



Terms of Reference:

Sun Shadow Analysis

Town of Milton
January 2023

Disclaimer: Terms of Reference documents will be reviewed and updated as necessary to reflect current policies, practices and accepted standards.

1. What is the purpose of this?

The purpose of this shadow impact analysis terms of reference is to establish the criteria for the impact of shadows cast by a proposed development on its surroundings and to establish the requirements of the shadow impact analysis submission document.

The shadow impact analysis shall be used to evaluate whether a proposed development causes any undue shadow impacts on the subject lands and the surrounding context, including building facades, private and public outdoor amenity and open spaces, public parkland, sidewalks and other components of the public realm.



2. When is this required?

A shadow impact analysis is required for proposals comprising of buildings five (5) storeys and higher, for the following types of development applications:

- Official Plan Amendment;
- Zoning By-law Amendment; and,
- Site Plan.

Staff may also require a shadow impact analysis for development proposals of a lesser height based on the potential impacts on the surroundings. This requirement will be identified during the mandatory pre-consultation process.

3. Submission Requirements

The applicant shall submit a written report summarizing the shadow impact analysis, outlining how the criteria have been met and describing any proposed mitigating features.

- Provide one digital copy in pdf format and 2 hard copies of the submission documents.

- Provide 1 (one) digital Sketch-up format file of the proposed massing of the building(s).

The shadow impact analysis may be submitted as part of an Urban Design Brief.

4. Contextual Models Analysis Requirements

The shadow impact analysis shall clearly illustrate the images of the shadow cast by the proposed development, within the development site and all adjacent properties and buildings affected by shadows on:

- All streets, blocks, parks and open spaces, and existing buildings and structures to a distance that shows the shadow impacts during the requested times; and
- All approved but unbuilt buildings and structures within the affected area.

The shadows of the existing and approved buildings, as well as the shadows cast by the proposed development, shall be represented using different colours to distinguish between existing shadows and the shadows resulting from the proposed development. Shadow diagrams shall be plotted to a standard metric scale.

5. Evaluation Criteria

The shadow impact analysis should illustrate that the shadow impact analysis meets the following criteria for April 21, June 21 and September 21:

5.1 Public Realm (Sidewalks, Parks, Plazas, School Yards)

- 60% of the opposing sidewalks should receive direct sunlight for at least 3 continuous hours (between 10:00 am and 3:00 pm).
- In mixed-use areas, sidewalk patios should receive at least 2 hours of sunlight during either lunchtime (between 10 am and 2 pm) or dinner hours (between 5:00 pm and 9:00 pm).
- 50% of community parks and urban plazas should receive 5 continuous hours of sunshine between 9:00 am and 5:00 pm.
- Active areas - fixed picnic stations or barbeque areas, splash pads, play equipment areas, schoolyards and community gardens should receive at least 5 hours of sunshine (between 9:00 am and 5:00 pm) but may not be continuous.

5.2 Private Realm

Private front yard, rear yard, windows and rooftop patios should receive sunlight for at least 2 continuous hours of sunshine (between 10 am and 5 pm).

5.3 Solar Panels

Solar panels should receive sunlight for an extended period of the day (minimum 8 hours may not be consecutive). Shadow impacts from development should not exceed two consecutive hourly test times on December 21.

6. Time Zone

Shadow demonstration time for Town of Milton should be prepared using: Eastern Time Zone-Standard Time: Universal Time minus 5 hours and Daylight Saving Time: Universal Time minus 4 hours.

7. Geographic Coordinates

Latitude N 43 degrees 14' 30",
Longitude W 79 degrees 51'00"

8. Additional Studies

Additional study times and analyses may be required to properly determine degree of shadow impact.

