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

## SHADOW MODELLING INFORMATION

1. Site latitude and longitude of the subject site at 1225 Dundas St E, Mississauga, ON L4Y 2C5 are as follows:

**Latitude:** 43° 36' 20" N  
**Longitude:** 79° 36' 15" W

2. Time Zone: Eastern

**Standard Time:** UT – 5 hours (December 21st)  
**Daylight Time:** UT – 4 hours (June 21st and September 21st)

3. **Astronomic North** was determined based on the North Arrow on Survey plan of Part of lot 7 concession 1 north of Dundas Street prepared by MAURO GROUP INC. dated May 11, 2022.

4. The **source of the base plan** is a combination of property data obtained from the City of Mississauga and the land survey by MAURO GROUP INC. 1225 Dundas Street E proposed and built massing provided by Turner Fleischer Architects Inc. Other existing surrounding building mass and heights were approximated based on Google Maps.

5. The **source of the proposed building model** was provided by the architect, Turner Fleischer Architects Inc.

6. **Site Orientation:**  
The site is bound by:  
Dundix Road on Northwest : N37°41'25"E  
3020 Queen Frederica Drive on Northeast : N47°26'40"W  
Dundas Street E on Southeast : N37°55'15"E  
Dundas Street E and Arena Road on South : N83°28'05"E  
Arena Road on Southwest : N51°00'45"W

7. Shadow Studies are conducted assuming site is flat and is at +120.5M

## REVIEW OF SHADOW CRITERIA

### Review of Shadow Criteria

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

Proposed shadows reach no impact zone of private amenity spaces for the properties on southwest on June 21 at 07:07am till 09:20am, and shadowed for more than two consecutive hourly test times.

Proposed shadows reach no impact zone of private amenity spaces for the townhouses on west on September 21 at 08:35am till 10:12am, and shadowed for more than two consecutive hourly test times.

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

1- Applewood Heights park  
Proposed shadows don't affect Applewood Heights park on June 21<sup>st</sup> and September 21<sup>st</sup>.

2- Proposed Outdoor Amenity Space.  
The criterion is met for the proposed Outdoor Amenity Area at Floor 10 for June 21, September 21 and December 21.

The criterion is met for the proposed Outdoor Amenity Area at Ground Floor for June 21, but not met for September 21 and December 21. That said, in order to meet criterion 3.2 for ground floor amenity in December, both buildings A and B have to be 2 storey high. Even 3 storey building wouldn't meet the criterion as sun access factor would be around 40.5%.

#### Criterion 3.3 - Public Realm - Sep 21

We identify Dundix Road as a low and medium-density residential street. Proposed shadows reach the opposite sidewalk and cover it, therefore we doesn't meet the criteria. That said, the shadow at September 21 11:12 AM only partially covers a small area of the sidewalk around 45.6m<sup>2</sup> in size. This portion of Dundix Road has also a large number of mature trees that are casting shadows on the sidewalk. If the criterion for September 21 11:12 AM would be met, the overall criterion 3.3 for Medium-density residential street would be also met.

We identify Dundas Street and Blundell Road as a high-density residential and commercial streets. Proposed shadows do met 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 no impact zone of the townhouses on west, at 08:35am till 10:12am on September 21. The criteria is not met as these areas are shadowed for more than two consecutive hourly test times.

Table 1. Summary

Month	Time	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Notes/ Explanations
		Met/Not Met	Met/Not Met	Met/Not Met	Met/Not Met	Met/Not Met	
June 21st	7:07 AM	Not Met	Met	n/a for date	n/a for date	n/a for date	Criterion 1 not met as partial part of the impact zone is shadowed by proposal for more than two consecutive hourly test times between 07:07PM to 09:20PM.
	7:20 AM						
	8:20 AM						
	9:20 AM	Met					
	10:20 AM	Met					
	11:20 AM	Met					
	12:20 PM	Met					
	1:20 PM	Met					
	2:20 PM	Met					
	3:20 PM	Met					
4:20 PM	Met						
5:20 PM	Met						
6:20 PM	Met						
7:20 PM	Met						
7:33 PM	Met						
Sept 21st	8:35 AM	Not Met	Met	See Table 3	n/a - no turf and flower gardens within Public Parks	Met	Criterion 1 and 5 not met as no impact zone is shadowed by proposal for more than two consecutive hourly test times.
	9:12 AM						
	10:12 AM						
	11:12 AM	Met					
	12:12 PM	Met					
	1:12 PM	Met					
	2:12 PM	Met					
	3:12 PM	Met					
	4:12 PM	Met					
	5:12 PM	Met					
5:48 PM	Met						
Month	Time	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Notes/ Explanations
		Met/Not Met	Met/Not Met	Met/Not Met	Met/Not Met	Met/Not Met	
Dec 21st	9:19 AM	n/a for date	Not Met	n/a for date	n/a for date	n/a for date	
	10:17 AM						
	11:17 AM						
	12:17 PM						
	1:17 PM						
	2:17 PM						
3:15 PM							

Table 2. Criteria 2

	Time	Applewood Heights Park Area			Outdoor Amenity Ground Floor			Outdoor Amenity Floor 10		
		Sun Coverage*	Percentage	Date Average	Sun Coverage*	Percentage	Date Average	Sun Coverage*	Percentage	Date Average
		June 21st	7:07 AM	44,025.88	100.00%		0.00	0.00%		933.20
	7:20 AM	44,025.88	100.00%		0.00	0.00%		954.70	78.58%	
	8:20 AM	44,025.88	100.00%		0.00	0.00%		1,049.50	86.38%	
	9:20 AM	44,025.88	100.00%	100.00%	0.00	0.00%	58.17%	1,110.00	91.36%	83.42%
	10:20 AM	44,025.88	100.00%		25.80	4.22%		1,135.60	93.47%	
	11:20 AM	44,025.88	100.00%		284.90	46.61%		1,196.30	98.46%	
	12:20 PM	44,025.88	100.00%		421.50	68.96%		1,185.30	97.56%	
	1:20 PM	44,025.88	100.00%		526.70	86.17%		1,128.30	92.86%	
	2:20 PM	44,025.88	100.00%		611.20	100.00%		1,060.80	87.31%	
	3:20 PM	44,025.88	100.00%		611.20	100.00%		973.20	80.10%	
	4:20 PM	44,025.88	100.00%		611.20	100.00%		916.90	75.47%	
	5:20 PM	44,025.88	100.00%		611.20	100.00%		858.90	70.69%	
	6:20 PM	44,025.88	100.00%		600.50	98.25%		818.30	67.35%	
	7:20 PM	44,025.88	100.00%		528.90	86.53%		925.10	76.14%	
	7:33 PM	44,025.88	100.00%		499.50	81.72%		957.00	78.77%	
Sept 21st	8:35 AM	44,025.88	100.00%	100.00%	0.00	0.00%	36.55%	1,135.80	93.48%	72.28%
	9:12 AM	44,025.88	100.00%		0.00	0.00%		1,161.10	95.56%	
	10:12 AM	44,025.88	100.00%		0.00	0.00%		1,204.10	99.10%	
	11:12 AM	44,025.88	100.00%		10.90	1.78%		1,183.60	97.42%	
	12:12 PM	44,025.88	100.00%		187.50	30.68%		1,134.40	93.37%	
	1:12 PM	44,025.88	100.00%		342.30	56.00%		1,057.70	87.05%	
	2:12 PM	44,025.88	100.00%		373.80	61.16%		940.90	77.44%	
	3:12 PM	44,025.88	100.00%		126.40	20.68%		763.20	62.81%	
	4:12 PM	44,025.88	100.00%		403.70	66.05%		553.80	45.58%	
	5:12 PM	44,025.88	100.00%		604.90	98.97%		302.70	24.91%	
	5:48 PM	44,025.88	100.00%		407.90	66.74%		222.30	18.30%	
Dec 21st	9:19 AM	44,025.88	100.00%	100.00%	28.40	4.65%	3.12%	1,179.50	97.08%	68.06%
	10:17 AM	44,025.88	100.00%		0.00	0.00%		1,136.70	93.56%	
	11:17 AM	44,025.88	100.00%		0.00	0.00%		1,077.20	88.66%	
	12:17 PM	44,025.88	100.00%		0.00	0.00%		1,005.20	82.73%	
	1:17 PM	44,025.88	100.00%		0.00	0.00%		880.70	72.49%	
	2:17 PM	44,025.88	100.00%		0.00	0.00%		499.10	41.08%	
	3:15 PM	44,025.88	100.00%		105.00	17.18%		10.10	0.83%	

\* Sun Coverage calculated by subtracting full extent of shadow impact of proposal from total park area  
\* The criteria is not met for proposed Outdoor Amenity Area for December 21

Table 3. Criteria 3

	Time	Low/ Medi High Density	
		Met	Not Met
Sept 21st	8:35 AM		
	9:12 AM	Not Met	Met
	10:12 AM	Not Met	Met
	11:12 AM	Not Met	Met
	12:12 PM		Met
	1:12 PM		Met
	2:12 PM		Met
	3:12 PM	Met	Met
	4:12 PM	Met	Met
	5:12 PM	Met	Not Met
5:48 PM			
SUMMARY		Not Met	Met

\* The criteria is not met at Dundix Road on the northwest sidewalk but is met at Dundas Street northeast sidewalk.

4	06-27-2026	OPA & ZBA RESUBMISSION #2	MLE
#	DATE	DESCRIPTION	BY

PROJECT  
**PROPOSED MIXED-USE DEVELOPMENT**  
1225 Dundas Street E, Mississauga, ON  
(OZ/OPA 22-20 W3)

DRAWING  
**SHADOW STUDIES ANALYSIS**

PROJECT NO.  
22.117P01  
PROJECT DATE  
2022-08-07  
DRAWN BY  
MLE  
CHECKED BY  
NMC  
SCALE



DRAWING NO.  
**A810**  
REV  
**4**