

SUN SHADOW STUDY

8 Shoreview Place

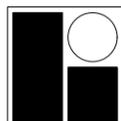
Proposed Mixed-Use Development
8 Shoreview Place, Stoney Creek
City of Hamilton

Prepared for:
8 Shoreview LP

Prepared by:
Ralph Bouwmeester, P. Eng.

RBA File: S23017

JUNE 5, 2023



R. BOUWMEESTER & ASSOCIATES

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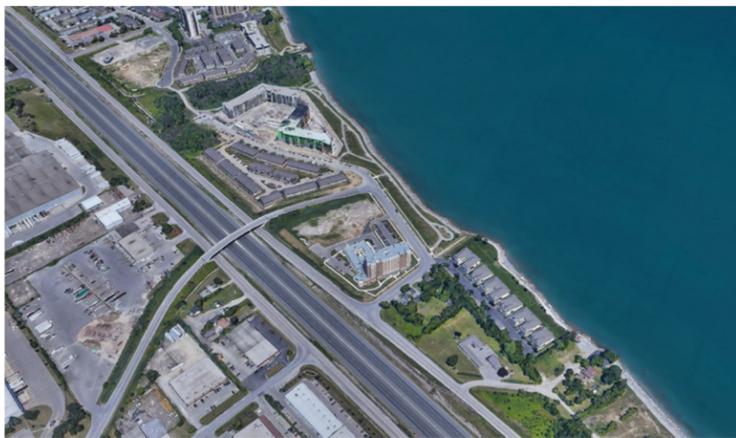
1. This summary report should be read in conjunction with shadow study Drawings RH-1 and SS-1 to SS-7 all dated June 5, 2023.
2. Site latitude and longitude used for this study are based on the latitude and longitude of the subject site as follows:

Latitude: 43° 14' 14" N (43.2372° N)
 Longitude: 79° 43' 05" W (79.7181° W)
3. Time Zone: Eastern
 Daylight Time: UT – 4 hours
4. Site Orientation: South Limit of Shoreview Place N 55°14'20" W (MTM grid)

The bearing of the site's north boundary (i.e. south limit of Shoreview Place) is shown as N 55°14'20" W (MTM grid) on a Topographic Survey dated November 23, 2022, by A.T. McLaren Limited Legal and Engineering Surveys. This survey is referenced to the MTM Zone 10 NAD 83 coordinate system and was adjusted to relate to the City of Hamilton's mapping coordinate system which is referenced to UTM Zone 17 NAD 83. Based on the site's location, we have determined that True (Solar) North is 0.8782° west (i.e. CCW) of UTM Grid North. See North Arrow on drawings.

Shadow lengths and directions relative to True North were calculated using proprietary software.

5. The base plan used in this analysis was obtained from the City of Hamilton's Open Data mapping portal; this mapping is in the UTM Zone 17 NAD 83 coordinate system. The 3D massing model of the proposal was provided by Graziani + Corazza Architects. Existing dwellings are generally assumed to be 6 m in height while the heights of taller buildings were estimated from Google Earth Pro. See area context aerial photos below.



View of the area subject to morning and mid-day shadows – Looking West



View of the area subject to mid-day and afternoon shadows – Looking East

6. The shadow analysis is based on an assumed flat ground plane.
7. The shadow study includes hourly test times between 1.5 hours after sunrise to 1.5 hours before sunset on Mar 21 per "Development Application Guidelines - Sun Shadow Study" (Appendix "B31" to Report PED22112(d)). It also includes solar noon and the times marking 1.5 hours after sunrise and 1.5 hours before sunset as required.
8. The Impact Criteria specified in the Guidelines include the following:

A. Public Realm

This category includes public sidewalks, public/private outdoor amenity spaces such as patios, sitting areas, and other similar programs.

- Shadows from a proposed development shall allow for a minimum of 3 hours of sun coverage between 10:00 a.m. and 4:00 p.m., as measured on March 21st.

B. Common Amenity Areas

This category includes public plazas, parks, open spaces, school yards, and playgrounds.

- Shadows from the proposed development shall allow for a minimum of 50% sun coverage at all times of the day, as measured on March 21st.

There are additional criteria that are not relevant in this analysis since they apply specifically to locations in Hamilton Downtown.

9. Review of Shadow Drawings

Mar 21 – Proposed shadows cross Millen Road Overpass and reach portions of the backyards of 5 townhouse blocks to the west at the 10:00 a.m. test time. This reduces to portions of 3 blocks at 11:00 a.m. and 2 at noon and 1:00 p.m. Proposed shadows do not reach any backyards after 1:00 p.m.

Proposed shadows reach the opposite sidewalk along Shoreview Place in various locations between 10:00 a.m. and 4:00 p.m. but they do not linger in any one location for more than about one hour (directly across the street after about 1:00 p.m.). There are a minimum of about 5 hours of sunlight on the sidewalk between 10:00 a.m. and 4:00 p.m.

There are no sidewalks along Millen Road Overpass.

Proposed shadows reach the waterfront trail area between Shoreview Place and the lake in various locations between about 1:00 p.m. and 4:00 p.m. but they do not linger in any one location for more than about one hour. There are a minimum of about 5 hours of sunlight in this area between 10:00 a.m. and 4:00 p.m.

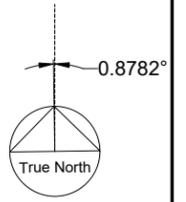
Proposed shadows do not reach Millen Road Parkette northeast of the site at any time between 10:00 a.m. and 4:00 p.m. on March 21st.

10. Conclusion:

Based on our assessment, the proposal meets the requirements for 3 hours of sun and 50% sun coverage on March 21st as described above.

NOTES:

1. SHADOWS INCLUDE PARAPETS, BALCONY SLABS & RAILINGS (ASSUMED SOLID), AND ROOF-TOP FEATURES, WHERE APPLICABLE.
2. PROPOSED BUILDING HEIGHTS ARE GIVEN IN METERS.
3. PROPOSED BUILDING HEIGHTS WERE DERIVED FROM A 3D MODEL AND PLANS BY GRAZIANI + CORAZZA ARCHITECTS.
4. SHADOWS ARE SHOWN ON AN ASSUMED FLAT GROUND PLANE.
5. BASE MAPPING OBTAINED FROM CITY OF HAMILTON OPEN DATA PORTAL.
6. EXISTING BUILDING HEIGHTS ESTIMATED FROM GOOGLE EARTH.
7. SITE BOUNDARY SURVEY DATA PROVIDED BY A.T. McLAREN LIMITED.



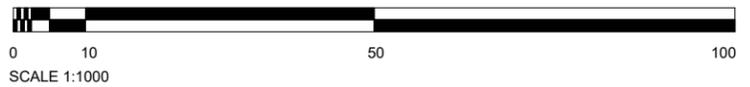
KEY PROPOSED HEIGHTS

GEOGRAPHIC SITE LOCATION:

LATITUDE: 43° 14' 14" N
 LONGITUDE: 79° 43' 05" W

TIME ZONE:

EASTERN
 - STANDARD TIME (EST) (UT - 5 hrs)
 - DAYLIGHT TIME (EDT) (UT - 4 hrs)

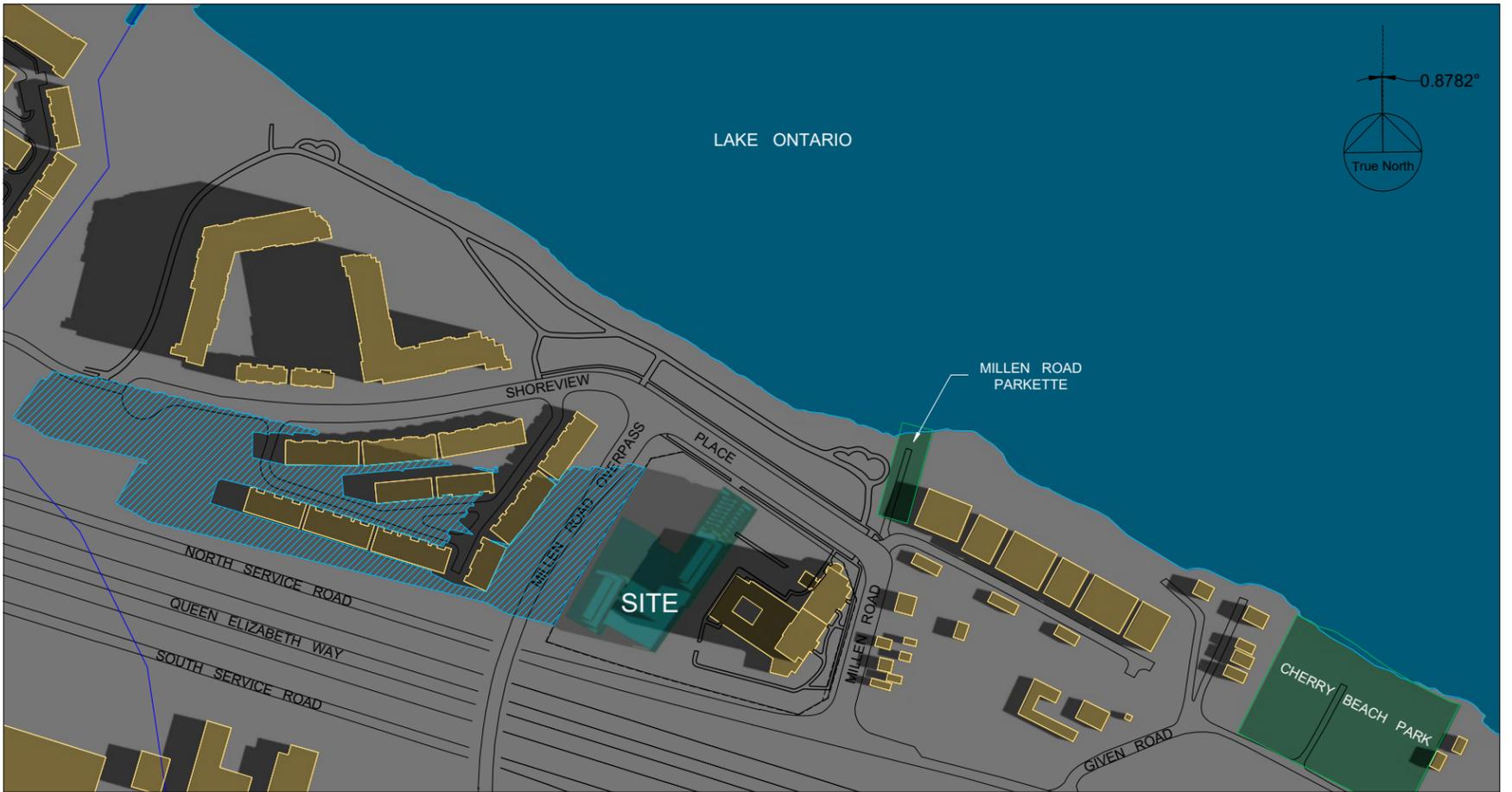


**KEY PLAN & HEIGHTS
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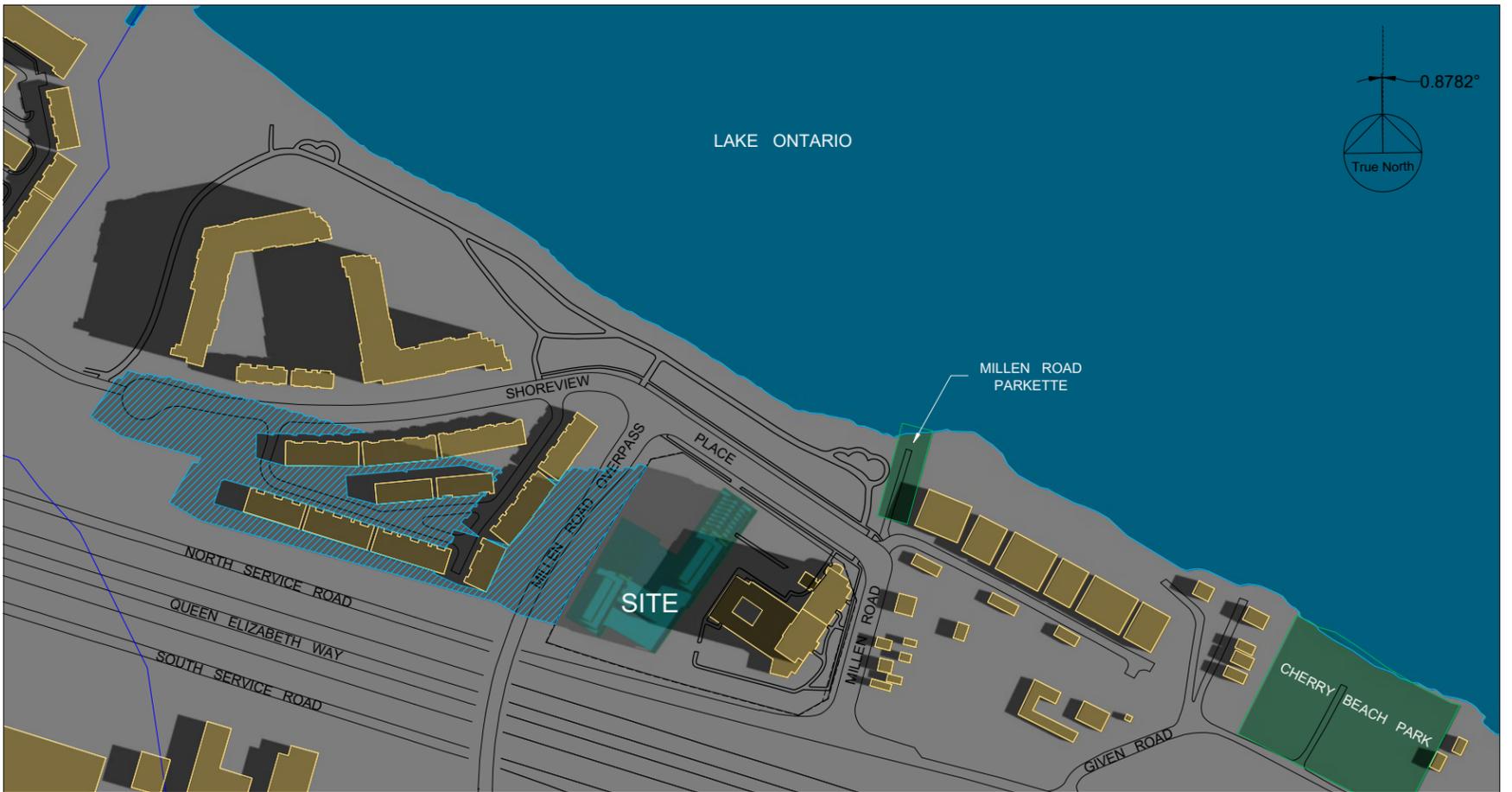
RH-1



8:50 AM^{EDT}



- EXISTING SHADOW
- PROPOSED SHADOW
- INCREMENTAL GROUND LEVEL SHADOW
(BEYOND PROPERTY LINE, ON ASSUMED FLAT GROUND PLANE)

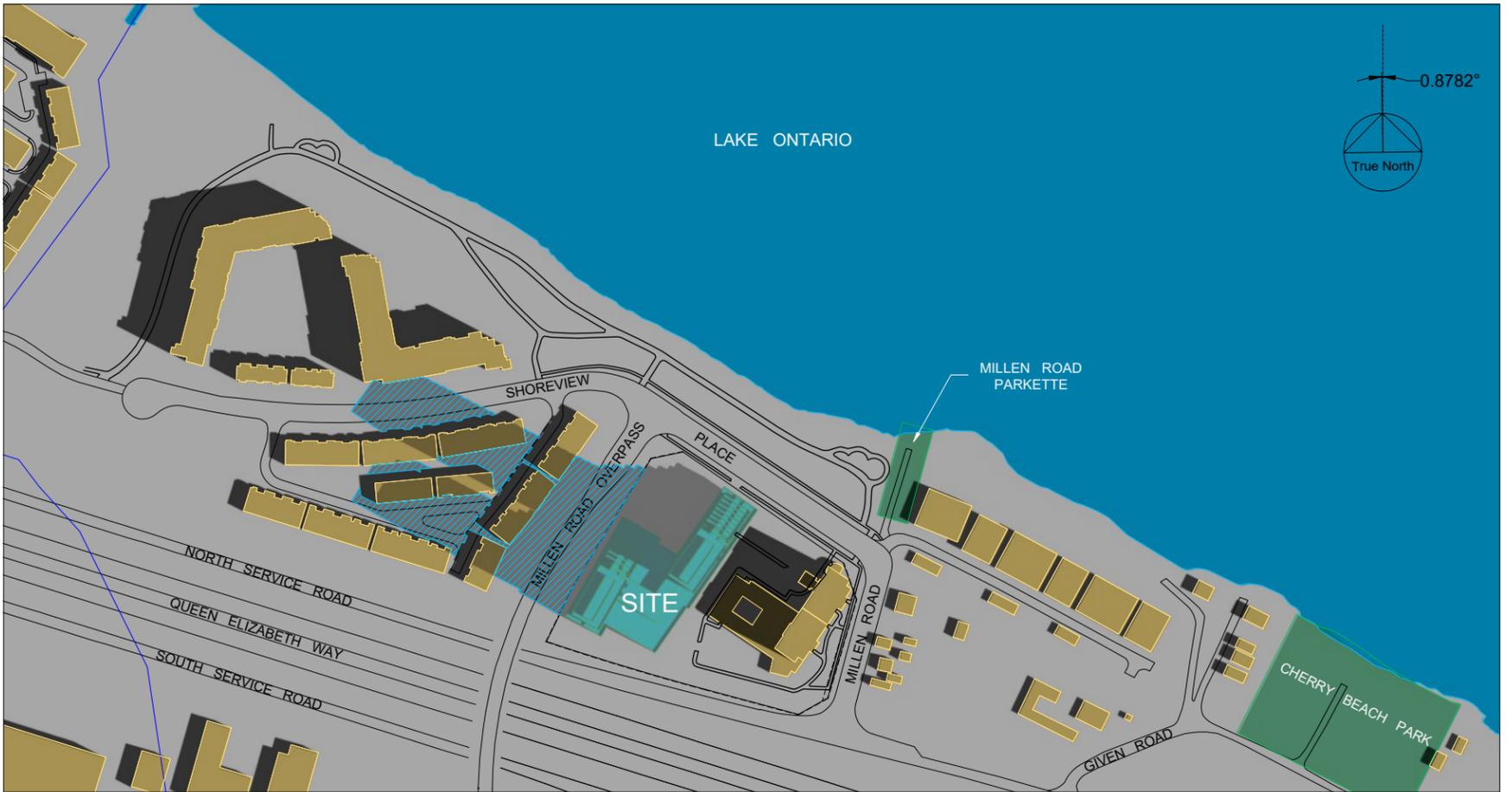


9:00 AM^{EDT}

MAR 21

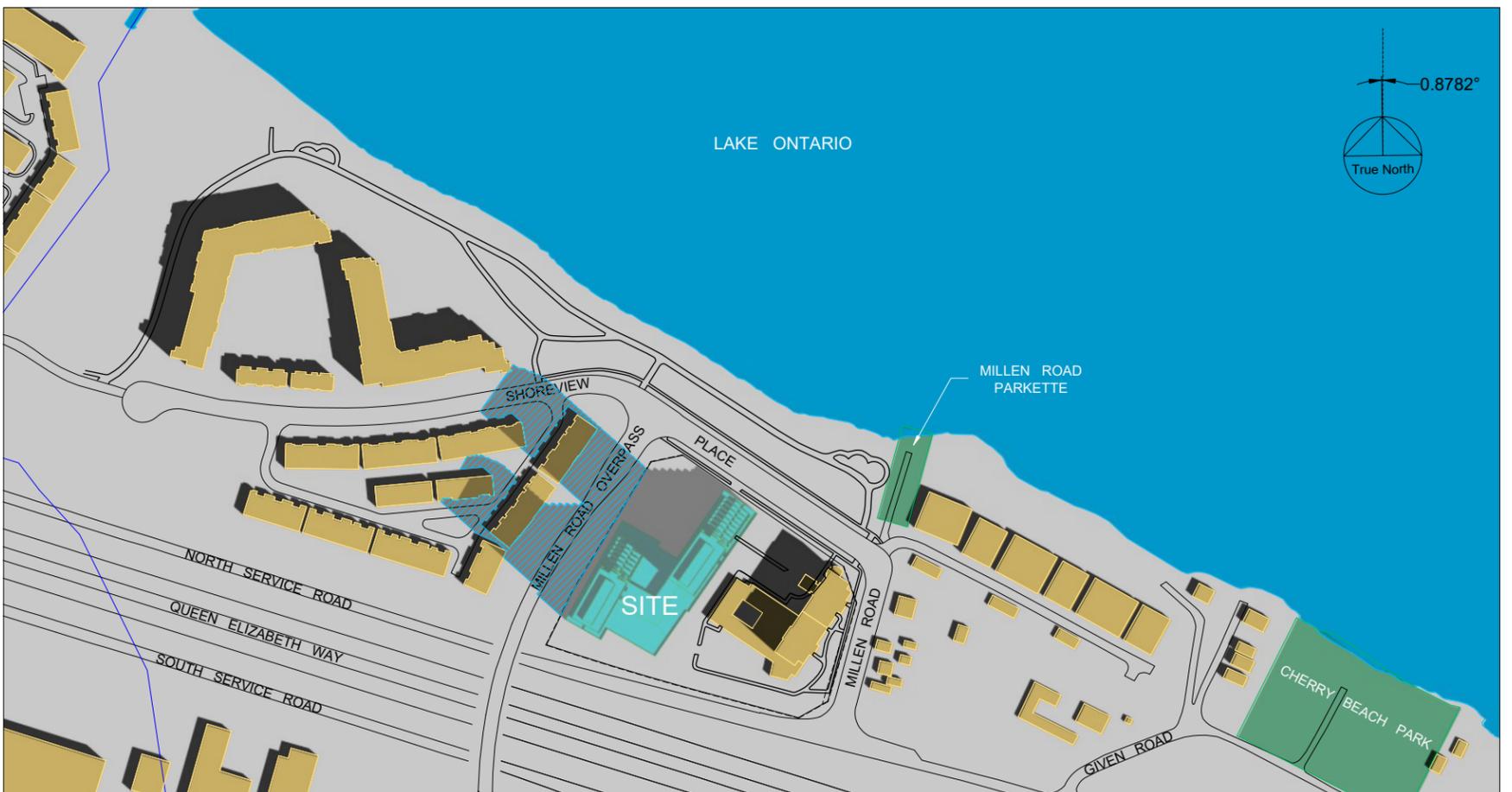
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	Drawn by:	RB	Scale:	1:4000	
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10:00 AM^{EDT}

-  EXISTING SHADOW
-  PROPOSED SHADOW
-  INCREMENTAL GROUND LEVEL SHADOW
(BEYOND PROPERTY LINE, ON ASSUMED FLAT GROUND PLANE)

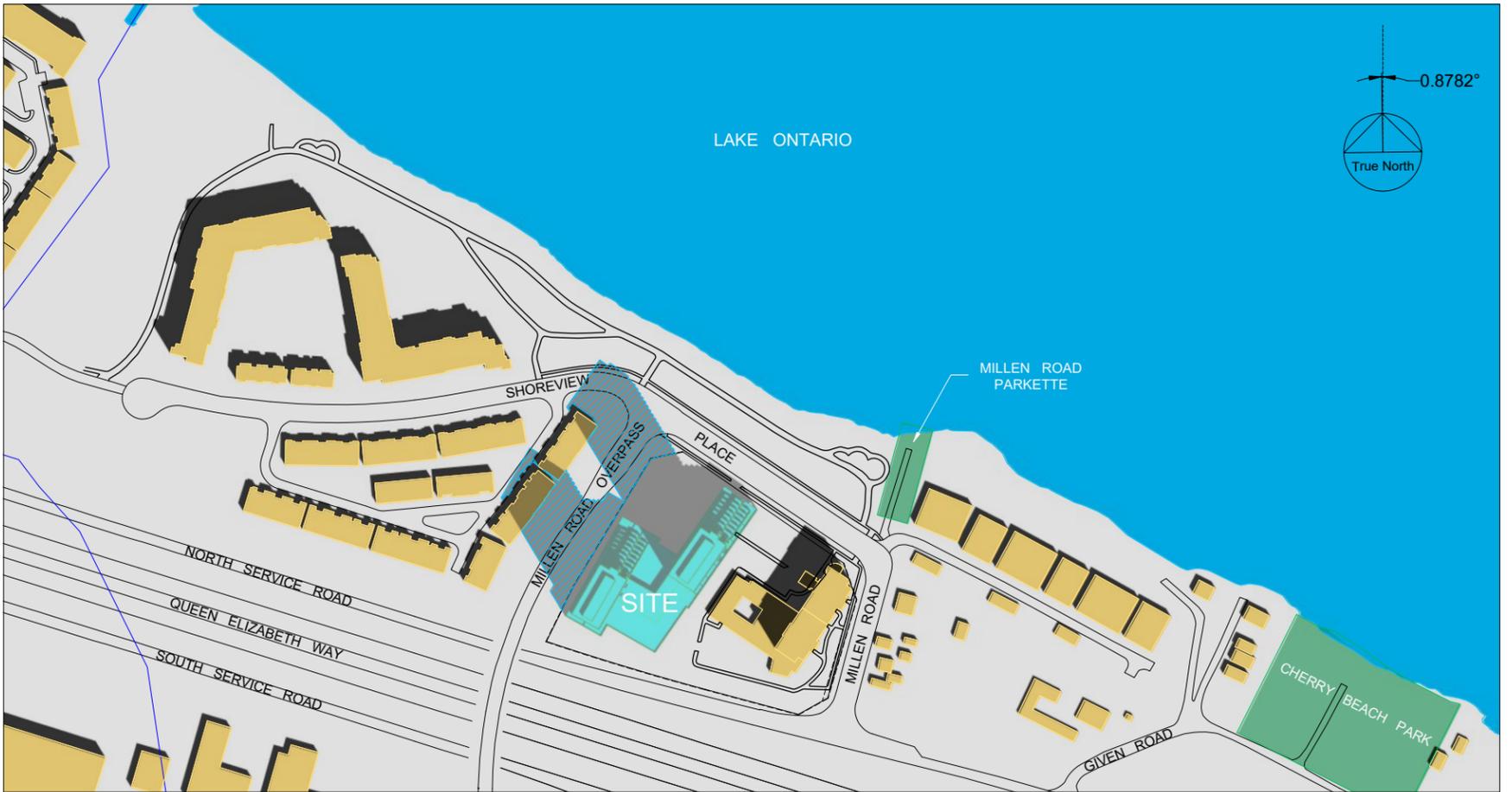


11:00 AM^{EDT}

MAR 21

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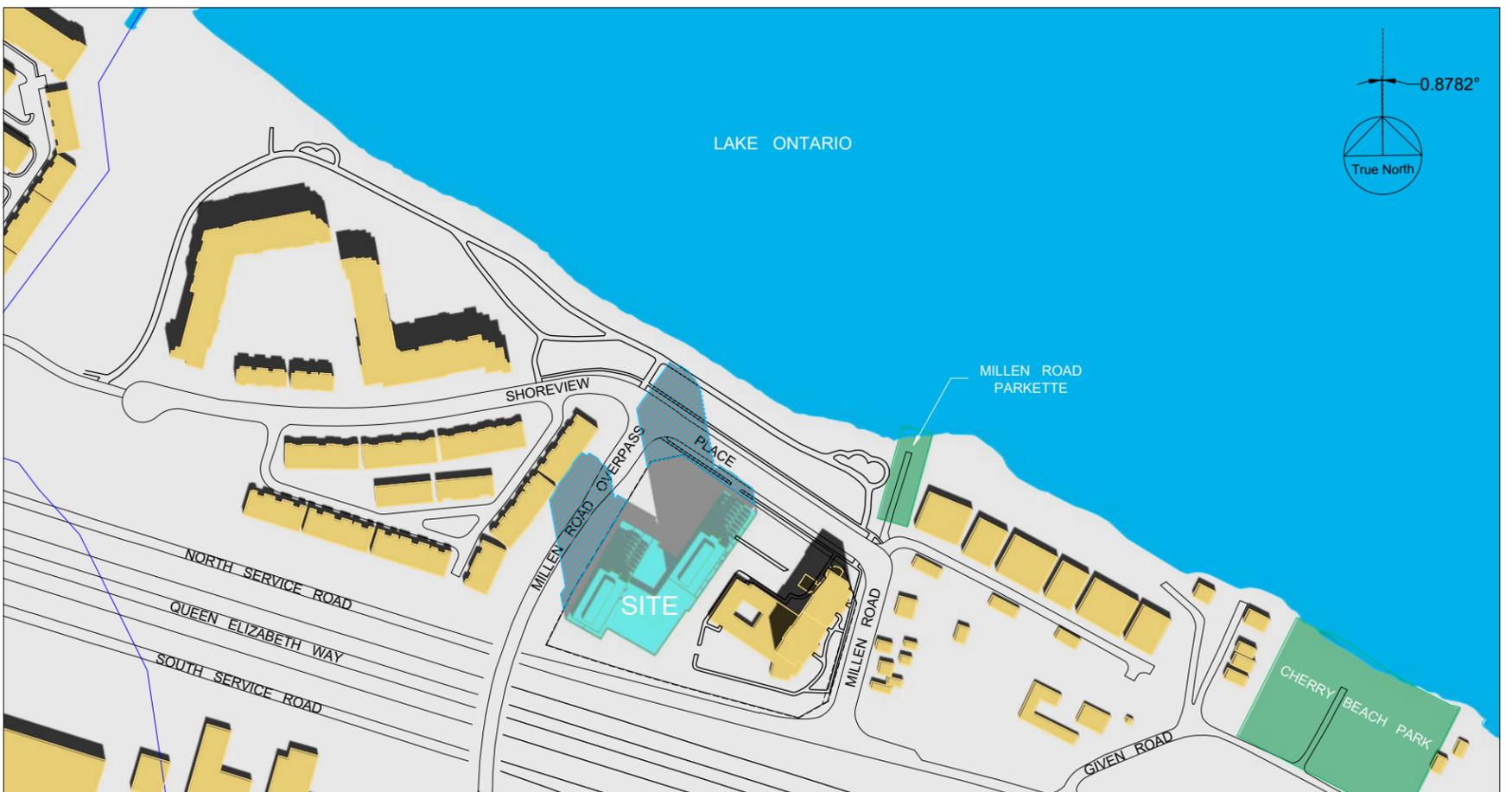
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Checked by: RB	Date: JUN 5/23		



12:00 PM^{EDT}



- EXISTING SHADOW
- PROPOSED SHADOW
- INCREMENTAL GROUND LEVEL SHADOW
(BEYOND PROPERTY LINE, ON ASSUMED FLAT GROUND PLANE)

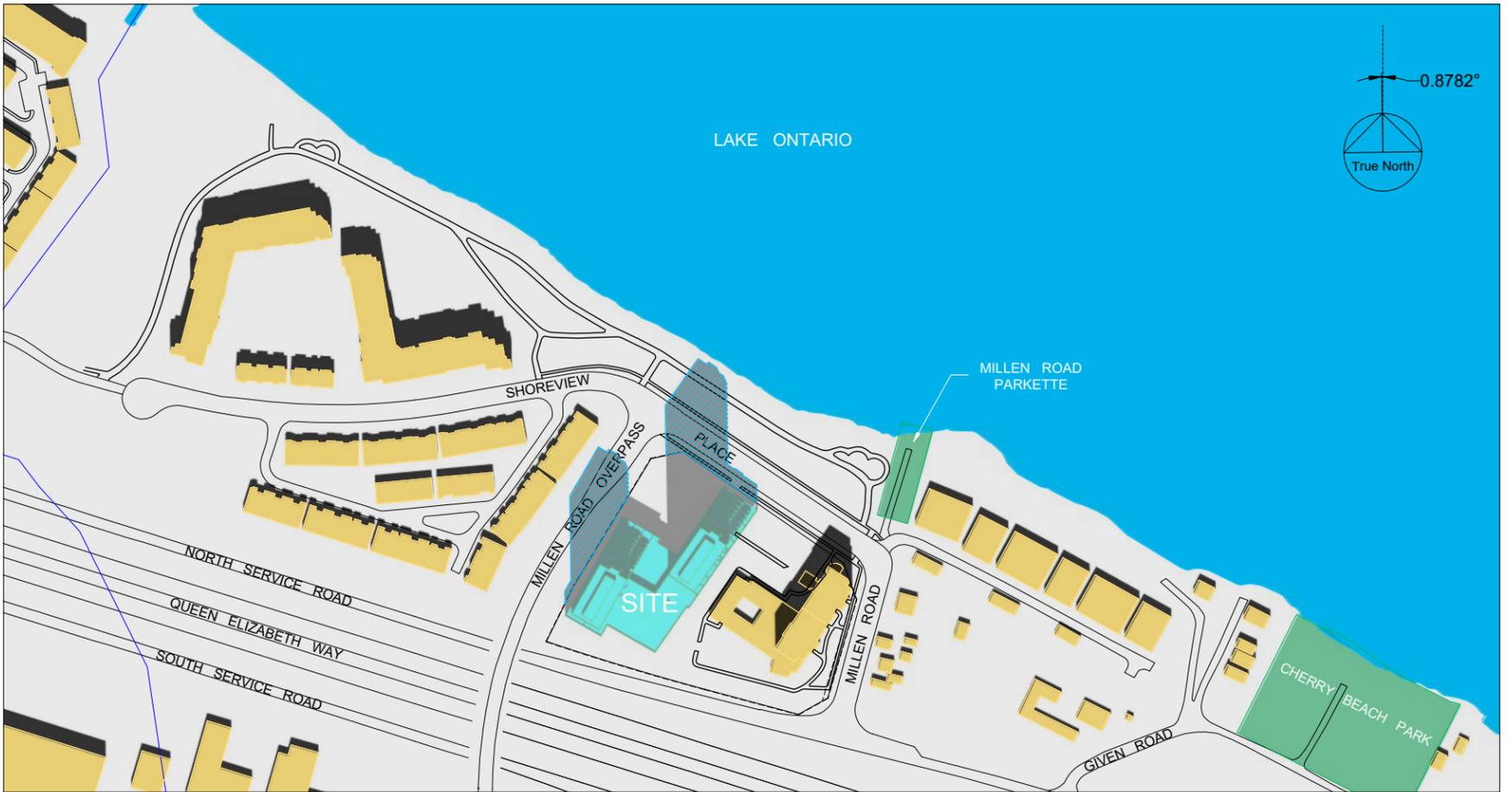


1:00 PM^{EDT}

MAR 21

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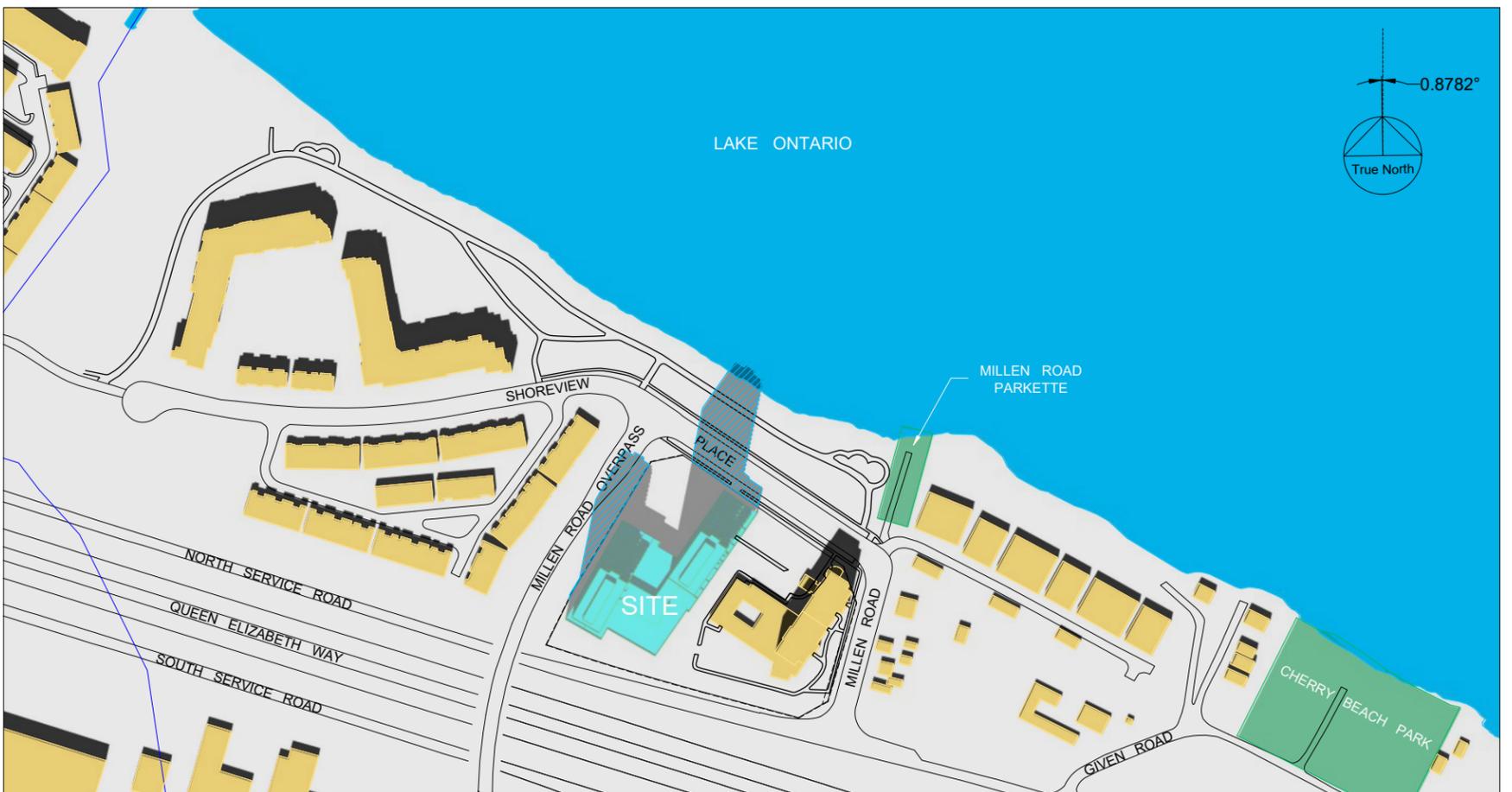
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	Checked by:	RB	Date:	JUN 5/23	



1:26 PM^{EDT}



- EXISTING SHADOW
- PROPOSED SHADOW
- INCREMENTAL GROUND LEVEL SHADOW
(BEYOND PROPERTY LINE, ON ASSUMED FLAT GROUND PLANE)

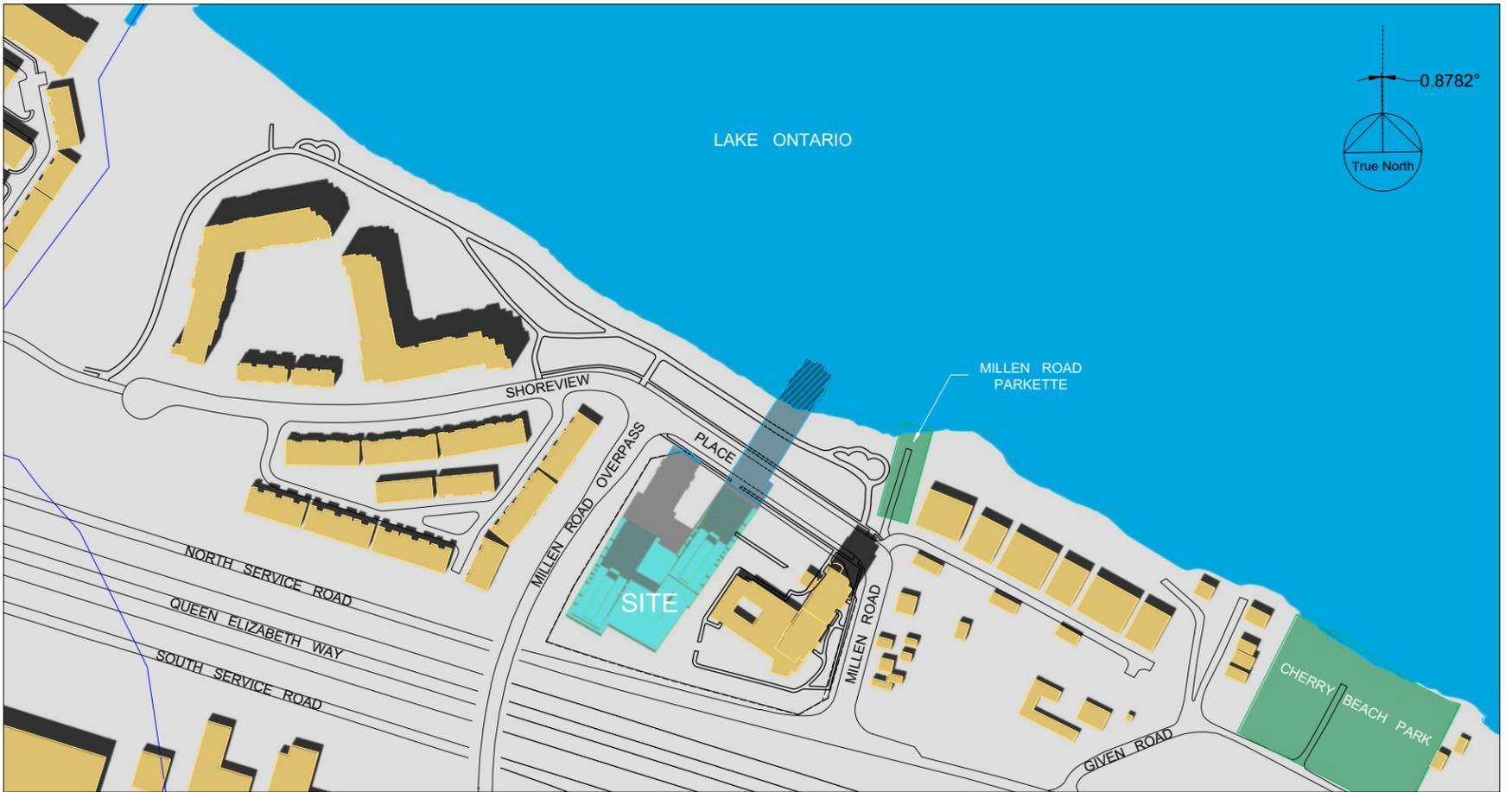


2:00 PM^{EDT}

MAR 21

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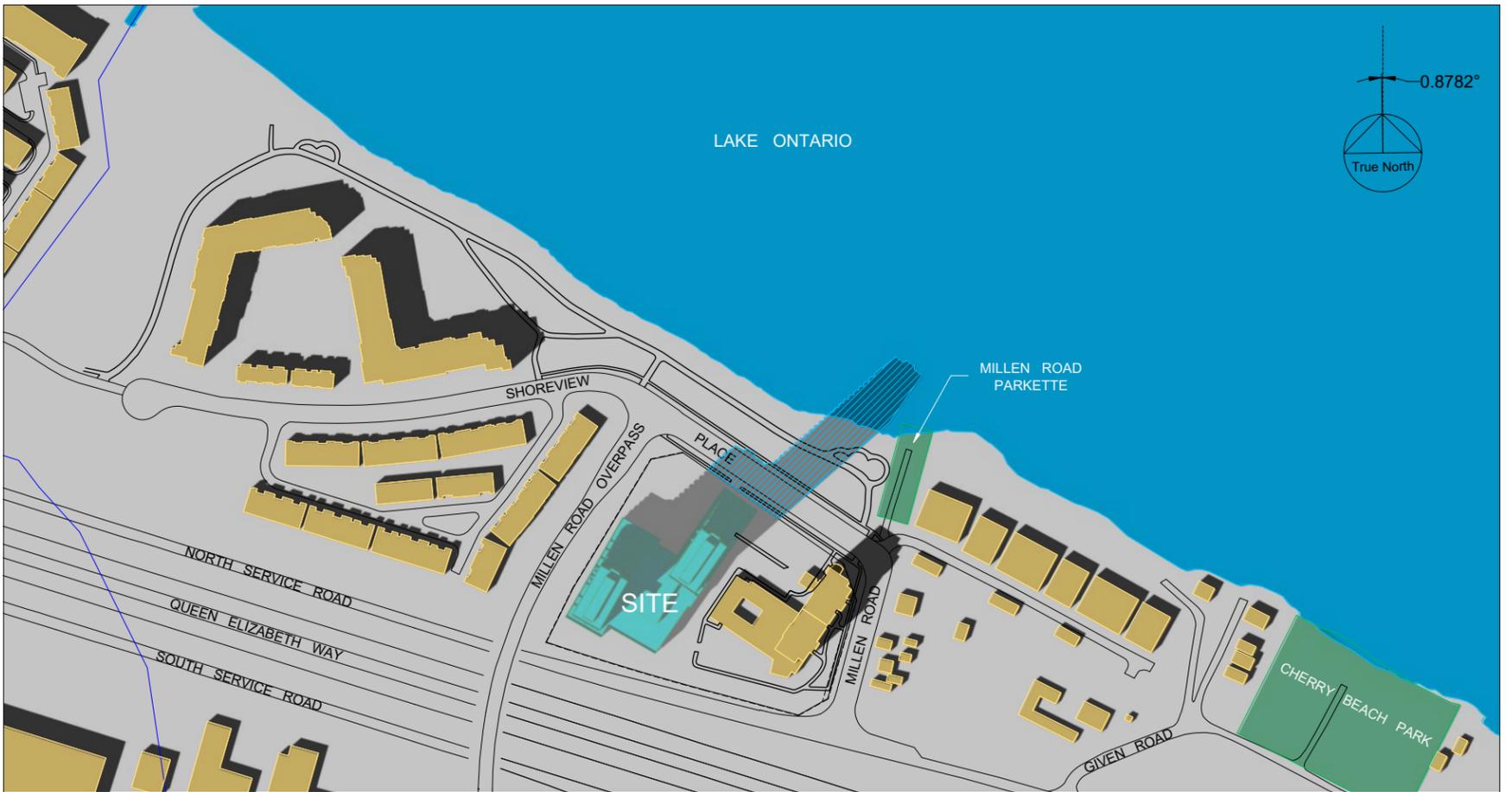
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Calculated by:	RB	Project:	S23017	SS-4
Drawn by:	RB	Scale:	1:4000	
Checked by:	RB	Date:	JUN 5/23	



3:00 PM^{EDT}



-  EXISTING SHADOW
-  PROPOSED SHADOW
-  INCREMENTAL GROUND LEVEL SHADOW
(BEYOND PROPERTY LINE, ON ASSUMED FLAT GROUND PLANE)



4:00 PM^{EDT}

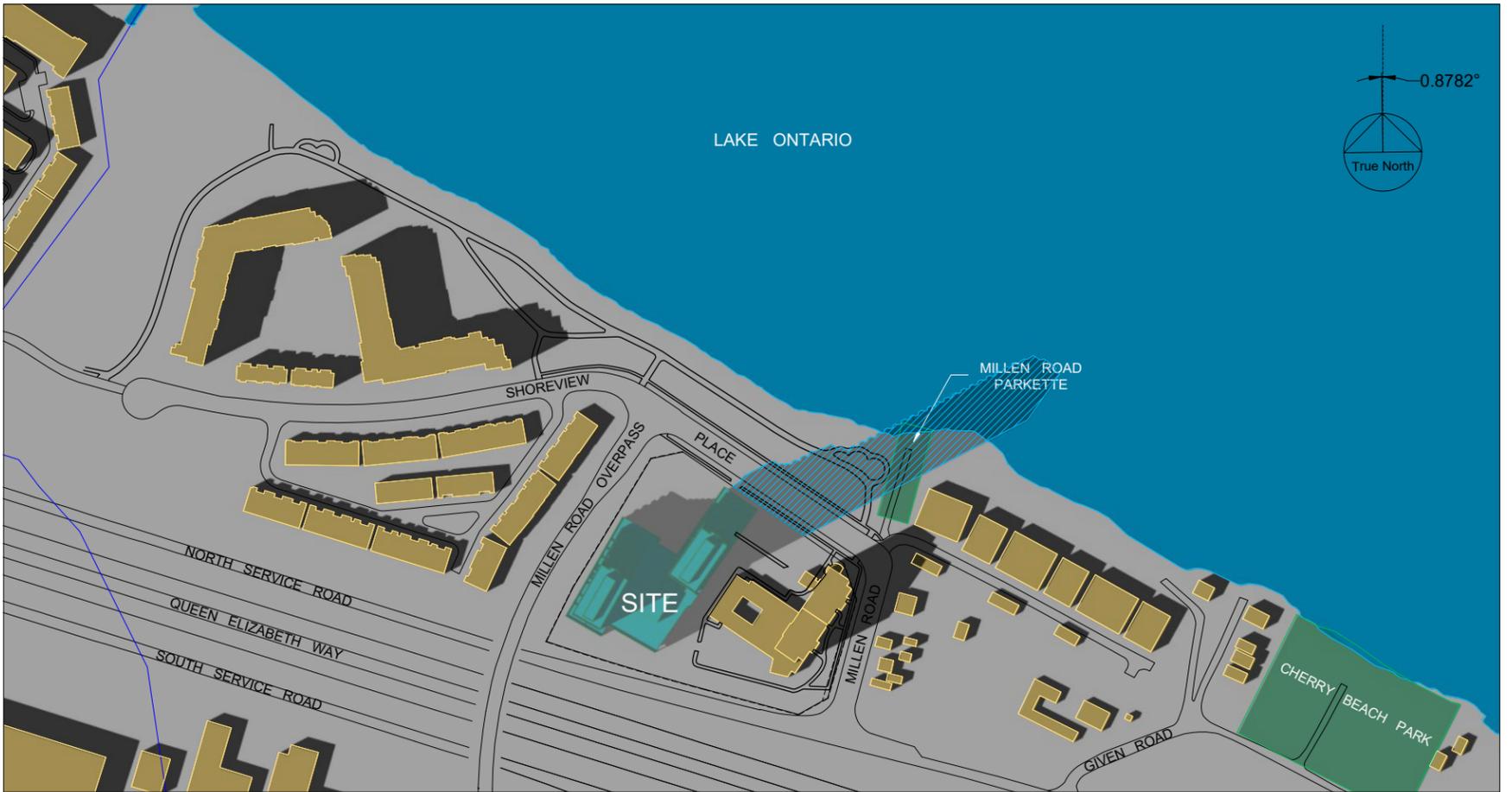
MAR 21

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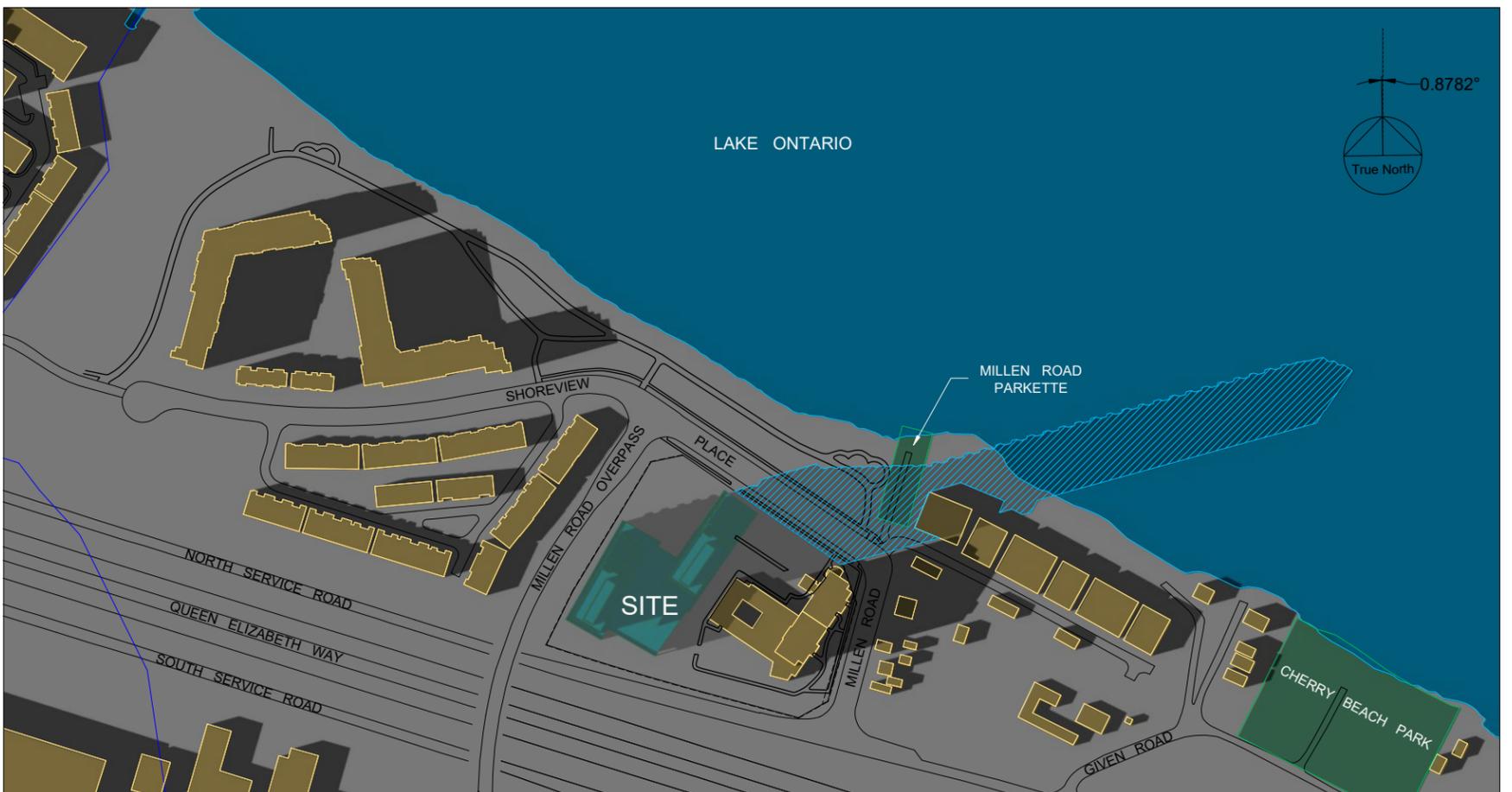
SS-5



5:00 PM^{EDT}



- EXISTING SHADOW
- PROPOSED SHADOW
- INCREMENTAL GROUND LEVEL SHADOW
(BEYOND PROPERTY LINE, ON ASSUMED FLAT GROUND PLANE)



6:00 PM^{EDT}

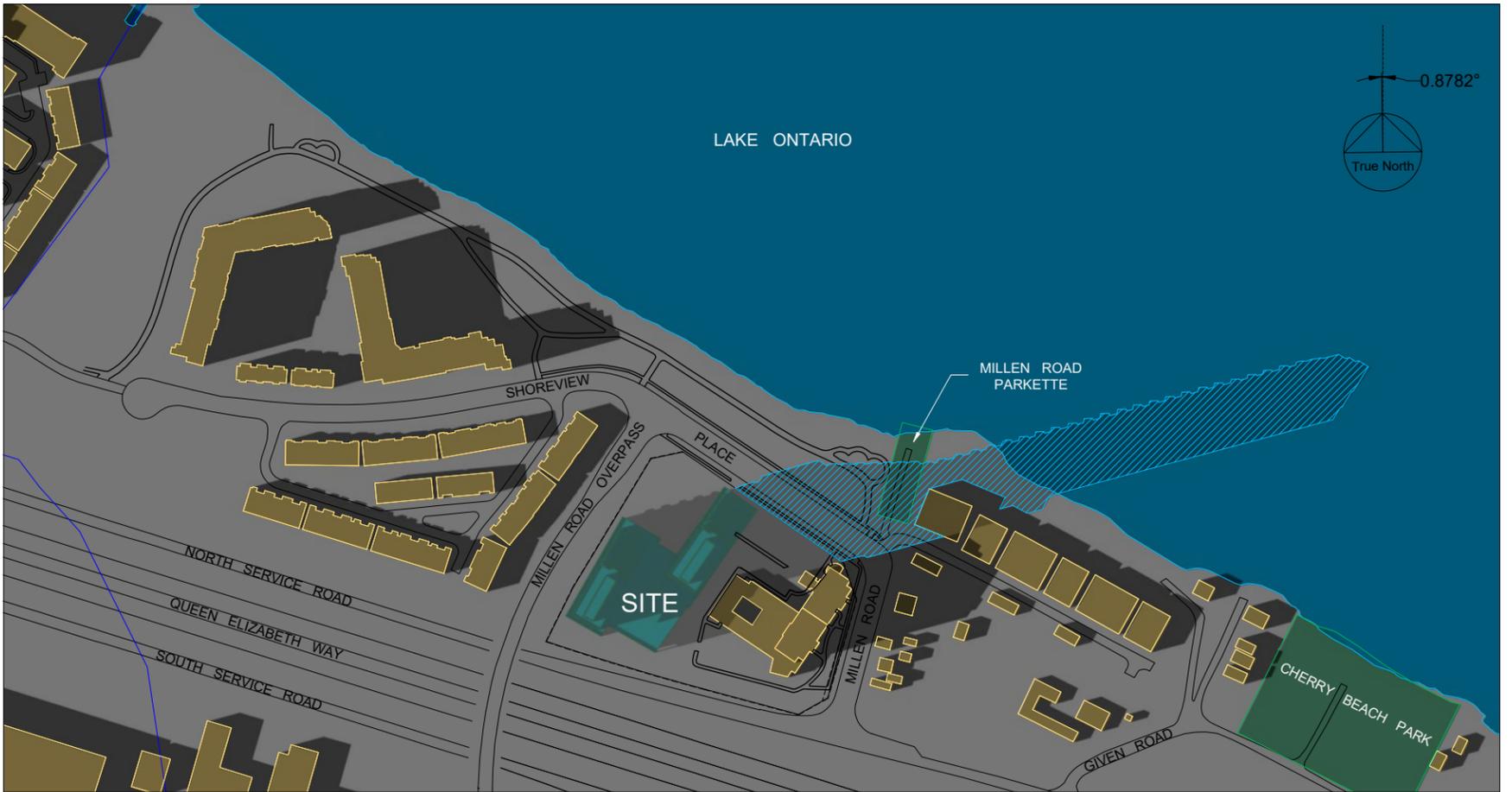
MAR 21

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Checked by:	RB	Date:	JUN 5/23	

SS-6



6:02 PM^{EDT}



-  EXISTING SHADOW
-  PROPOSED SHADOW
-  INCREMENTAL GROUND LEVEL SHADOW
(BEYOND PROPERTY LINE, ON ASSUMED FLAT GROUND PLANE)

MAR 21

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