CERMAK PETERKA PETERSEN WIND ENGINEERING CONSULTANTS

26 July 2024

Cermak Peterka Petersen (CPP) Wind Engineering Consultants was retained by Dundix Realty Holdings c/o SmartCentres REIT to provide an expert review of the impact of several design modifications to the proposed 1225 Dundas St. E development on the surrounding pedestrian wind conditions. This expert opinion is informed by the results of a previously conducted wind tunnel study of the development conducted by CPP (findings summarized in the "1225 Dundas St E - Pedestrian-Level Wind Report", dated 28 June 2022) and updated drawings provided on 22 July 2024.

Initial Wind Tunnel Study Findings

A previous wind tunnel study of the 1225 Dundas St E development was conducted to assess pedestrian wind comfort and safety. The proposed development included a mix of residential, retail and office spaces and was a total height of ~47 m (12 stories). The results of this initial study can be summarized as follows:

- All measurement locations were predicted to meet the wind safety criteria in the existing configuration and with the addition of the proposed development.
- In the existing configuration, wind conditions at the measurement locations around the site were generally found to be comfortable for walking with uncomfortable conditions anticipated to the northeast of the site during the winter season.
- The addition of the 1225 Dundas St E development was found to increase wind activity around the site with wind conditions at several additional measurement locations anticipated to be rated as uncomfortable. Most uncomfortable wind conditions were anticipated to occur at the building corners as a result of winds intercepting the massing, descending to grade and accelerating at the downwind corners.
- While uncomfortable wind conditions are not uncommon for the Mississauga area during the winter, and currently present in the existing scenario, it is expected that as the design of the development progresses, wind control features (i.e. canopies, landscaping, etc.) will be refined.

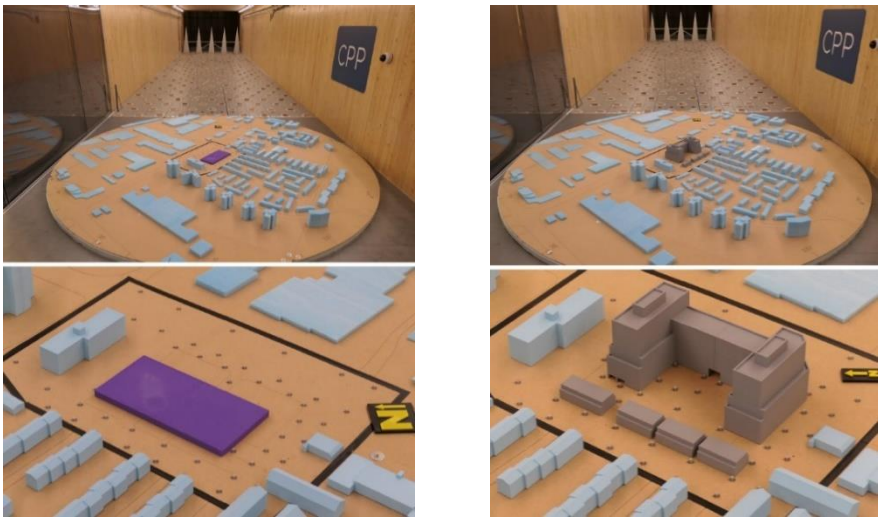

Figure 1: Existing Site and Surroundings (Left Photographs) and Project with Existing Surroundings (Right Photographs)

Design Evolution

The design of the 1225 Dundas St E development has evolved since the 28 June 2022 study. Primary design modification includes a change in height from 12 to 18 stories.

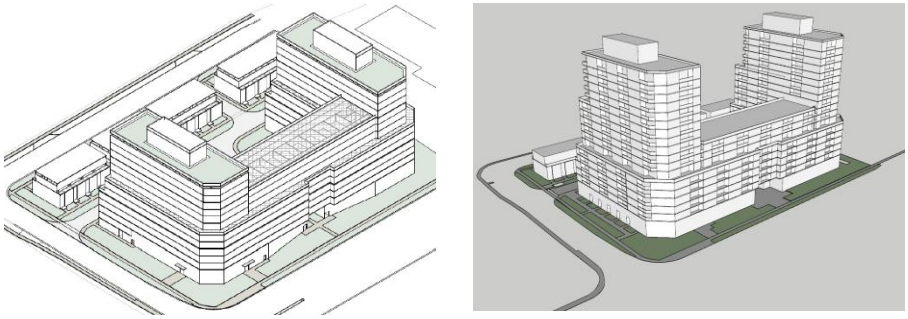

Figure 2: 28 June 2022 OPA/SPA Submission (Left) and Current 25 July 2024 Design (Right)

Impact on Pedestrian Wind Comfort

Winds that approach a tall, exposed building tend to be redirected by the façade to flow around and downward towards grade in what is commonly described as a downwashing wind flow (see Image in Figure 3). As illustrated, winds at higher elevations also tend to flow around a structure. Although the proposed towers have a relatively narrow plan form, the increase in height may result in a minor increase in wind activity, primarily at grade near the corners of the building.

The potential impact of the increase in height of the building is to be evaluated in an updated round of boundary layer wind tunnel testing.

Following this testing, mitigation measures are to be developed through consultation with the project team and evaluated simulations to confirm the efficacy of the solutions. These findings will be provided in an updated report to the project team.

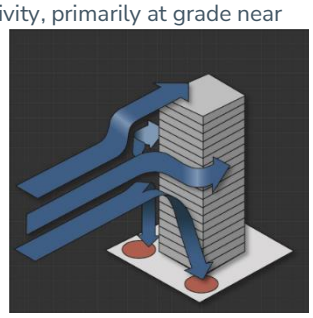

Figure 3: Example of a Downwashing Wind Flow Pattern

Conclusions

It is CPP's opinion, based on the results of previous wind tunnel tests and our experience, that an increase in height may result in a minor increase in wind activity. The impact of these proposed changed are to be evaluated in an up-coming wind tunnel simulation. Following this initial round of simulations, wind mitigation measures will be developed as necessary and subsequently evaluated to confirm the efficacy of the wind control features to be incorporated into the design.

With best regards,

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