

142-148 QUEEN STREET SOUTH

MISSISSAUGA, ONTARIO

PEDESTRIAN WIND STUDY

RWDI # 2402108

February 23, 2024

SUBMITTED TO

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EXECUTIVE SUMMARY

RWDI was retained to conduct a pedestrian wind assessment for the proposed 142-148 Queen Street South in Mississauga, Ontario. The assessment was based on the wind-tunnel testing conducted for the proposed development site under the Existing, Phase 1, and All Phases configurations of the site and surroundings. The results were analysed using the regional wind climate records and evaluated against the Mississauga Wind Criteria for pedestrian comfort (pertaining to common wind speeds conducive to different levels of human activity) and pedestrian safety (pertaining to infrequent but strong gusts that could affect a person's footing). The predicted wind conditions are presented in Figures 1A through 3C, and Table 1, and are summarized as follows:

GROUND LEVEL: COMFORT

Existing Configuration

Existing wind speeds in all areas on and around the project site are comfortable for pedestrian use throughout the year.

Phase 1 Configuration

With the addition of the Phase 1 development, the predicted wind conditions at most locations remain similar to the Existing configuration and would be comfortable for the intended pedestrian use throughout the year. Higher than desired wind speeds for passive use are expected near the southeast corner of the ground-level outdoor amenity space in the summer. During the winter, due to seasonally stronger winds, higher wind speeds are expected that would continue to be appropriate for the intended uses in most areas. Windier conditions than desired are predicted at a few building entrances near the northwest corner of site and between the buildings.

All Phases Configuration

In the All-Phases configuration, a reduction in wind speeds is expected on and around the site year-round, that would reduce the higher winds at the entrances and the uncomfortable conditions from the Phase 1 configuration.

GROUND LEVEL: SAFETY

Existing wind speeds meet the safety criterion at all locations assessed. In the Phase 1 configuration, wind speeds that meet the safety criterion are anticipated at all grade level and some above grade locations. With the addition of the All-Phases configuration most locations are anticipated to meet the safety criterion with all above grade safeties being eliminated; however, two safety exceedances are expected at grade level between Building 3A and Building 2A.

ABOVE-GRADE AMENITY TERRACES

In the summer for both the Phase 1 and All Phases configurations, wind speeds are expected to be comfortable for passive use in most areas on Building 1A, Level 4 and Building 1B, Level 7 outdoor amenity areas. Higher winds than desired for passive patron use are predicted at the southern corner of Building 1A, Level 7, and at the west end of Building 1B, Level 4, and the wind activity in these areas could exceed the annual safety criterion as well. These conditions can be improved with the addition of localized hard or soft scape features to be confirmed with additional wind tunnel testing during Site Plan Approval.



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1 INTRODUCTION

RWDI was retained to conduct a pedestrian wind assessment for the proposed 142-148 Queen Street South development in Mississauga, 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 south side of Queen Street south, west of Tannery Street (Image 1). The project is a mixed-use development to be built in phases. The masterplan will consist of several buildings ranging from 8-storeys to 15-storeys with outdoor amenity space, a public park and market square and is currently pursuing a site wide OPA submission and ZBA submission for Phase 1. The focus of this study is for Phase 1 (Buildings 1A and 1B) only.

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 Mississauga criteria for gauging wind comfort and safety in pedestrian areas. The assessment focused on critical pedestrian areas, including building entrances, public sidewalks, and outdoor amenity areas.



Image 1: Aerial View of Existing Site and Surroundings (Photo Courtesy of 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 - Phase 1 Phase 1 with existing surroundings (Image 2B), and,
- C - All Phases: All Phases with existing 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 165 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.

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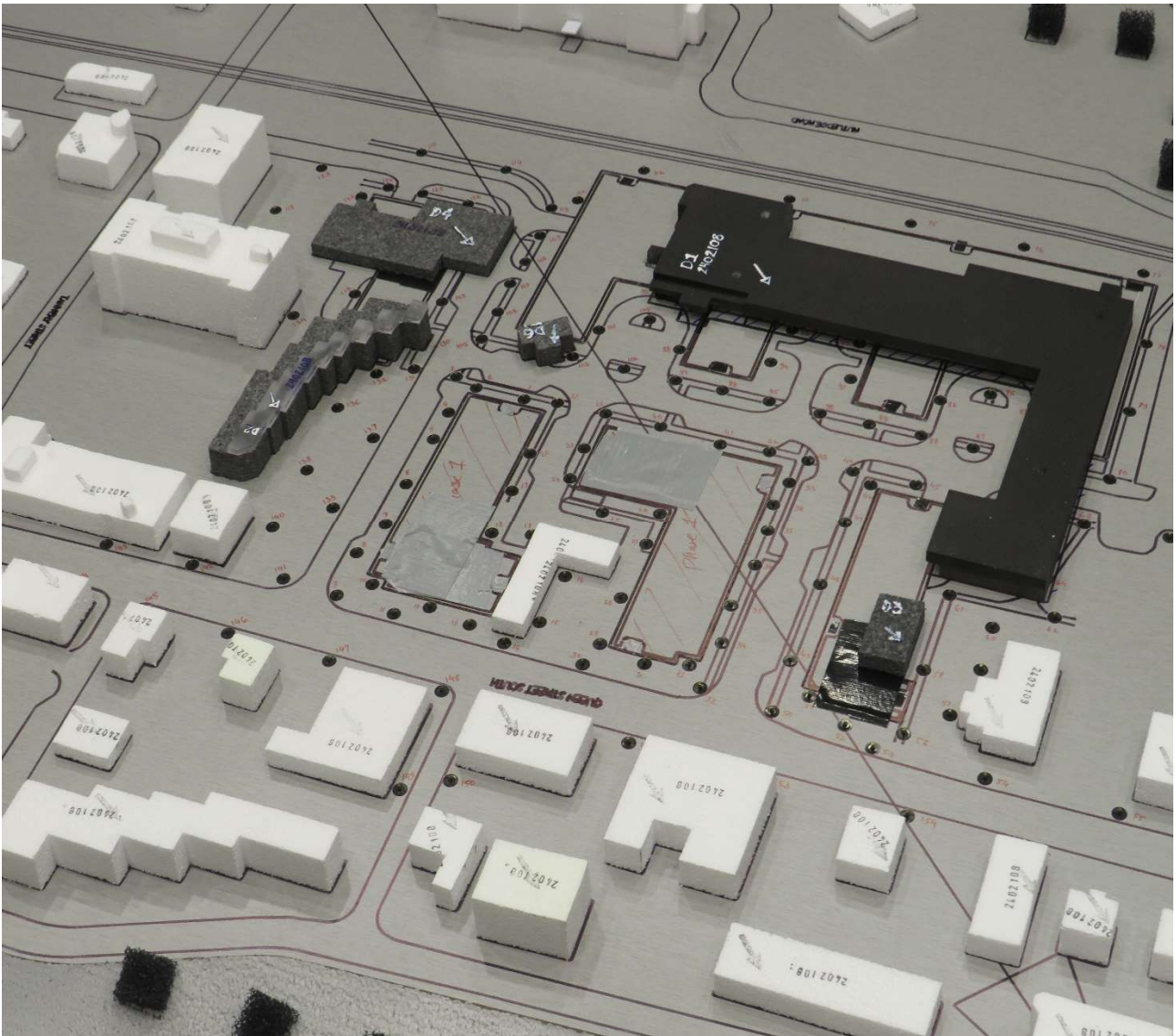
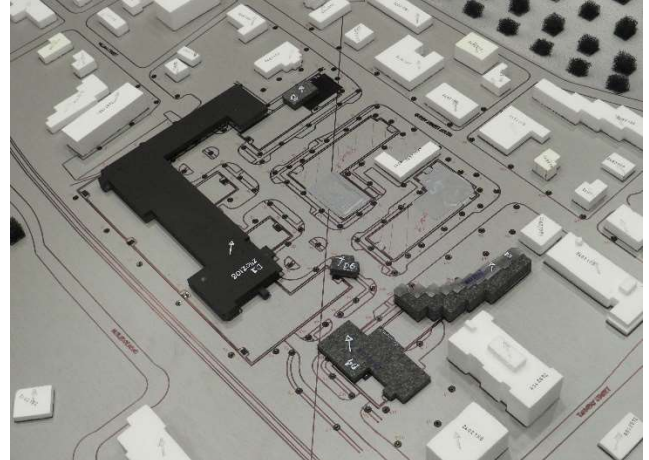


Image 2A: Wind Tunnel Study Model - Existing Configuration

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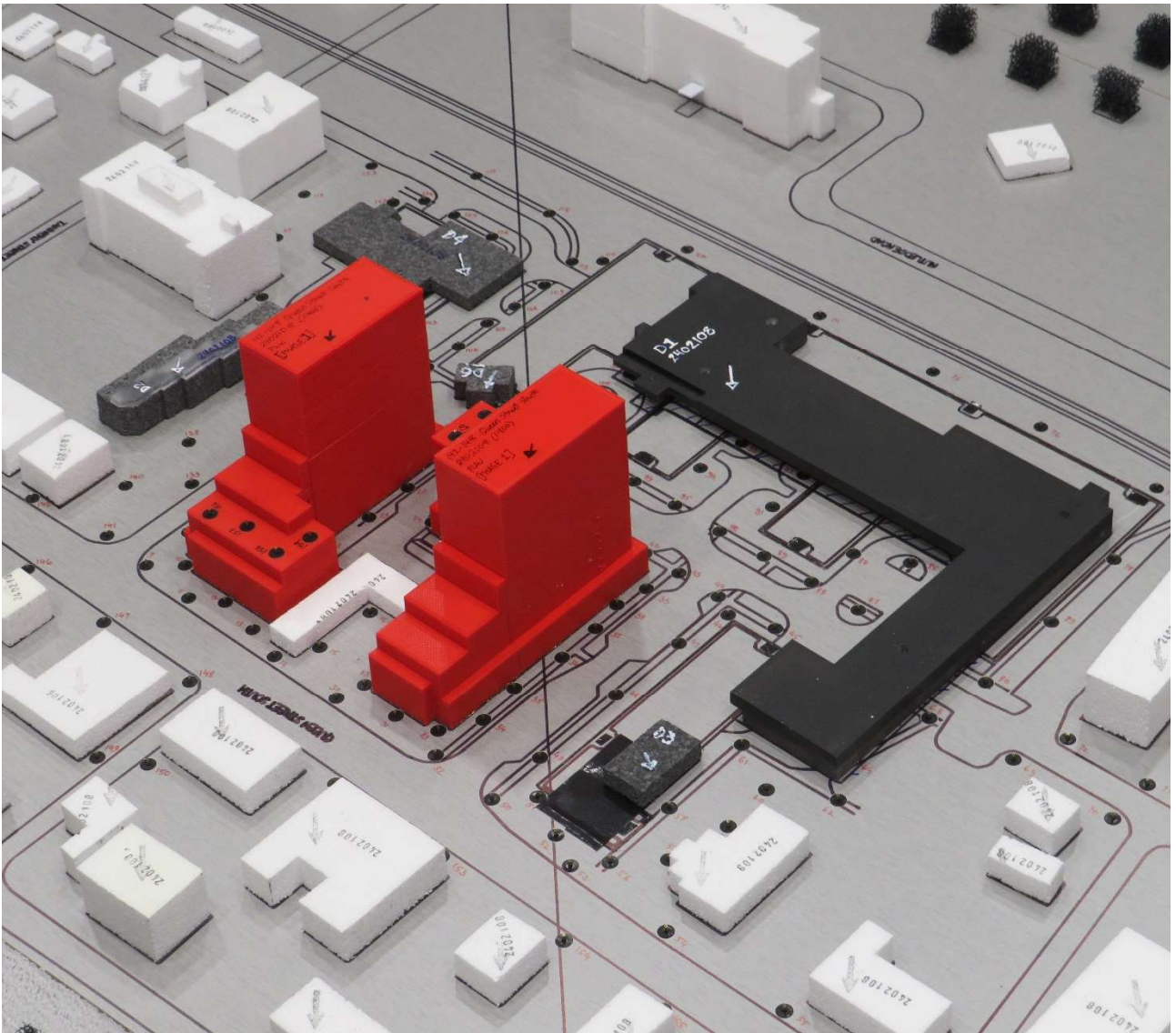
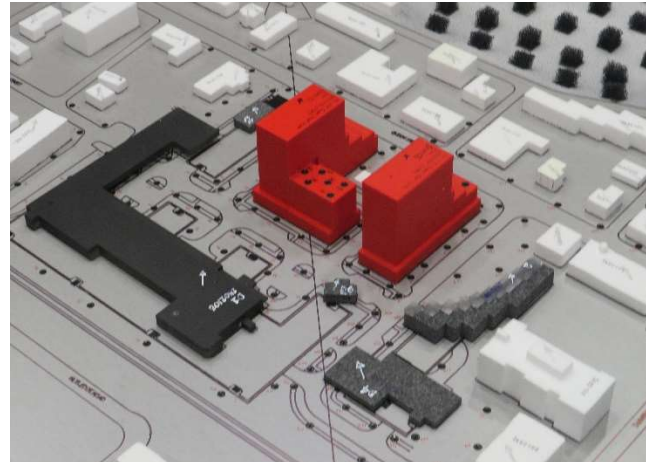


Image 2B: Wind Tunnel Study Model – Phase 1 Configuration

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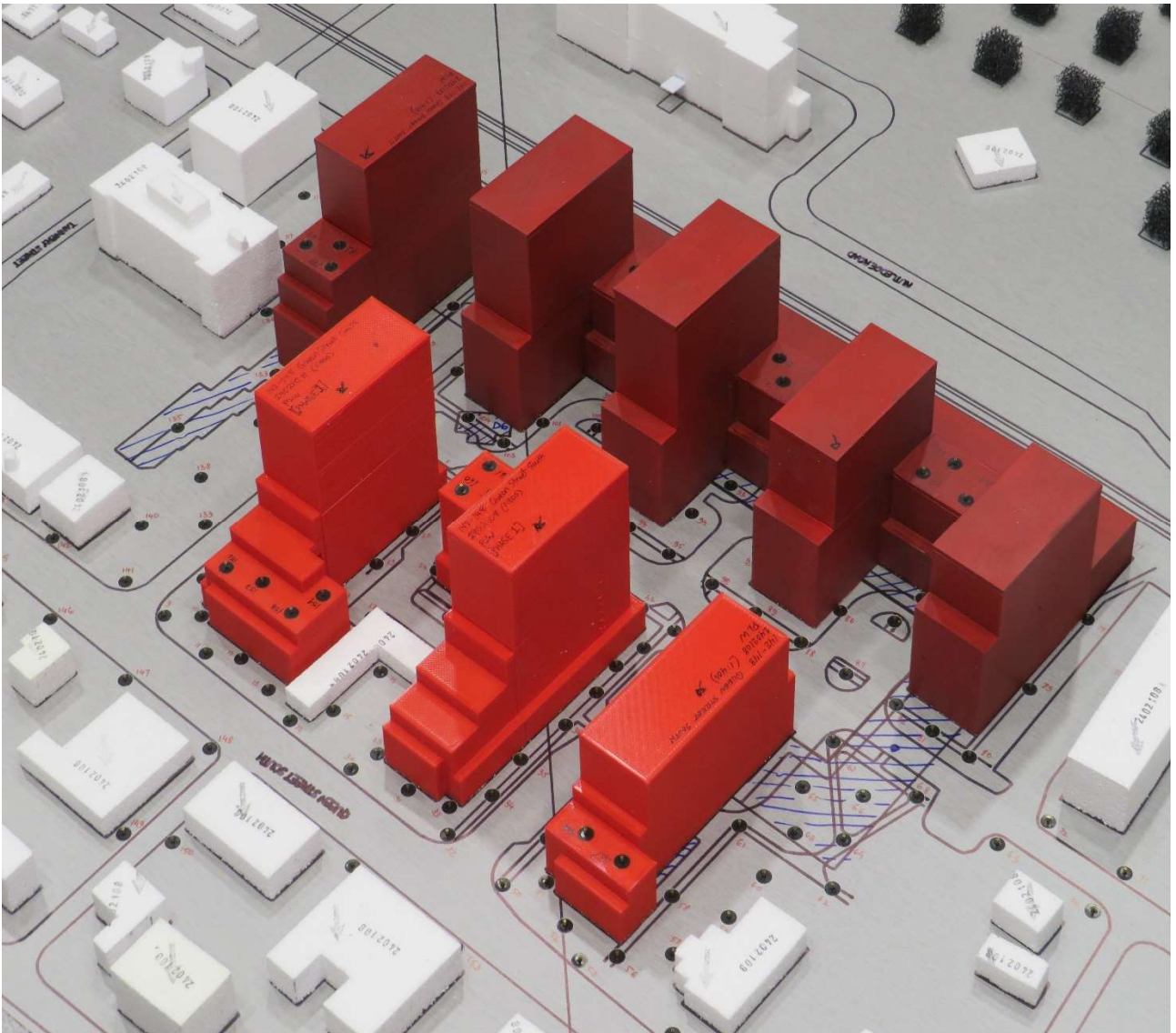
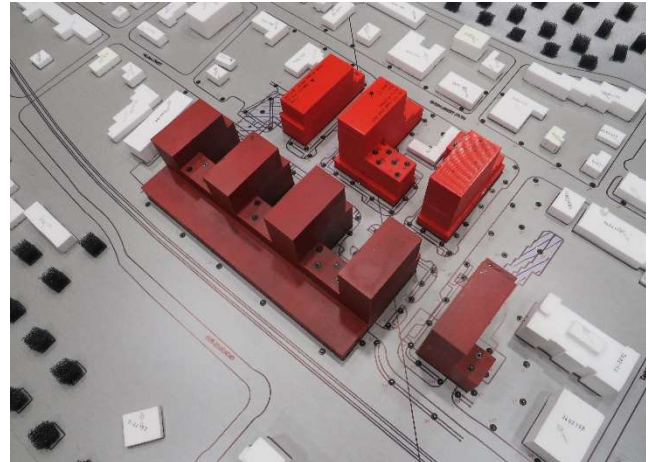
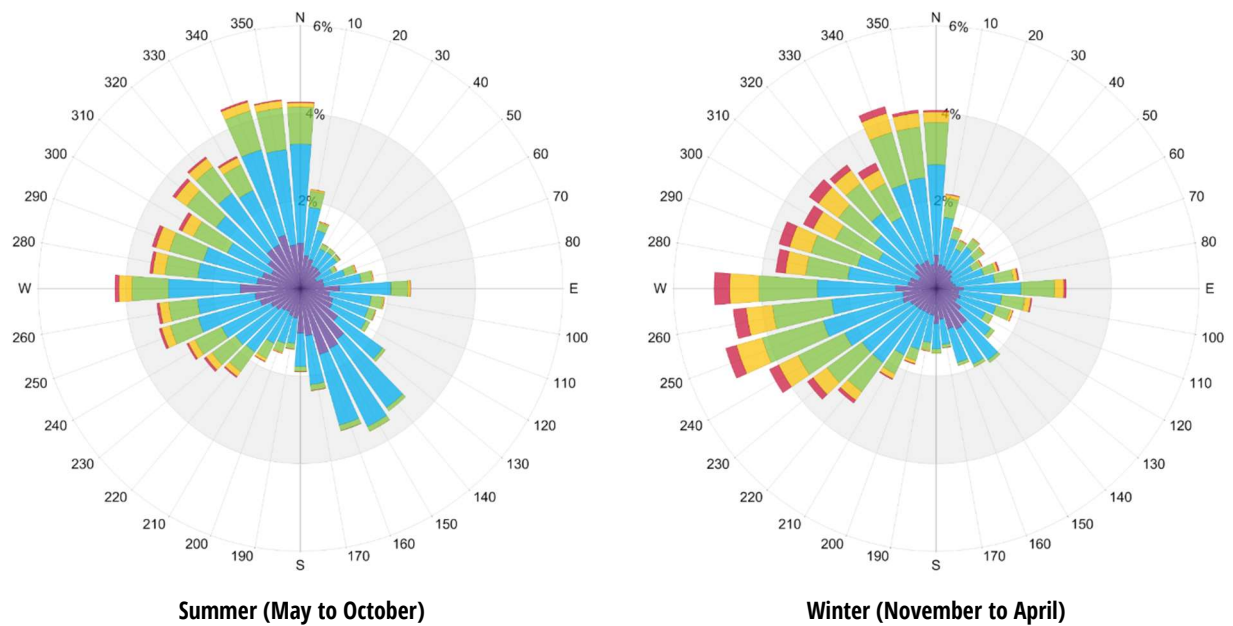


Image 2C: Wind Tunnel Study Model - All Phases Configuration

2.2 Wind Climate Data

Wind statistics recorded at Toronto Pearson International Airport between 1987 and 2017, inclusive, were analyzed for the summer (May to October) and winter (November to April) seasons. Image 3 graphically depicts the directional distributions of wind frequencies and speeds for these two seasons. Winds from the southwest, west and northwest directions are predominant during both summer and winter. During the winter season, the winds from the east direction are also frequent, as indicated by the wind roses. The southeast winds are frequent in the summer, but typically of low speeds. Strong winds of a mean speed greater than 30 km/h, measured at the airport (at an anemometer height of 10 m), occur for 4.6% and 11.1% 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	6.0	4.0
	1-10	32.0	23.0
	11-20	42.2	40.1
	21-30	15.2	21.8
	31-40	3.7	7.9
	>40	0.9	3.2

Image 3: Directional Distribution of Winds Approaching Toronto Pearson International Airport (1990 to 2020)



2.3 Mississauga Pedestrian Wind Criteria

The Mississauga pedestrian wind criteria, developed in June 2014, are specified in the Urban Design Terms of Reference, “Pedestrian Wind Comfort and Safety Studies”. As both mean and gust wind speeds can affect pedestrian comfort, their combined effect is used as the basis of the comfort criteria and defined as a Gust Equivalent Mean (GEM) wind speed. A 20% exceedance is used in these comfort criteria to determine the comfort category, which suggests that wind speeds would be comfortable for the corresponding activity at least 80% of the time or four out of five days.

Only gust winds are considered in the safety criterion. These are usually rare events but deserve special attention in city planning and building design due to their potential impact on pedestrian safety.

The following defines the criteria.

Comfort Category	GEM Speed (km/h)	Description
Sitting	≤ 10	Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away
Standing	≤ 15	Gentle breezes suitable for main building entrances and bus stops
Walking	≤ 20	Relatively high speeds that can be tolerated if one’s objective is to walk, run or cycle without lingering
Uncomfortable	> 20	Strong winds of this magnitude are considered a nuisance for most activities, and wind mitigation is typically recommended

Notes:

- (1) GEM speed = max (mean speed, gust speed/1.85),
- (2) GEM speeds listed above are based on a seasonal exceedance of 20% of the time between 6:00 and 23:00.

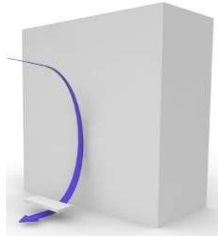
Safety Criterion	Gust Speed (km/h)	Description
Exceeded	> 90	Excessive gust speeds that can adversely affect a pedestrian's balance and footing. Wind mitigation is typically required.

Notes:

- (1) Based on an annual exceedance of 9 hours or 0.1% of the time for 24 hours a day.

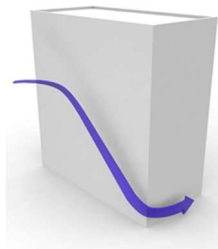
2.4 Generalized Wind Flows

In our discussion of wind conditions, reference may be made to the following generalized wind flows (Image 4):



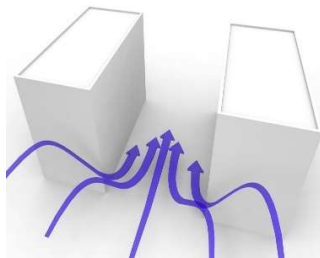
DOWNWASHING

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 winds approach at an oblique angle to a tall façade and are deflected down, a localized increase in the wind activity or corner acceleration can be expected around the exposed building corners at pedestrian level.



CHANNELLING EFFECT

When two buildings are situated side by side, wind flow tends to accelerate through the space between the buildings due to channelling effect caused by the narrow gap.

Image 4: Generalized Wind Flows

If these building/wind combinations occur for prevailing winds, there is a greater potential for increased wind activity. Design details such as 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.

Canopy, landscaping and wind screens (left to right)

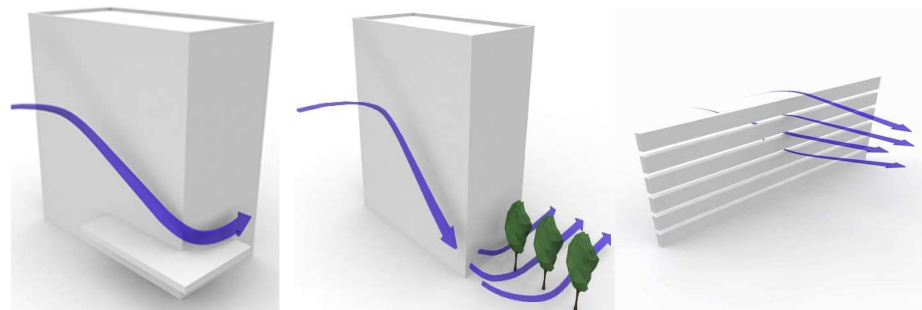


Image 5: Common Wind Control Measures

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. These conditions and the associated wind speeds are also presented in Table 1, located in the “Tables” section of this report. The following is a detailed discussion of the suitability of the wind conditions for the anticipated pedestrian use of each area of interest.

3.1 Grade Level (Locations 1 through 155)

Wind conditions comfortable for walking are appropriate for sidewalks and walkways on and around the project site as pedestrians will be active and less likely to remain in one area for prolonged periods of time. Lower wind speeds, conducive to standing or sitting, are preferred at main entrances where pedestrians are apt to linger.

Note that wind directions are based on true north, while project north has been considered for reference around the project site and buildings.

3.1.1 Existing Configuration

For all areas on and around the project site, existing wind speeds are comfortable for walking or lower (Figures 1A and 2A). Wind speeds that meet the safety criterion are anticipated at all areas assessed in the Existing configuration (Figure 3A).

3.1.2 Phase 1 Configuration

With the addition of the Phase 1 buildings to the site, wind speeds in a few areas sheltered by the proposed buildings are reduced throughout the year. An increase in wind speeds is expected to the east, south, and west of the development, but conditions at most areas are expected to remain appropriate for the intended uses. Wind speeds that meet the safety criterion are predicated at all grade level locations in the Phase 1 configuration (Figure 3B).

Wind conditions are predicted to continue to be comfortable for sitting or standing in most areas in the summer with higher speeds comfortable for walking at a few areas across from Building 1A to the west and along the sidewalks to the south and east of the buildings (Figure 1B). During the winter, wind speeds are expected to increase with conditions comfortable for walking expected at more areas compared to the summer (Figure 2B). These conditions are appropriate for the intended use of the sidewalks and walkways on and around the site year-round. Higher than desired wind speeds rated uncomfortable are expected at the northwest corner of the site due to corner acceleration and to the south where winds are being channelled between the buildings (Figures 2B). Any proposed landscaping will help reduce wind speeds around the site.

Wind conditions at the outdoor amenity space at the southeast corner of Building 1B during the summer, when this area would be frequented, are expected to be comfortable for standing along the east façade and walking to the south. Wind speeds to the south are higher than desired for passive pedestrian use and wind control strategies are recommended. To reduce wind speeds at the outdoor amenity space, consider a canopy (free-standing or structural) along the south façade wrapped around the southeast corner to deflect downwashing winds and winds

accelerating around the southeast corner. Additionally, adding tall wind screens and landscaping at the corner and around designated seating areas can help lower winds speeds. Both overhead and ground-level features can be up to 50% porous, and the vegetation and screens should be at least 2 m tall to be effective for wind control. Examples of wind control strategies are shown in Image 6.



Image 6: Wind control strategies for grade level amenity spaces

Main entrances to the proposed development are situated near Locations 1, 4, 7, 12, 19, 26, 27, 31, 35, 38 and 41. Wind speeds at most entrances are predicted to be comfortable for sitting or standing throughout the year which are suitable conditions for entrances. Wind speeds at the entrance on the south side of Building 1B and the entrances on the west side of Building 1A are expected to be higher than desired during the winter (Locations 1, 35 and 38 in Figures 2B) due to the prevailing westerly and northwesterly winds being intercepted by the buildings and being redirected down (downwashing) to grade. To reduce wind speeds at these entrance locations, consider recessing the entrance into the façade. Alternatively adding wind control features in the form of overhead canopies all along the west façade of Building 1A or wind screens or tall landscaping on either side of the entrance is recommended. Examples of these wind control strategies are shown in Image 7.

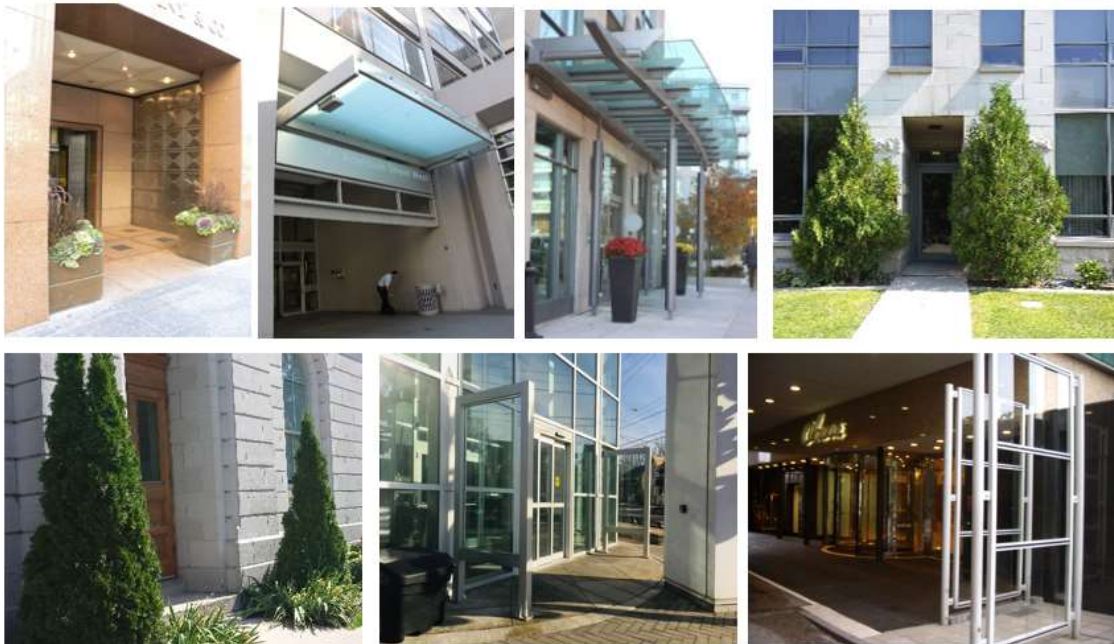


Image 7: Wind control strategies for entrances

3.1.3 All Phases Configuration

With the addition of all phases, wind speeds are expected to be reduced at most areas on and around the site throughout the year when compared with the Phase 1 configuration. Wind speeds at most locations at grade in the All-Phase configuration are predicted to meet the wind safety criterion; however, two locations where winds would exceed the criterion are expected in the gap between Buildings 2A and 3A (Figure 3C).

During the summer wind conditions are expected to be comfortable for sitting or standing with a few areas of walking to east of the site, these conditions are suitable for pedestrian use including market square and the public park (Figure 1C). In the winter, winds on the east side of site being channelled in the gap between Building 3A and Building 2A are expected to increase from being comfortable for standing in Phase 1 to be comfortable for walking in the All Phases configuration (Figure 2C). Positively, the uncomfortable wind conditions predicted at the northeast corner of site and between Building 1A and Building 1B in the Phase 1 configuration would be improved to be comfortable for standing in the All Phases configuration (Locations 20 and 32 in Figure 2C). Higher than desired wind speeds expected at the western entrances of Building A1 during the winter in the Phase 1 configuration are expected to reduce to be comfortable for standing, which is suitable for entrances (Locations 1, 35, 38 in Figure 2C).

3.2 Outdoor Amenity Levels Above Grade (Locations 156 through 165)

It is generally desirable for wind conditions on terraces intended for passive activities to be comfortable for sitting or standing in the summer, with conditions comfortable for sitting being desirable in seating/longing/dining areas. During the winter, the area would not be used frequently, and increased wind activity would be considered appropriate.

In the Phase 1 configuration, wind conditions on the Level 4 amenity terrace of Building 1B (Locations 156 through 159 in Figure 1B) are predicted to be comfortable for standing during the summer. Wind conditions comfortable for sitting or standing are expected at some locations on Level 7 terrace of Building 1A during the summer (Locations 162, 163 and 165 in Figure 1B); however, higher wind speeds comfortable for walking are expected at a few locations on the south and east side of the space (Locations 160, 161 and 164). During the winter most locations on the Level 4 and Level 7 amenity areas are expected to be windier than desired (Figure 2B). The wind safety criterion is expected to be met at most areas except one location on Level 4 of Building 1B. Wind conditions at most areas on the Level 7 terrace of Building 1A are expected to exceed the criterion in the Phase 1 configuration (Figure 3B).

In the All-Phase configuration, wind speeds on the amenity levels are expected to be reduced from the Phase 1 configuration (Figures 1C and 2C). Wind speeds improve and are expected to meet the wind safety criterion at all above-grade amenity levels in the All-Phase configuration (Figure 3C).

Satisfactory wind speeds can be achieved on the terraces using of taller guardrails to protect against strong horizontal winds approaching the terrace, and/or windscreens and dense landscaping targeted around activity areas to create localized low-wind zones for patron-use. Examples of guardrails, windscreens and landscaping are shown in Image 8.



Image 8: Wind control strategies for above grade levels



4 STATEMENT OF LIMITATIONS

Limitations

This report was prepared by Rowan Williams Davies & Irwin, Inc. (“RWDI”) for De Zen Realty Company Limited (“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 SRM Architects + Urban Designers and De Zen Realty Company Limited and used to construct the scale model of the proposed 142-148 Queen Street South project (“**Project Data**”).

File Name	File Type	Date Received (dd/mm/yyyy)
D2034 - Site Model - Alternative Option - 2024.01.26	SktechUP	26/01/2024
23064 - DeZen - 146 Queen St - Phase 01- 2024-01-24	PDF	25/01/2024
D2034 -142 Queen - Site Master Plan - Alternative Plan- 2024.01.22	PDF	24/01/2024

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.

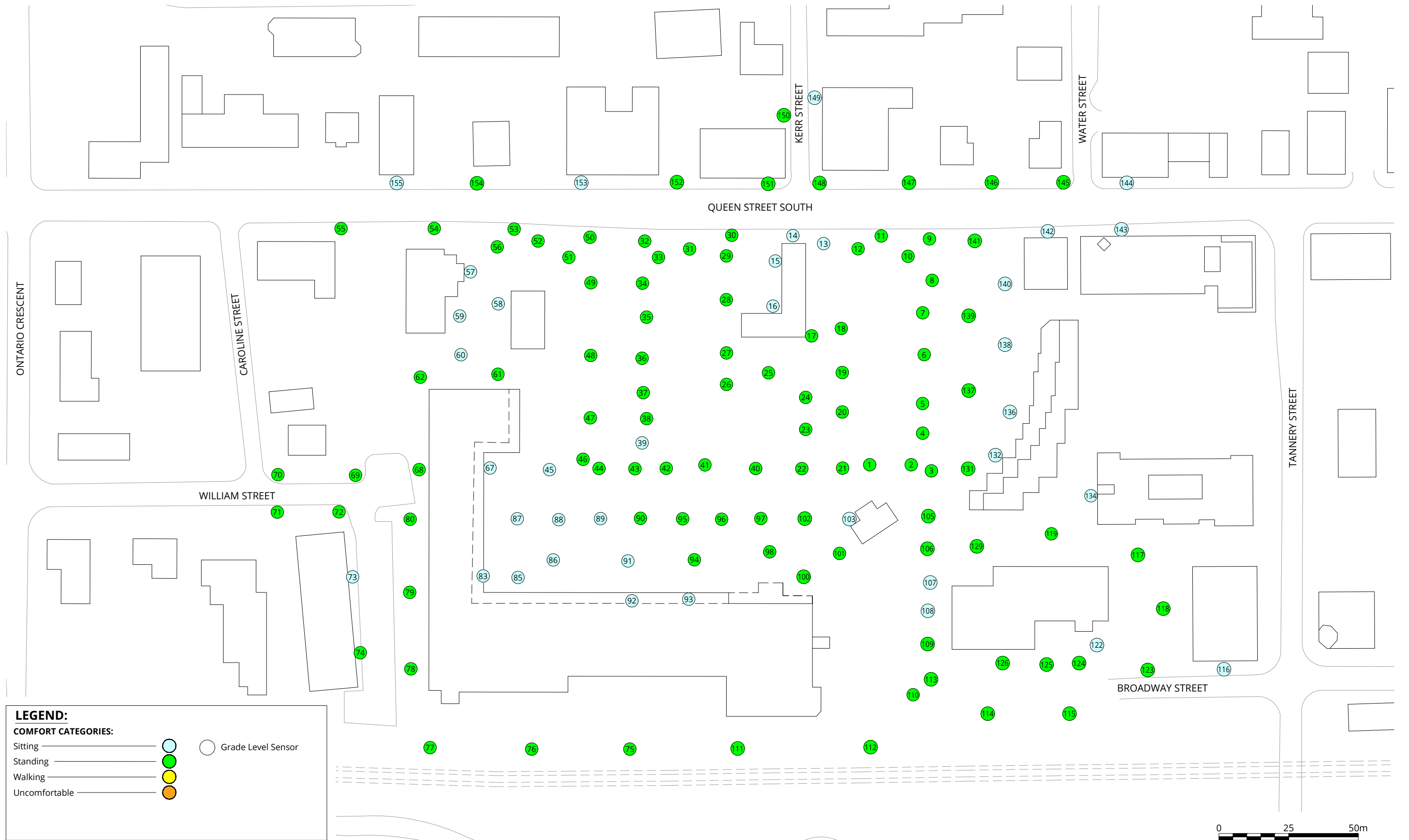


5 REFERENCES

1. ASCE Task Committee on Outdoor Human Comfort (2004). *Outdoor Human Comfort and Its Assessment*, 68 pages, American Society of Civil Engineers, Reston, Virginia, USA.
2. Williams, C.J., Hunter, M.A. and Waechter, W.F. (1990). "Criteria for Assessing the Pedestrian Wind Environment," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.36, pp.811-815.
3. Williams, C.J., Soligo M.J. and Cote, J. (1992). "A Discussion of the Components for a Comprehensive Pedestrian Level Comfort Criteria," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.41-44, pp.2389-2390.
4. Soligo, M.J., Irwin, P.A., and Williams, C.J. (1993). "Pedestrian Comfort Including Wind and Thermal Effects," *Third Asia-Pacific Symposium on Wind Engineering*, Hong Kong.
5. Soligo, M.J., Irwin, P.A., Williams, C.J. and Schuyler, G.D. (1998). "A Comprehensive Assessment of Pedestrian Comfort Including Thermal Effects," *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.77&78, pp.753-766.
6. Williams, C.J., Wu, H., Waechter, W.F. and Baker, H.A. (1999). "Experiences with Remedial Solutions to Control Pedestrian Wind Problems," *Tenth International Conference on Wind Engineering*, Copenhagen, Denmark.
7. Lawson, T.V. (1973). "Wind Environment of Buildings: A Logical Approach to the Establishment of Criteria", *Report No. TVL 7321*, Department of Aeronautic Engineering, University of Bristol, Bristol, England.
8. Durgin, F. H. (1997). "Pedestrian Level Wind Criteria Using the Equivalent average", *Journal of Wind Engineering and Industrial Aerodynamics*, Vol. 66, pp.215-226.
9. Wu, H. and Kriksic, F. (2012). "Designing for Pedestrian Comfort in Response to Local Climate", *Journal of Wind Engineering and Industrial Aerodynamics*, Vol.104-106, pp.397-407.
10. Wu, H., Williams, C.J., Baker, H.A. and Waechter, W.F. (2004), "Knowledge-based Desk-Top Analysis of Pedestrian Wind Conditions", *ASCE Structure Congress 2004*, Nashville, Tennessee.

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FIGURES



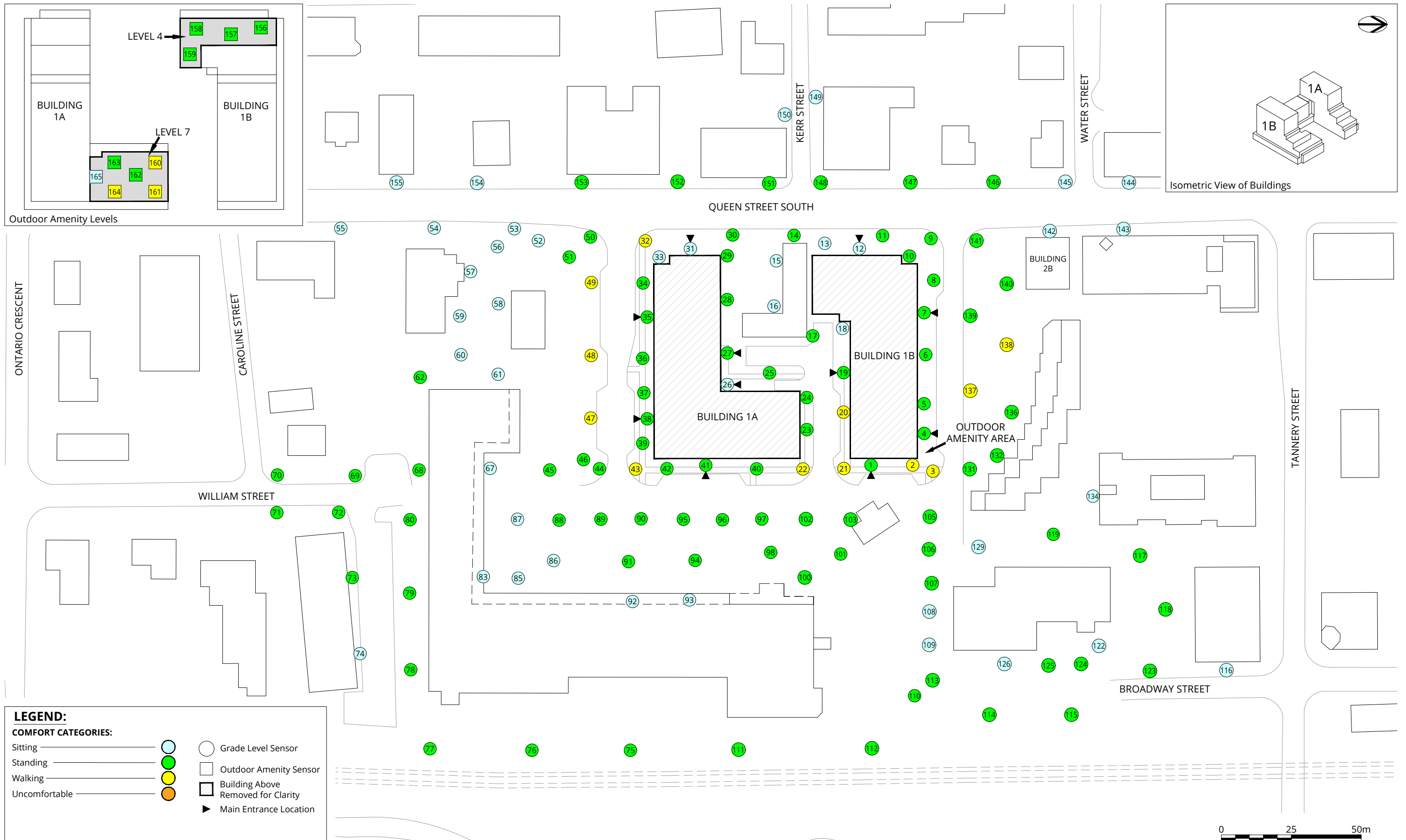
Pedestrian Wind Comfort Conditions
 Existing Configuration
 Summer (May to October, 6:00 to 23:00)
 142-148 Queen Street South - Mississauga, ON

Project North True North



 Project #2402108

Drawn by: ALJM Figure: 1A
 Approx. Scale: 1:1250
 Date Revised: Feb. 15, 2024



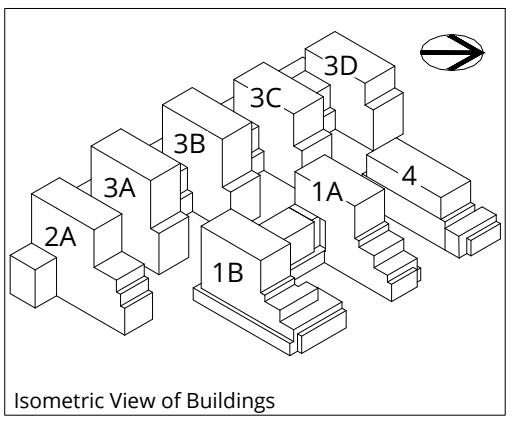
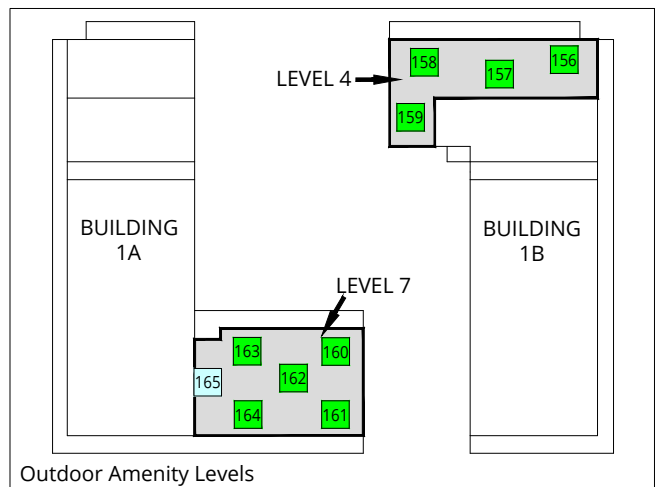
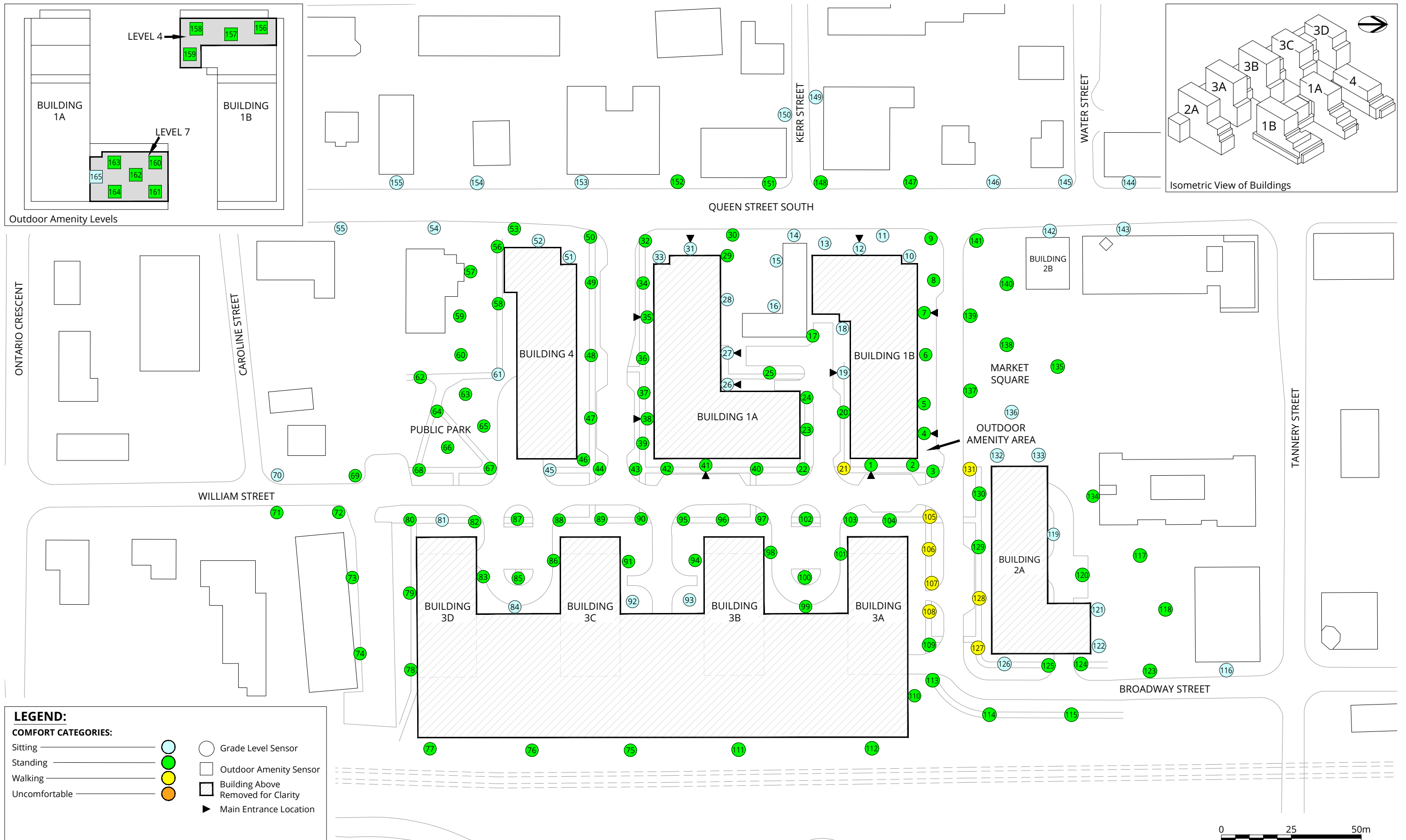


Pedestrian Wind Comfort Conditions
 Phase 1 Configuration
 Summer (May to October, 6:00 to 23:00)
 142-148 Queen Street South - Mississauga, ON

Project North True North
 
 Project #2402108

Drawn by: ALJM Figure: 1B
 Approx. Scale: 1:1250
 Date Revised: Feb. 15, 2024

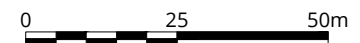




LEGEND:

COMFORT CATEGORIES:

- Sitting
- Standing
- Walking
- Uncomfortable
- Grade Level Sensor
- Outdoor Amenity Sensor
- Building Above Removed for Clarity
- ▶ Main Entrance Location



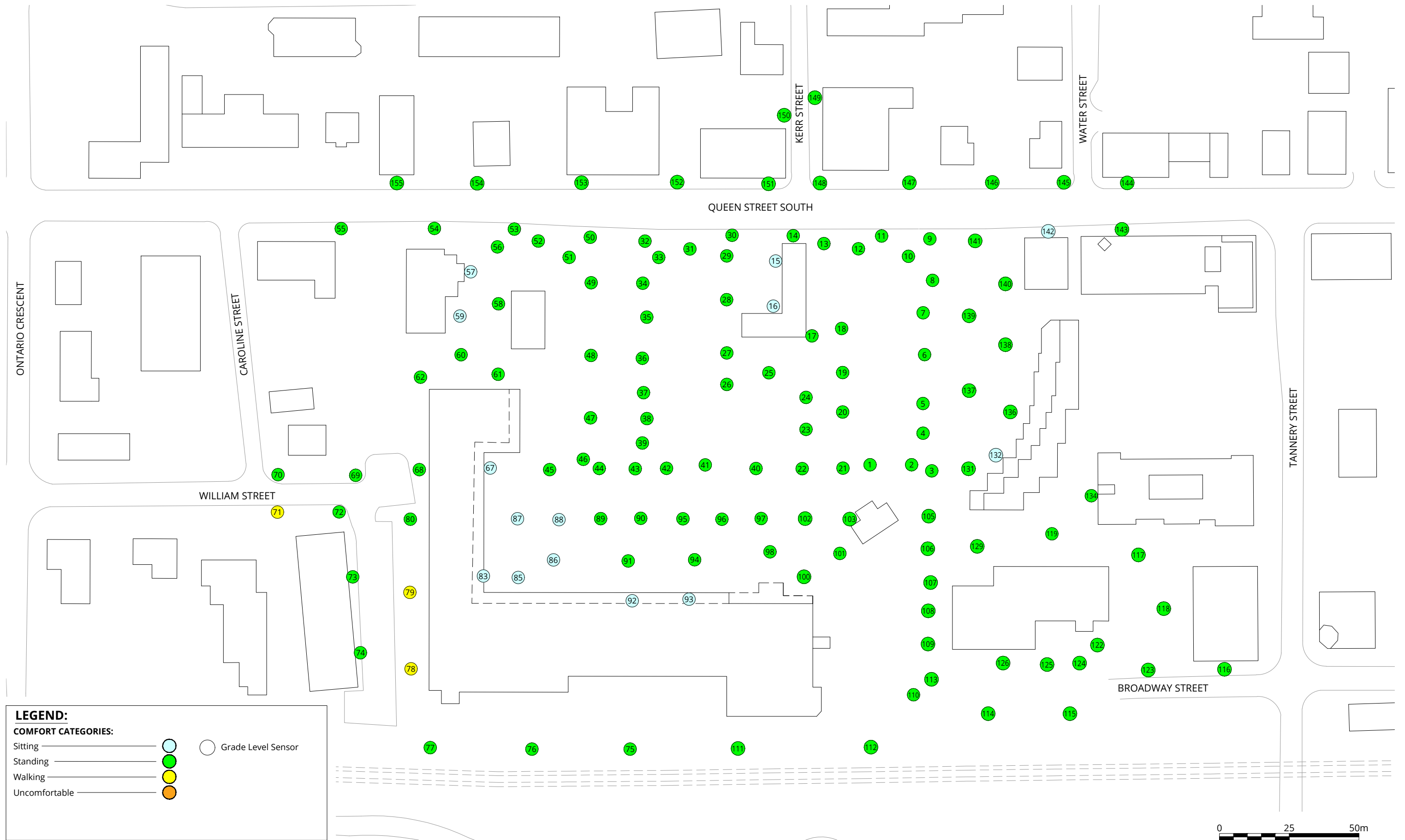
Pedestrian Wind Comfort Conditions
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 142-148 Queen Street South - Mississauga, ON

Project North True North

 Project #2402108

Drawn by: ALJM Figure: 1C
 Approx. Scale: 1:1250
 Date Revised: Feb. 15, 2024





LEGEND:

COMFORT CATEGORIES:

- Sitting ●
- Standing ●
- Walking ●
- Uncomfortable ●

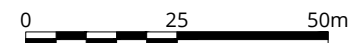
Grade Level Sensor

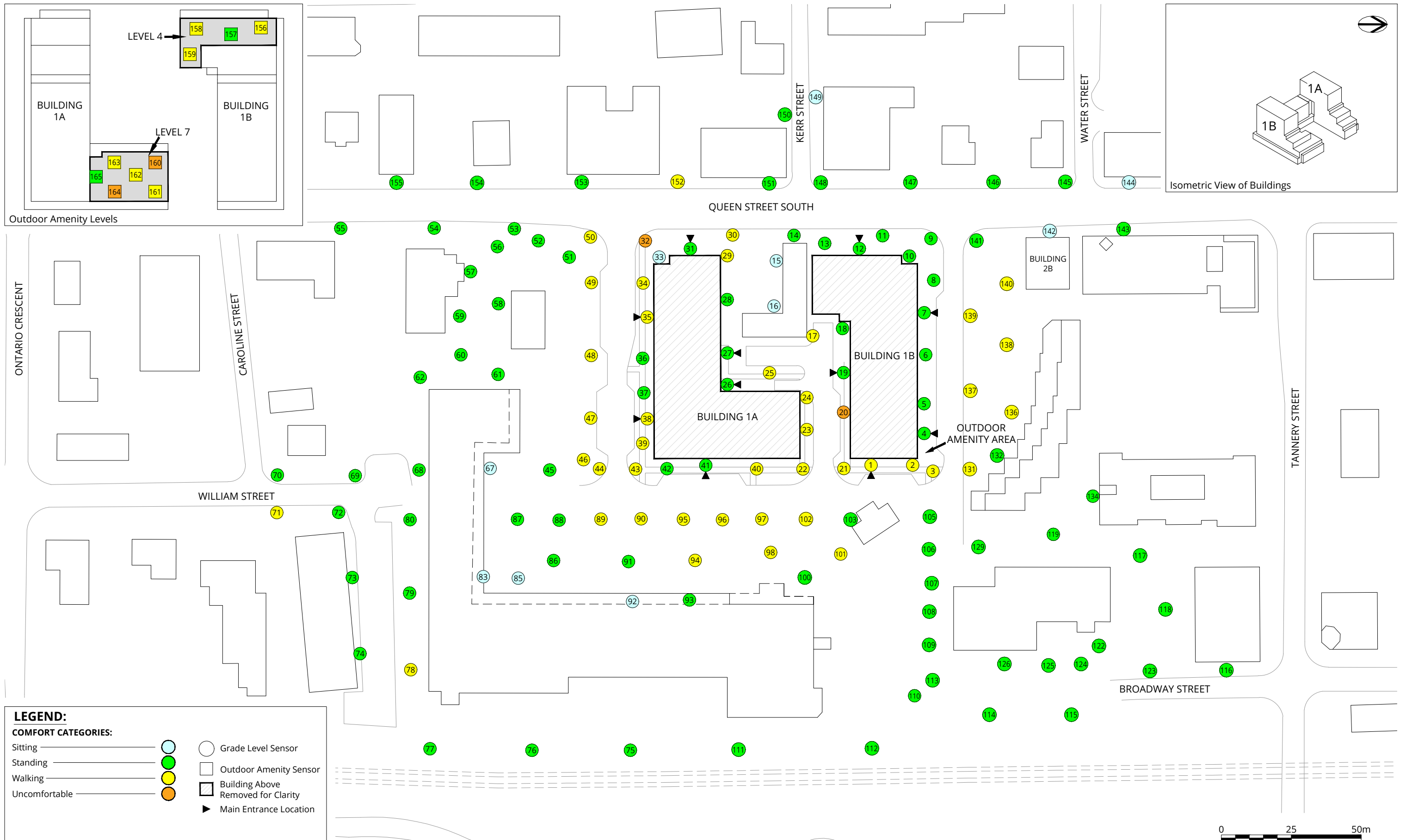
Pedestrian Wind Comfort Conditions
 Existing Configuration
 Winter (November to April, 6:00 to 23:00)
 142-148 Queen Street South - Mississauga, ON

Project North True North

Project #2402108

Drawn by: ALJM Figure: 2A
 Approx. Scale: 1:1250
 Date Revised: Feb. 15, 2024





LEGEND:

COMFORT CATEGORIES:

- Sitting — ●
- Standing — ●
- Walking — ●
- Uncomfortable — ●

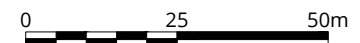
- Grade Level Sensor
- Outdoor Amenity Sensor
- Building Above Removed for Clarity
- ▶ Main Entrance Location

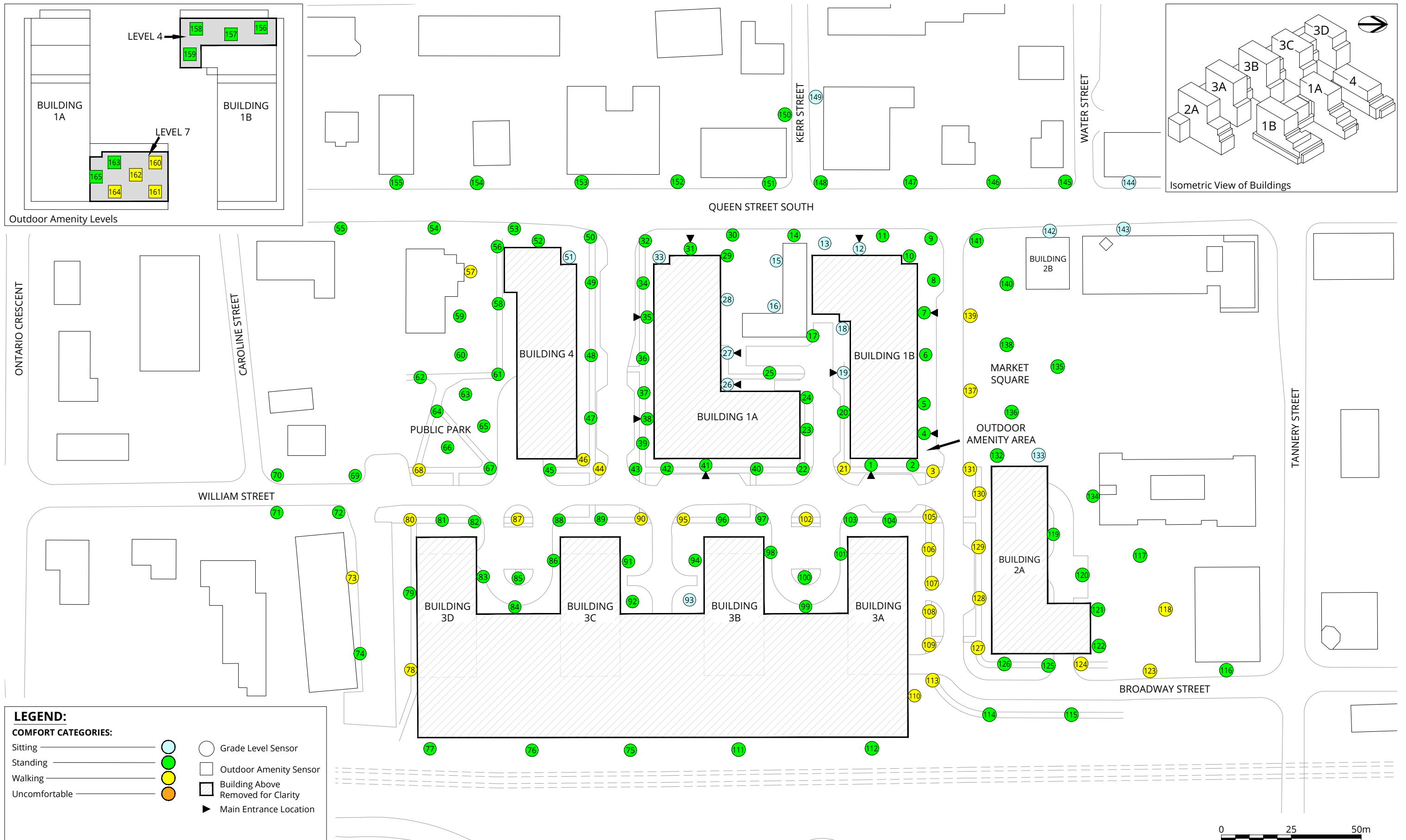
Pedestrian Wind Comfort Conditions
 Phase 1 Configuration
 Winter (November to April, 6:00 to 23:00)
 142-148 Queen Street South - Mississauga, ON

Project North True North

 Project #2402108

Drawn by: ALJM Figure: 2B
 Approx. Scale: 1:1250
 Date Revised: Feb. 15, 2024





LEGEND:

COMFORT CATEGORIES:

- Sitting ———— (light blue circle)
- Standing ———— (green circle)
- Walking ———— (yellow circle)
- Uncomfortable ———— (orange circle)

- Grade Level Sensor
- Outdoor Amenity Sensor
- ▨ Building Above Removed for Clarity
- ▶ Main Entrance Location

Pedestrian Wind Comfort Conditions
 All Phases Configuration
 Winter (November to April, 6:00 to 23:00)
 142-148 Queen Street South - Mississauga, ON

Project North True North

Drawn by: ALJM Figure: 2C
 Approx. Scale: 1:1250
 Date Revised: Feb. 15, 2024

Project #2402108



LEGEND:

SAFETY CATEGORIES:

Acceptable — ○

Exceeded — ●

○ Grade Level Sensor

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

142-148 Queen Street South - Mississauga, ON

Project North True North



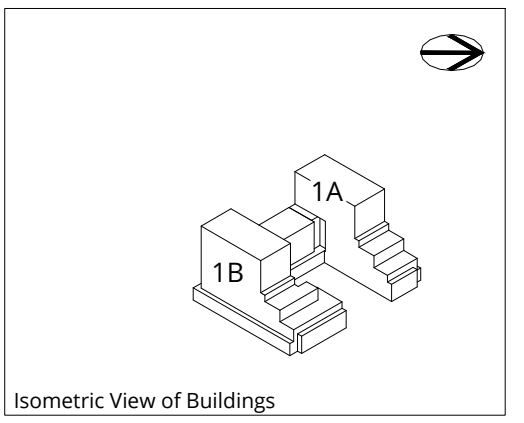
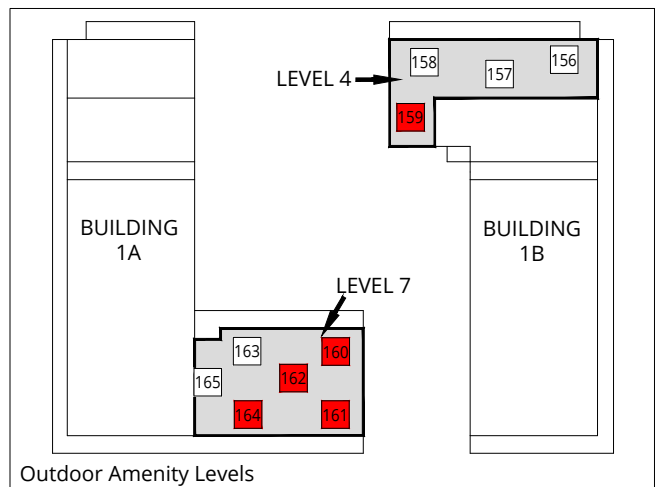
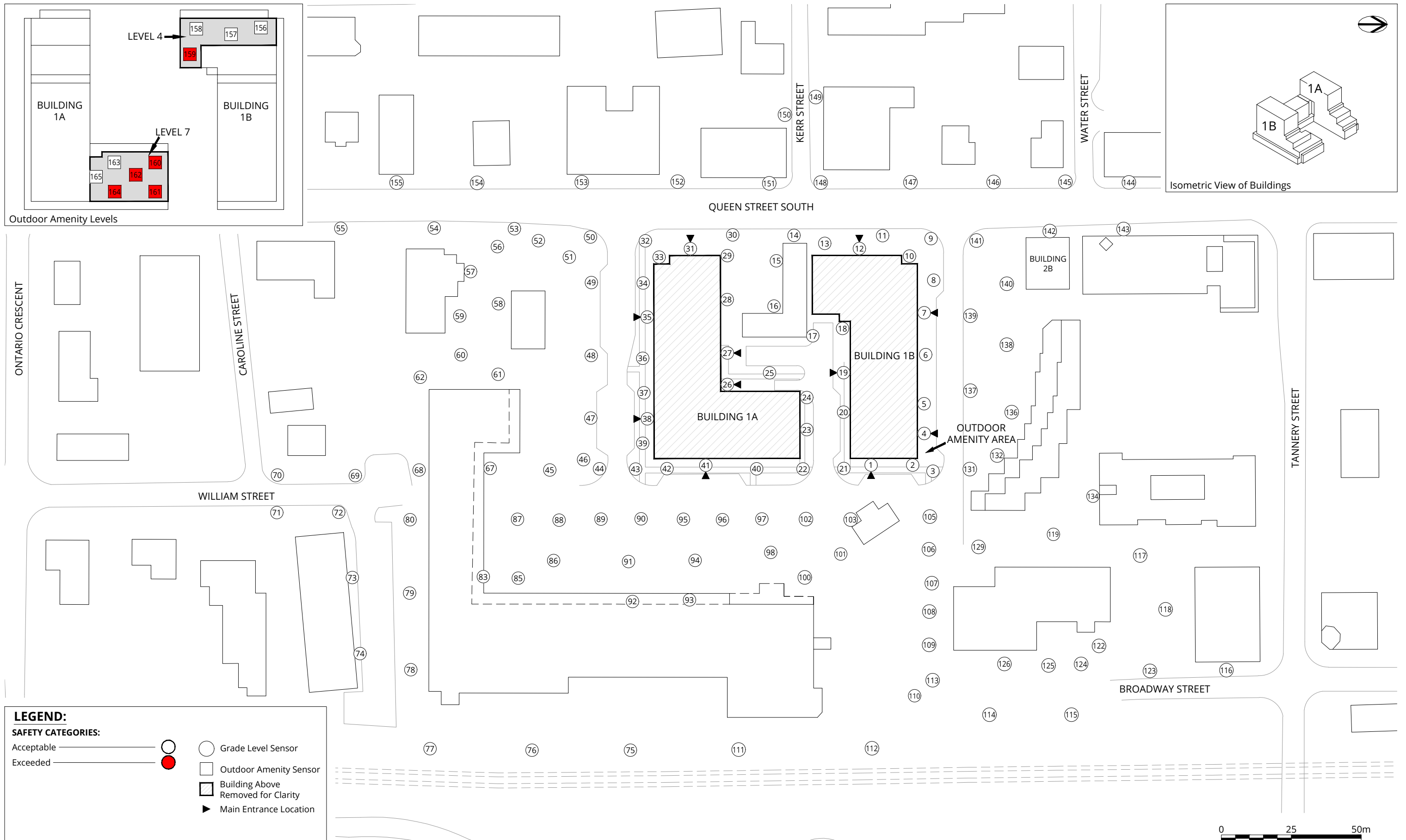
Drawn by: ALJM Figure: 3A

Approx. Scale: 1:1250

Date Revised: Feb. 15, 2024

Project #2402108

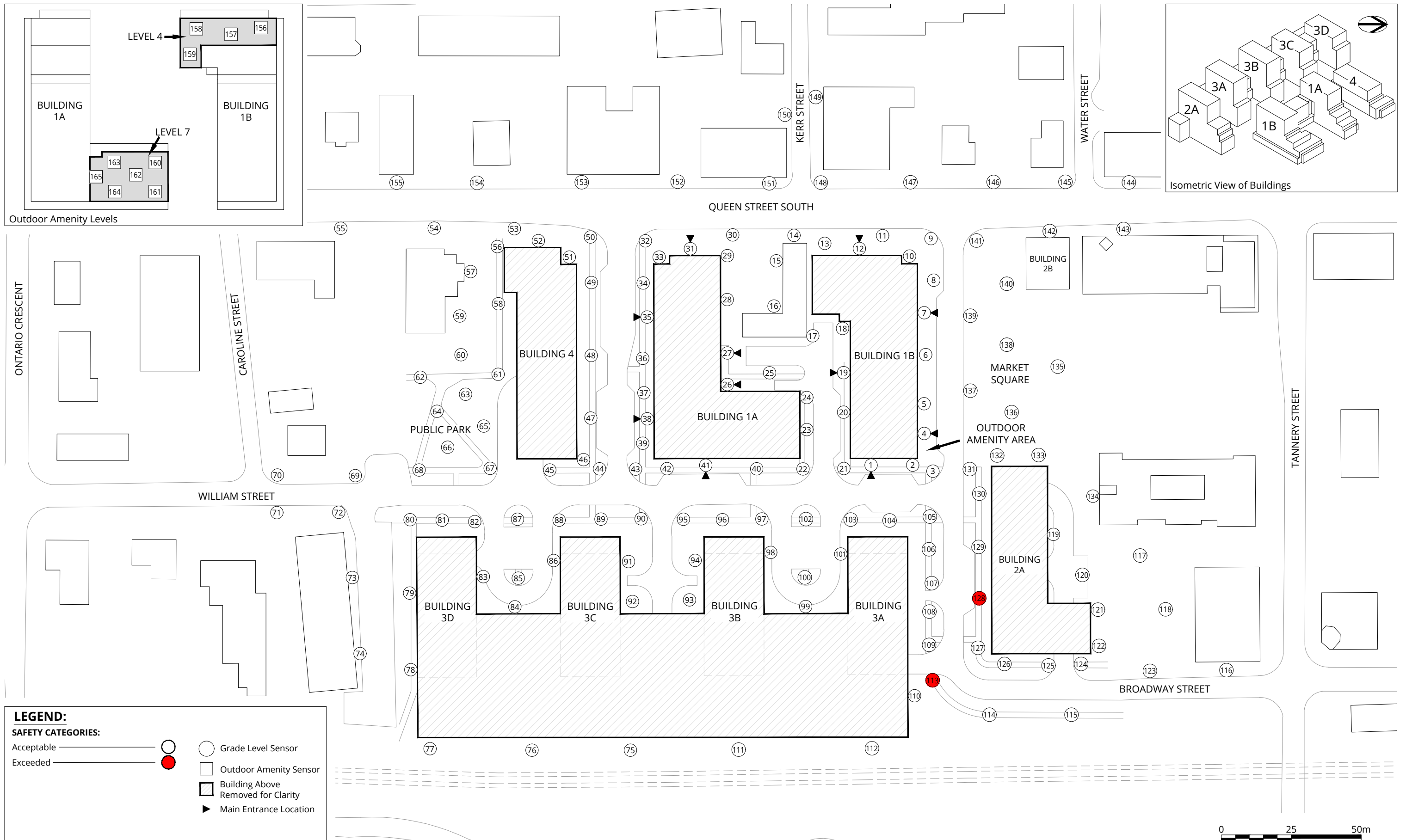




LEGEND:

SAFETY CATEGORIES:

- Acceptable — ○
- Exceeded — ●
- Grade Level Sensor — ○
- Outdoor Amenity Sensor — □
- Building Above Removed for Clarity — □
- Main Entrance Location — ▶



Pedestrian Wind Safety Conditions
 All Phases Configuration
 Annual (January to December, 0:00 to 23:00)
 142-148 Queen Street South - Mississauga, ON

Project North True North

 Project #2402108

Drawn by: ALJM Figure: 3C
 Approx. Scale: 1:1250
 Date Revised: Feb. 15, 2024



A large decorative graphic on the left side of the page. It features a blue triangular shape at the top left corner, which is separated from a large, light gray circular area by a white curved line. The word 'TABLES' is centered within the gray area.

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	Standing	58	Pass
	Phase 1	13	Standing	16	Walking	78	Pass
	All Phases	13	Standing	15	Standing	71	Pass
2	Existing	12	Standing	14	Standing	53	Pass
	Phase 1	16	Walking	18	Walking	85	Pass
	All Phases	12	Standing	13	Standing	51	Pass
3	Existing	11	Standing	13	Standing	54	Pass
	Phase 1	16	Walking	20	Walking	76	Pass
	All Phases	15	Standing	17	Walking	71	Pass
4	Existing	11	Standing	14	Standing	53	Pass
	Phase 1	12	Standing	13	Standing	64	Pass
	All Phases	12	Standing	14	Standing	61	Pass
5	Existing	12	Standing	14	Standing	58	Pass
	Phase 1	12	Standing	14	Standing	77	Pass
	All Phases	11	Standing	14	Standing	61	Pass
6	Existing	11	Standing	14	Standing	55	Pass
	Phase 1	13	Standing	15	Standing	64	Pass
	All Phases	11	Standing	13	Standing	57	Pass
7	Existing	12	Standing	15	Standing	62	Pass
	Phase 1	11	Standing	13	Standing	55	Pass
	All Phases	11	Standing	12	Standing	56	Pass
8	Existing	11	Standing	14	Standing	55	Pass
	Phase 1	13	Standing	15	Standing	62	Pass
	All Phases	12	Standing	14	Standing	58	Pass
9	Existing	11	Standing	14	Standing	54	Pass
	Phase 1	14	Standing	15	Standing	61	Pass
	All Phases	12	Standing	14	Standing	55	Pass
10	Existing	12	Standing	14	Standing	58	Pass
	Phase 1	11	Standing	13	Standing	66	Pass
	All Phases	10	Sitting	11	Standing	58	Pass
11	Existing	12	Standing	14	Standing	59	Pass
	Phase 1	12	Standing	13	Standing	57	Pass
	All Phases	10	Sitting	11	Standing	49	Pass
12	Existing	11	Standing	13	Standing	54	Pass
	Phase 1	9	Sitting	11	Standing	46	Pass
	All Phases	8	Sitting	9	Sitting	39	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	10	Sitting	12	Standing	52	Pass
	Phase 1	10	Sitting	11	Standing	48	Pass
	All Phases	9	Sitting	10	Sitting	43	Pass
14	Existing	10	Sitting	11	Standing	52	Pass
	Phase 1	11	Standing	12	Standing	53	Pass
	All Phases	10	Sitting	11	Standing	48	Pass
15	Existing	8	Sitting	10	Sitting	44	Pass
	Phase 1	9	Sitting	10	Sitting	46	Pass
	All Phases	8	Sitting	9	Sitting	41	Pass
16	Existing	7	Sitting	9	Sitting	38	Pass
	Phase 1	8	Sitting	9	Sitting	44	Pass
	All Phases	7	Sitting	8	Sitting	40	Pass
17	Existing	12	Standing	15	Standing	58	Pass
	Phase 1	13	Standing	16	Walking	67	Pass
	All Phases	11	Standing	13	Standing	59	Pass
18	Existing	12	Standing	15	Standing	63	Pass
	Phase 1	9	Sitting	11	Standing	47	Pass
	All Phases	7	Sitting	9	Sitting	43	Pass
19	Existing	12	Standing	15	Standing	61	Pass
	Phase 1	11	Standing	14	Standing	64	Pass
	All Phases	8	Sitting	10	Sitting	44	Pass
20	Existing	12	Standing	15	Standing	58	Pass
	Phase 1	19	Walking	23	Uncomfortable	90	Pass
	All Phases	12	Standing	14	Standing	63	Pass
21	Existing	12	Standing	15	Standing	59	Pass
	Phase 1	17	Walking	20	Walking	76	Pass
	All Phases	16	Walking	18	Walking	71	Pass
22	Existing	12	Standing	15	Standing	59	Pass
	Phase 1	16	Walking	20	Walking	84	Pass
	All Phases	12	Standing	14	Standing	62	Pass
23	Existing	12	Standing	15	Standing	61	Pass
	Phase 1	14	Standing	17	Walking	70	Pass
	All Phases	11	Standing	12	Standing	51	Pass
24	Existing	12	Standing	15	Standing	61	Pass
	Phase 1	15	Standing	18	Walking	70	Pass
	All Phases	11	Standing	12	Standing	53	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	11	Standing	14	Standing	58	Pass
	Phase 1	14	Standing	17	Walking	80	Pass
	All Phases	12	Standing	14	Standing	59	Pass
26	Existing	12	Standing	14	Standing	55	Pass
	Phase 1	10	Sitting	12	Standing	58	Pass
	All Phases	7	Sitting	8	Sitting	35	Pass
27	Existing	12	Standing	14	Standing	55	Pass
	Phase 1	12	Standing	15	Standing	66	Pass
	All Phases	9	Sitting	10	Sitting	43	Pass
28	Existing	11	Standing	14	Standing	58	Pass
	Phase 1	11	Standing	12	Standing	51	Pass
	All Phases	9	Sitting	9	Sitting	40	Pass
29	Existing	12	Standing	14	Standing	60	Pass
	Phase 1	15	Standing	18	Walking	74	Pass
	All Phases	11	Standing	13	Standing	55	Pass
30	Existing	11	Standing	14	Standing	58	Pass
	Phase 1	14	Standing	16	Walking	68	Pass
	All Phases	11	Standing	13	Standing	55	Pass
31	Existing	12	Standing	15	Standing	63	Pass
	Phase 1	10	Sitting	12	Standing	57	Pass
	All Phases	9	Sitting	11	Standing	49	Pass
32	Existing	12	Standing	15	Standing	62	Pass
	Phase 1	17	Walking	21	Uncomfortable	88	Pass
	All Phases	12	Standing	15	Standing	74	Pass
33	Existing	12	Standing	15	Standing	61	Pass
	Phase 1	9	Sitting	10	Sitting	56	Pass
	All Phases	9	Sitting	10	Sitting	57	Pass
34	Existing	12	Standing	15	Standing	63	Pass
	Phase 1	14	Standing	18	Walking	80	Pass
	All Phases	12	Standing	14	Standing	68	Pass
35	Existing	12	Standing	15	Standing	62	Pass
	Phase 1	14	Standing	18	Walking	77	Pass
	All Phases	12	Standing	15	Standing	71	Pass
36	Existing	12	Standing	14	Standing	62	Pass
	Phase 1	12	Standing	15	Standing	67	Pass
	All Phases	11	Standing	13	Standing	56	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	14	Standing	62	Pass
	Phase 1	13	Standing	15	Standing	67	Pass
	All Phases	11	Standing	13	Standing	56	Pass
38	Existing	12	Standing	14	Standing	56	Pass
	Phase 1	14	Standing	16	Walking	71	Pass
	All Phases	11	Standing	13	Standing	61	Pass
39	Existing	10	Sitting	12	Standing	46	Pass
	Phase 1	15	Standing	19	Walking	75	Pass
	All Phases	12	Standing	14	Standing	52	Pass
40	Existing	12	Standing	15	Standing	59	Pass
	Phase 1	13	Standing	16	Walking	74	Pass
	All Phases	11	Standing	13	Standing	60	Pass
41	Existing	12	Standing	14	Standing	57	Pass
	Phase 1	13	Standing	15	Standing	68	Pass
	All Phases	12	Standing	14	Standing	57	Pass
42	Existing	12	Standing	15	Standing	60	Pass
	Phase 1	13	Standing	15	Standing	89	Pass
	All Phases	11	Standing	13	Standing	58	Pass
43	Existing	12	Standing	14	Standing	59	Pass
	Phase 1	16	Walking	19	Walking	73	Pass
	All Phases	12	Standing	14	Standing	62	Pass
44	Existing	11	Standing	13	Standing	57	Pass
	Phase 1	15	Standing	18	Walking	76	Pass
	All Phases	14	Standing	17	Walking	74	Pass
45	Existing	10	Sitting	12	Standing	48	Pass
	Phase 1	13	Standing	15	Standing	64	Pass
	All Phases	10	Sitting	11	Standing	53	Pass
46	Existing	11	Standing	13	Standing	56	Pass
	Phase 1	15	Standing	18	Walking	78	Pass
	All Phases	15	Standing	18	Walking	75	Pass
47	Existing	11	Standing	14	Standing	59	Pass
	Phase 1	16	Walking	19	Walking	76	Pass
	All Phases	13	Standing	15	Standing	69	Pass
48	Existing	11	Standing	14	Standing	64	Pass
	Phase 1	16	Walking	20	Walking	79	Pass
	All Phases	12	Standing	14	Standing	59	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
49	Existing	12	Standing	14	Standing	60	Pass
	Phase 1	16	Walking	19	Walking	85	Pass
	All Phases	12	Standing	14	Standing	63	Pass
50	Existing	12	Standing	14	Standing	57	Pass
	Phase 1	14	Standing	17	Walking	77	Pass
	All Phases	12	Standing	15	Standing	68	Pass
51	Existing	12	Standing	14	Standing	54	Pass
	Phase 1	12	Standing	15	Standing	66	Pass
	All Phases	9	Sitting	10	Sitting	44	Pass
52	Existing	11	Standing	13	Standing	51	Pass
	Phase 1	10	Sitting	12	Standing	50	Pass
	All Phases	9	Sitting	11	Standing	44	Pass
53	Existing	11	Standing	13	Standing	51	Pass
	Phase 1	10	Sitting	12	Standing	52	Pass
	All Phases	11	Standing	12	Standing	50	Pass
54	Existing	11	Standing	12	Standing	51	Pass
	Phase 1	9	Sitting	11	Standing	44	Pass
	All Phases	9	Sitting	11	Standing	46	Pass
55	Existing	11	Standing	13	Standing	53	Pass
	Phase 1	10	Sitting	12	Standing	50	Pass
	All Phases	10	Sitting	12	Standing	48	Pass
56	Existing	11	Standing	13	Standing	53	Pass
	Phase 1	10	Sitting	13	Standing	61	Pass
	All Phases	12	Standing	15	Standing	57	Pass
57	Existing	9	Sitting	10	Sitting	45	Pass
	Phase 1	9	Sitting	11	Standing	54	Pass
	All Phases	14	Standing	17	Walking	68	Pass
58	Existing	9	Sitting	11	Standing	51	Pass
	Phase 1	9	Sitting	12	Standing	54	Pass
	All Phases	11	Standing	13	Standing	59	Pass
59	Existing	8	Sitting	10	Sitting	44	Pass
	Phase 1	9	Sitting	11	Standing	48	Pass
	All Phases	11	Standing	14	Standing	59	Pass
60	Existing	10	Sitting	12	Standing	51	Pass
	Phase 1	10	Sitting	11	Standing	48	Pass
	All Phases	13	Standing	15	Standing	66	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
61	Existing	11	Standing	12	Standing	51	Pass
	Phase 1	9	Sitting	12	Standing	59	Pass
	All Phases	10	Sitting	12	Standing	55	Pass
62	Existing	12	Standing	15	Standing	65	Pass
	Phase 1	12	Standing	14	Standing	63	Pass
	All Phases	11	Standing	14	Standing	72	Pass
63	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	12	Standing	15	Standing	64	Pass
64	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	12	Standing	15	Standing	74	Pass
65	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	11	Standing	13	Standing	61	Pass
66	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	12	Standing	15	Standing	73	Pass
67	Existing	7	Sitting	7	Sitting	34	Pass
	Phase 1	7	Sitting	8	Sitting	36	Pass
	All Phases	12	Standing	15	Standing	68	Pass
68	Existing	11	Standing	14	Standing	70	Pass
	Phase 1	11	Standing	13	Standing	64	Pass
	All Phases	13	Standing	17	Walking	79	Pass
69	Existing	12	Standing	14	Standing	56	Pass
	Phase 1	12	Standing	14	Standing	55	Pass
	All Phases	12	Standing	15	Standing	62	Pass
70	Existing	12	Standing	15	Standing	63	Pass
	Phase 1	12	Standing	14	Standing	60	Pass
	All Phases	10	Sitting	13	Standing	60	Pass
71	Existing	13	Standing	16	Walking	68	Pass
	Phase 1	13	Standing	16	Walking	65	Pass
	All Phases	12	Standing	15	Standing	64	Pass
72	Existing	12	Standing	14	Standing	57	Pass
	Phase 1	12	Standing	14	Standing	56	Pass
	All Phases	11	Standing	13	Standing	53	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
73	Existing	10	Sitting	12	Standing	49	Pass
	Phase 1	11	Standing	12	Standing	50	Pass
	All Phases	13	Standing	16	Walking	64	Pass
74	Existing	11	Standing	13	Standing	53	Pass
	Phase 1	10	Sitting	13	Standing	53	Pass
	All Phases	13	Standing	15	Standing	60	Pass
75	Existing	12	Standing	14	Standing	54	Pass
	Phase 1	12	Standing	13	Standing	54	Pass
	All Phases	11	Standing	13	Standing	59	Pass
76	Existing	12	Standing	14	Standing	59	Pass
	Phase 1	12	Standing	14	Standing	57	Pass
	All Phases	12	Standing	14	Standing	62	Pass
77	Existing	13	Standing	15	Standing	60	Pass
	Phase 1	13	Standing	14	Standing	59	Pass
	All Phases	11	Standing	13	Standing	58	Pass
78	Existing	13	Standing	16	Walking	64	Pass
	Phase 1	13	Standing	16	Walking	67	Pass
	All Phases	15	Standing	18	Walking	71	Pass
79	Existing	13	Standing	16	Walking	62	Pass
	Phase 1	13	Standing	15	Standing	60	Pass
	All Phases	12	Standing	14	Standing	63	Pass
80	Existing	11	Standing	13	Standing	58	Pass
	Phase 1	11	Standing	13	Standing	56	Pass
	All Phases	12	Standing	16	Walking	65	Pass
81	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	10	Sitting	12	Standing	66	Pass
82	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	12	Standing	14	Standing	65	Pass
83	Existing	6	Sitting	7	Sitting	29	Pass
	Phase 1	7	Sitting	7	Sitting	34	Pass
	All Phases	12	Standing	14	Standing	68	Pass
84	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	9	Sitting	11	Standing	53	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
85	Existing	6	Sitting	7	Sitting	33	Pass
	Phase 1	6	Sitting	7	Sitting	32	Pass
	All Phases	11	Standing	13	Standing	63	Pass
86	Existing	8	Sitting	9	Sitting	38	Pass
	Phase 1	9	Sitting	11	Standing	46	Pass
	All Phases	11	Standing	13	Standing	58	Pass
87	Existing	8	Sitting	9	Sitting	36	Pass
	Phase 1	9	Sitting	11	Standing	48	Pass
	All Phases	13	Standing	16	Walking	66	Pass
88	Existing	9	Sitting	10	Sitting	41	Pass
	Phase 1	12	Standing	13	Standing	57	Pass
	All Phases	13	Standing	15	Standing	64	Pass
89	Existing	10	Sitting	12	Standing	48	Pass
	Phase 1	14	Standing	16	Walking	73	Pass
	All Phases	11	Standing	13	Standing	54	Pass
90	Existing	11	Standing	13	Standing	54	Pass
	Phase 1	15	Standing	18	Walking	76	Pass
	All Phases	14	Standing	16	Walking	71	Pass
91	Existing	10	Sitting	12	Standing	51	Pass
	Phase 1	12	Standing	14	Standing	58	Pass
	All Phases	12	Standing	14	Standing	58	Pass
92	Existing	7	Sitting	8	Sitting	38	Pass
	Phase 1	8	Sitting	9	Sitting	39	Pass
	All Phases	9	Sitting	11	Standing	48	Pass
93	Existing	7	Sitting	9	Sitting	40	Pass
	Phase 1	9	Sitting	11	Standing	49	Pass
	All Phases	8	Sitting	9	Sitting	44	Pass
94	Existing	11	Standing	13	Standing	58	Pass
	Phase 1	15	Standing	18	Walking	70	Pass
	All Phases	11	Standing	13	Standing	58	Pass
95	Existing	11	Standing	14	Standing	56	Pass
	Phase 1	15	Standing	18	Walking	75	Pass
	All Phases	14	Standing	17	Walking	71	Pass
96	Existing	12	Standing	14	Standing	59	Pass
	Phase 1	15	Standing	18	Walking	81	Pass
	All Phases	13	Standing	15	Standing	66	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
97	Existing	12	Standing	14	Standing	56	Pass
	Phase 1	15	Standing	17	Walking	73	Pass
	All Phases	13	Standing	15	Standing	64	Pass
98	Existing	11	Standing	13	Standing	57	Pass
	Phase 1	14	Standing	17	Walking	71	Pass
	All Phases	11	Standing	12	Standing	58	Pass
99	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	11	Standing	13	Standing	56	Pass
100	Existing	11	Standing	13	Standing	53	Pass
	Phase 1	12	Standing	14	Standing	60	Pass
	All Phases	11	Standing	12	Standing	53	Pass
101	Existing	12	Standing	14	Standing	54	Pass
	Phase 1	14	Standing	17	Walking	69	Pass
	All Phases	11	Standing	13	Standing	57	Pass
102	Existing	12	Standing	14	Standing	56	Pass
	Phase 1	15	Standing	19	Walking	75	Pass
	All Phases	14	Standing	16	Walking	69	Pass
103	Existing	10	Sitting	12	Standing	50	Pass
	Phase 1	11	Standing	13	Standing	55	Pass
	All Phases	12	Standing	14	Standing	60	Pass
104	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	12	Standing	14	Standing	64	Pass
105	Existing	12	Standing	14	Standing	54	Pass
	Phase 1	13	Standing	14	Standing	62	Pass
	All Phases	17	Walking	20	Walking	76	Pass
106	Existing	11	Standing	13	Standing	51	Pass
	Phase 1	11	Standing	13	Standing	55	Pass
	All Phases	16	Walking	19	Walking	76	Pass
107	Existing	10	Sitting	13	Standing	50	Pass
	Phase 1	11	Standing	13	Standing	51	Pass
	All Phases	16	Walking	19	Walking	79	Pass
108	Existing	10	Sitting	12	Standing	48	Pass
	Phase 1	9	Sitting	11	Standing	47	Pass
	All Phases	17	Walking	20	Walking	85	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
109	Existing	11	Standing	13	Standing	50	Pass
	Phase 1	10	Sitting	12	Standing	49	Pass
	All Phases	15	Standing	20	Walking	90	Pass
110	Existing	11	Standing	13	Standing	54	Pass
	Phase 1	11	Standing	13	Standing	54	Pass
	All Phases	12	Standing	16	Walking	81	Pass
111	Existing	12	Standing	13	Standing	53	Pass
	Phase 1	12	Standing	13	Standing	55	Pass
	All Phases	11	Standing	13	Standing	60	Pass
112	Existing	13	Standing	15	Standing	59	Pass
	Phase 1	13	Standing	15	Standing	58	Pass
	All Phases	11	Standing	15	Standing	72	Pass
113	Existing	11	Standing	13	Standing	52	Pass
	Phase 1	11	Standing	13	Standing	51	Pass
	All Phases	14	Standing	19	Walking	96	Exceeded
114	Existing	12	Standing	14	Standing	54	Pass
	Phase 1	12	Standing	14	Standing	55	Pass
	All Phases	12	Standing	14	Standing	58	Pass
115	Existing	12	Standing	14	Standing	54	Pass
	Phase 1	12	Standing	14	Standing	55	Pass
	All Phases	12	Standing	15	Standing	68	Pass
116	Existing	10	Sitting	12	Standing	54	Pass
	Phase 1	10	Sitting	12	Standing	56	Pass
	All Phases	10	Sitting	13	Standing	73	Pass
117	Existing	12	Standing	14	Standing	63	Pass
	Phase 1	11	Standing	14	Standing	61	Pass
	All Phases	12	Standing	15	Standing	64	Pass
118	Existing	11	Standing	13	Standing	54	Pass
	Phase 1	11	Standing	13	Standing	53	Pass
	All Phases	14	Standing	17	Walking	75	Pass
119	Existing	11	Standing	13	Standing	52	Pass
	Phase 1	11	Standing	13	Standing	52	Pass
	All Phases	9	Sitting	11	Standing	48	Pass
120	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	11	Standing	13	Standing	71	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
121	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	10	Sitting	12	Standing	52	Pass
122	Existing	10	Sitting	12	Standing	50	Pass
	Phase 1	10	Sitting	13	Standing	51	Pass
	All Phases	10	Sitting	12	Standing	55	Pass
123	Existing	12	Standing	13	Standing	53	Pass
	Phase 1	12	Standing	14	Standing	55	Pass
	All Phases	14	Standing	17	Walking	81	Pass
124	Existing	11	Standing	13	Standing	49	Pass
	Phase 1	11	Standing	13	Standing	52	Pass
	All Phases	13	Standing	18	Walking	85	Pass
125	Existing	11	Standing	13	Standing	51	Pass
	Phase 1	11	Standing	13	Standing	52	Pass
	All Phases	11	Standing	14	Standing	71	Pass
126	Existing	11	Standing	12	Standing	48	Pass
	Phase 1	10	Sitting	12	Standing	50	Pass
	All Phases	10	Sitting	12	Standing	54	Pass
127	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	17	Walking	20	Walking	83	Pass
128	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	16	Walking	19	Walking	91	Exceeded
129	Existing	11	Standing	13	Standing	54	Pass
	Phase 1	10	Sitting	12	Standing	56	Pass
	All Phases	15	Standing	18	Walking	84	Pass
130	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	15	Standing	18	Walking	79	Pass
131	Existing	11	Standing	13	Standing	56	Pass
	Phase 1	15	Standing	18	Walking	66	Pass
	All Phases	16	Walking	20	Walking	81	Pass
132	Existing	8	Sitting	10	Sitting	39	Pass
	Phase 1	12	Standing	14	Standing	57	Pass
	All Phases	10	Sitting	11	Standing	50	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
133	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	8	Sitting	10	Sitting	42	Pass
134	Existing	10	Sitting	12	Standing	51	Pass
	Phase 1	10	Sitting	12	Standing	52	Pass
	All Phases	11	Standing	12	Standing	53	Pass
135	Existing	-	-	-	-	-	-
	Phase 1	-	-	-	-	-	-
	All Phases	12	Standing	13	Standing	61	Pass
136	Existing	9	Sitting	11	Standing	45	Pass
	Phase 1	15	Standing	18	Walking	73	Pass
	All Phases	10	Sitting	11	Standing	48	Pass
137	Existing	11	Standing	13	Standing	53	Pass
	Phase 1	16	Walking	19	Walking	82	Pass
	All Phases	14	Standing	17	Walking	76	Pass
138	Existing	10	Sitting	12	Standing	51	Pass
	Phase 1	16	Walking	18	Walking	78	Pass
	All Phases	12	Standing	14	Standing	64	Pass
139	Existing	11	Standing	14	Standing	56	Pass
	Phase 1	15	Standing	17	Walking	69	Pass
	All Phases	14	Standing	16	Walking	68	Pass
140	Existing	10	Sitting	12	Standing	49	Pass
	Phase 1	14	Standing	16	Walking	71	Pass
	All Phases	11	Standing	13	Standing	53	Pass
141	Existing	12	Standing	15	Standing	57	Pass
	Phase 1	14	Standing	15	Standing	62	Pass
	All Phases	12	Standing	14	Standing	60	Pass
142	Existing	9	Sitting	10	Sitting	45	Pass
	Phase 1	8	Sitting	10	Sitting	48	Pass
	All Phases	8	Sitting	9	Sitting	48	Pass
143	Existing	10	Sitting	11	Standing	50	Pass
	Phase 1	9	Sitting	11	Standing	49	Pass
	All Phases	9	Sitting	10	Sitting	48	Pass
144	Existing	10	Sitting	11	Standing	47	Pass
	Phase 1	9	Sitting	10	Sitting	39	Pass
	All Phases	8	Sitting	9	Sitting	38	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
145	Existing	12	Standing	15	Standing	62	Pass
	Phase 1	10	Sitting	12	Standing	49	Pass
	All Phases	10	Sitting	11	Standing	47	Pass
146	Existing	12	Standing	15	Standing	58	Pass
	Phase 1	11	Standing	13	Standing	52	Pass
	All Phases	10	Sitting	12	Standing	46	Pass
147	Existing	11	Standing	13	Standing	55	Pass
	Phase 1	13	Standing	14	Standing	60	Pass
	All Phases	11	Standing	12	Standing	51	Pass
148	Existing	11	Standing	13	Standing	53	Pass
	Phase 1	11	Standing	13	Standing	54	Pass
	All Phases	11	Standing	12	Standing	50	Pass
149	Existing	9	Sitting	11	Standing	44	Pass
	Phase 1	8	Sitting	10	Sitting	42	Pass
	All Phases	7	Sitting	9	Sitting	37	Pass
150	Existing	11	Standing	13	Standing	55	Pass
	Phase 1	10	Sitting	12	Standing	47	Pass
	All Phases	9	Sitting	11	Standing	43	Pass
151	Existing	11	Standing	14	Standing	64	Pass
	Phase 1	11	Standing	13	Standing	57	Pass
	All Phases	11	Standing	13	Standing	60	Pass
152	Existing	12	Standing	14	Standing	56	Pass
	Phase 1	14	Standing	17	Walking	72	Pass
	All Phases	11	Standing	13	Standing	54	Pass
153	Existing	10	Sitting	13	Standing	52	Pass
	Phase 1	11	Standing	13	Standing	55	Pass
	All Phases	10	Sitting	12	Standing	49	Pass
154	Existing	11	Standing	13	Standing	54	Pass
	Phase 1	9	Sitting	11	Standing	47	Pass
	All Phases	9	Sitting	11	Standing	46	Pass
155	Existing	10	Sitting	12	Standing	56	Pass
	Phase 1	9	Sitting	12	Standing	51	Pass
	All Phases	9	Sitting	11	Standing	47	Pass
156	Existing	-	-	-	-	-	-
	Phase 1	15	Standing	16	Walking	72	Pass
	All Phases	13	Standing	14	Standing	62	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
157	Existing	-	-	-	-	-	-
	Phase 1	13	Standing	15	Standing	67	Pass
	All Phases	11	Standing	13	Standing	58	Pass
158	Existing	-	-	-	-	-	-
	Phase 1	15	Standing	18	Walking	74	Pass
	All Phases	13	Standing	15	Standing	62	Pass
159	Existing	-	-	-	-	-	-
	Phase 1	15	Standing	19	Walking	96	Exceeded
	All Phases	11	Standing	14	Standing	61	Pass
160	Existing	-	-	-	-	-	-
	Phase 1	17	Walking	21	Uncomfortable	103	Exceeded
	All Phases	13	Standing	16	Walking	81	Pass
161	Existing	-	-	-	-	-	-
	Phase 1	17	Walking	20	Walking	98	Exceeded
	All Phases	13	Standing	16	Walking	71	Pass
162	Existing	-	-	-	-	-	-
	Phase 1	15	Standing	19	Walking	95	Exceeded
	All Phases	13	Standing	16	Walking	79	Pass
163	Existing	-	-	-	-	-	-
	Phase 1	13	Standing	16	Walking	80	Pass
	All Phases	12	Standing	15	Standing	77	Pass
164	Existing	-	-	-	-	-	-
	Phase 1	17	Walking	22	Uncomfortable	109	Exceeded
	All Phases	13	Standing	17	Walking	89	Pass
165	Existing	-	-	-	-	-	-
	Phase 1	10	Sitting	12	Standing	68	Pass
	All Phases	9	Sitting	11	Standing	58	Pass

Season	Months	Hours	Comfort Speed (km/h)	Safety Speed (km/h)
Summer	May - October	6:00 - 23:00 for comfort	(20% Seasonal Exceedance)	(0.1% Annual Exceedance)
Winter	November - April	6:00 - 23:00 for comfort	≤ 10 Sitting	≤ 90 Pass
Annual	January - December	0:00 - 23:00 for safety	11 - 15 Standing	> 90 Exceeded
Configurations			16 - 20 Walking	
Existing	Existing site and surroundings		> 20 Uncomfortable	
Phase 1	Phase 1 buildings with existing surroundings			
All Phases	All phases with existing surroundings			