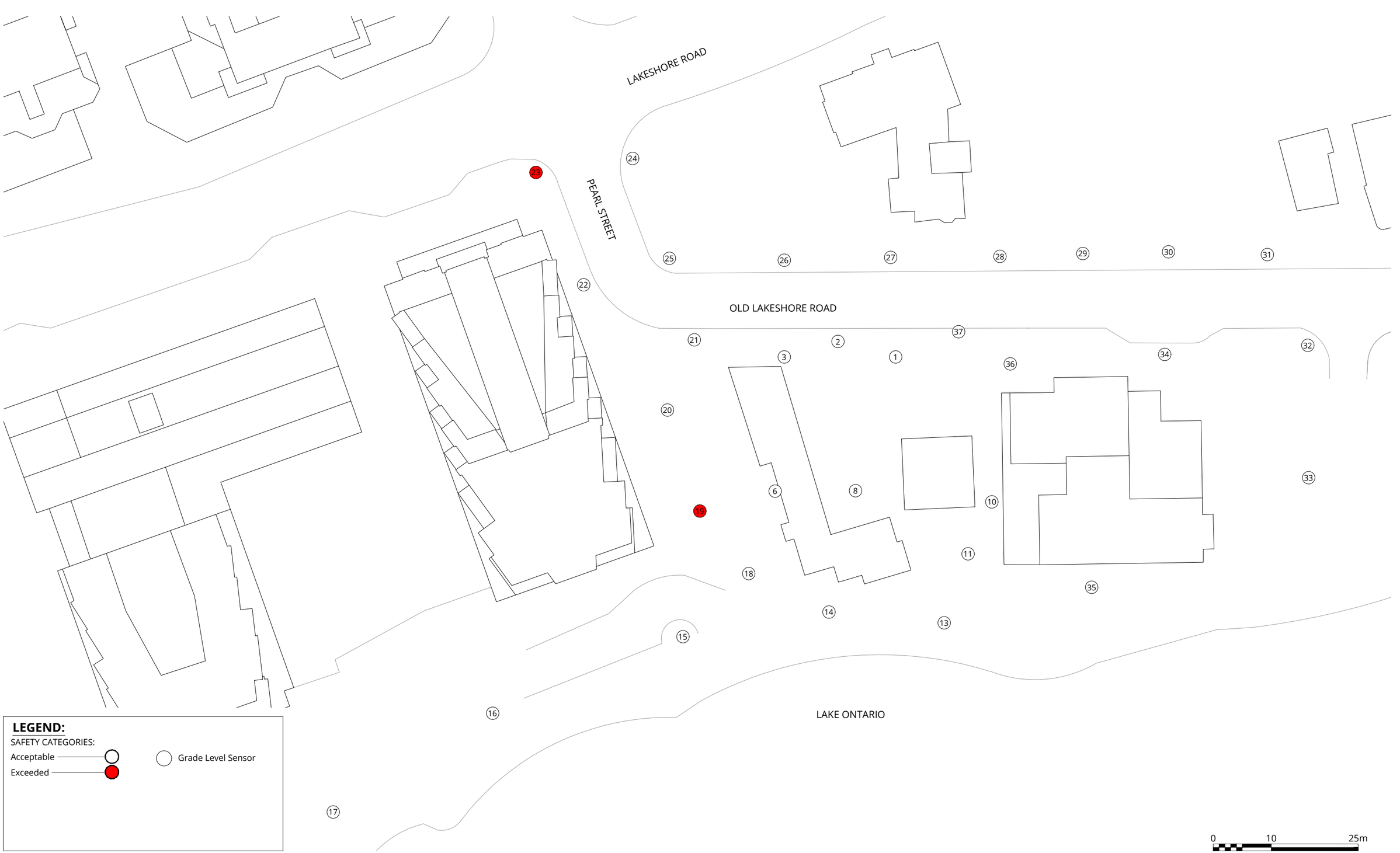
Winter (November to April, 6:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

True North

Project #2510999

Drawn by:	NRA	Figure:	2C
Approx. Scale:		1:600	
Date Revised:		July 23, 2025	



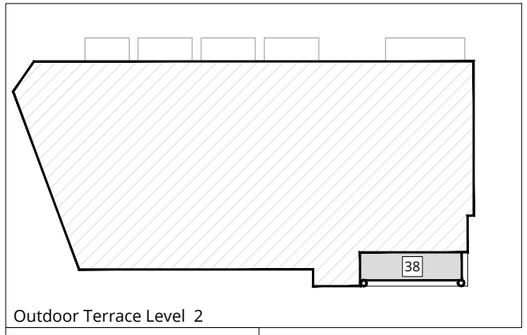
Pedestrian Wind Safety Conditions
Existing Configuration
Annual (January to December, 0:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

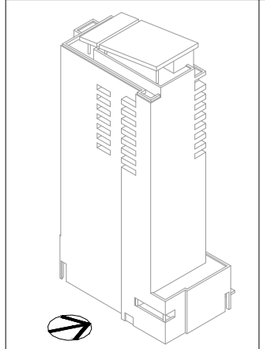
True North

Project #2510999

Drawn by:	NRA	Figure:	3A
Approx. Scale:	1:600		
Date Revised:	July 23, 2025		



Outdoor Terrace Level 2



Isometric View of Building

LAKESHORE ROAD

PEARL STREET

OLD LAKESHORE ROAD

LAKE ONTARIO

LEGEND:

SAFETY CATEGORIES:

Acceptable

Exceeded

Grade Level Sensor

Outdoor Terrace Level Sensor

Building Above Removed for Clarity

Main Entrance Location

0 10 25m

Pedestrian Wind Safety Conditions

Proposed Configuration

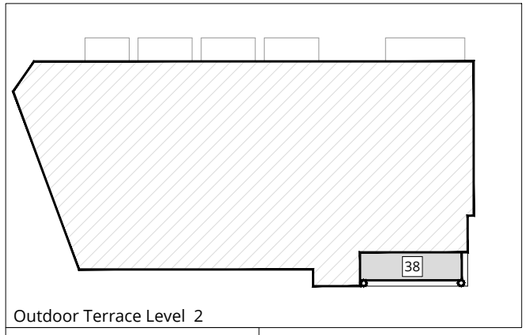
Annual (January to December, 0:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

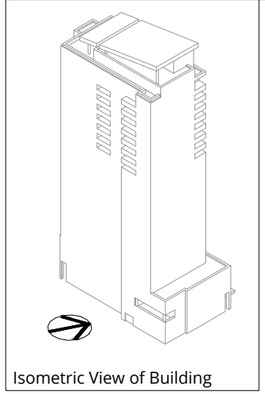
True North

Project #2510999

Drawn by:	NRA	Figure:	3B
Approx. Scale:		1:600	
Date Revised:		July 23, 2025	



Outdoor Terrace Level 2



Isometric View of Building

LAKESHORE ROAD

FUTURE BUILDINGS

PEARL STREET

OLD LAKESHORE ROAD

LAKE ONTARIO

LEGEND:

SAFETY CATEGORIES:

Acceptable

Exceeded

Grade Level Sensor

Outdoor Terrace Level Sensor

Building Above Removed for Clarity

Main Entrance Location

0 10 25m

Pedestrian Wind Safety Conditions

Future Configuration

Annual (January to December, 0:00 to 23:00)

2076 Old Lakeshore Road - Burlington, ON

True North

Project #2510999

Drawn by:	NRA	Figure:	3C
Approx. Scale:		1:600	
Date Revised:		July 23, 2025	

TABLES

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
1	Existing	12	Standing	15	Leisurely Walking	64	Pass
	Proposed	10	Sitting	12	Standing	52	Pass
	Future	11	Standing	15	Leisurely Walking	60	Pass
2	Existing	11	Standing	14	Standing	61	Pass
	Proposed	10	Sitting	12	Standing	61	Pass
	Future	11	Standing	15	Leisurely Walking	62	Pass
3	Existing	11	Standing	13	Standing	56	Pass
	Proposed	11	Standing	13	Standing	69	Pass
	Future	10	Sitting	13	Standing	52	Pass
4	Existing	-	-	-	-	-	-
	Proposed	18	Fast Walking	22	Uncomfortable	97	Exceeded
	Future	13	Standing	16	Leisurely Walking	82	Pass
5	Existing	-	-	-	-	-	-
	Proposed	14	Standing	17	Leisurely Walking	80	Pass
	Future	12	Standing	15	Leisurely Walking	60	Pass
6	Existing	9	Sitting	12	Standing	50	Pass
	Proposed	11	Standing	14	Standing	68	Pass
	Future	10	Sitting	13	Standing	55	Pass
7	Existing	-	-	-	-	-	-
	Proposed	11	Standing	14	Standing	72	Pass
	Future	10	Sitting	12	Standing	75	Pass
8	Existing	10	Sitting	12	Standing	50	Pass
	Proposed	10	Sitting	12	Standing	65	Pass
	Future	8	Sitting	10	Sitting	64	Pass
9	Existing	-	-	-	-	-	-
	Proposed	12	Standing	15	Leisurely Walking	91	Exceeded
	Future	10	Sitting	12	Standing	74	Pass
10	Existing	13	Standing	16	Leisurely Walking	72	Pass
	Proposed	9	Sitting	12	Standing	72	Pass
	Future	7	Sitting	9	Sitting	54	Pass
11	Existing	8	Sitting	10	Sitting	46	Pass
	Proposed	11	Standing	14	Standing	61	Pass
	Future	10	Sitting	12	Standing	54	Pass
12	Existing	-	-	-	-	-	-
	Proposed	14	Standing	17	Leisurely Walking	91	Exceeded
	Future	12	Standing	14	Standing	83	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
13	Existing	11	Standing	14	Standing	64	Pass
	Proposed	13	Standing	17	Leisurely Walking	73	Pass
	Future	11	Standing	14	Standing	68	Pass
14	Existing	11	Standing	14	Standing	61	Pass
	Proposed	13	Standing	17	Leisurely Walking	75	Pass
	Future	11	Standing	14	Standing	71	Pass
15	Existing	15	Leisurely Walking	19	Fast Walking	88	Pass
	Proposed	14	Standing	18	Fast Walking	84	Pass
	Future	11	Standing	14	Standing	72	Pass
16	Existing	16	Leisurely Walking	20	Fast Walking	88	Pass
	Proposed	15	Leisurely Walking	20	Fast Walking	86	Pass
	Future	12	Standing	16	Leisurely Walking	72	Pass
17	Existing	14	Standing	17	Leisurely Walking	73	Pass
	Proposed	13	Standing	17	Leisurely Walking	73	Pass
	Future	13	Standing	16	Leisurely Walking	72	Pass
18	Existing	13	Standing	17	Leisurely Walking	78	Pass
	Proposed	13	Standing	17	Leisurely Walking	76	Pass
	Future	10	Sitting	13	Standing	75	Pass
19	Existing	17	Leisurely Walking	21	Uncomfortable	91	Exceeded
	Proposed	16	Leisurely Walking	20	Fast Walking	95	Exceeded
	Future	12	Standing	14	Standing	63	Pass
20	Existing	12	Standing	15	Leisurely Walking	69	Pass
	Proposed	17	Leisurely Walking	20	Fast Walking	88	Pass
	Future	14	Standing	17	Leisurely Walking	72	Pass
21	Existing	14	Standing	17	Leisurely Walking	75	Pass
	Proposed	16	Leisurely Walking	19	Fast Walking	75	Pass
	Future	14	Standing	17	Leisurely Walking	68	Pass
22	Existing	10	Sitting	13	Standing	53	Pass
	Proposed	12	Standing	14	Standing	59	Pass
	Future	14	Standing	17	Leisurely Walking	67	Pass
23	Existing	16	Leisurely Walking	19	Fast Walking	92	Exceeded
	Proposed	15	Leisurely Walking	19	Fast Walking	86	Pass
	Future	14	Standing	17	Leisurely Walking	71	Pass
24	Existing	15	Leisurely Walking	19	Fast Walking	77	Pass
	Proposed	14	Standing	18	Fast Walking	65	Pass
	Future	14	Standing	16	Leisurely Walking	69	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
25	Existing	15	Leisurely Walking	20	Fast Walking	81	Pass
	Proposed	16	Leisurely Walking	20	Fast Walking	76	Pass
	Future	16	Leisurely Walking	20	Fast Walking	76	Pass
26	Existing	12	Standing	16	Leisurely Walking	70	Pass
	Proposed	14	Standing	17	Leisurely Walking	72	Pass
	Future	10	Sitting	12	Standing	58	Pass
27	Existing	11	Standing	14	Standing	64	Pass
	Proposed	13	Standing	17	Leisurely Walking	71	Pass
	Future	13	Standing	15	Leisurely Walking	76	Pass
28	Existing	12	Standing	14	Standing	58	Pass
	Proposed	12	Standing	15	Leisurely Walking	57	Pass
	Future	12	Standing	14	Standing	69	Pass
29	Existing	11	Standing	14	Standing	57	Pass
	Proposed	11	Standing	14	Standing	55	Pass
	Future	12	Standing	15	Leisurely Walking	68	Pass
30	Existing	11	Standing	14	Standing	55	Pass
	Proposed	12	Standing	14	Standing	57	Pass
	Future	11	Standing	14	Standing	66	Pass
31	Existing	10	Sitting	13	Standing	52	Pass
	Proposed	11	Standing	14	Standing	55	Pass
	Future	12	Standing	15	Leisurely Walking	70	Pass
32	Existing	10	Sitting	13	Standing	50	Pass
	Proposed	12	Standing	14	Standing	56	Pass
	Future	11	Standing	13	Standing	62	Pass
33	Existing	10	Sitting	12	Standing	54	Pass
	Proposed	11	Standing	13	Standing	56	Pass
	Future	9	Sitting	11	Standing	53	Pass
34	Existing	10	Sitting	13	Standing	55	Pass
	Proposed	11	Standing	14	Standing	54	Pass
	Future	12	Standing	15	Leisurely Walking	58	Pass
35	Existing	11	Standing	14	Standing	60	Pass
	Proposed	12	Standing	15	Leisurely Walking	67	Pass
	Future	10	Sitting	12	Standing	57	Pass
36	Existing	10	Sitting	12	Standing	55	Pass
	Proposed	10	Sitting	13	Standing	53	Pass
	Future	11	Standing	13	Standing	57	Pass

Table 1: Pedestrian Wind Comfort and Safety Conditions

Location	Configuration	Wind Comfort				Wind Safety	
		Summer		Winter		Annual	
		Speed (km/h)	Rating	Speed (km/h)	Rating	Speed (km/h)	Rating
37	Existing	12	Standing	15	Leisurely Walking	58	Pass
	Proposed	11	Standing	14	Standing	62	Pass
	Future	14	Standing	17	Leisurely Walking	70	Pass
38	Existing	-	-	-	-	-	-
	Proposed	10	Sitting	12	Standing	57	Pass
	Future	9	Sitting	11	Standing	57	Pass

Season	Months	Hours
Summer	May - October	6:00 - 23:00 for comfort
Winter	November - April	6:00 - 23:00 for comfort
Annual	January - December	0:00 - 23:00 for safety
Configurations		
Existing	Existing site and surroundings	
Proposed	Project with existing surroundings	
Future	Project with future surroundings	

Comfort Speed (km/h)	
(20% Seasonal Exceedance)	
≤ 10	Sitting
11 - 14	Standing
15 - 17	Leisurely Walking
18 - 20	Fast Walking
> 20	Uncomfortable

Safety Speed (km/h)	
(0.1% Annual Exceedance)	
≤ 90	Pass
> 90	Exceeded