600 Southgate Drive
Guelph, ON N1G 4P6

Tel: +1.519.823.1311

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Andrea Sinclair
Partner
asinclair@mhbcplan.com

MHBC Planning Urban Design and Landscape Architecture
540 Bingemans Centre Drive, Suite 200,
Kitchener ON, N2B
T: 519-576-3650

Re: Pedestrian Wind Assessment – Addendum Letter
22 Weber Street, Kitchener, ON
RWDI Project # 2002752

Dear Andrea:

Rowan Williams Davies & Irwin Inc. (RWDI) has prepared this letter to comment on the potential wind effects that may be created by recent design changes to the proposed 22 Weber Street development in Kitchener, Ontario.

Original Wind Assessment Completed October 2021

A desktop wind assessment was completed by RWDI in 2021 to predict pedestrian wind comfort conditions. Summer and winter wind conditions for the proposed building (2021 design) were determined based on our engineering judgement and knowledge of wind flows around buildings, as well as the use of a 3D software developed by RWDI (WindEstimator). These findings were summarized in a report dated October 8, 2021 (attached for reference) and are outlined below:

- The main entrance is well designed for wind and is expected to have appropriate wind conditions.
- The parking area entrance, and the parking area itself will be vulnerable to westerly winds channeling through the large opening on the west side of the parking area.
- Sidewalk along Weber Street is expected to have appropriate wind conditions.
- In the event that a roof top terrace is being considered, some conceptual suggestions for wind control have been provided in the attached report.
- To quantify these wind conditions or refine any conceptual mitigation measures presented in our report, physical scale-model tests in a boundary-layer wind tunnel ***would be required.***

Impact Of Building Massing Design Changes (2024)

The most up-to-date design drawings received by RWDI on November 20, 2024, indicate a similar building massing used in our 2021 desktop assessment. As a result, the wind conditions around the proposed development are expected to be similar to those presented in the October 8, 2021 report. That said, the open-air garage has now been completely enclosed in the 2024 design and as such, the winds will not be able to channel through the structure but will be redirected around the building (please see **Image 1a and 1b** below). This may result in higher than desired wind conditions at the north-west and south-west building corners. This assumption will have to be validated through wind tunnel testing.

2021 Summer Wind Conditions **2024 Summer Wind Conditions**

Image 1a: Summer Wind Conditions

2021 Winter Wind Conditions | **2024 Winter Wind Conditions**

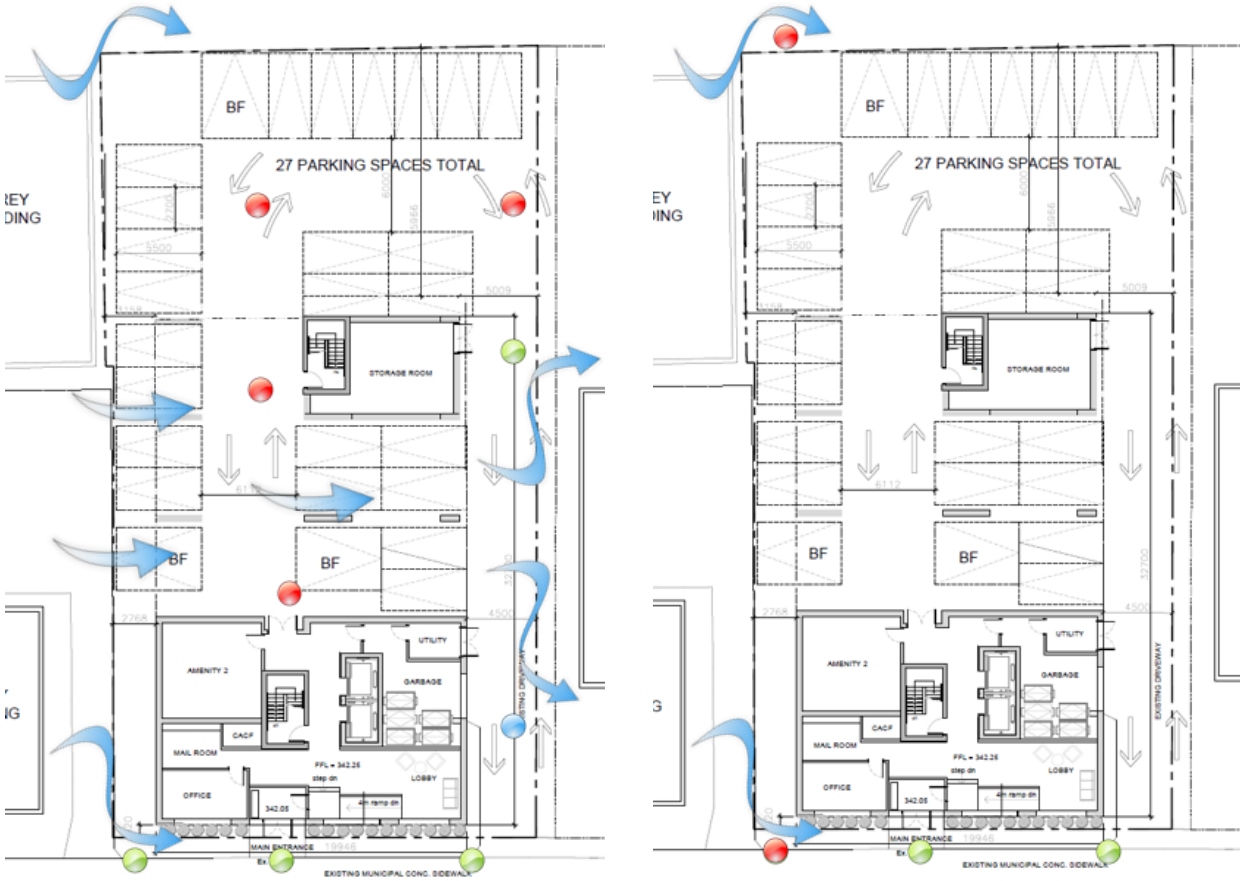

Image 1b: Winter Wind Conditions

We trust the above discussion satisfies your current requirements. Should you have any questions or require additional information, please do not hesitate to contact us.

Yours truly,

RWDI

Hanqing Wu, Ph.D., P.Eng.
Senior Technical Director / Principal

Peter Soligo, P.Eng.
Project Manager

HW/PMJS/smd
Attach.