

# Terms of Reference: Sun and Shadow Study

## Purpose:

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- To provide a visual model and written description of the impact of shadows cast by a proposed development on the development site, surrounding streets and buildings, parks, and open spaces including privately owned and publicly accessible spaces and surrounding properties throughout the day and during changing seasons. The objective of the study is to assess shadow impacts at various times of day, throughout the year.

## Required in Support of:

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Through an Inquiry Meeting or Preliminary (PARC) Meeting, Town staff will confirm if a Sun/Shadow Study is required.

- Shall be required for proposals comprised of buildings 5 storeys or higher, in support of:
  - Zoning By-law Amendments
  - Site Plan Applications
  - DART
  - Draft Plan of Subdivision Applications (for subdivision blocks that meet this criteria)
  - Draft Plan of Condominium Applications (for subdivision blocks that meet this criteria)
  - Complete Application policies of the Town's Official Plan
  - The Town's Complete Application Checklist.
- A Sun/ Shadow study may also be required in support of Minor Variance Applications
- A Sun/Shadow Study may also be requested for developments that are less than 5 storeys where height is applied for near shadow sensitive areas (such as parks and open spaces, schoolyards, etc.). The requirement for, and scope of this work, should be discussed with Town Urban Design staff during Pre-Consultation.
- Changes to massing or building locations would necessitate update of the sun/shadow study.

## Prepared By:

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- Sun and Shadow Studies must be prepared by an Architect, Urban Designer, Landscape Architect or a Registered Professional Planner (RPP) with a demonstrated specialization in this area.



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## Peer Review and Scoping:

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- The Town will require a peer review of this document at the sole cost of the owner/applicant submitting the development application.
- On a project-by-project basis, the Town will identify any possible scoping of the assessment, or alternatively, other considerations to be incorporated into the assessment.

## Content:

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- The study is used to evaluate the impacts of new development applications on the existing public realm, open space and parks, surrounding uses, and building facades including access to sunlight for lower-level storeys in multiple building developments, and the subject site. The study is to be comprised of visual modelling and written descriptions of the impacts of the shadows and all measures that will be taken to mitigate the shadow impacts on surrounding lands. A mention of the proposed materials used in the building design should be included in the written description, where applicable.
- The models images of the sun/shadow evaluation must show the subject site boundary, the proposed development massing, the surrounding streets and public realm, public open space and parks, any significant natural features, and the massing of adjacent buildings. Modeling will have two parts, the first showing the existing situation and the second showing the proposed development in its context. The proposed development context should include other approved but not built buildings within the model area if applicable. These should be indicated graphically as different from the proposal and the built context. “As of right” or other site-specific applicable shadow conditions should be indicated clearly by a contrasting colour single-line overlay with explanatory notation provided in a printed legend (i.e., red for “as of right” on the subject property, yellow for approved but not yet built adjacent development).
- The shadow impacts will be recorded on the following dates and times, using the **NAD\_1983\_UTM\_Zone\_17N** geodetic reference system:
  - March 21, June 21, September 21 - 9:00, 11:00, 13:00, 15:00, 17:00, & 19:00
  - December 21 - 11:00, 13:00, & 15:00
- The shadow impact statement must demonstrate that:
  - There are 5 consecutive hours of full sunlight between the test hours in March, June and September;
  - Shadows are not cast on more than 50% of outdoor amenities, including school yards, parks, children’s play areas and amenities associated with commercial and employment areas (throughout the seasons); and,
  - Shadows are not cast on the opposite sidewalk during the spring and fall.
- Developments that propose additional shadow impacts on public parks or publicly accessible open spaces will require Sun/Shadow tests at hourly increments for both June 21 and December 21 to provide additional information on the impacts of shadows on these important public places.

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## Policy Reference:

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- Town-wide Design Guidelines
- Green Development Standards

## Submission Requirements:

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- Digital report in PDF format
- File size not to exceed 4 GB