

170 LAKESHORE ROAD EAST
MISSISSAUGA, ONTARIO



1. INTRODUCTION

This report presents a shadow Study Analysis of a planned residential development comprising one tower located at 170 Lakeshore Road East in the City of Mississauga.

This report has been prepared by IBI Group Architects on behalf of the applicant Lightpoint (170 Lakeshore Road East Port Credit) Inc.

The report addresses the specific criteria contained in the City of Mississauga Planning and Building Department's Standards for Shadow Studies (June 2014) and demonstrates that the proposed development will not cause undue impacts with respect to shade.

1.1 Proposed development

This 0.7 acre land assembly include 1 lot to the north of Lakeshore Road East. Subject to planning approval, the site will be redeveloped into a condominium building rising 15 storeys and comprising of 147 units within 13,453.5m² of residential GFA. There are 3 levels of underground parking with 170 total spots.

The property is located South-East of the Port Credit GO Station and is 10 minutes from the Credit River, the Waterfront Trail, as well as walking distance from a wide array of retail stores, restaurants, art galleries, cafes and entertainment venues.

A dedicated Loading area is provided at Ground level accessed from Elmwood Avenue, the parking for visitors and residents is also accessed from Elmwood Av and 3 underground parking levels provided.

Residential indoor amenity space is provided at the Level 6 and 16 and outdoor amenity space is provided at the same floors immediately adjacent to the indoor amenity space.

2. SUMMARY RESULTS OF SHADOW STUDY ANALYSIS

The shadow Study Analysis demonstrates that the proposed development meets the City's standards for sun and daylight access on neighbouring properties and in the public realm as summarized in the **Table 1** below. Detailed results for each of the five criteria are presented in Section 3. Supporting shadow study exhibits for June 21, September 21, and December 21 for the hourly test times specified in the City's *Standards for Shadow Studies* are provided in **Appendix A**.

TABLE 1 SHADOW STUDY ANALYSIS SUMMARY | 170 LAKESHORE RD E

City Criteria No.	Scenario	Criteria Achieved
1.	Residential Private Outdoor Amenity Spaces	
	i. June 21	Criteria Achieved on rooftop terrace & Level 6
	ii. September 21	Criteria Achieved on rooftop terrace & Level 6
2.	Community Outdoor Amenity Area	
	iii. June 21	Criteria Achieved
	iv. September 21	Criteria Achieved
	v. December 21	Criteria Achieved
3.	Public Realm	
	a. Low and Medium Residential Streets	Criteria Achieved
	b. Mixed-Use, Commercial, Employment and High-Density Residential Streets	Criteria Achieved
	c. Public Open Spaces, Parks and Plazas	Criteria Achieved
4.	Turf and Flower gardens in Public Parks	Criteria Achieved
5.	Building Faces to allow for the Possibility of using Solar Energy	Criteria Achieved

Notes:

- a. The site latitude is 43.556N and longitude 79.585W
- b. Astronomical north was based on the base mapping obtained from the City of Mississauga
- c. The base mapping (CAD files) was obtained from the City of Mississauga
- d. Base mapping includes a minimum coverage area of 4x the tallest building height to the north, east and west and 1.5x the tallest building to the south

3. INDIVIDUAL CRITERIA RESULTS

This section provides the result of the shadow analysis related to each of the five criteria applicable to this site contained in the City of Mississauga's Standards for Shadow Studies (June 2014). We have cited the relevant City standard and provide a conclusion with respect to each along with back-up diagrams to support this conclusion. As noted above, supporting exhibits for all required hourly analysis are provided in Appendix A.

3.1 Residential Private Outdoor Amenity Spaces (Criterion 1)

Standard: To maximise the use of private residential amenity spaces during spring, summer and fall, shadow impacts from proposed developments should not exceed one hour in duration on areas such as private rear yards, decks, patios and pools of surrounding residential dwellings on June 21 and September 21.

This criteria is met if there is shadow impact for no more than two consecutive hourly test times within the space between the exterior wall of the dwelling that abuts the amenity space and the line of impact assessment ("No Impact Zone"). The line of impact assessment shall be, a line 7.5m minimum from the rear wall or other appropriate exterior building wall of the dwelling that abuts the private amenity space.

Conclusion: The at grade outdoor amenity will not meet the criteria but the majority of the Residential Private Outdoor Amenity Spaces on Level 6 & the rooftop is met for June, September and December.

3.2 Communal Outdoor Amenity Areas (Criterion 2)

Standard: Ensure adequate sunlight on communal outdoor amenity areas including: children's play areas, school yards, tot lots, and park features such as sandboxes, wading pools, etc., and outdoor amenity areas by seniors and those associated with commercial and employment areas during spring, summer and fall. The criteria is met if the "sun access factor" is at least 50% on each of the required test dates.

The following communal outdoor amenity area was identified within the study area:

Existing communal amenity space - Forest Avenue Public School

The communal space (School Yard) as highlighted below only has a shadow impact on December 21st at 9:18am.

Area of space: 12917m²

Average area in sunshine: 12284m²

Sun Access Factor: 0.95

Conclusion: The criteria is met for this existing outdoor community amenity space as the current condition achieves a "sun access factor" of at least 50% / 0.5 or more, (currently AT = 12917m², As (ave)=12284m², SAF 0.95).

3.3 Public Realm (Criterion 3)

3.3a) Low and Medium Residential Streets

Standard: Developments should be designed to allow full sunlight on the opposite boulevard including the full width of the sidewalk on September 21 for the total of at least 4 hours between 9:12am and 11:12am and between 3:12pm and 5:12pm

Conclusion: The criteria is met as there are no incremental shadows on the opposite boulevard on the low density residential streets between the time periods noted in the standard above.

3.3b) Mixed Use, Commercial, Employment and High Density Residential streets

Standard: Developments should be designed to allow full sunlight on the opposite boulevard including the full width of the sidewalk on September 21 as follows: For a total of at least 5 hours that must include the 2 hour period between 12:12 p.m. and 2:12 p.m., and an additional 2 hour period from either 9:12 a.m. to 11:12 a.m. or from 3:12 p.m. to 5:12 p.m.

Conclusion: The criteria is met as there are no incremental shadows on the opposite boulevard on the Mixed Use, Commercial, Employment and High Density Residential streets between the time periods noted in the standard above.

3.3c) Public Open Spaces, parks and Plazas

Standard: Developments should be designed to provide a sun access factor of at least 50% on public open spaces, parks and plazas on September 21.

Conclusion: This criteria is met as the development does not cast incremental shadows on any nearby public open spaces, parks or plazas. Therefore, the Sun Access Factor remains unchanged by the proposed development.

3.4 Turf and Flower Gardens in the Public Parks (Criterion 4)

Standard: Proposed developments should allow for adequate sunlight during the growing season from March to October by allowing for a minimum of 6 hours of direct sunlight on September 21.

Conclusion: Criteria is met. Full sun is provided from 8:35am to 3:12pm (7 test times) on September 21st.

3.5 Building faces to allow for the possibility of using solar energy (Criterion 5)

Standard: Shadow impacts from proposed developments should not exceed one hour in duration on the roofs, front, rear and exterior side walls of adjacent low rise (one to four storeys) residential buildings including townhouses, detached and semi-detached dwellings on September 21.

Conclusion: The criteria is met as there is shadow impact for no more than two consecutive hourly test times in the “No Impact Zone” of the surrounding low-rise residential buildings.



JUNE 21 - 7:07AM

170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 7:20AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 8:20AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



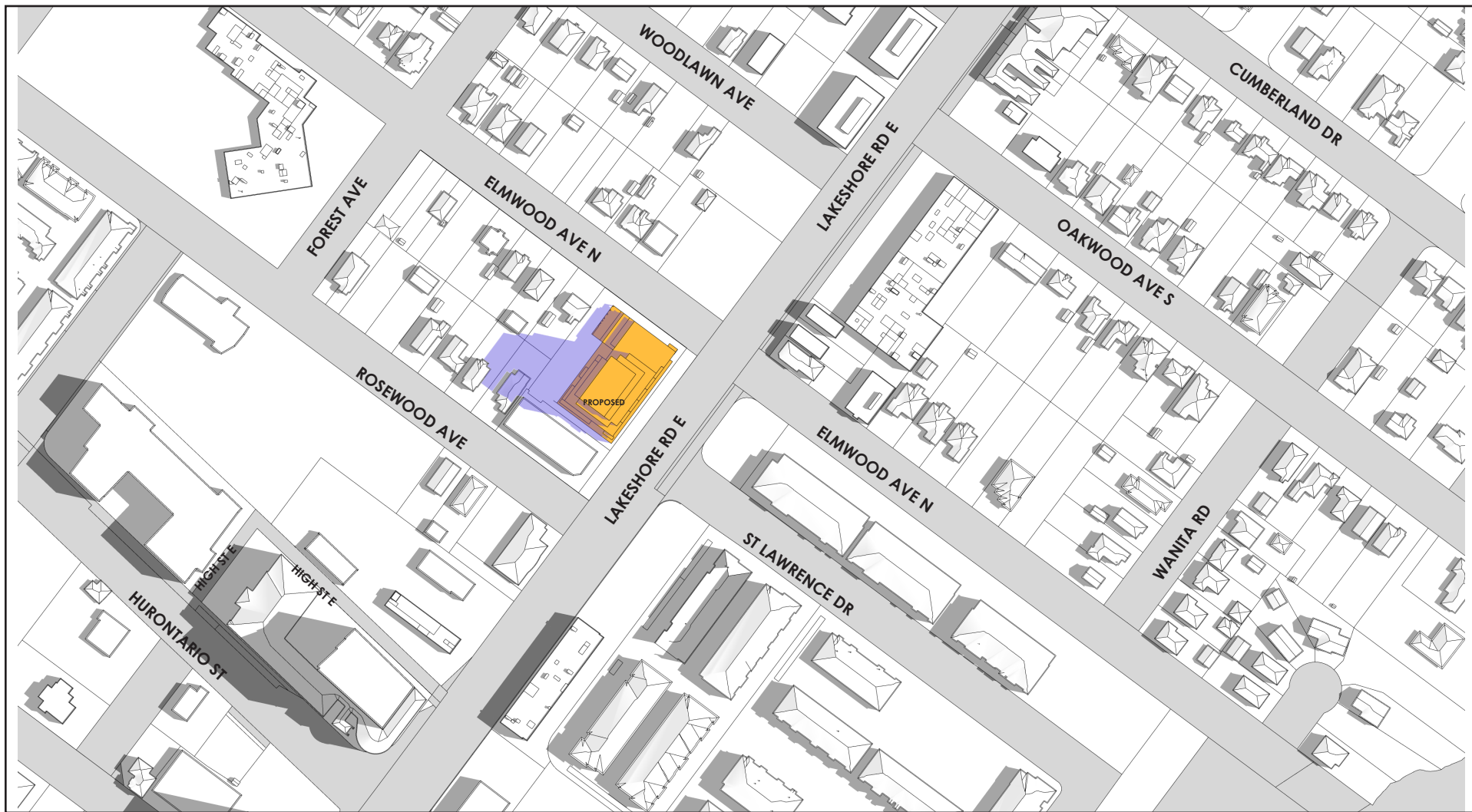
JUNE 21 - 9:20AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



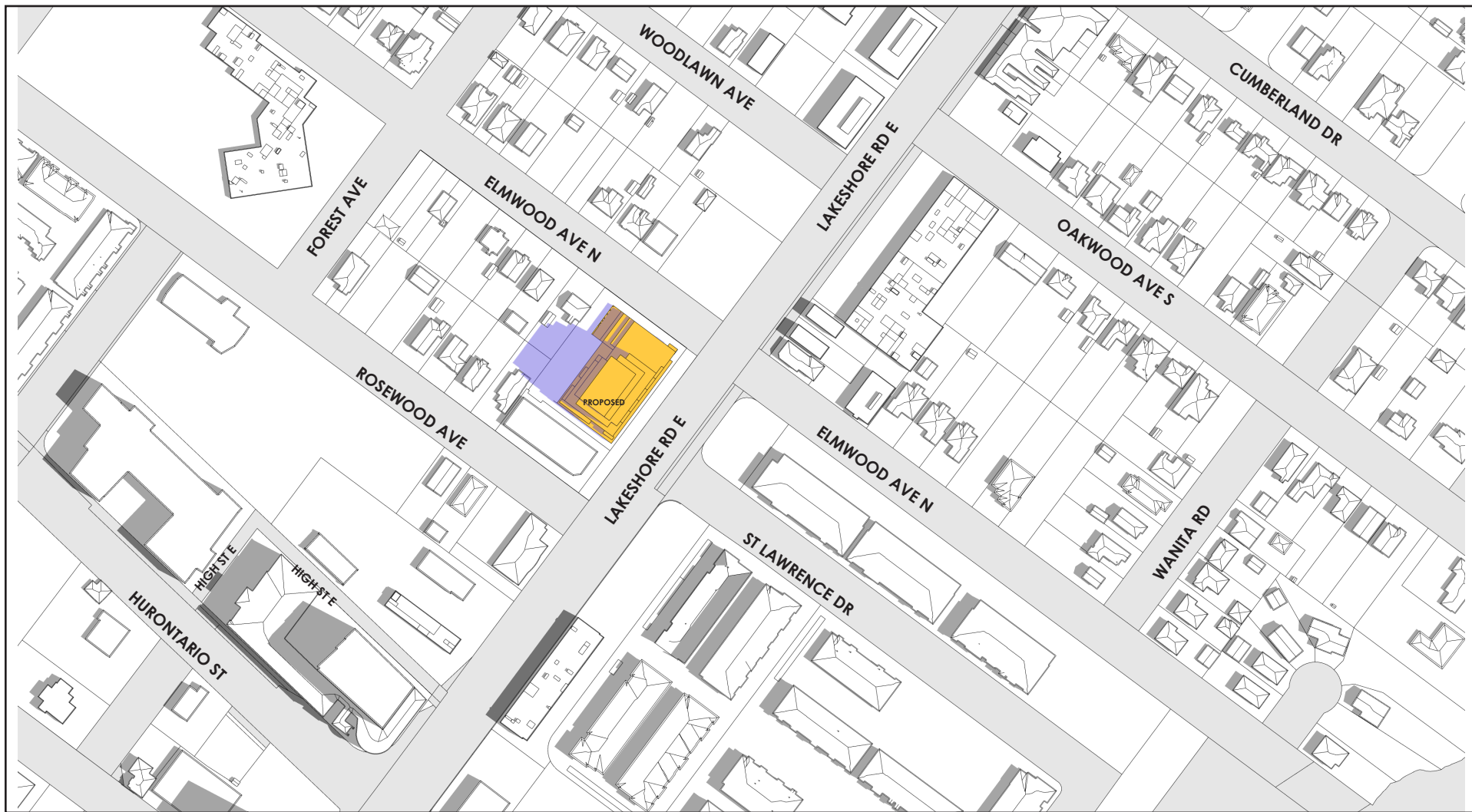
JUNE 21 - 10:20AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



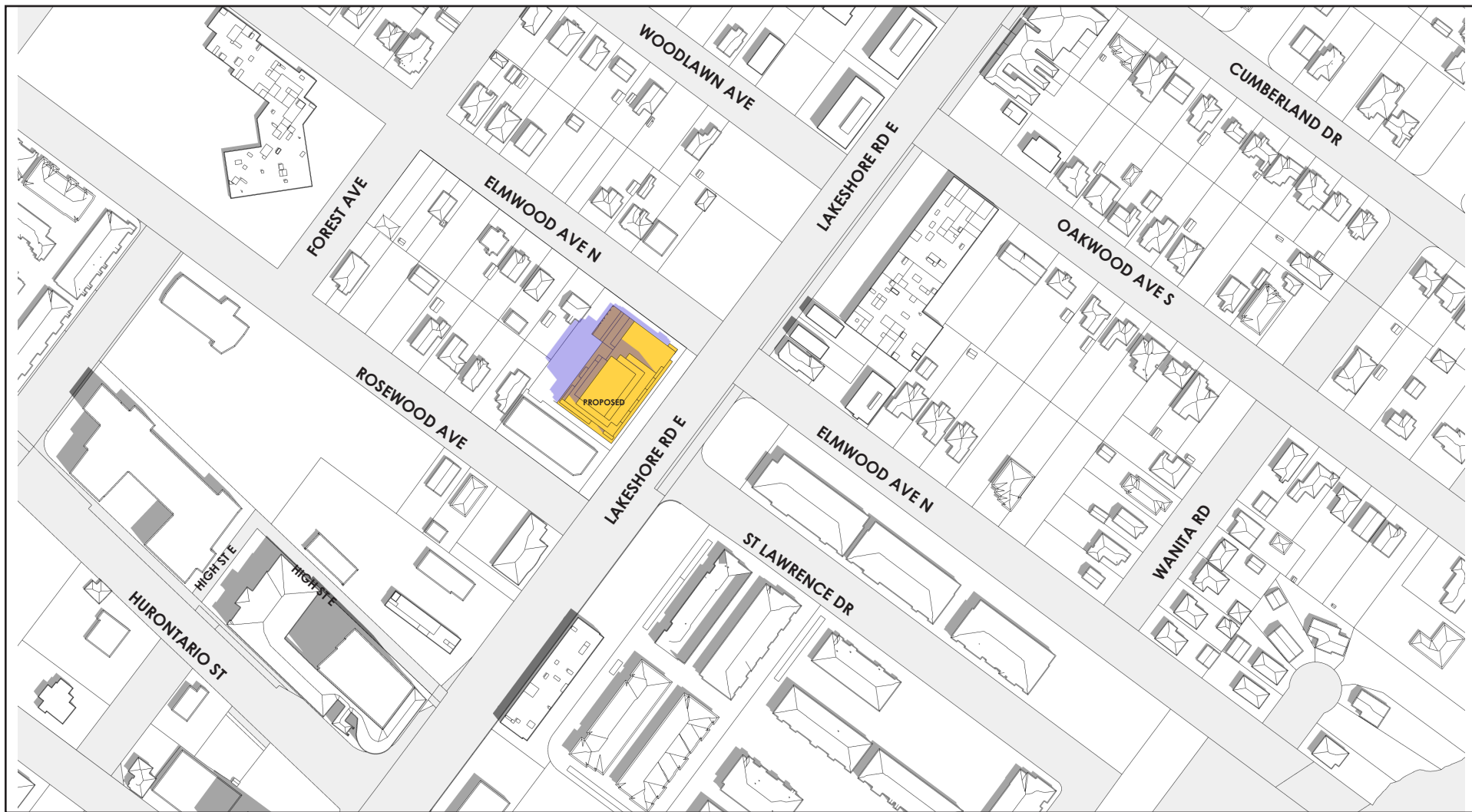
JUNE 21 - 11:20AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 12:20PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 1:20PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 2:20PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 3:20PM

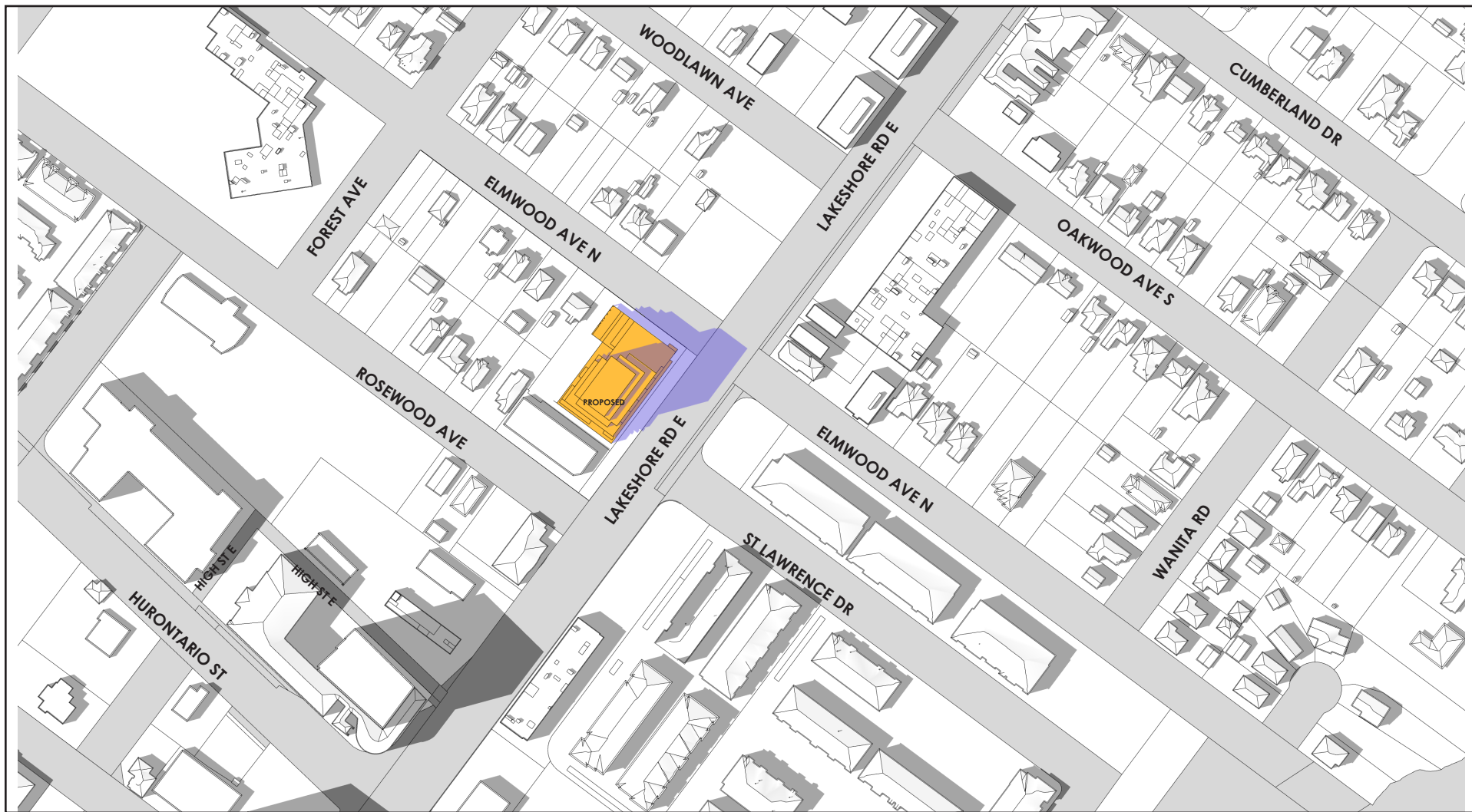


170 LAKESHORE RD E - PROPOSED SHADOW

170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 4:20PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 5:20PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 6:20PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 7:20PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



JUNE 21 - 7:33PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 8:35AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 9:12AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 10:12AM

170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 11:12AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



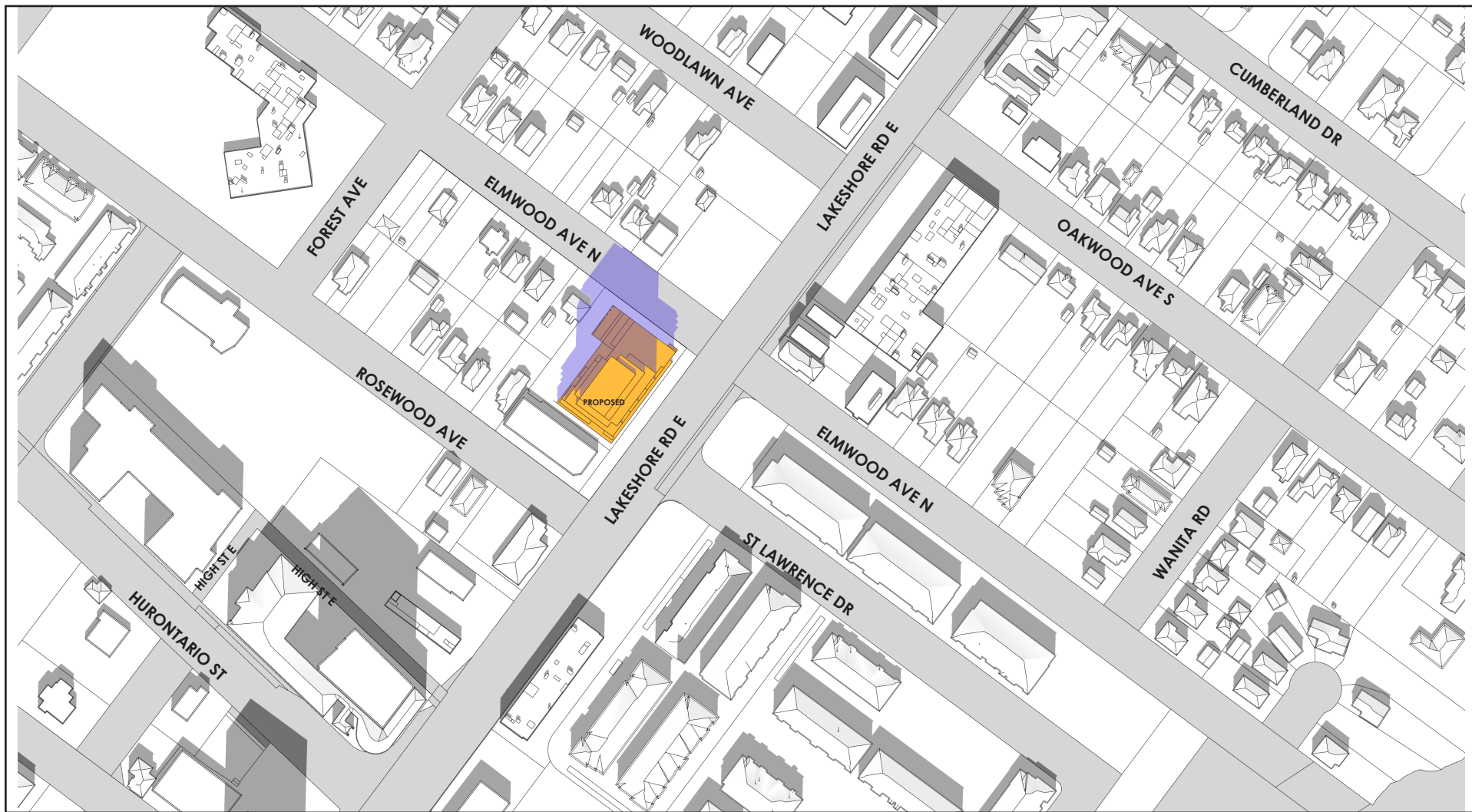
SEPTEMBER 21 - 12:12PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 1:12PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 2:12PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 3:12PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 4:12PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



SEPTEMBER 21 - 5:12PM



170 LAKESHORE RD E
 SHADOW STUDY
 OCTOBER 2021



SEPTEMBER 21 - 5:48PM

170 LAKESHORE RD E
 SHADOW STUDY
 OCTOBER 2021



DECEMBER 21 - 9:19AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



DECEMBER 21 - 10:17AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



DECEMBER 21 - 11:17AM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



DECEMBER 21 - 12:17PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



DECEMBER 21 - 1:17PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



DECEMBER 21 - 2:17PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021



DECEMBER 21 - 3:15PM



170 LAKESHORE RD E

SHADOW STUDY

OCTOBER 2021