

As per the standard requirements of shadow studies of the City of Mississauga, the analysis was conducted for the dates of March 21, June 21, September 21, and December 21 at all required reference times.

SHADOW MODELLING INFORMATION

- Site latitude and longitude of the subject site at 4099 Erin Mills Parkway, Mississauga, ON L5L 3P9 are as follows:

Latitude: 43° 33' 3.2148"
Longitude: -79° 41' 15.846"
- Time Zone: Eastern

Standard Time: UT – 5 hours (December 21st)
Daylight Time: UT – 4 hours (March 21, June 21st and September 21st)
- Astronomic North** was determined based on the North Arrow on Survey plan Block II Registered Plan M-247 prepared by J.D. BARNES Ltd. dated January 4, 2022.
- The **source of the base plan** is a combination of property data obtained from the City of Mississauga and the land survey by J.D. BARNES Ltd. 4099 Erin Mill's proposed and built massing provided by Turner Fleischer Architects Inc.

 Other existing surrounding building mass and heights were approximated based on Google Maps.
- The **source of the proposed building model** was provided by the architect, Turner Fleischer Architects Inc.
- Site Orientation:**
 The site is bound by :
 Erin Mills Pkwy and Folkway Dr Intersection on Northwest : N12°08'00"E
 Folkway Dr on North : N32°08'00"E , N28°55'35"E
 Folkway Dr Sawmill Valley Dr Intersection on Northeast : N63°45'40"E
 Sawmill Valley Dr on East : N75°25'35"W , N62°07'30"W , N41°07'20"E , N48°54'50"W
 Farrier Ct Townhouses on South : N31°55'15"E , N31°19'15"E
 Erin Mills Pkwy on West : N42°47'35"E , N47°07'05"W , N51°59'00"
- Shadow Studies are conducted assuming site is flat and is at +158.6M

REVIEW OF SHADOW CRITERIA

Review of Shadow Criteria

Criterion 3.1 - Residential Private Outdoor Amenity Spaces - Jun 21 and Sep 21

Proposed shadows reach properties on northwest on June 21 between 07:07 to 07:20, but they are not shadowed for more than two consecutive hourly test times*. See drawing SPA812.

Proposed shadows reach townhouses on southeast on June 21 between 17:20 to 19:33, and they are not shadowed for more than two consecutive hourly test times*. See drawing SPA815.

Proposed shadows reach private amenity spaces of the townhouses west of the site on September 21 between 08:35 to 10:12, and they are shadowed for more than two consecutive hourly test times*. See drawing SPA816.

Proposed shadows reach private amenity spaces of the townhouses north of the site on September 21 between 17:12 to 17:48, and they are not shadowed for more than two consecutive hourly test times*. See drawing SPA816.

** 'Hourly test times' are assumed to be 1 hour in duration each.
 The 'Consecutive hourly test' period does not exceed two hours.*

Criterion 3.2 - Communal Outdoor Amenity Areas - Jun 21, Sep 21 and Dec 21

Refer to table on SPA812

1- Coppersmith Grove Park
 Proposed shadows shadow a small corner of the south corner of the Coppersmith Grove Park on December 21 from 09:19 to 15:15. But it still meets the criteria as the sunfactor is more than 0.5. (calculate sun factor, avg. of total area in sunshine at all times / total area of the park). See drawing SPA819 and SPA820.

2- Dunn Park
 Proposed shadows do not affect Dunn Park area.

3- Proposed Outdoor Amenity Space.
 The criterion is not met for the proposed Outdoor Amenity Area for September 21 and December 21. See drawing SPA816 - SPA820.

However, the sun access factor on September 21 is 49.9%, only 0.1% lower than the requirement. We will carefully design the MPH of Buildings D & E to minimize their shadow impact to meet this criterion.

While the criterion is not met for December 21, we believe the outdoor amenity area is at the most appropriate location. It could have been placed at the south corner of the subject site to gain daylight in the winter months. However, by placing it in the centre of the development, it's shielded from the traffic and the noise of the public streets and provides a safer gathering space for the community.

Criterion 3.3 - Public Realm - Sep 21

We identify Folkway Dr as a low and medium-density residential street. Proposed shadows reach the sidewalk and cover it from 9:12 to 11:12 on September 21. See drawing SPA816.

We identify Sawmill Valley Dr as a low and medium-density residential street. Proposed shadows reach the northwest sidewalk at 17:12 on September 21. See drawing SPA818.

We identify Erin Mills Pkwy as a high-density residential street. Proposed shadows do not reach the opposite boulevard or sidewalk at any of the time intervals and therefore meets the criteria.

Criterion 3.4 - Turf and flower gardens in public parks - Sep 21

N/A.

Criterion 3.5 - Building Faces to allow for the possibility of using solar energy - Sep 21

Proposed shadows reaches the northwest townhouses of 4195, 4191 and 4185 Sawmill Valley Dr, at just 17:48pm on September 21. But this still meets the criteria.

This drawing, as an instrument of service, is provided by and is the property of Turner Fleischer Architects Inc. The contractor must verify and accept responsibility for all dimensions and conditions on site and must notify Turner Fleischer Architects Inc. of any variations from the supplied information. This drawing is not to be scaled. The architect is not responsible for the accuracy of survey, structural, mechanical, electrical, etc. information shown on this drawing. Refer to the appropriate consultant drawings before proceeding with the work. Construction must conform to all applicable codes and requirements of all relevant having jurisdiction. The contractor working from drawings not specifically marked 'for Contractor' must assume full responsibility and bear costs for any corrections or damages resulting from his work.

#	DATE	DESCRIPTION	BY
1	2022-08-22	OFFICIAL PLAN AND REZONING SUBMISSION	AYU

PROJECT
4099 Erin Mills Parkway, Mississauga, ON

DRAWING
SHADOW STUDY ANALYSIS

PROJECT NO.
19.001
 PROJECT DATE
2022-08-26
 DRAWN BY
JMS
 CHECKED BY
AYU
 SCALE



DRAWING NO. **SPA810** REV. **1**