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**Re: Pedestrian Wind Study – Addendum Letter
Willow Tree Tower
RWDI Reference No. 1804408**

Dear Eric,

RWDI was retained by Geiger Huot Architectes to conduct a Pedestrian Wind Tunnel Study for the Willow Tree Development in Halifax, NS. The results of the study are summarized in our report issued on May 13, 2019 titled: **190513 RWDI Project# 1804408 - Willow Tree Tower - Pedestrian Wind Study Report**. An addendum letter of opinion was issued on May 29, 2019, regarding the potential wind mitigation for the southwest corner of the proposed tower.

The proposed development is taller than the building that currently exists on the site. Taller buildings tend to intercept stronger winds at higher elevations and deflect them down to the ground level. The proposed development has incorporated several positive design features to reduce such wind effects, including a large, low podium, tower setbacks at several levels, screen walls on the podium, canopies at grade and so on. As a result, the predicted wind conditions at grade are considered favourable in general.

For instance, the RWDI wind safety criterion was found to be met at all test locations for both the existing and proposed configurations.

For wind comfort in the summer, wind speeds were predicted to be low, comfortable for sitting or standing (dark blue and light blue dots in our report) in general according to RWDI wind comfort criteria. Four locations in the proposed configuration are expected to have higher wind speeds, comfortable for strolling (green dots in the report), the same as the existing configuration. During the winter, the wind conditions were typically comfortable for strolling and walking. The number of locations that were comfortable for walking (yellow dots in our report) was predicted to decrease from 16 for the existing configuration to 10 for the proposed configuration, indicating more locations being comfortable for strolling or better and a general reduction in wind activity in the area.



Eric Huot
Geiger Huot Architectes
RWDI#1804408
JULY 17, 2019

Our wind tunnel tests also predicted an existing uncomfortable location in the winter at the southwest corner of the intersection of Quinpool Road and Robie Street. Such an uncomfortable condition was expected to remain in the same area (Locations 25 and 26). An additional uncomfortable location was detected at the southwest corner of the proposed building (Location 11), for which a large canopy has been proposed along the west façade and wrapping around the building corner. Together with the inset building façade at grade level, it is our opinion that the predicted wind speed of 22 km/h during the winter at Location 11 will be reduced to an acceptable level (i.e., equal to or lower than the comfort threshold speed of 20 km/h).

Another area with minor wind speed increases is the sidewalk across Robie Street (Locations 32 and 33), with Location 33 at a bus stop. Comparing the proposed configuration to the existing, the wind comfort speeds were predicted to increased by 1 km/h for both seasons at Location 32, and by 1 km/h in the summer and 2 km/h in the winter at Location 33. In our opinion, these increases are insignificant, considering the tolerance or insensitivity of pedestrians to small wind speed changes as well as the repeatability associated with wind tunnel tests. In addition, there is an existing bus shelter at Location 33, which was not modelled in the wind tunnel testing but will provide protection for bus riders on windy days.

Overall, due to the positive features included in the current building design, the proposed wind conditions are expected to be similar to those that currently exist in the area and are considered to be appropriate for the intended pedestrian uses. The proposed large canopy along the west façade and around the southwest corner of the proposed building is expected to improve the wind conditions to an acceptable level, and the small increases in wind speeds across Robie Street are insignificant for pedestrian comfort.

We trust this letter satisfies your current needs. Please contact us if you have any other questions.

Yours truly,

Rowan Williams Davies & Irwin Inc.

Original Signed

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

Original Signed

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