

# 42 PORT STREET 91-93, 99 LAKESHORE ROAD

## Shadow Study

November 2022





# SUNLIGHT AND SHADOW SUMMARY

## 1.0 INTRODUCTION

This Shadow Study has been prepared in support of an Official Plan Amendment and Zoning Bylaw Amendment application for the property located at 42 Port Street East and 91-93 and 99 Lakeshore Road East in the City of Mississauga (the "Site" or "Subject Site"). The Proposed Development would introduce an 11-storey building onto the site, consisting of 221 residential units and approximately 2,019 square metres of commercial space oriented along Lakeshore Road. The Proposal will also retain the existing heritage building, create a new POPS plaza along Lakeshore Road, and provide for private outdoor amenity space and streetscape enhancements.

This Shadow Study adheres to the City of Mississauga's Terms of Reference for shadow studies. A shadow analysis has been conducted for the required dates and seasons: June 21, September 21 and December 21. As per the Terms of Reference, an analysis of March 21 has not been undertaken given that the results are similar to September 21. Shadow drawings are included in this study for the required time periods during each season, including from 1.5 hours after sunrise to 1.5 hours before sunset.

To assist in the review of the shadow impacts of the Proposed Development, the enclosed diagrams illustrate net new shadows as orange, with existing shadows associated with existing or approved developments shown in grey. Public parks are shown in green, given that they are key components of the public realm.

## 2.0 TECHNICAL INFORMATION

This shadow study is based on the following technical information:

- Latitude: 43 degrees 35' 20"
- Longitude: 79 degrees 38' 40" W
- Time Zone: Eastern Standard (UTC-05:00) EST
- Base Mapping: City of Mississauga mapping, which has been integrated into a mapping model developed by Urban Strategies Inc.
- North Arrow: As indicated on the plans
- Scale Bar: As indicated on the plans

## 3.0 SUMMARY OF SUN AND SHADOW IMPACTS

This section addresses the various criteria identified in the Terms of Reference and discusses the extent to which the Proposed Development achieves these criteria. As discussed further below, this study finds that the net new shadows introduced by the Proposed Development are acceptable.

The shadows are relatively modest given the mid-rise building form and the integration of building setbacks and varied massing, which help to limit the impacts on surrounding properties and open spaces. The Proposed Development does not cast any shadows on nearby public parks or plazas. The shadows which fall on the public boulevards along Lakeshore Road, Elizabeth Street and Port Street are also limited and brief in duration, allowing for generous sun access throughout much of the day.

The primary shadow impacts relate to the private outdoor amenity areas which are proposed as part of the development. However, it is important to note that these are private amenity spaces that are accessible only to residents of the building, with a large portion of the outdoor amenity area being located on the roof of the podium. Privately owned spaces are not part of the public realm, as noted in Section 9.3 of the Mississauga Official Plan, and as such are lower priority in terms of sunlight access.

A detailed review of the shadow criteria identified in the Terms of Reference is provided below.

### 3.1 Residential Private Outdoor Amenity Spaces

The Subject Site is located within the Port Credit Community Node, which is an area targeted for growth and intensification. The surrounding area is urban and mixed-use in character, with a prevalence of mid-rise to high-rise apartments and commercial buildings. The Subject Site is designated as Mixed Use, and most of the lands immediately surrounding the property are designated as Mixed Use or as Residential High Density. There are no lands immediately surrounding the Subject Site which are designated for low density or medium density residential uses. Since the immediate context does not contain any established clusters of lower-density residential dwellings, it can be concluded that Proposed Development does not impact the rear yards, decks, patios or swimming pools of surrounding residential dwellings. As such, this criterion is satisfied.



3.2 Communal Outdoor Amenity Areas

Communal Outdoor Amenity Areas include children’s play areas, school yards, and park features such as sandboxes, wading pools, as well outdoor amenity areas used by seniors and those associated with commercial and employment areas. There are few – if any – Communal Outdoor Amenity Areas within the immediate vicinity of the site. Much of the unbuilt area immediately surrounding the Subject Site is occupied by surface parking lots or landscaped street edges, rather than formal outdoor amenity spaces.

This criterion also applies to common outdoor amenity areas that are part of the Proposed Development. The Proposed Development provides for a large rooftop outdoor amenity area at Level 3 (above the mezzanine level) and a smaller ground floor outdoor amenity area along the east side of the building. These outdoor amenity spaces are situated towards the east side of the parcel, with the U-shaped building massing situated to the north, south and west. As a result, these areas experience varying degrees of shadows throughout the day and during all seasons. The sun access factor is less than 50% in September. While this criterion is not met for the proposed common amenity area, the Proposed Development does provide for other open space areas which do experience greater sunlight, including the plaza along Lakeshore Road and the landscaped edges along Elizabeth Street and Port Street. In addition, these amenity areas are private spaces which do not form part of the public realm.

3.3) Public Realm

The public realm includes sidewalks, open spaces, parks and plazas. A key objective for the City is to maximize the use of these spaces during the shoulder seasons (spring and fall).

Sidewalks and Boulevards

The Subject Site is situated within a higher-density mixed-use area, with the building fronting onto Lakeshore Road, Elizabeth Street and Port Street. The shadow study Terms of Reference emphasizes the importance of ensuring adequate sunlight on the opposite sidewalk/boulevard on September 21.

The Proposed Development satisfies the boulevard shadowing criteria, as it does not cast any new shadows on the opposite side of Lakeshore Road, Elizabeth Street or Port Street between 12:12pm and 2:12pm, or between 3:12pm and 5:12pm.

Public Parks, Open Spaces and Plazas

The City aims to ensure a sun access factor of at least 50% on public open spaces, parks and plazas on September 21. The shadow impacts on these spaces is summarized below:

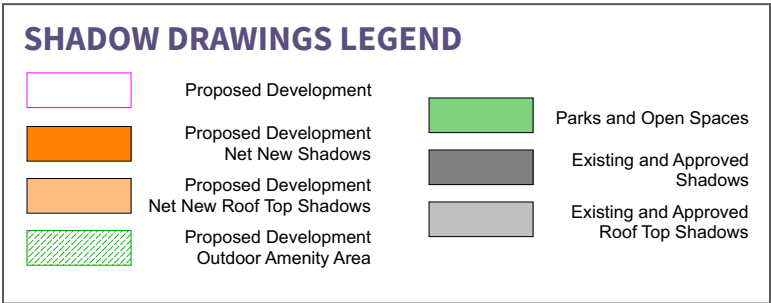
- **Public Parks:** There are several public parks within the Port Credit community, including Cenotaph Park and St. Lawrence Park. However, the proposed 11 storey building does not cast any net new shadows on these public parks on September 21.
- **Plazas:** The nearest plaza is located approximately 170 metres east of the Subject Site along Lakeshore Road. The shadows associated with the Proposed Development do not extend this far and therefore do not impact this plaza.
- **Proposed POPS Plaza:** The Proposed Development includes the creation of a plaza/patio space along Lakeshore Road, immediately east of the retained heritage building. On September 21, this proposed plaza is shadowed by the proposed building during the morning hours from 8:35am to 11:12am. At 12:12pm, approximately half of the plaza is shadowed by the proposed building. From 1:12pm onwards, the plaza is mostly in sunlight for the remainder of the day, for approximately 4.5 hours until 5:48pm.

3.4 Turf and Flower Gardens in Public Parks

This criterion seeks to ensure that flower gardens within public parks experience adequate sunlight during the growing season from March to October. This criterion is satisfied, as the Proposed Development does not introduce any net new shadows on surrounding public parks in March, June or September.

3.5 Building Faces to Allow for Solar Energy

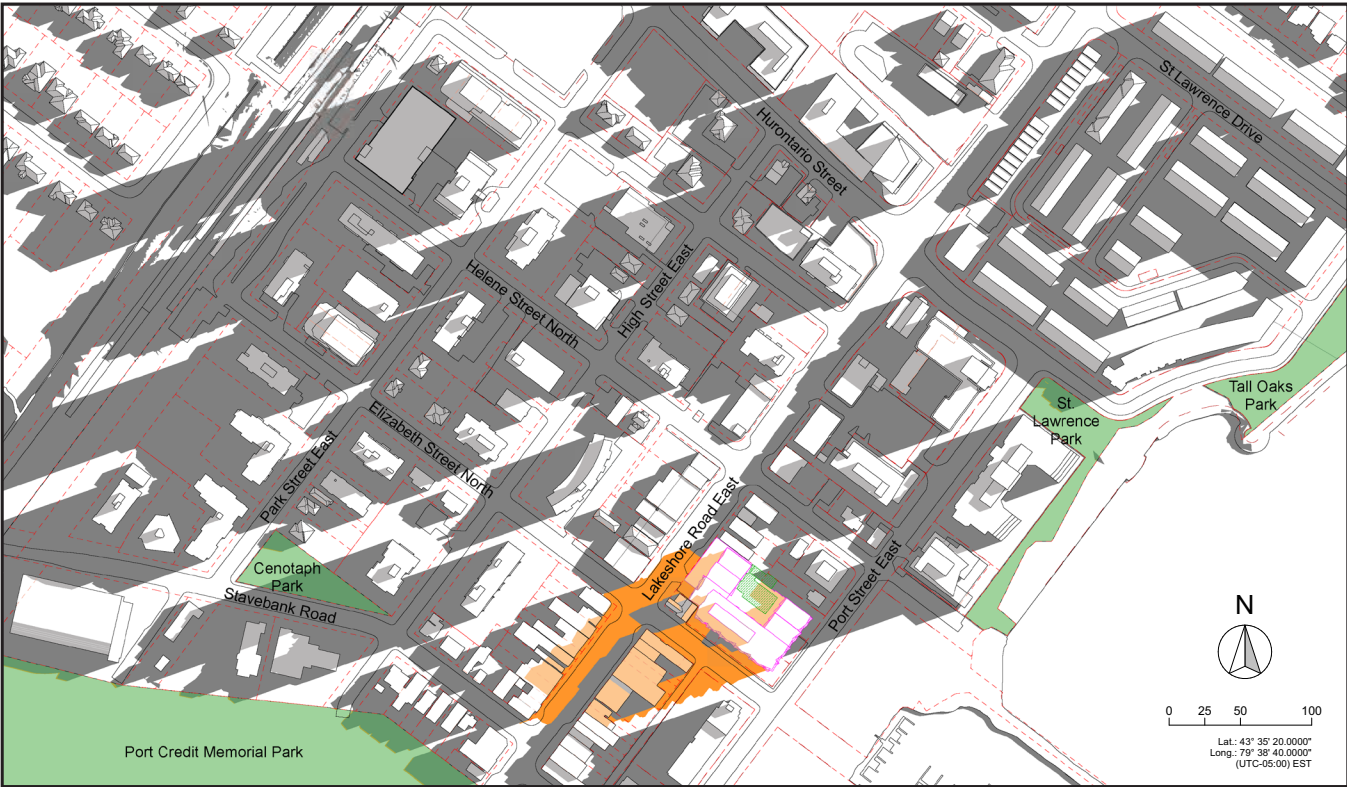
This criterion seeks to minimize shadow impacts on adjacent low rise (1-4 storey) residential buildings on September 21. This criterion is satisfied, as there are no low-rise residential buildings adjacent to the Subject Site.



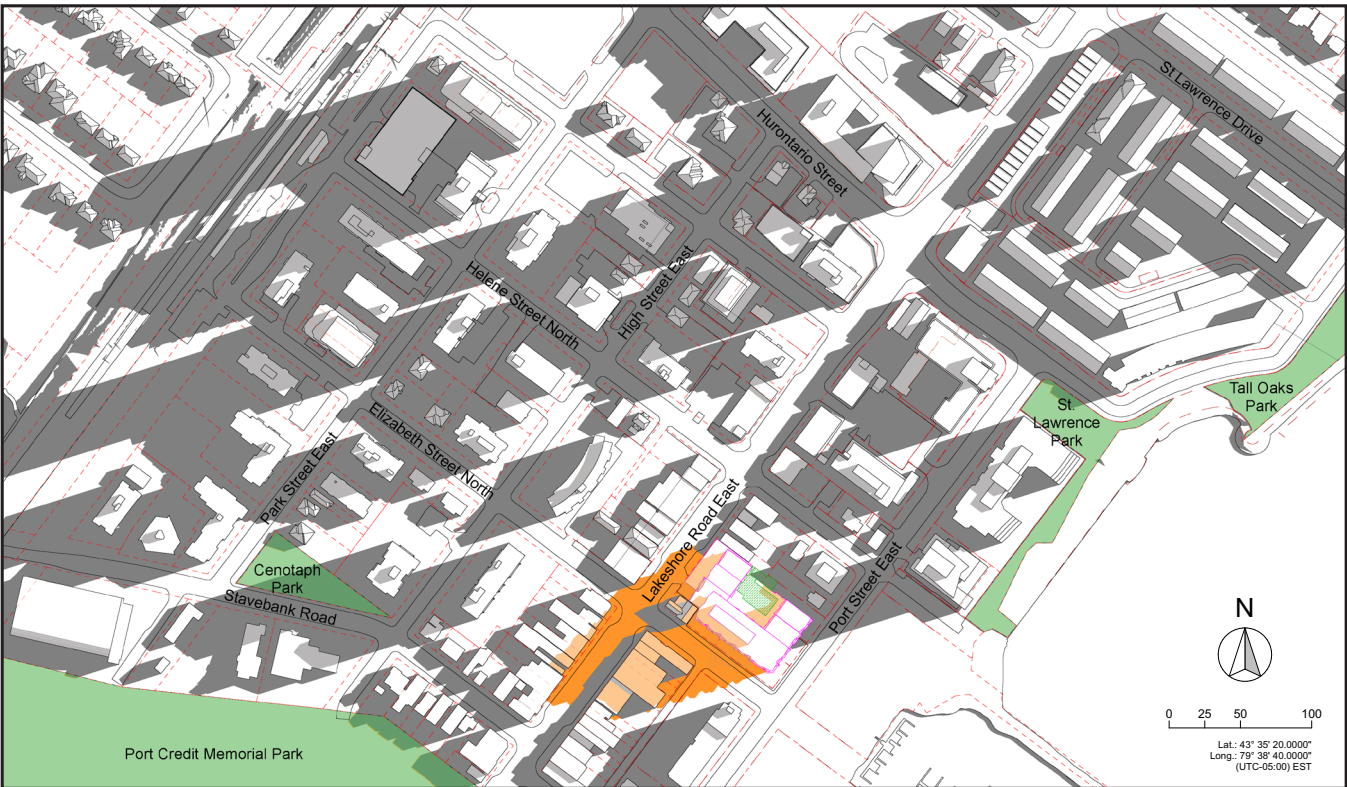


# JUNE

JUNE 21 - 7:07

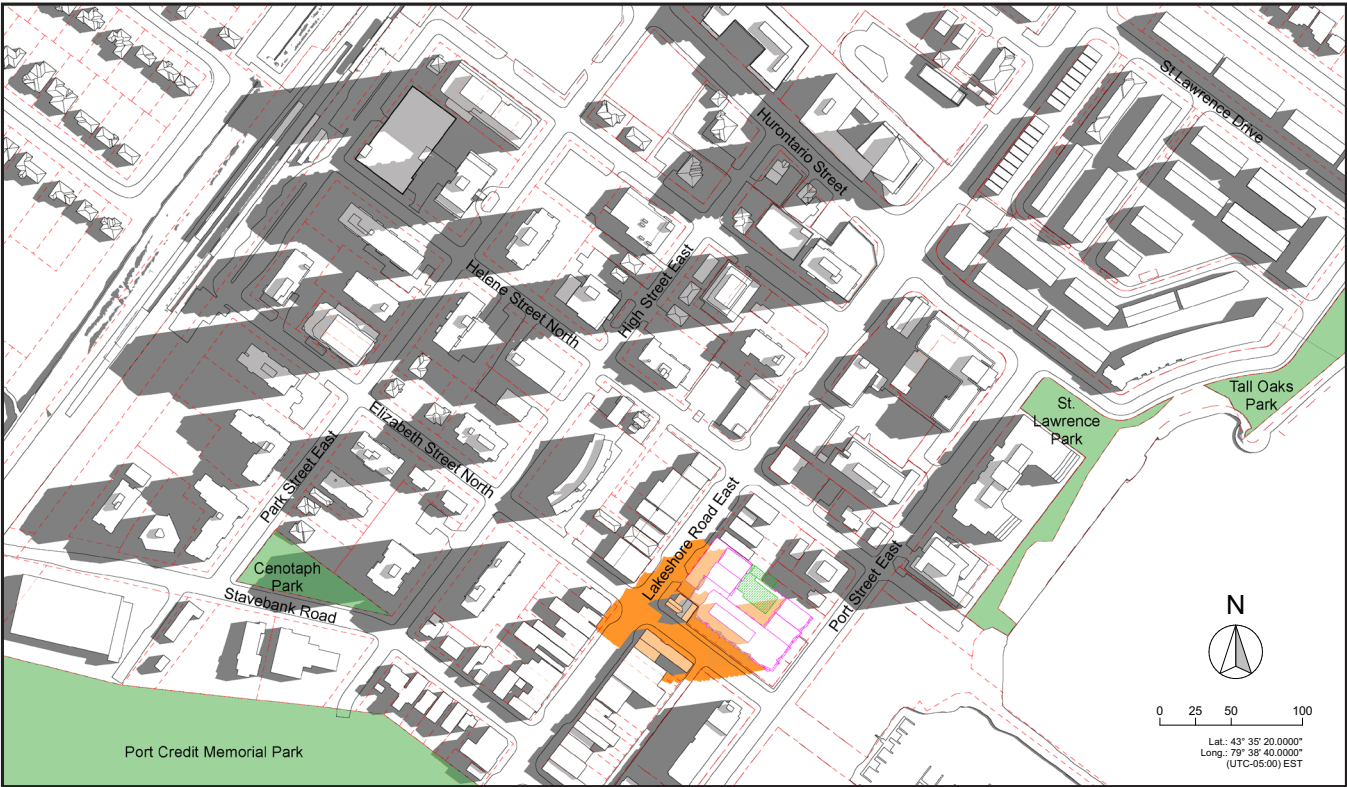


JUNE 21 - 7:20





**JUNE 21 - 8:20**



**JUNE 21 - 9:20**





**JUNE 21 - 10:20**

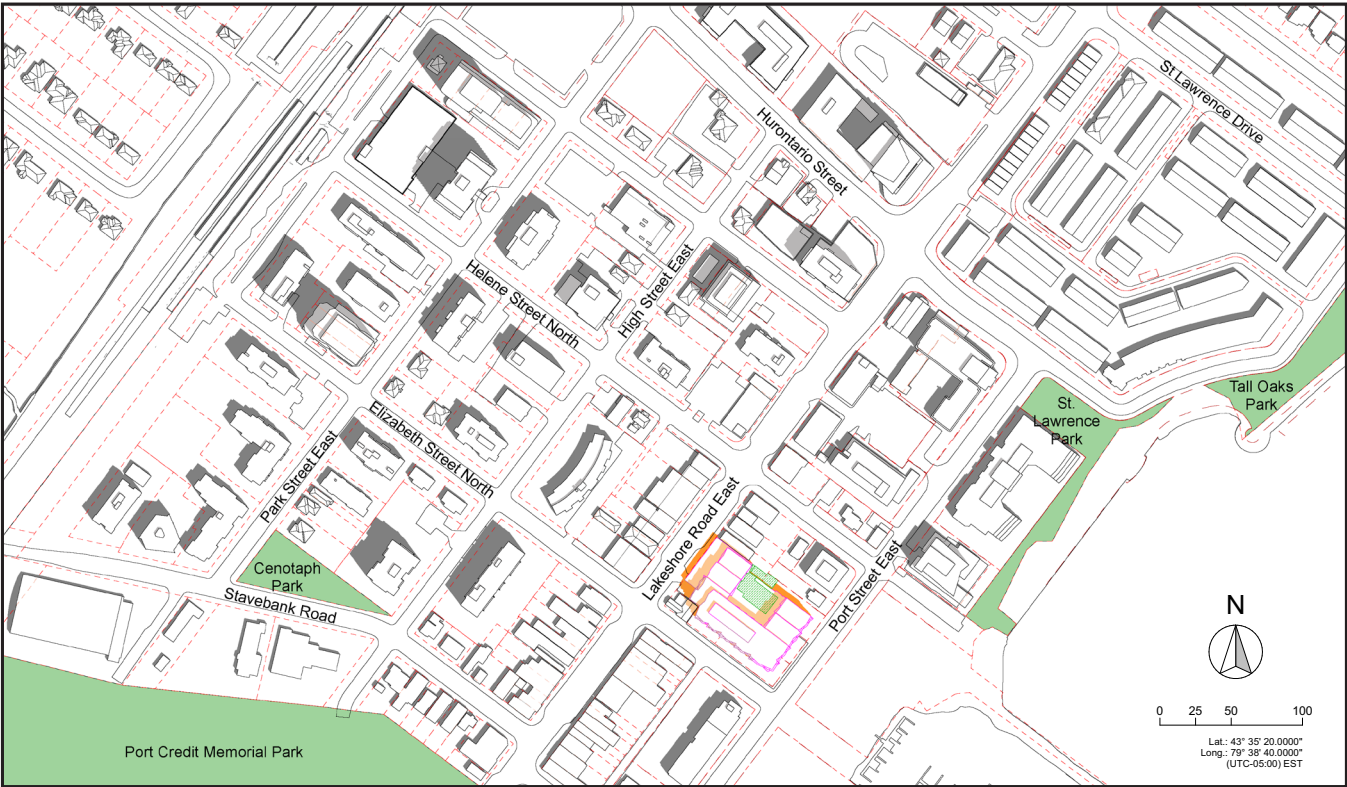


**JUNE 21 - 11:20**





**JUNE 21 - 12:20**



**JUNE 21 - 13:20**



**JUNE 21 - 14:20**



**JUNE 21 - 15:20**





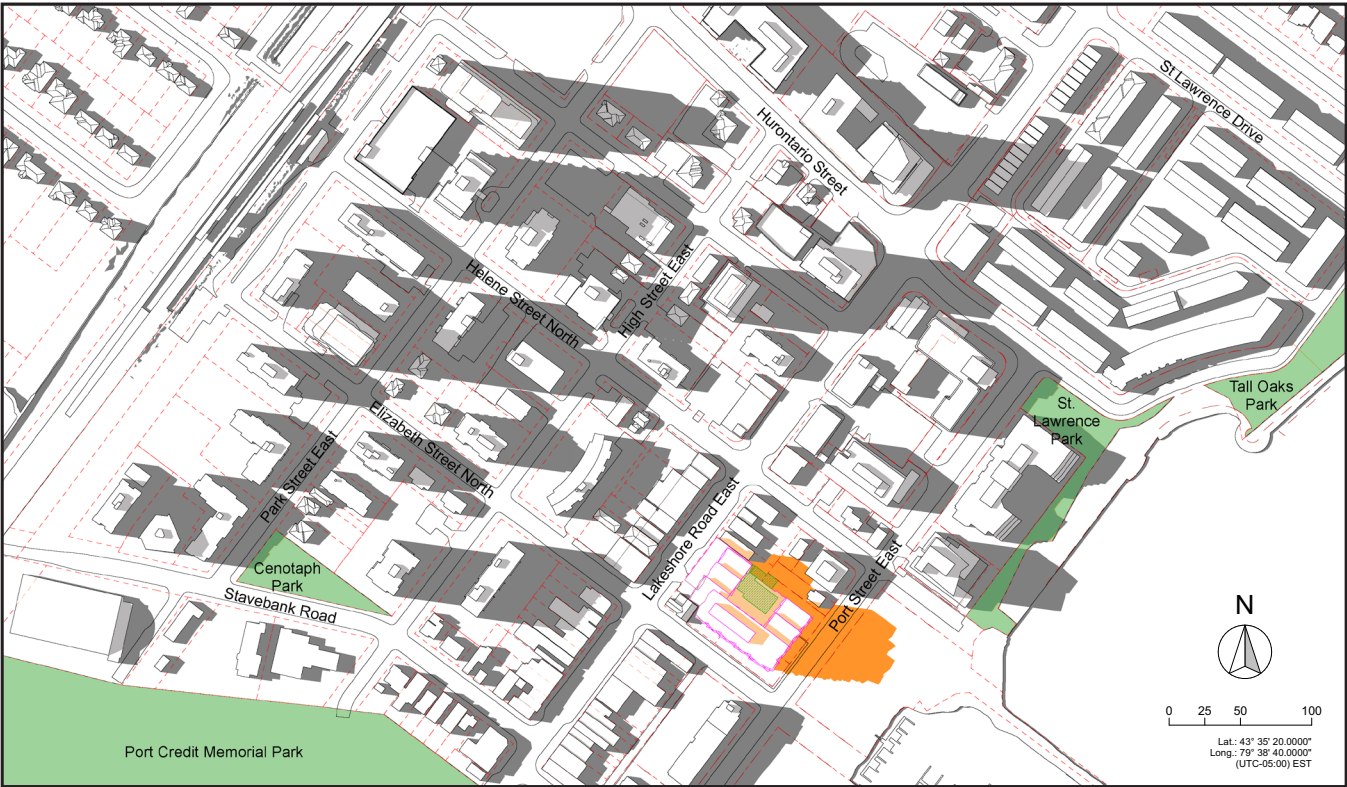
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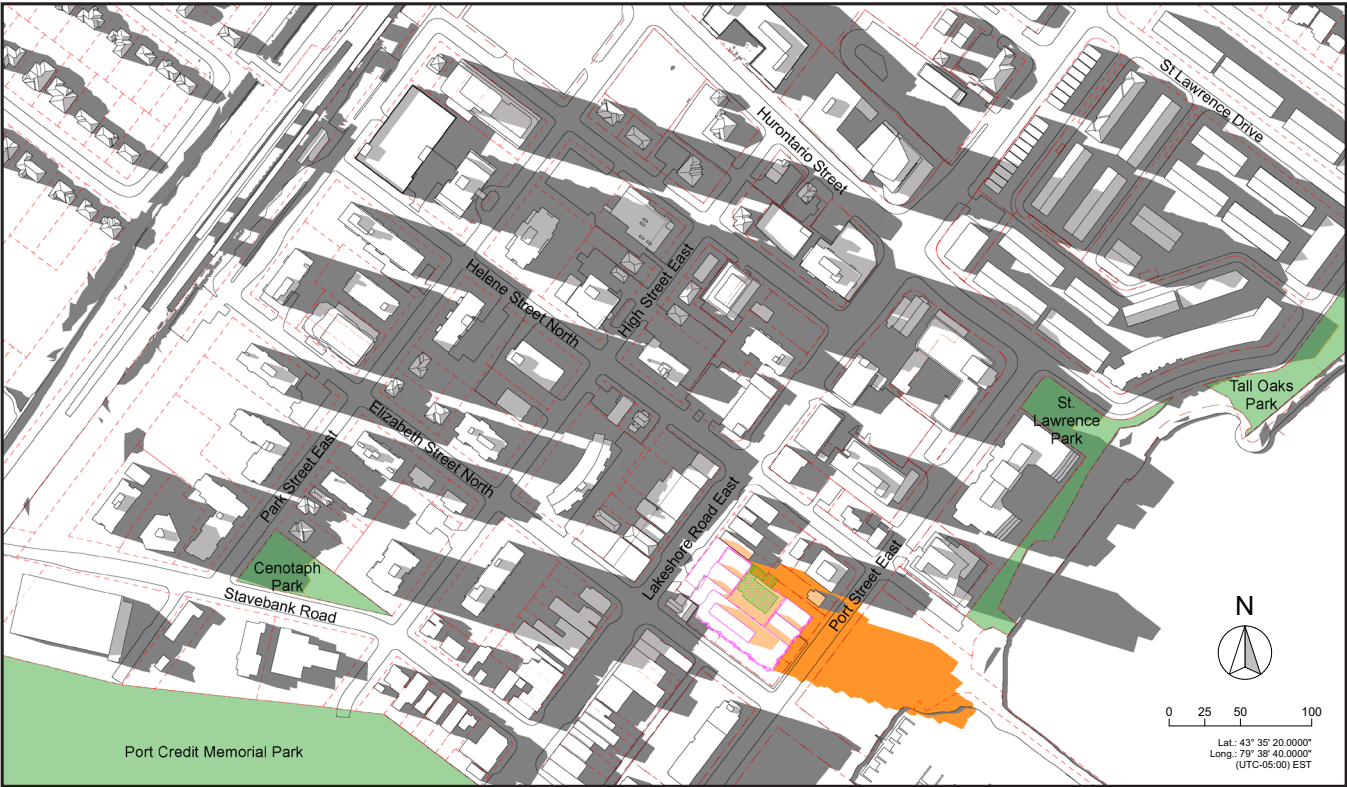
**JUNE 21 - 17:20**



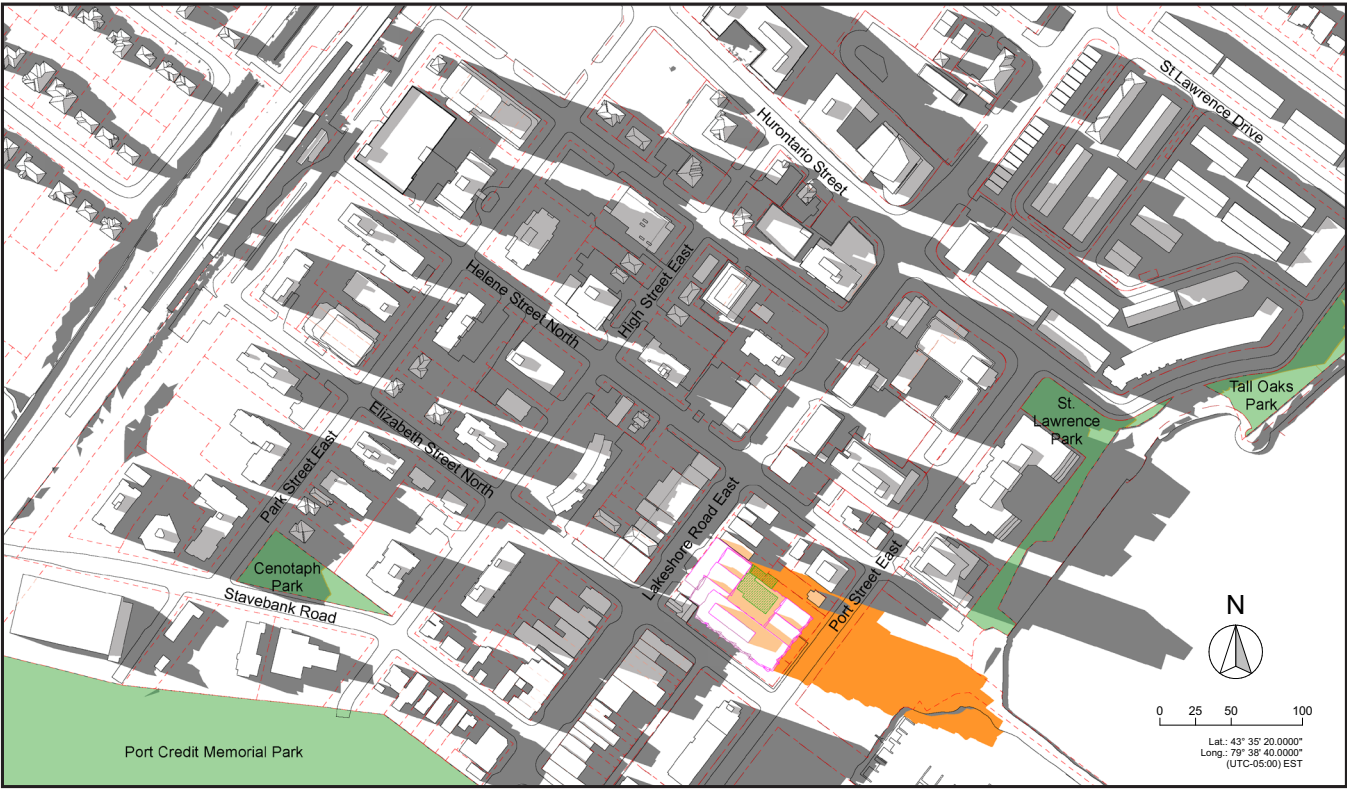
**JUNE 21 - 18:20**



**JUNE 21 - 19:20**







# SEPTEMBER

SEPTEMBER 21 - 8:35



SEPTEMBER 21 - 9:12





SEPTEMBER 21 - 10:12



SEPTEMBER 21 - 11:12



SEPTEMBER 21 - 12:12



SEPTEMBER 21 - 13:12





SEPTEMBER 21 - 14:12



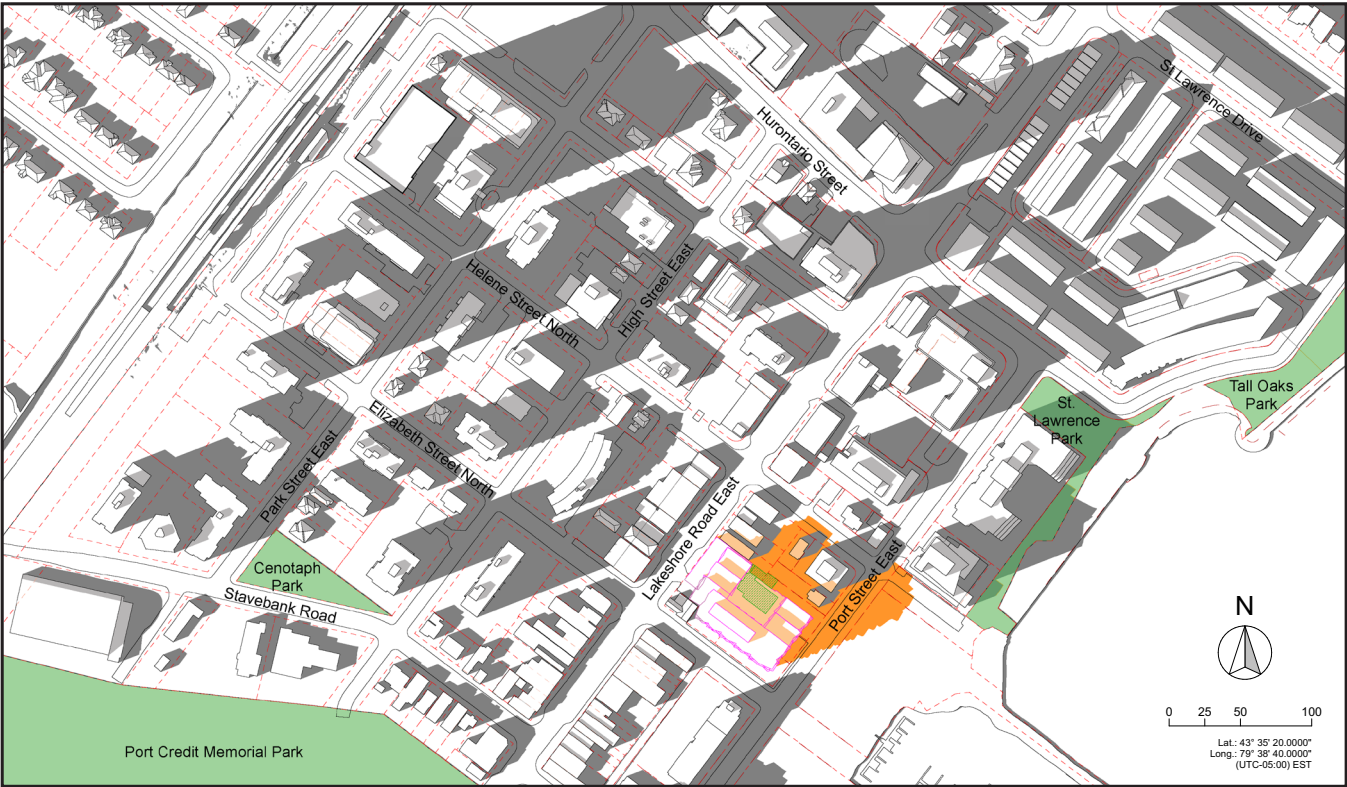
SEPTEMBER 21 - 15:12



SEPTEMBER 21 - 16:12

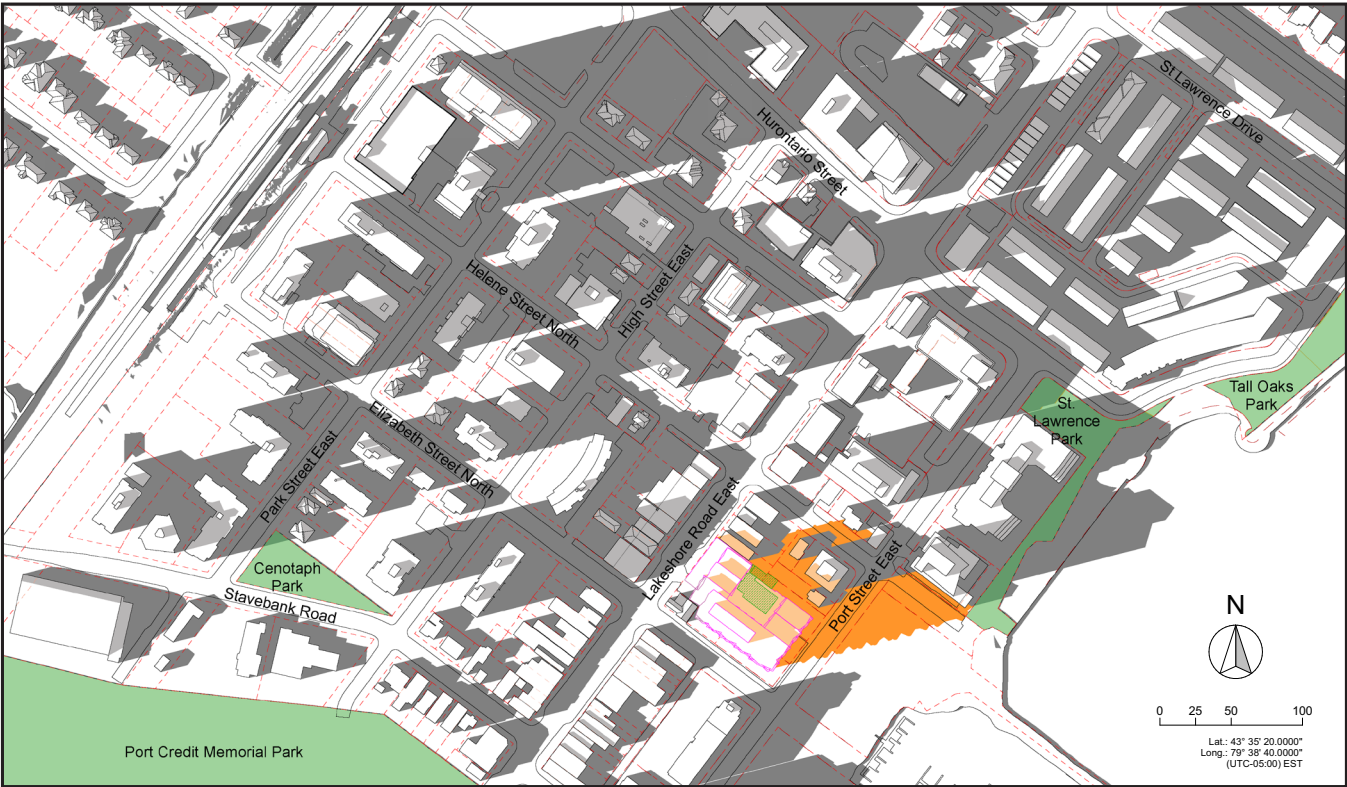


SEPTEMBER 21 - 17:12





SEPTEMBER 21 - 17:48

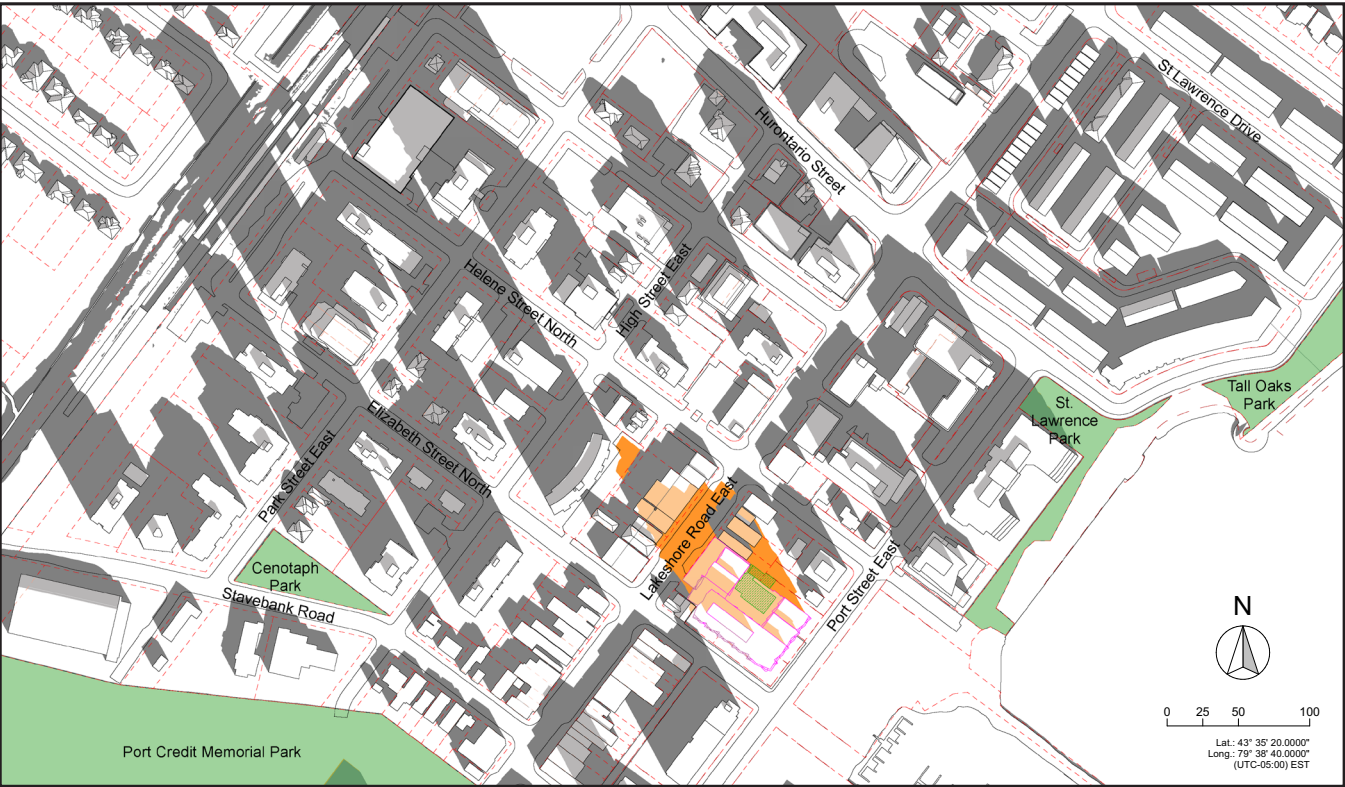


# DECEMBER

DECEMBER 21 - 9:18



DECEMBER 21 - 10:17





**DECEMBER 21 - 11:17**



**DECEMBER 21 - 12:17**



DECEMBER 21 - 13:17



DECEMBER 21 - 14:17





DECEMBER 21 - 15:17



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