

Study Description

A **Shadow Study** is a technical document, comprised of text and supporting diagrams, that demonstrates the shadows cast by a proposed development during several times/dates throughout the year to determine whether shadows generated will impact adjacent properties, streets and public spaces, and to what extent.

Purpose

To evaluate whether the proposal causes undue shadow impacts on public parks and open spaces, private amenity areas, and surrounding streets so as to limit any resulting shadow and uncomfortable conditions to preserve their utility.

Who should prepare this?

A registered architect, professional engineer, a Registered Professional Planner (RPP), or a qualified consultant with experience in this field. All reports and drawings must be stamped, signed and dated by a qualified professional, licensed in the Province of Ontario.

When is this required?

A **Shadow Study** may be required for proposals comprised of buildings four storeys and higher, for the following development applications:

- Official Plan Amendment
- Zoning By-law Amendment
- Plan of Subdivision/Condominium
- Site Plan Control

Required Contents

- A letter/brief summarizing the shadow analysis, outlining how the criteria have been met, and describing any proposed mitigating measures
- Images of shadow tests using models that clearly indicate the development site, its boundary, the foot print and mass of buildings within the test site, all streets, public parks and open spaces, and all adjacent properties and buildings affected by shadows

Shadow Tests

Shadow tests for City of Barrie should be prepared using Eastern Time Zone (Standard Time: Universal Time minus 5 hours and Daylight Saving Time: Universal Time minus 4 hours) and the geographic coordinates of the proposed development.

Shadow Models should include:

- All streets, blocks, parks and open spaces, and existing buildings and structures to a distance that shows the shadow impacts during the requested times
- All approved, but not built, buildings and structures within the model area
- Existing, approved, and proposed built form differentiated using different colours
- The shadows of the existing and approved buildings, as well as the shadows cast by the proposed development, represented using

different colours to distinguish between existing shadows and the shadows resulting from proposed buildings

- A reference base plan plotted at a metric standard scale

Test Dates

- The shadow impact analysis will be conducted for April 21, June 21, September 21, and December 21

Test Times

- Hourly intervals starting 1.5 hours after sunrise and ending 1.5 hours before sunset

Criteria

- The shadow impact analysis must demonstrate that adequate sunlight is available for public parks and open spaces, private amenity areas, and surrounding streets to maximize their use during spring, summer and fall afternoons and evenings.

What else should we know?

Additional study times and analyses may be required to properly determine the degree of shadow impact. The **Shadow Study** may be submitted as part of an Urban Design Report.

Shadow/shadowing testing of alternative building massing may be required during the application review.

What other resources are available?

Section 3.3 Built Form Types and Development Criteria - Official Plan:
barrie.ca/OfficialPlan

City of Barrie Intensification Area Urban Design Guidelines:
<https://www.barrie.ca/Urban-Design-Manual.pdf>

Ontario Professional Planners Institute (OPPI)

To hire a professional planning consultant, consult the directory:
<https://ontarioplanners.ca/hire-an-rpp>

Ontario Association of Architects

To hire a professional architectural consultant, consult the directory:
<http://www.oaa.on.ca/discover%20an%20architect>

Notes

If the proposed development is revised, the study/report shall reflect the revisions by an updated report or letter from the author indicating the recommendations and conclusions are the same.

Please note that a peer review may be required. The cost of the peer review will be borne by the applicant.

Please note that the requirements of this study may vary depending on the nature of the proposal. This will be determined through the pre-consultation process and in consultation with any applicable external agencies.

If the submitted study is incomplete, is authored by an unqualified individual, or does not contain adequate analysis, the application will be considered incomplete and returned to the applicant.