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Date: July, 28th, 2023

Project: 42 Lakeshore Rd W
Oakville, Ontario

File Ref: 22116

PARAMETERS

Sun Angles used in this study are based on the following latitude and longitude of the proposed development at 42 Lakeshore Rd W, Oakville, Ontario.

Coordinates: 43.46° N
79.72° W

The base plan was drawn from combination of the site survey (May 19, 2022 by J.D. BARNES LIMITED Surveying Inc.) and Google Maps images in AutoCAD. The images for this study were produced using Sketch-Up Shadow Engine. Astronomic north was never altered from the original site survey used for the base plan, and the parameters of the AutoCAD drawing were kept when imported into Sketch Up, thus determining astronomic north.

The first page is the key plan showing the areas surrounding the proposed development that were included in the shadow study. The remaining pages, 2-43, show the proposed and previously SPA approved shadow images for the subject development on April 21, June 21, September 21 & December 21.

Pages 2-12 illustrate shadows on April 21 at the following times: 07:54 am, 08:54 am, 09:54 am, 10:54 am, 11:54 am, 12:54 pm, 1:54 pm, 2:54 pm, 3:54 pm, 4:54 pm, 5:54 pm.

Pages 13-26 illustrate shadows on June 21 at the following times: 07:06 am, 08:06 am, 09:06 am, 10:06 am, 12:06 pm, 01:06 pm, 02:06 pm, 03:06 pm, 04:06 pm, 05:06 pm, 06:06 pm, 07:06 pm, 08:06 pm.

Pages 27-36 illustrate shadows on September 21 at the following times: 08:34 am, 09:34 am, 10:34 am, 11:34 am, 12:34 pm, 01:34 pm, 02:34 pm, 03:34 pm, 04:34 pm, 05:34 pm.

Pages 37-43 illustrate shadows on December 21 at the following times: 09:18 am, 10:18 am, 11:18 am, 12:18 pm, 01:18 pm, 02:18 pm, 03:18 pm.

ANALYSIS

The City's Terms of Reference requires a summary of the analysis and the three criteria relating to residential amenity spaces, public realm, and solar energy have been assessed.

Private Outdoor Amenity Spaces:

The shadow impact analysis indicates that there is sufficient sunlight available for the private outdoor amenity spaces adjacent to the development, allowing them to be fully utilized during afternoons and evenings throughout the testing periods in April, June, and September.

Public Realm:

The Town's Terms of Reference requires that "public sidewalks, public plazas, public parks, and school yards receive at least 5 hours of continuous sunlight per day on April 21, June 21, and September 21.

No portion of the sidewalks on Lakeshore Rd. W was impacted by the shadows from the proposed development on April 21, from 1:54 pm to 5:54 pm.

The sidewalks of Chisholm Street were also reviewed against the Town's Terms of Reference. It was found that a significant portion of this sidewalk meets the requirements. However, a small portion of this sidewalk exceeded the listed requirements. This portion of the sidewalk is in full sunlight from 07:45 am to 11:54 pm on April 21.

On June 21, no portion of the sidewalks on Lakeshore Rd. W was impacted by the shadows from the proposed development from 02:06 pm to 08:06 pm. Similarly, no portion of the sidewalks on Chisholm St was impacted by the shadows from the proposed development on June 21, from 7:06 am to 1:06 pm.

Reviewing the sidewalks of Lakeshore Rd. W against the Town's Terms of Reference on September 21, it was found that a significant portion of these sidewalks was not impacted by the shadows from the proposed development, from 12:34 pm to 05:34 pm. However, a small portion of this sidewalk is in full sunlight from 01:34 pm to 05:34 pm.

On September 21, no portion of the sidewalks on Chisholm St was impacted by the shadows from the proposed development from 8:34 am to 10:34 am. However, it is notable that a significant portion of this sidewalk is in full sunlight from 8:34 am to 01:34 pm

Solar Energy (Building faces and Roofs):

According to the Town's Terms of Reference, the shadow impacts on building faces and roofs from the proposed development should not extend beyond two consecutive hourly test times on December 21.

Shadow impact analysis reveals that on December 21, the proposed development will have slightly more prolonged shadow impacts on three properties located at the northwest (NW) and southeast (SE) corners of Lakeshore Rd. W and Chisholm St. Specifically, the property situated at the northwest corner will experience shadow from 9:18 a.m. to 11:18 a.m., and the two properties located at the southeast corner will have shadow from 12:18 p.m. to 3:18 p.m.

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Conclusion:

After conducting a thorough shadow impact assessment for the Proposed Development, it is evident that there are no adverse effects on the residential amenity spaces in the surrounding area. The net new shadows cast by the development are minimal and have negligible impacts on rooftops.

Throughout the evaluation, we observed that three properties adjacent to the Site experience some level of impact beyond the rigorous criteria established in the Town's Terms of Reference. However, these impacts only result in partial solar energy effects and remain well within acceptable limits.

The strategic incorporation of upper floor setbacks for the proposed building, particularly along the eastern and northern property lines, has effectively minimized the overall impacts on the public realm.

Based on our thorough review of the illustrations and analysis provided, we conclude that the shadow impacts caused by the proposed development are well within acceptable parameters.

Included in this document:

- 3 pages of written analysis for sun/shadow study
- 1 page showing a key plan
- 42 pages of coloured illustrations showing proposed and existing shadows