

**86 THOMAS STREET
SHADOW STUDY**

May 20, 2021

Project Number 18-12

Written Analysis:

- ◆ Site latitude and longitude used:
 - ◆ Latitude: 43 degrees 35' 20" N
 - ◆ Longitude: 79 degrees 38' 40" W

From "Standards for Shadow Studies" City of Mississauga, June 2014.

- ◆ The astronomic north was determined from the Plan of Topographic Survey of Part of Lot 4, Concession 5, West of Hurontario Street, City of Mississauga, Regional Municipality of Peel by Donald H. Brown Surveying Ltd. Ontario Land Surveyor, completed on June 24, 2010 and revised on November 14, 2017.
- ◆ The origin/source of base plan is Site Plan, drawing A1.0 by WSA dated April 23, 2021.
- ◆ All criteria described on the "Standards for Shadow Studies" City of Mississauga, June 2014, have been satisfied on this project, except as noted below:

Ensure adequate sunlight on the following:

3.1 Residential Private Outdoor Amenity Spaces (Rear Yards)

The area of shadow on the existing residential private rear yards A and B located west of the proposed development on June 21 from 7:07 to 10:20 EDT are shown on diagrams RYT to RY4.

No Impact Zone Area A = 131.87 m². 108.71 m² (82.44 %) receives up to 3 hours and 13 minutes of shadow.

No Impact Zone Area B = 274.27 m² receives up to 3 hours and 13 minutes of shadow.

3.2 Communal Outdoor Amenity Areas

There are no communal outdoor amenity areas, such as children's play areas, tot lots or seniors outdoor amenity areas on this project or surrounding areas.

3.3 Public Realm

There is no incremental shade from the proposed development on the opposite boulevard of Thomas Street, including the full width of the sidewalk.

3.4 Turf and flower gardens in Public Parks

This development does not include a public park, nor there is one in the vicinity.

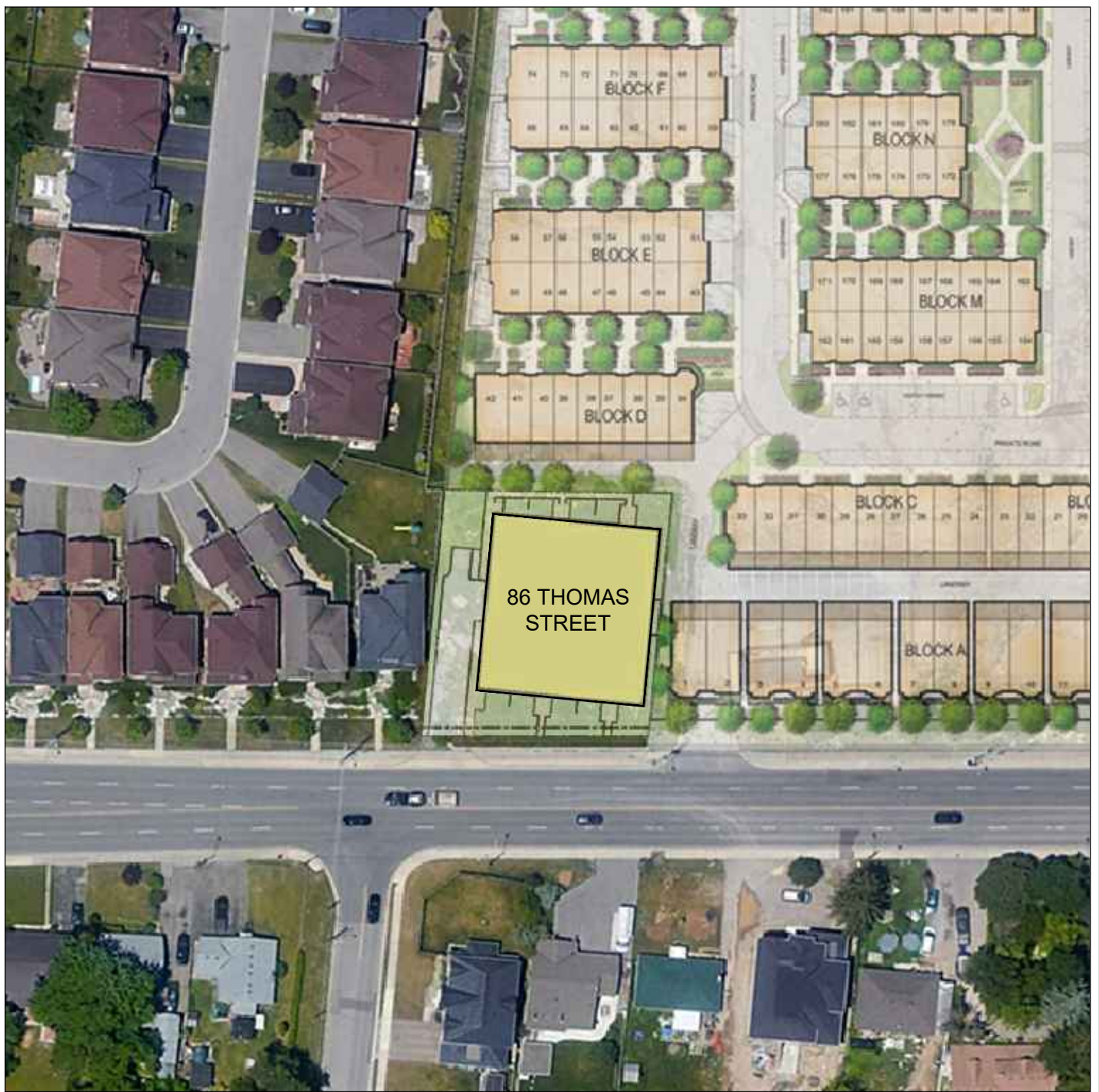
3.5 Building Faces to allow for the possibility of using solar energy (No Impact Zone: 3 m line of assessment in front, rear and exterior sides of the building)

The area of shadow on the existing semi-detached dwellings no impact zones C, D and E located east of the proposed development on September 21 from 11:12 to 17:48 are shown in diagrams ART to AR7.

No Impact Zone Area C = 142.72 m² receives up to 6 hours and 36 minutes of shadow.

No Impact Zone Area D = 84.55 m². 68.72 m² (81.28 %) receives up to 2 hours and 36 minutes of shadow.

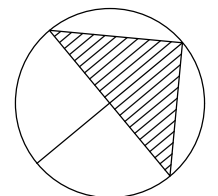
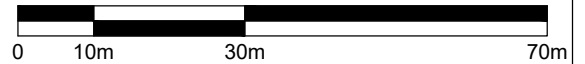
No Impact Zone Area E = 146.38 m². 13.88 m² (9.48 %) receives up to 36 minutes of shadow.

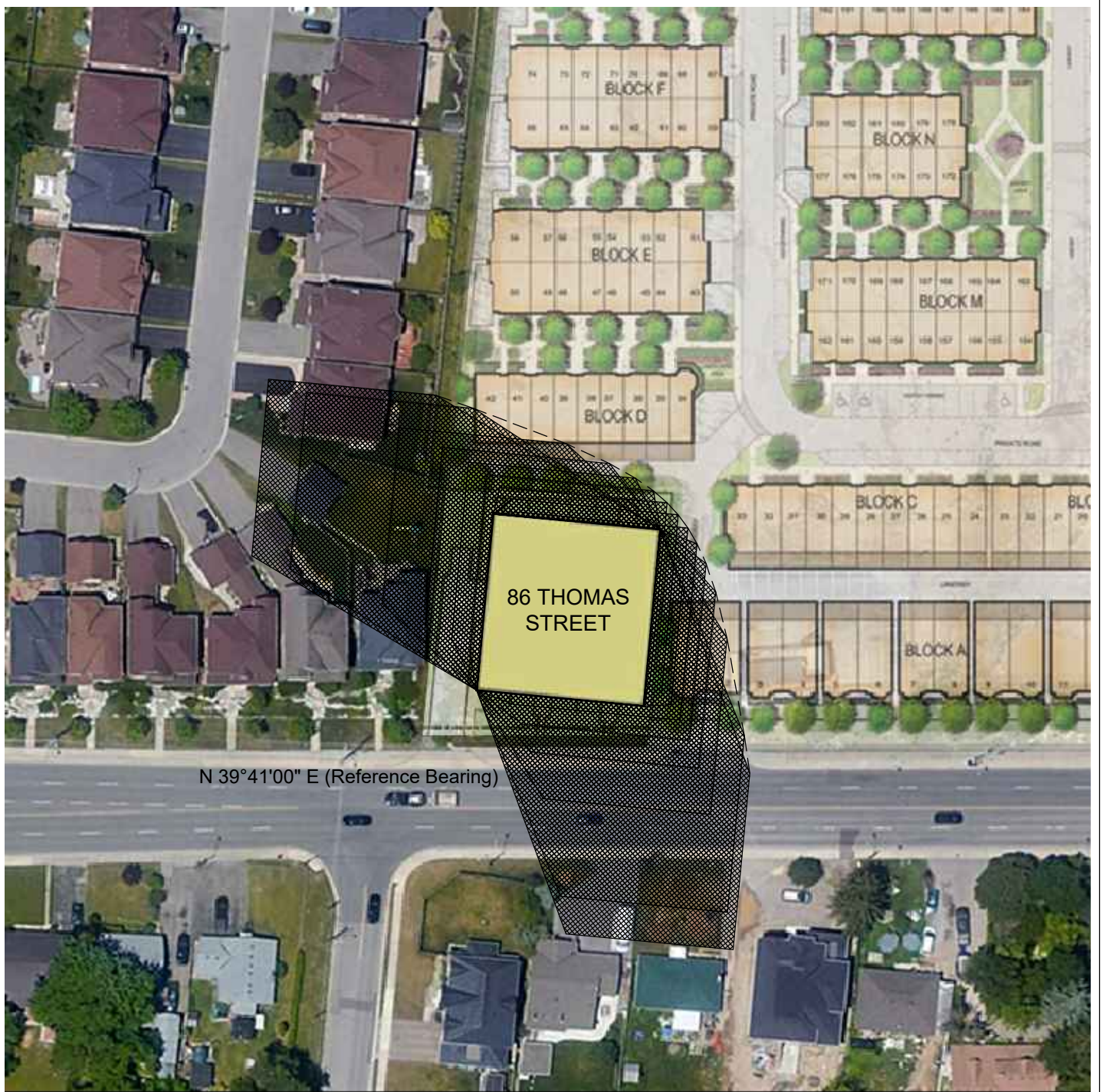


Shadow Study

86 Thomas Street, Mississauga, Ontario

Scale: 1:1000



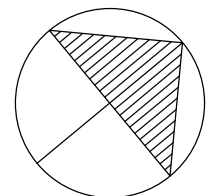
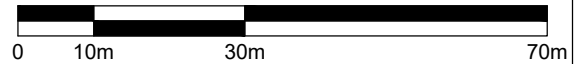


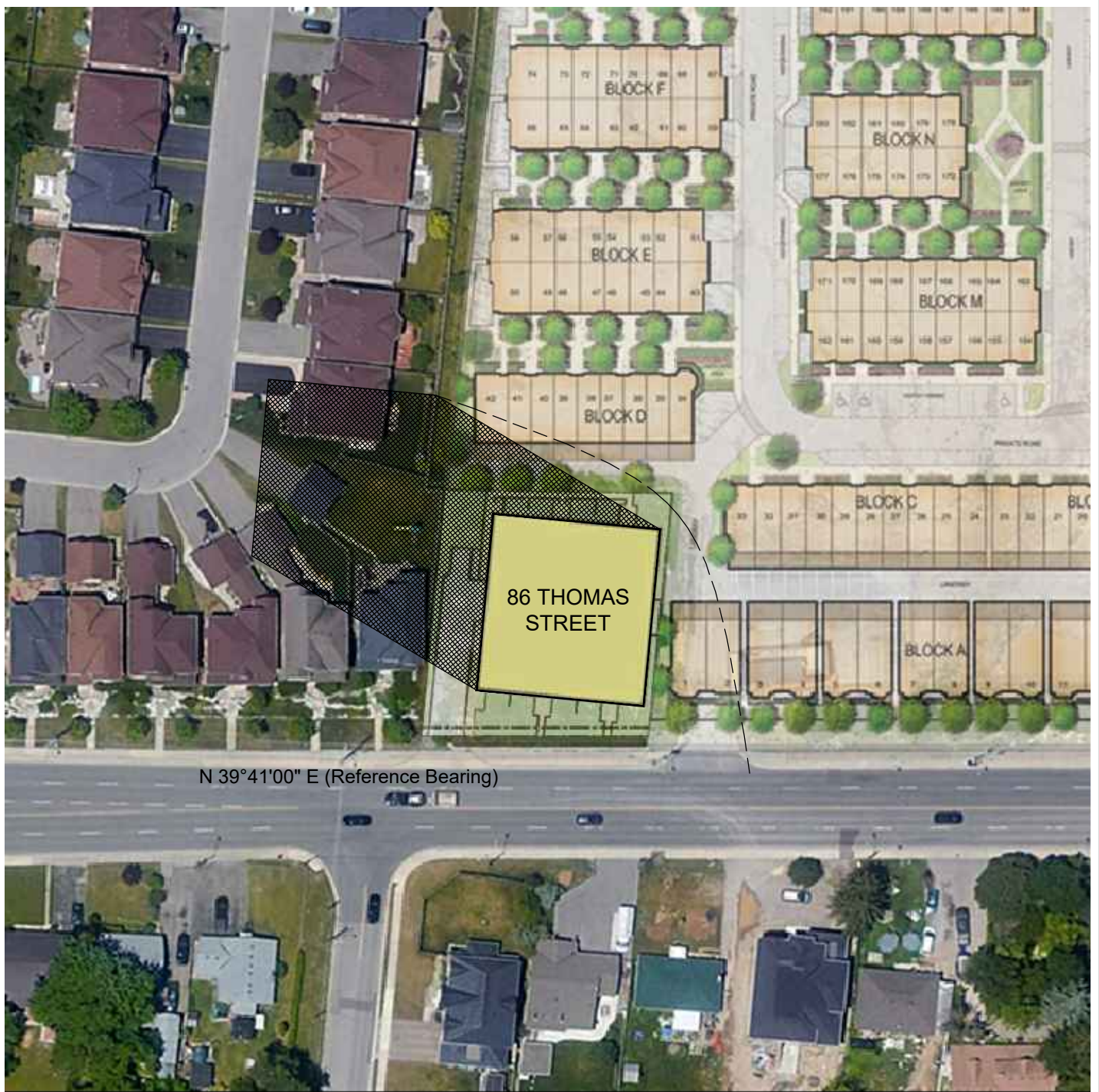
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 All hours

Scale: 1:1000



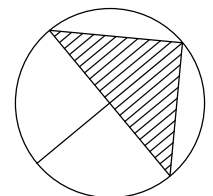
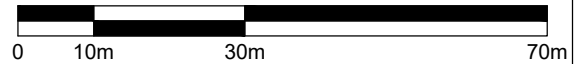


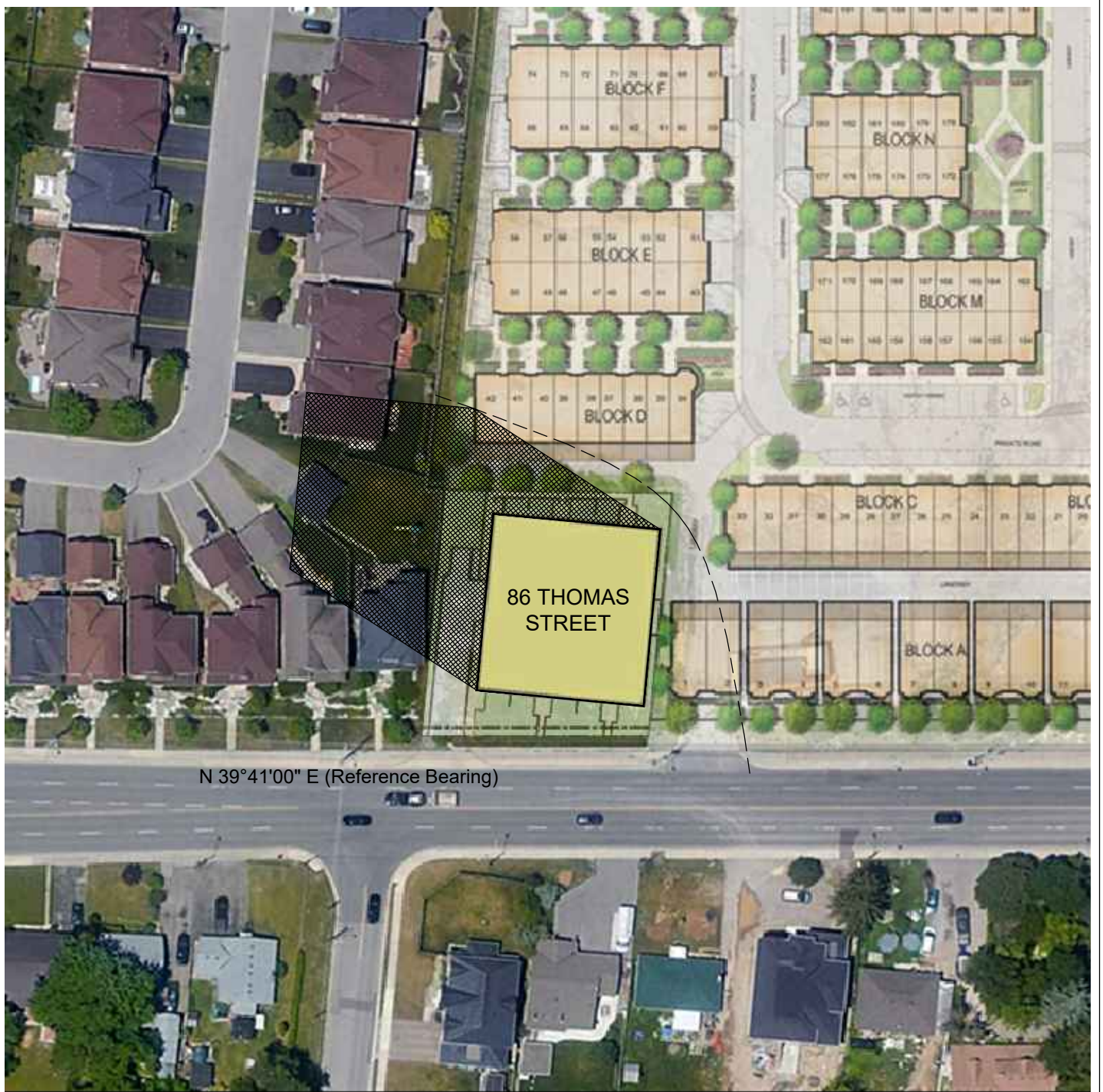
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 7:07 EDT
Rise + 1.5 hr.

Scale: 1:1000



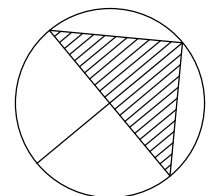
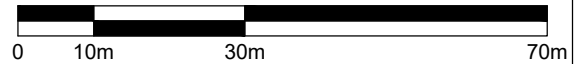


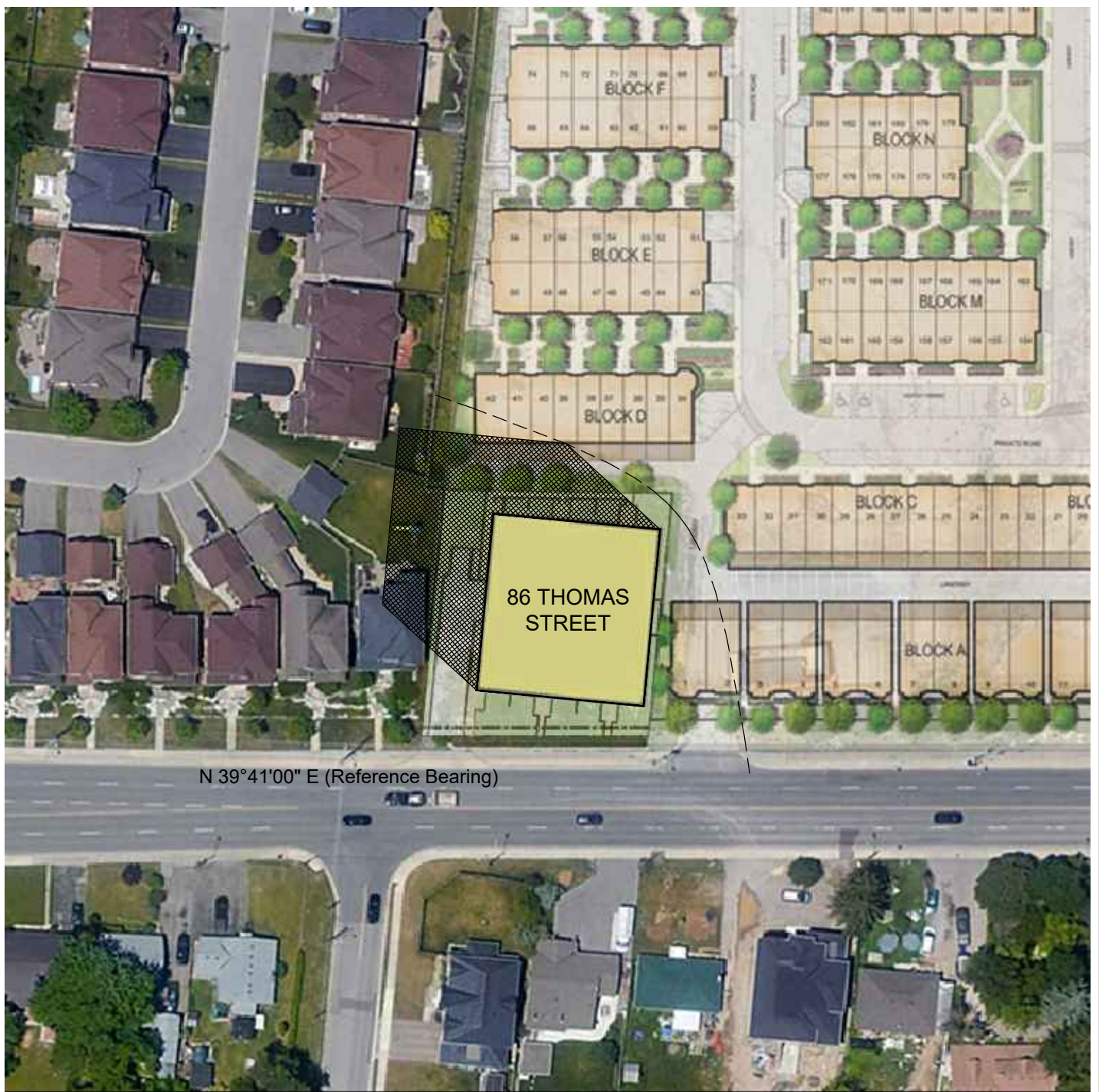
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 7:20 EDT
SN - 6 hr.

Scale: 1:1000



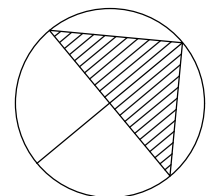
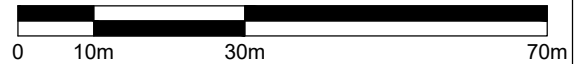


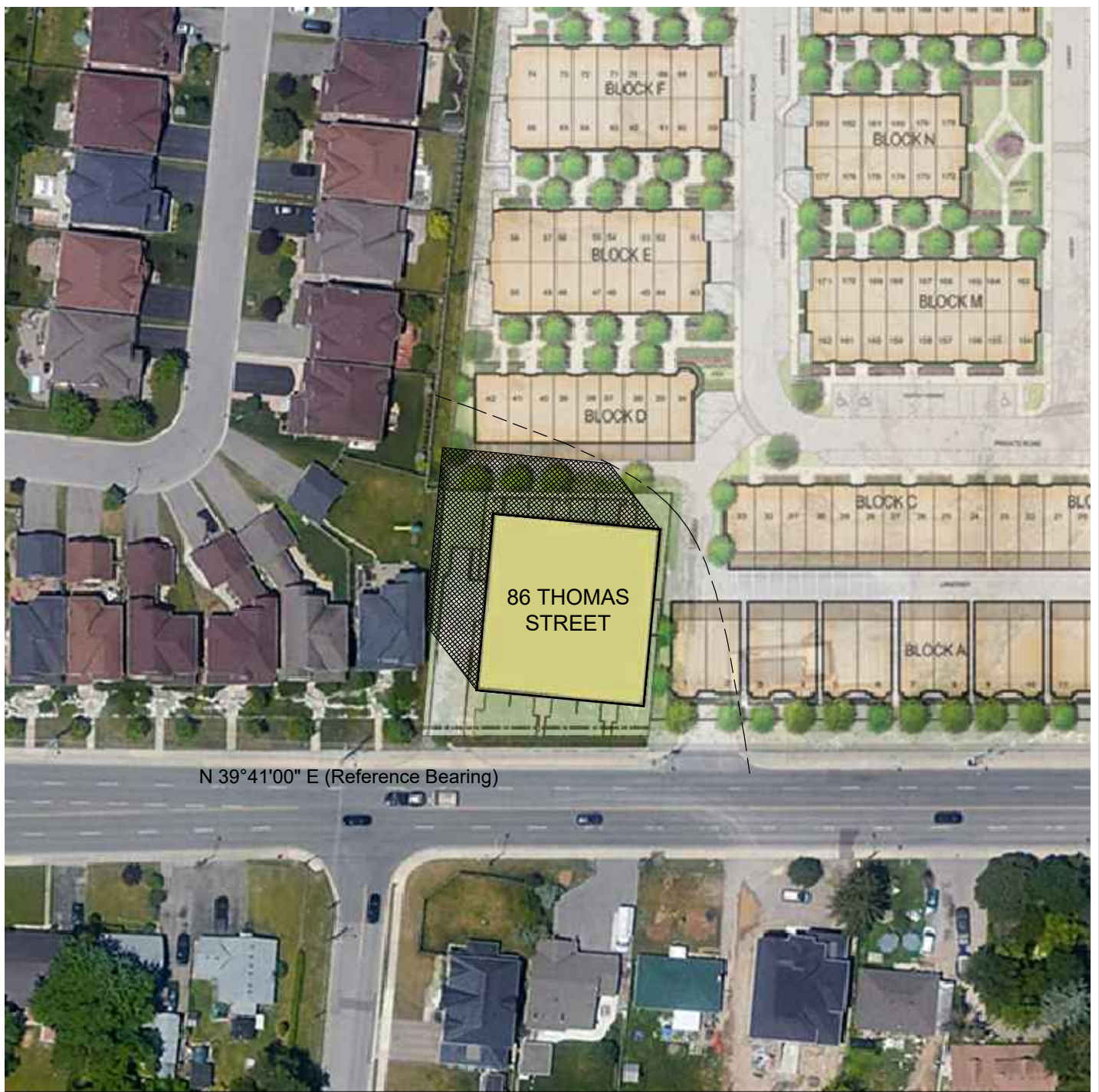
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 8:20 EDT
SN - 5 hr.

Scale: 1:1000



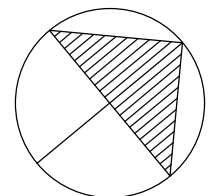
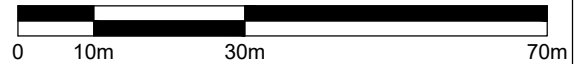


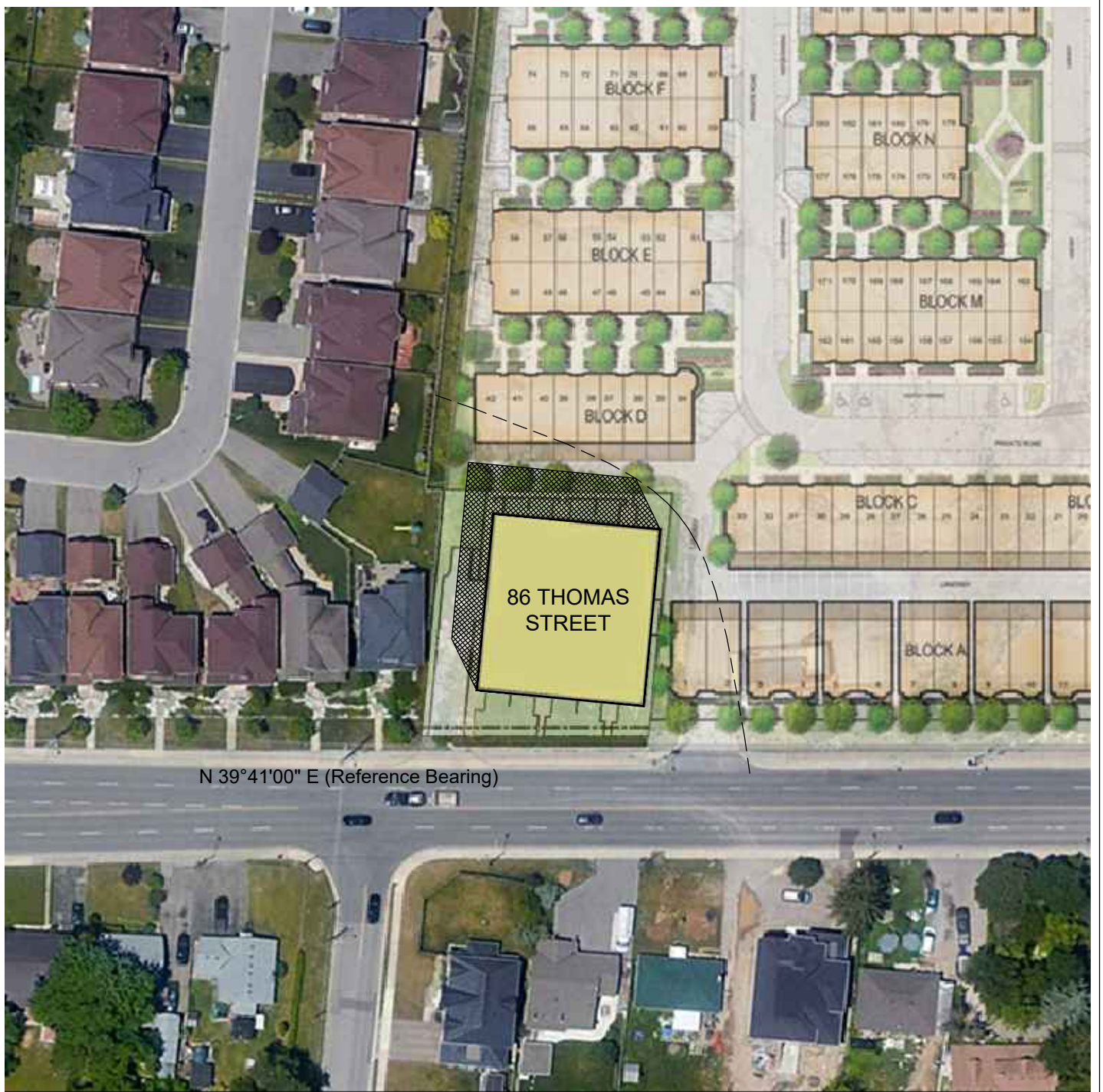
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 9:20 EDT
SN - 4 hr.

Scale: 1:1000



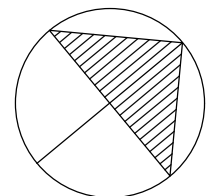
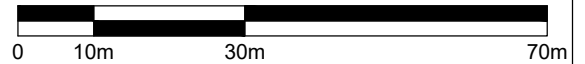


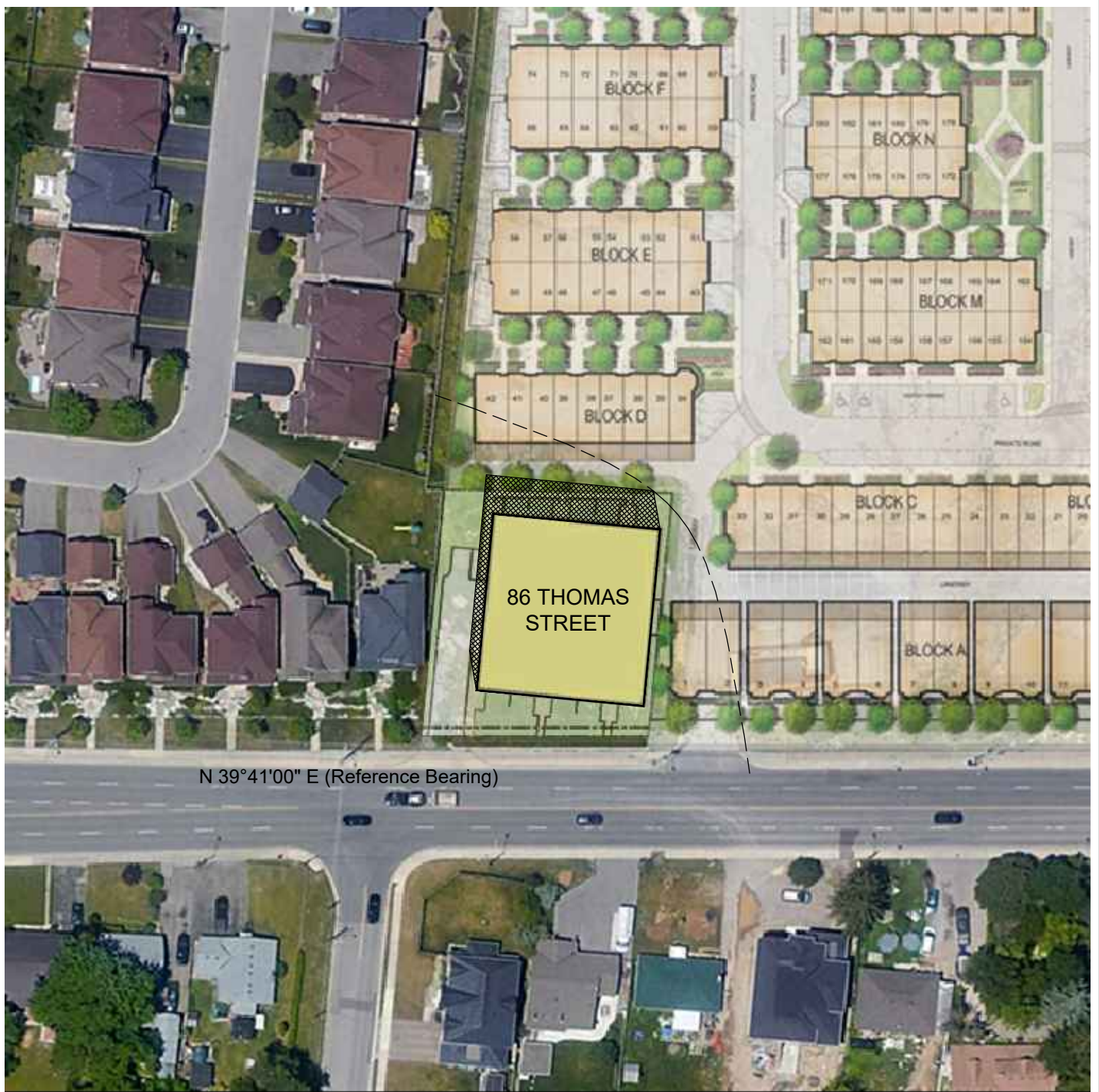
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 10:20 EDT
 SN - 3 hr.

Scale: 1:1000



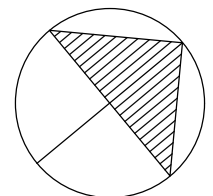
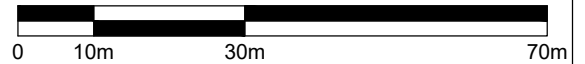


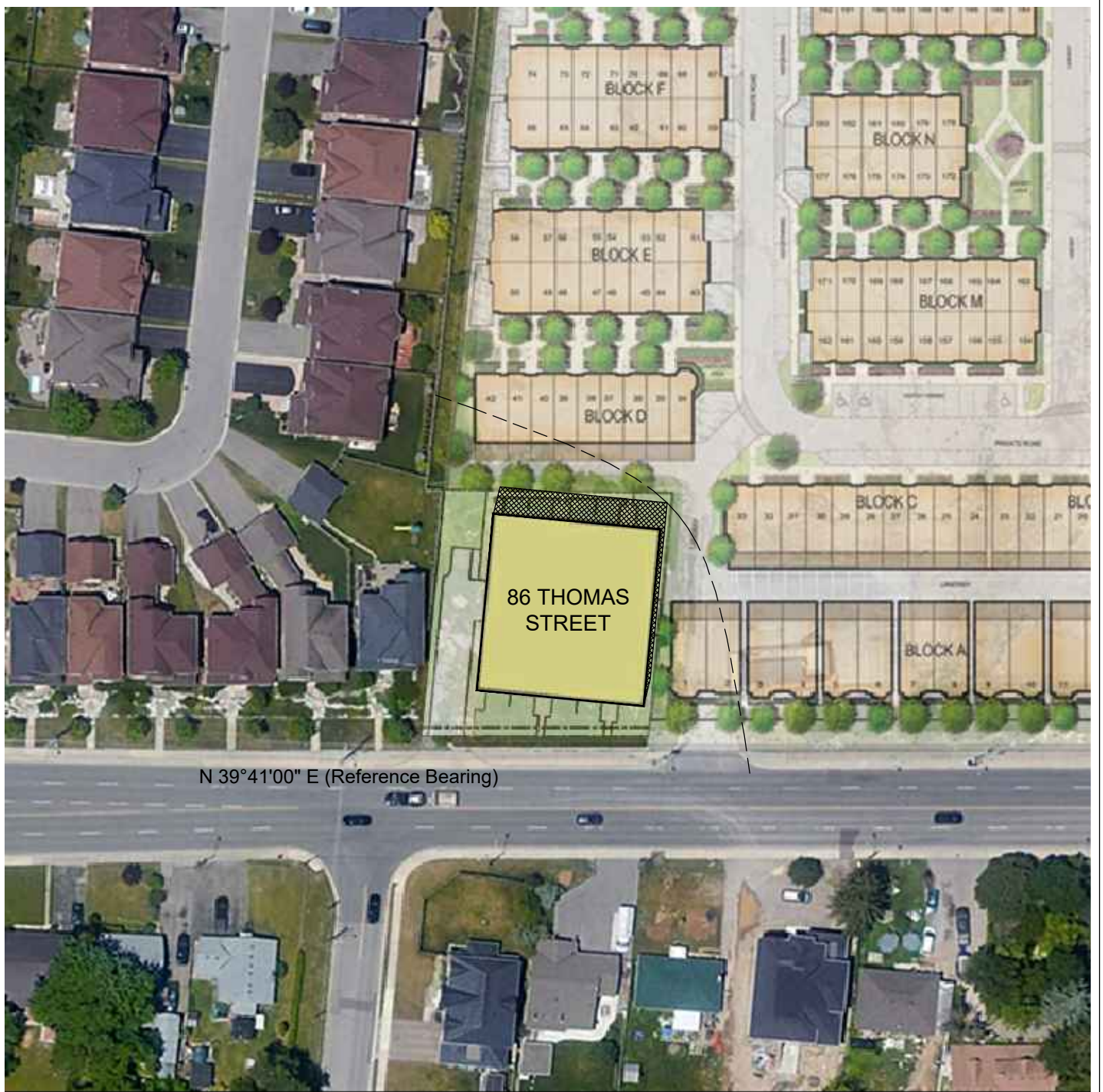
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 11:20 EDT
SN - 2 hr.

Scale: 1:1000



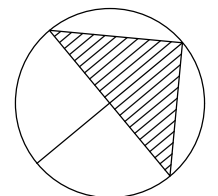
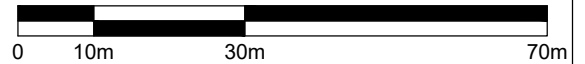


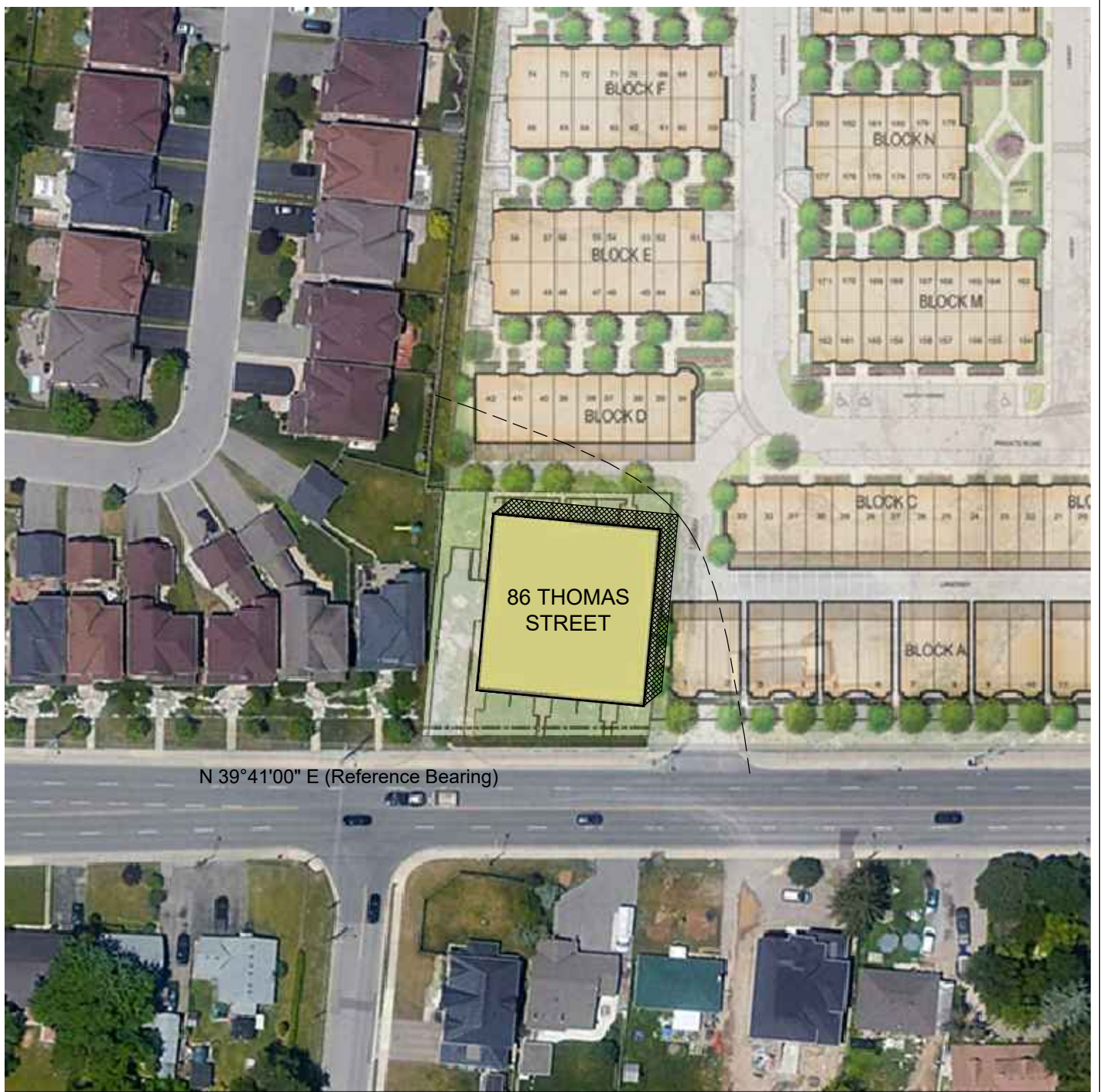
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 12:20 EDT
SN - 1 hr.

Scale: 1:1000



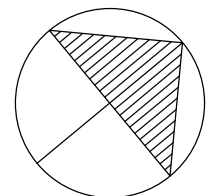
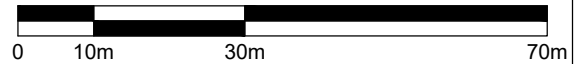


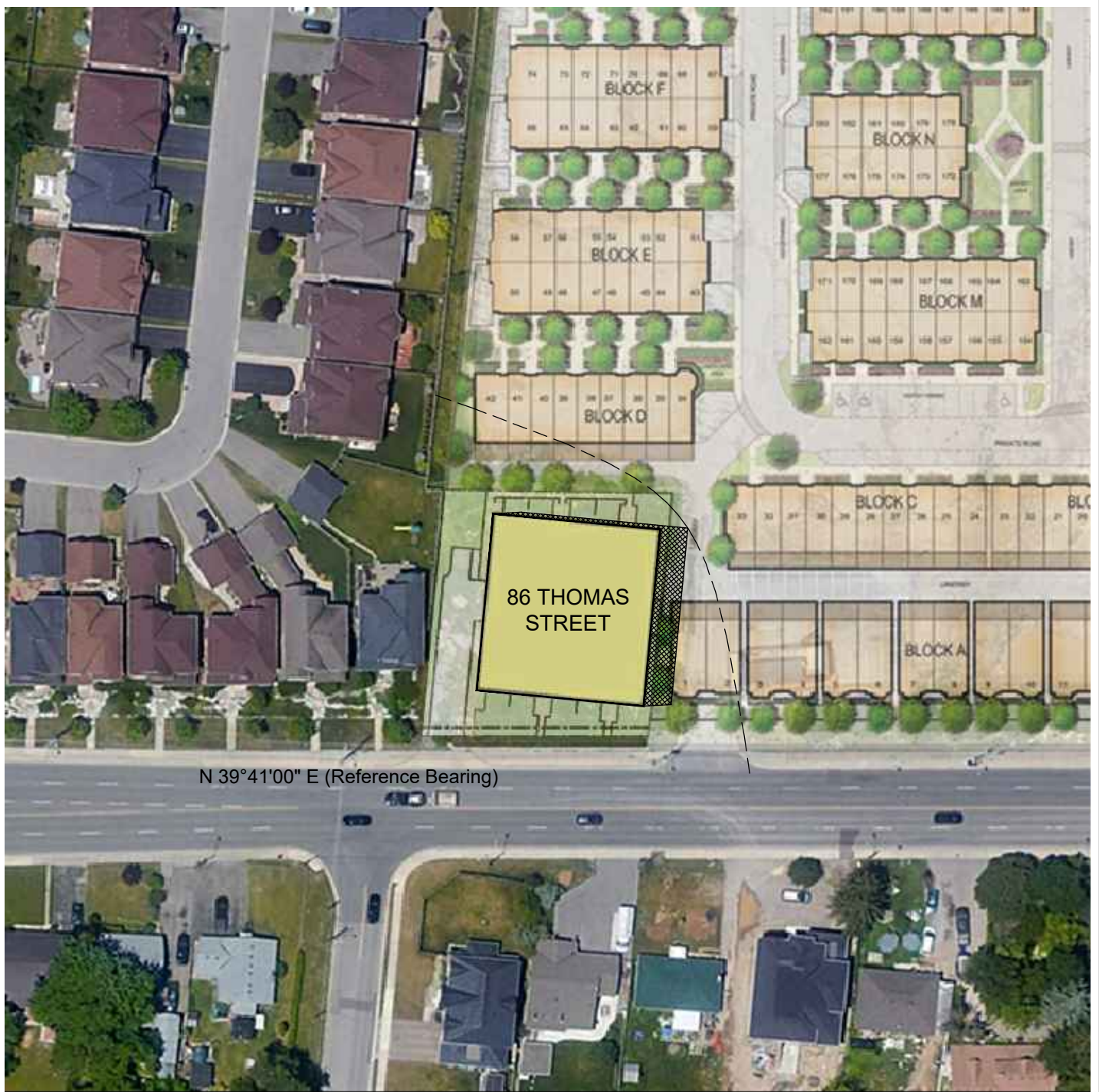
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 13:20 EDT
Solar Noon (SN)

Scale: 1:1000



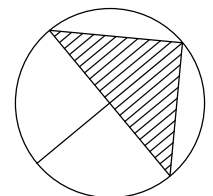
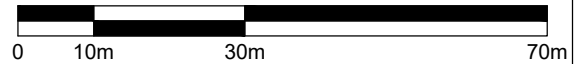


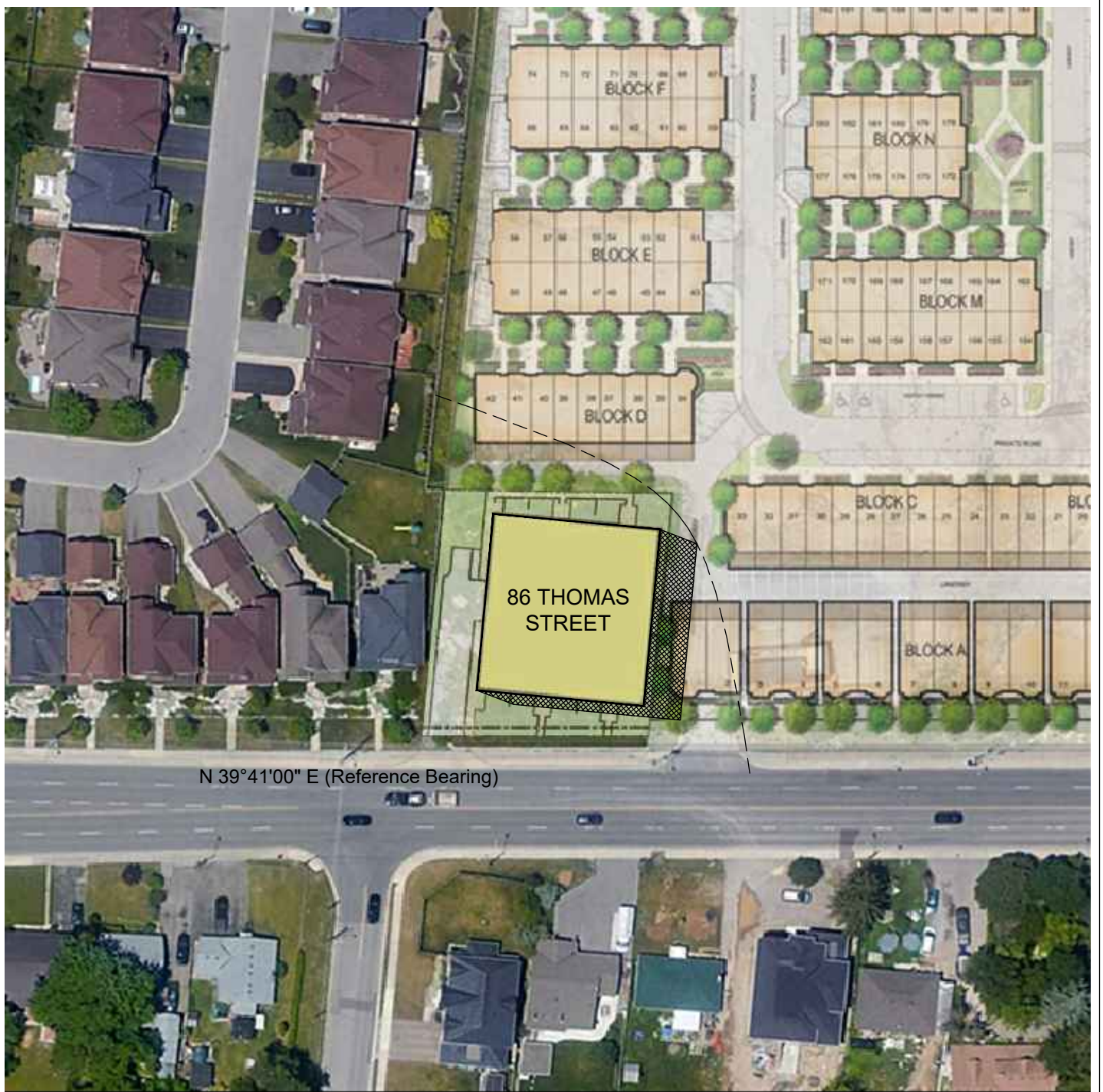
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 14:20 EDT
SN + 1 hr.

Scale: 1:1000



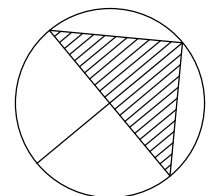
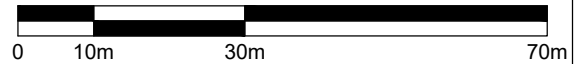


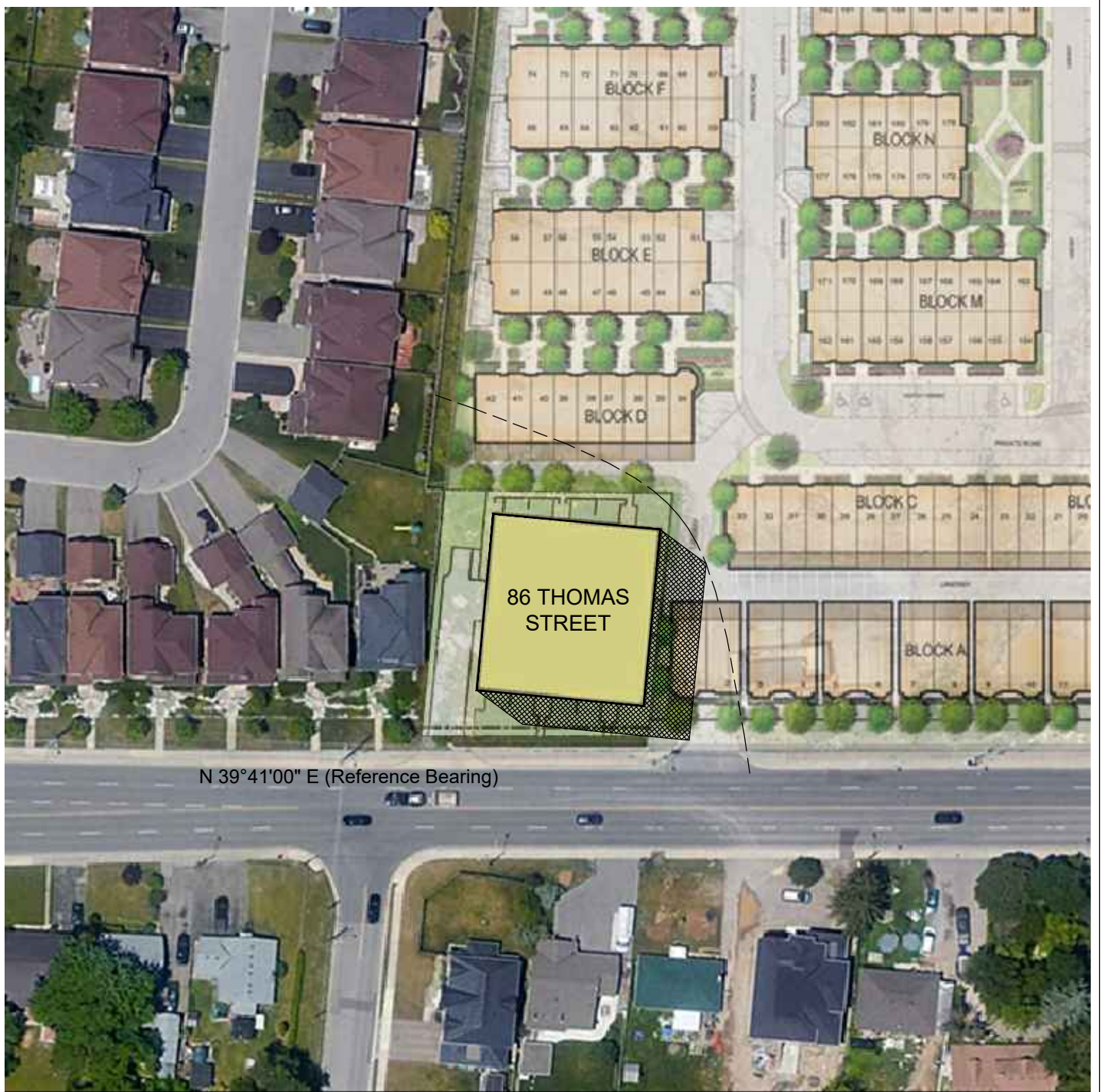
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 15:20 EDT
SN + 2 hr.

Scale: 1:1000



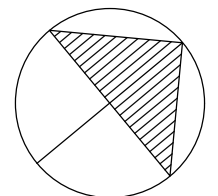
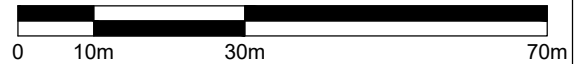


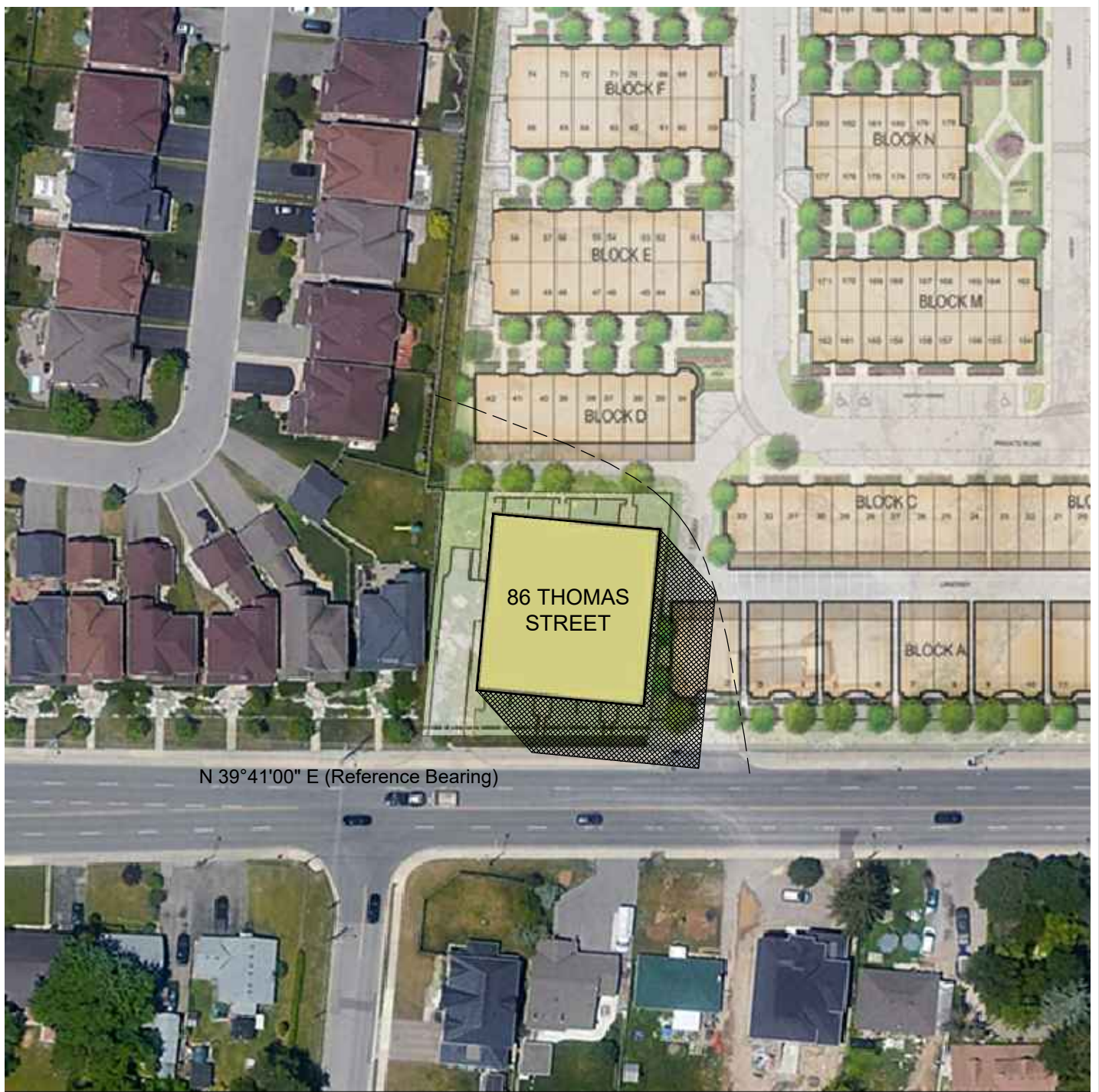
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 16:20 EDT
SN + 3 hr.

Scale: 1:1000



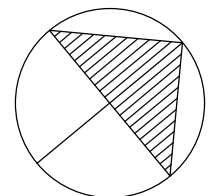
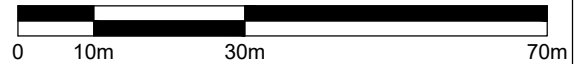


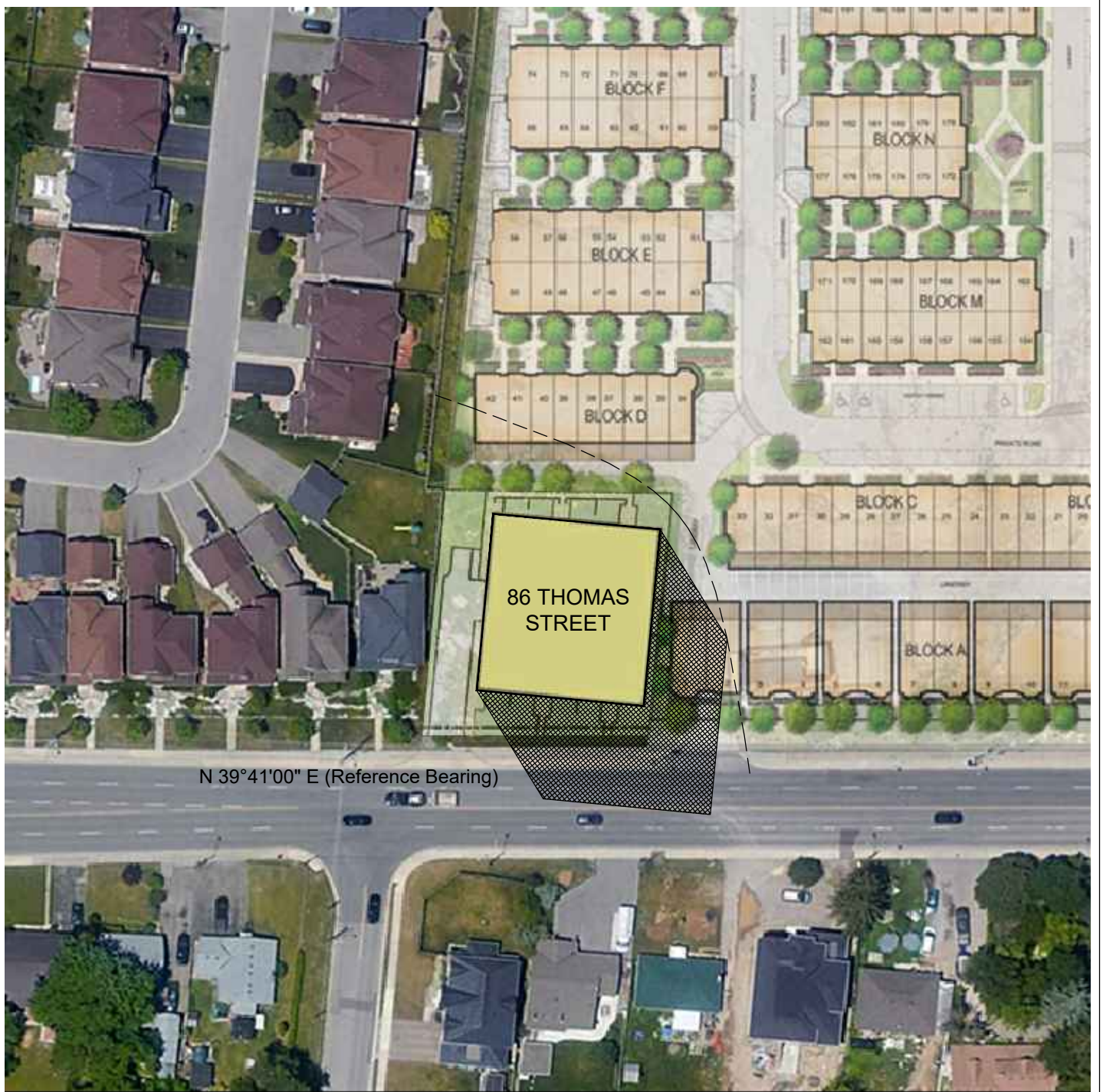
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 17:20 EDT
SN + 4 hr.

Scale: 1:1000





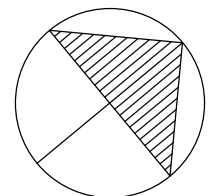
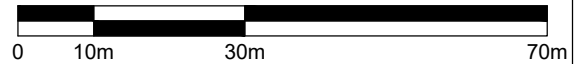
N 39°41'00" E (Reference Bearing)

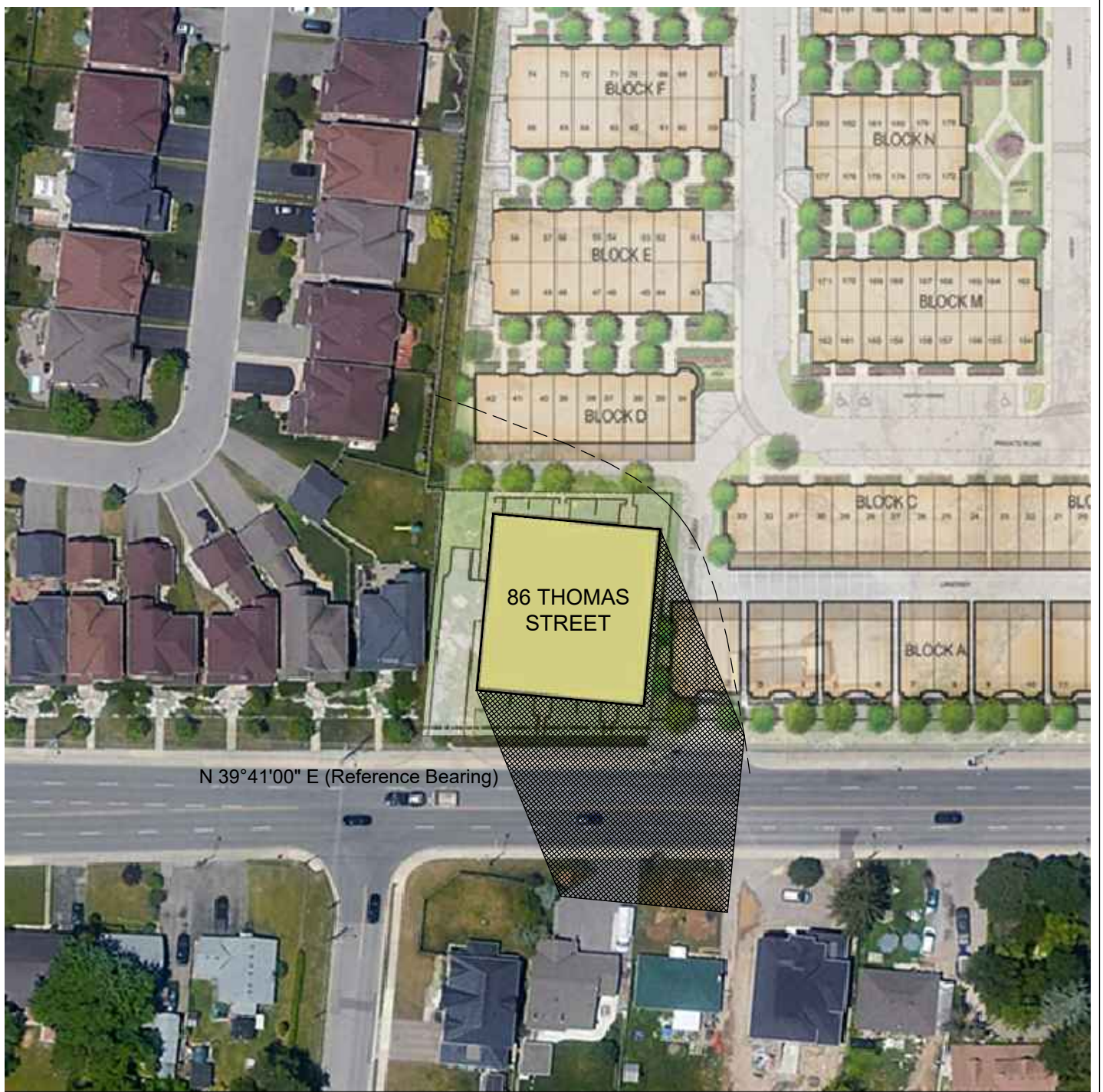
86 THOMAS STREET

Shadow diagram

June 21 18:20 EDT
SN + 5 hr.

Scale: 1:1000



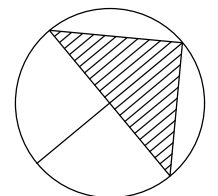
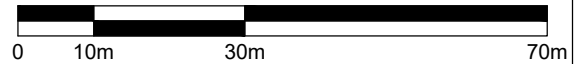


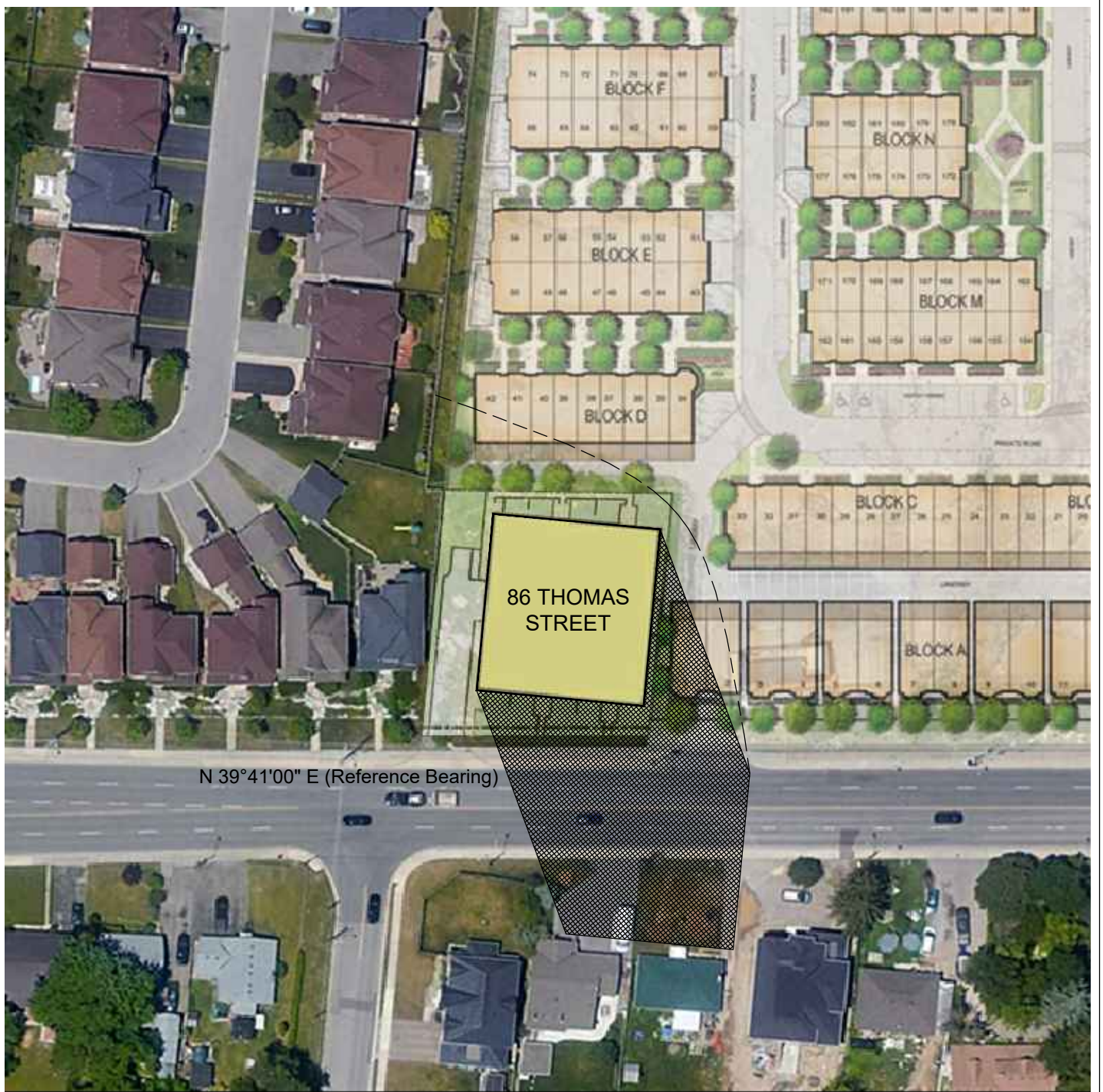
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 19:20 EDT
 SN + 6 hr.

Scale: 1:1000



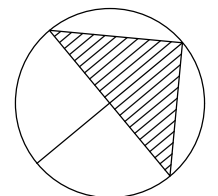
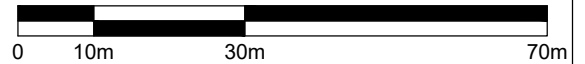


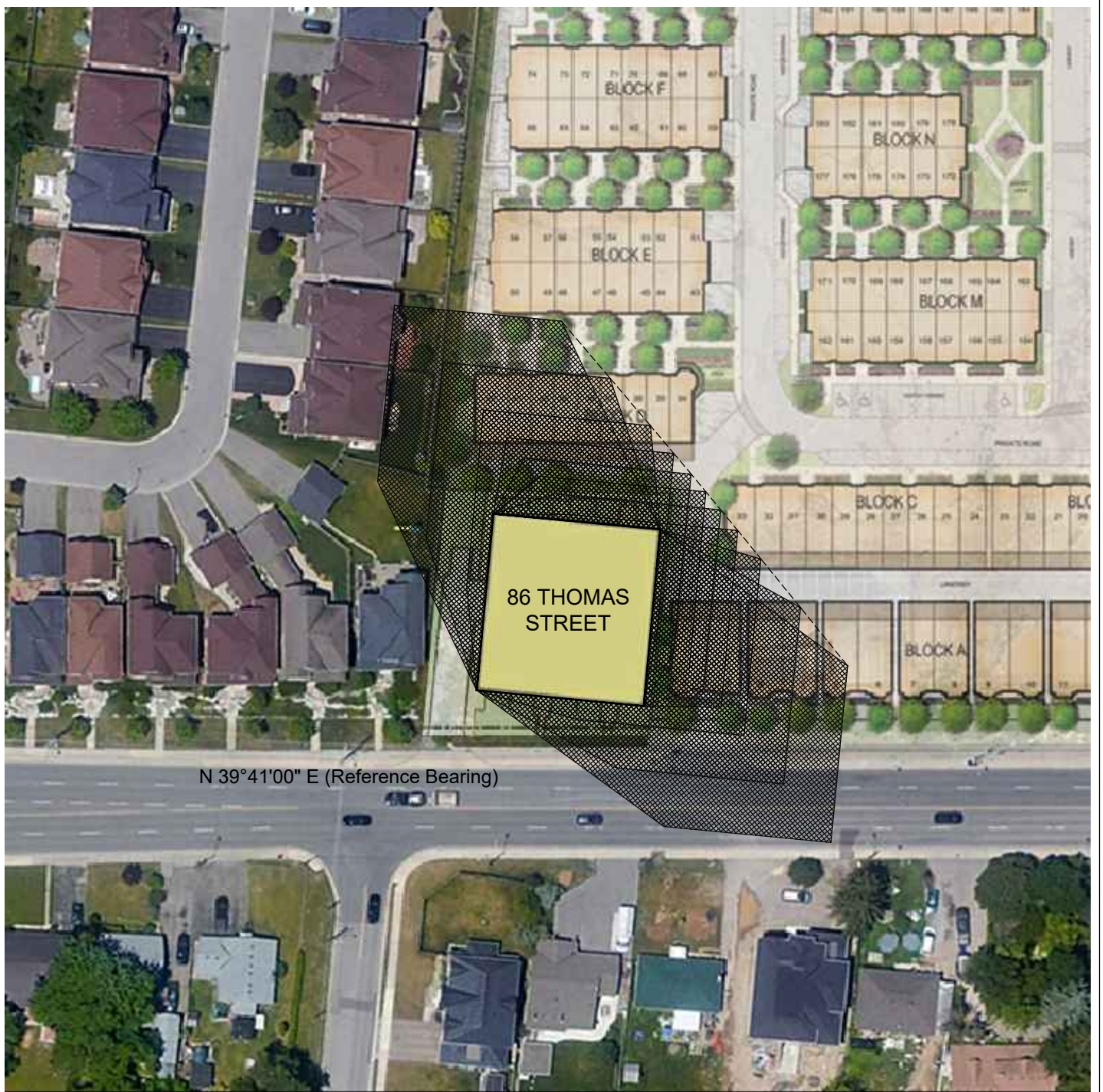
N 39°41'00" E (Reference Bearing)

Shadow diagram

June 21 19:33 EDT
Set - 1.5 hr.

Scale: 1:1000



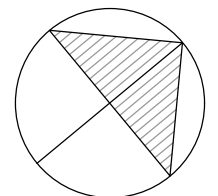
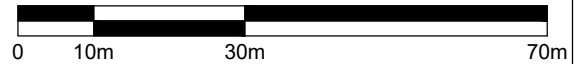


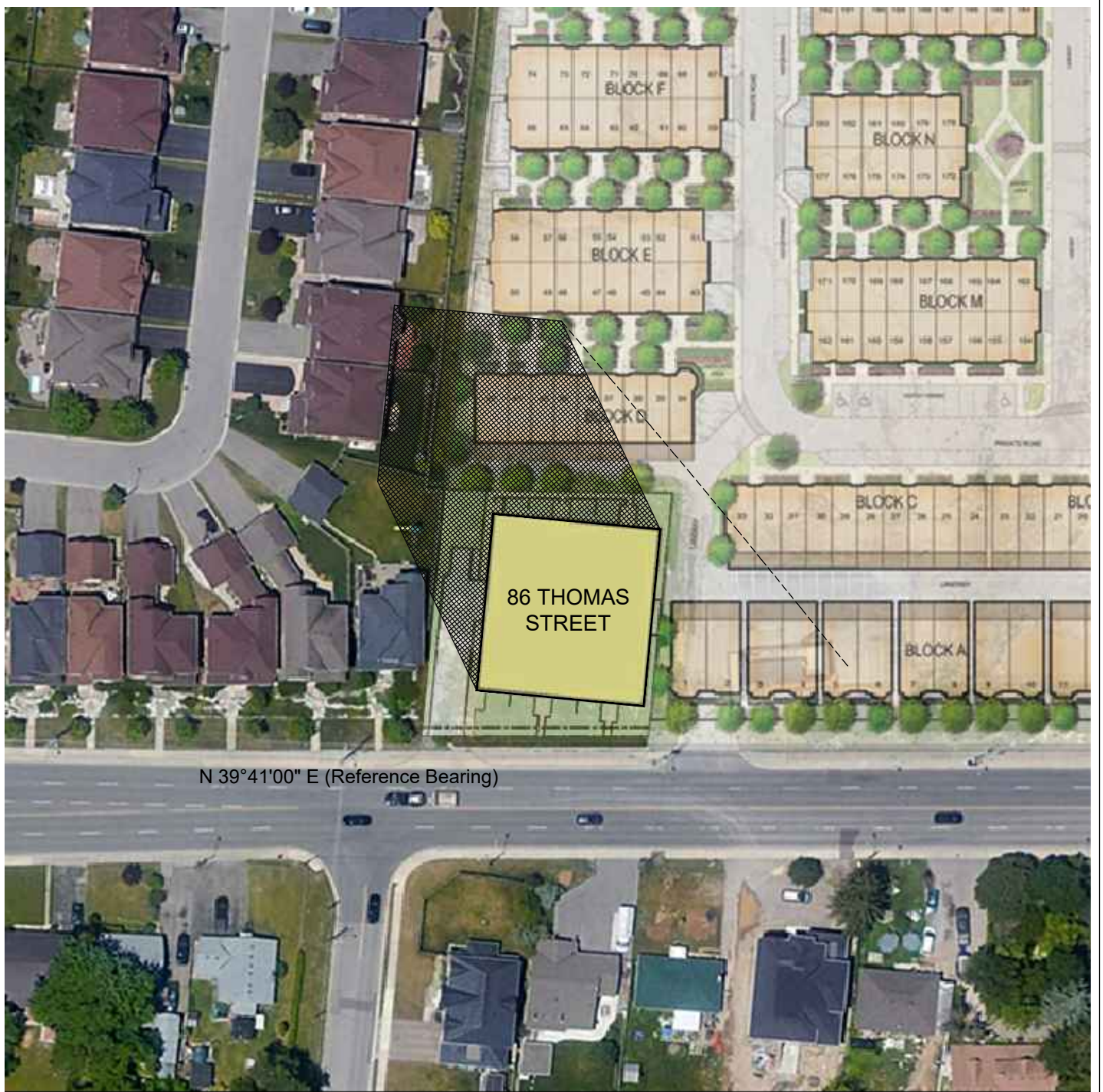
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 All hours

Scale: 1:1000



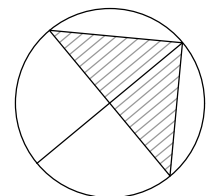
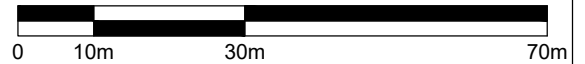


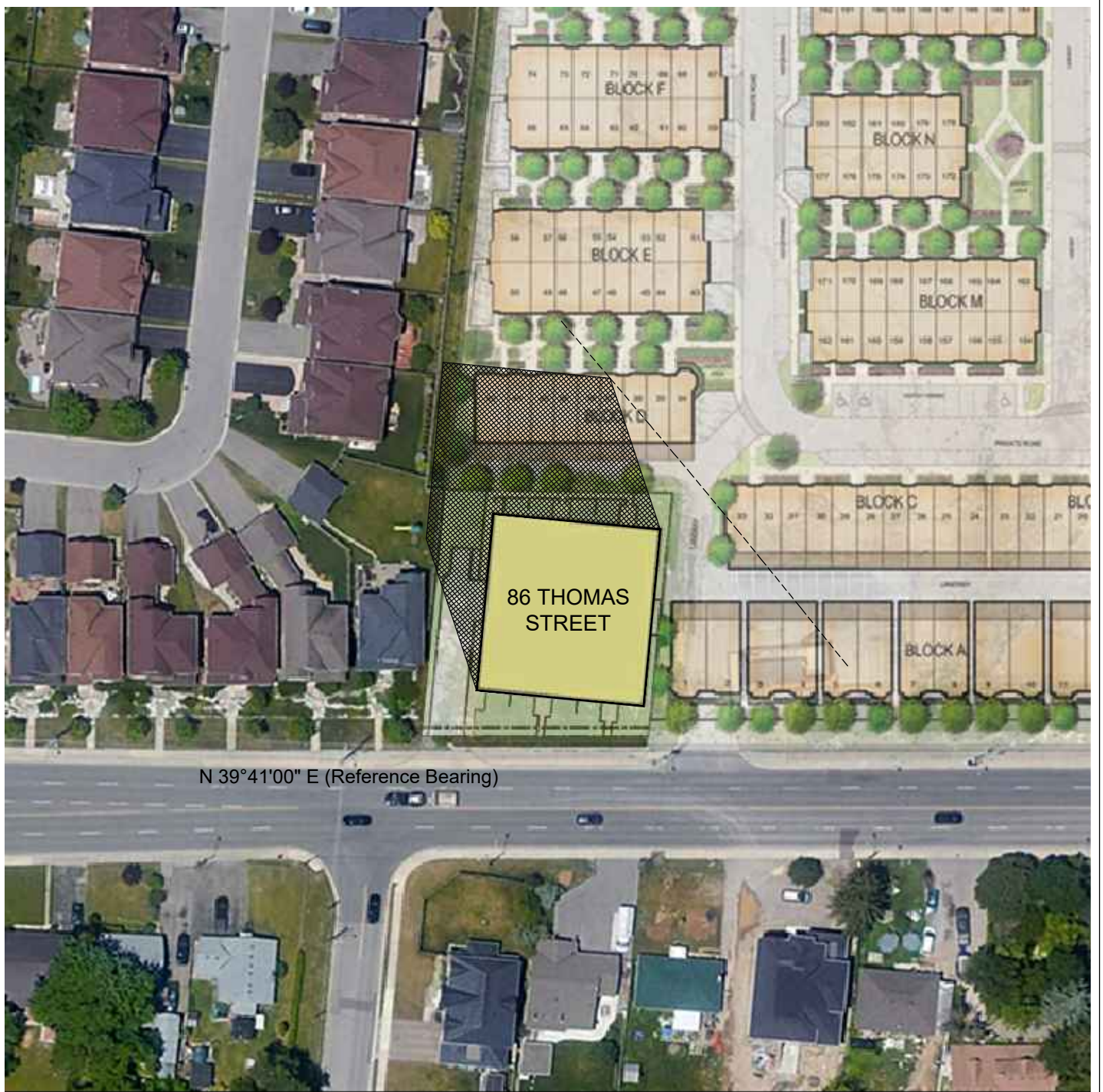
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 8:35 EDT
Rise + 1.5 hr.

Scale: 1:1000



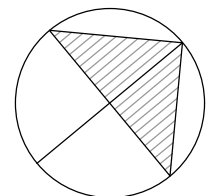
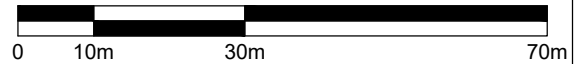


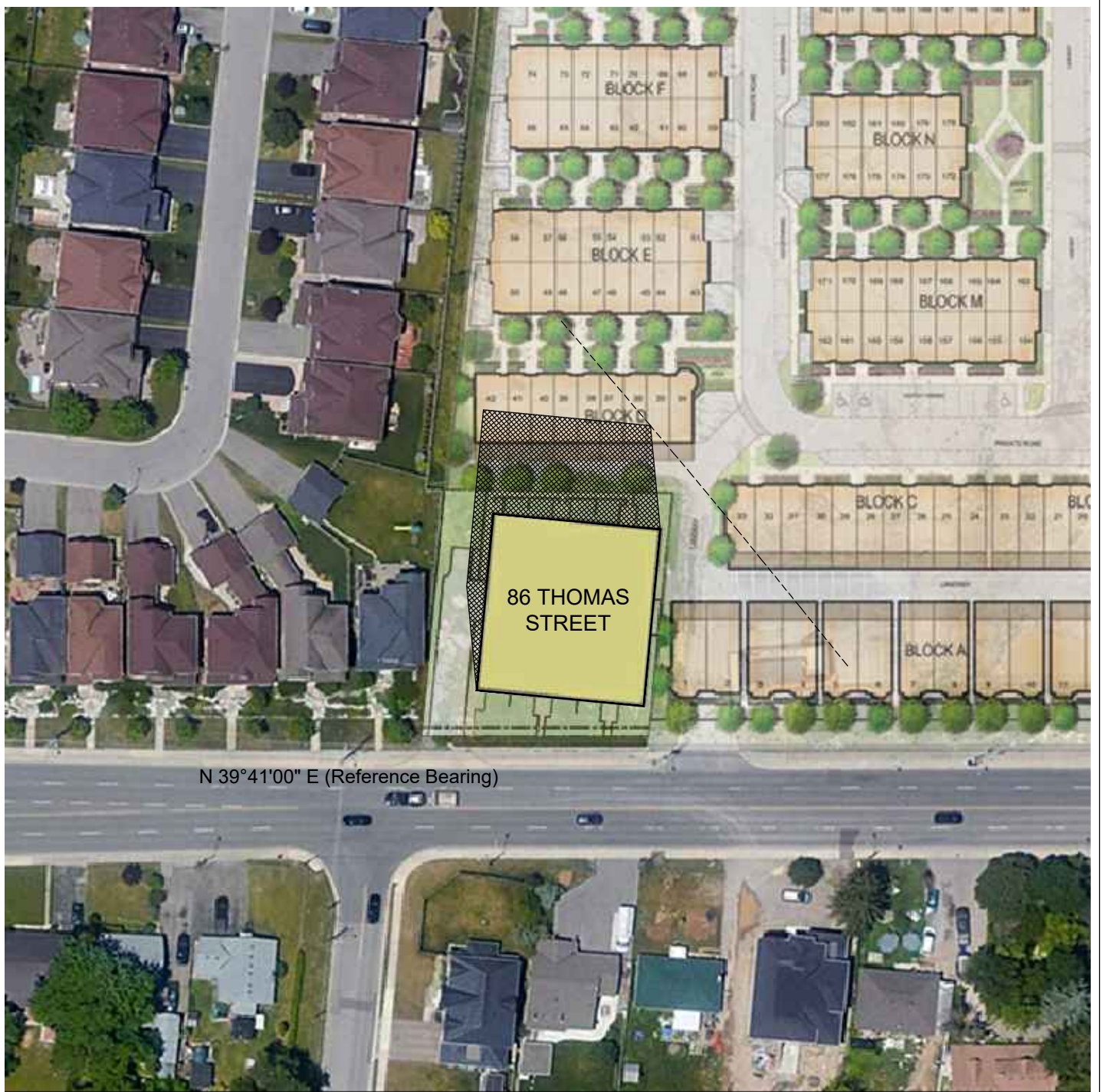
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 9:12 EDT
 SN - 4 hr.

Scale: 1:1000



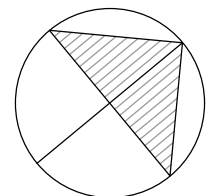
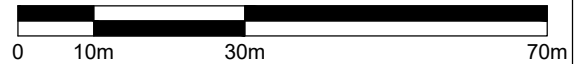


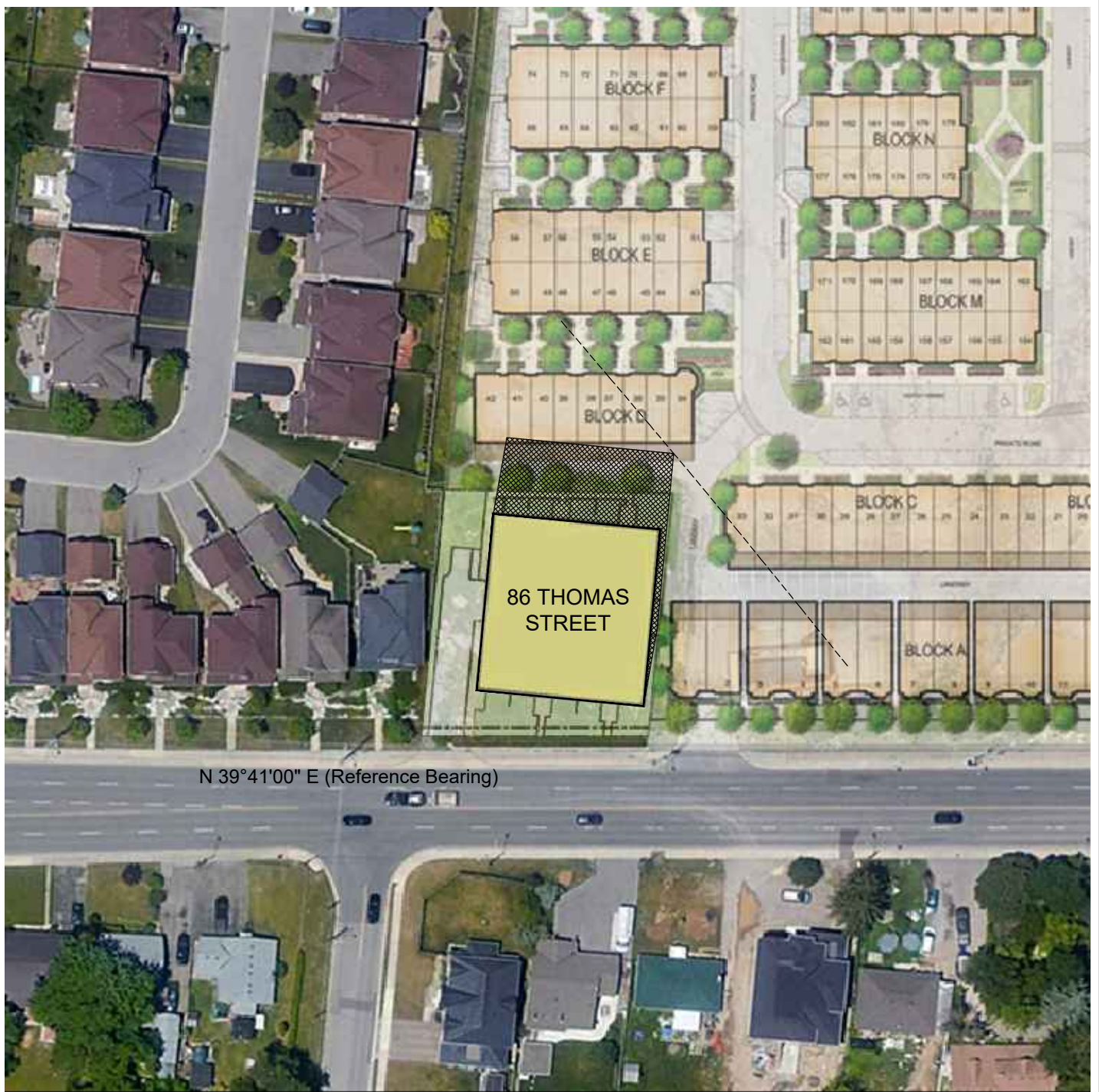
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 10:12 EDT
 SN - 3 hr.

Scale: 1:1000



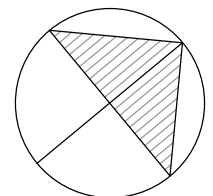
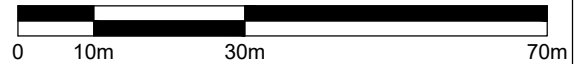


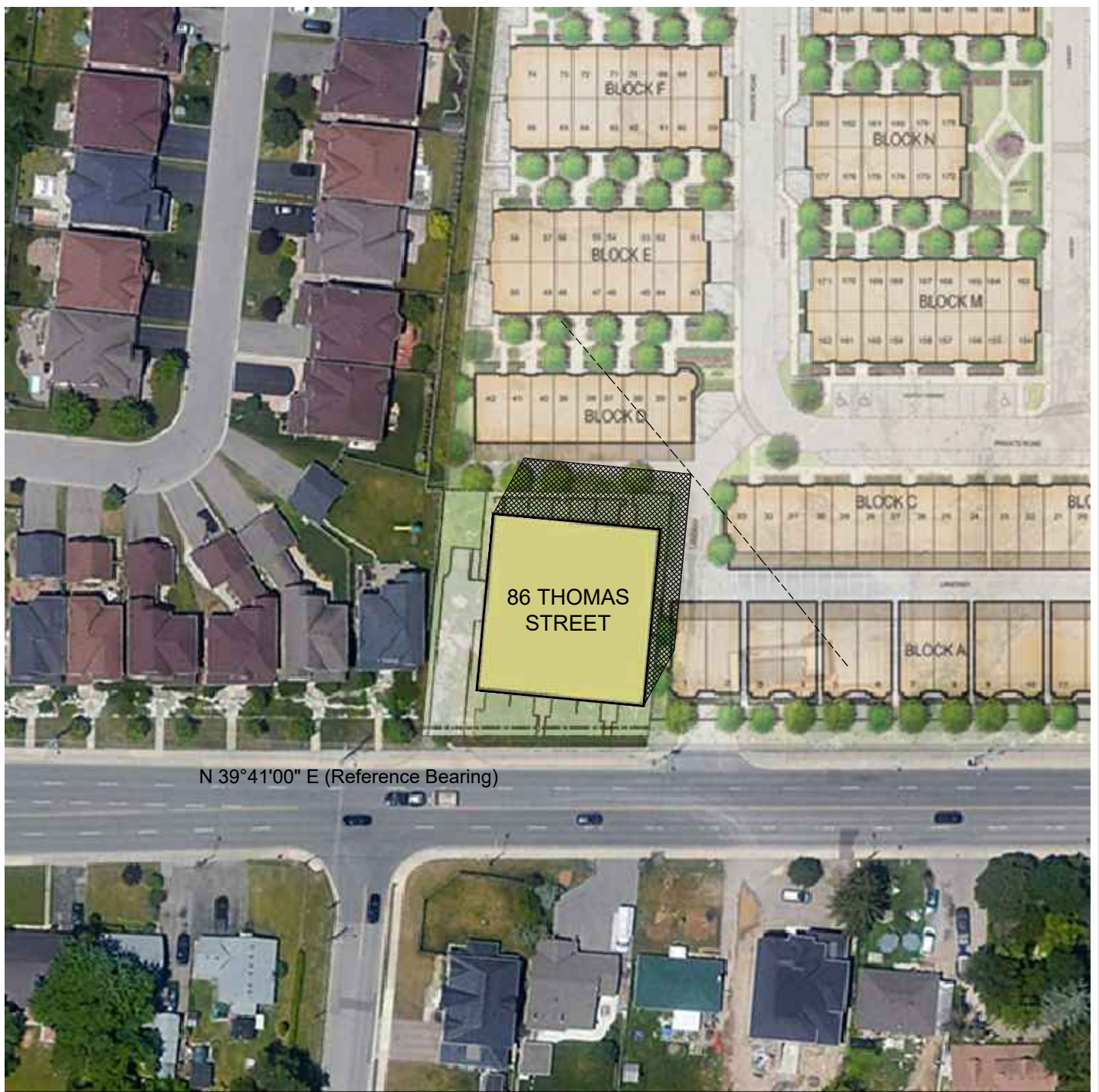
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 11:12 EDT
 SN - 2 hr.

Scale: 1:1000



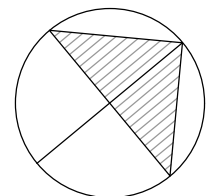
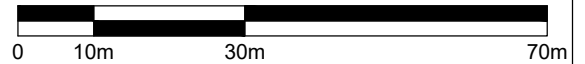


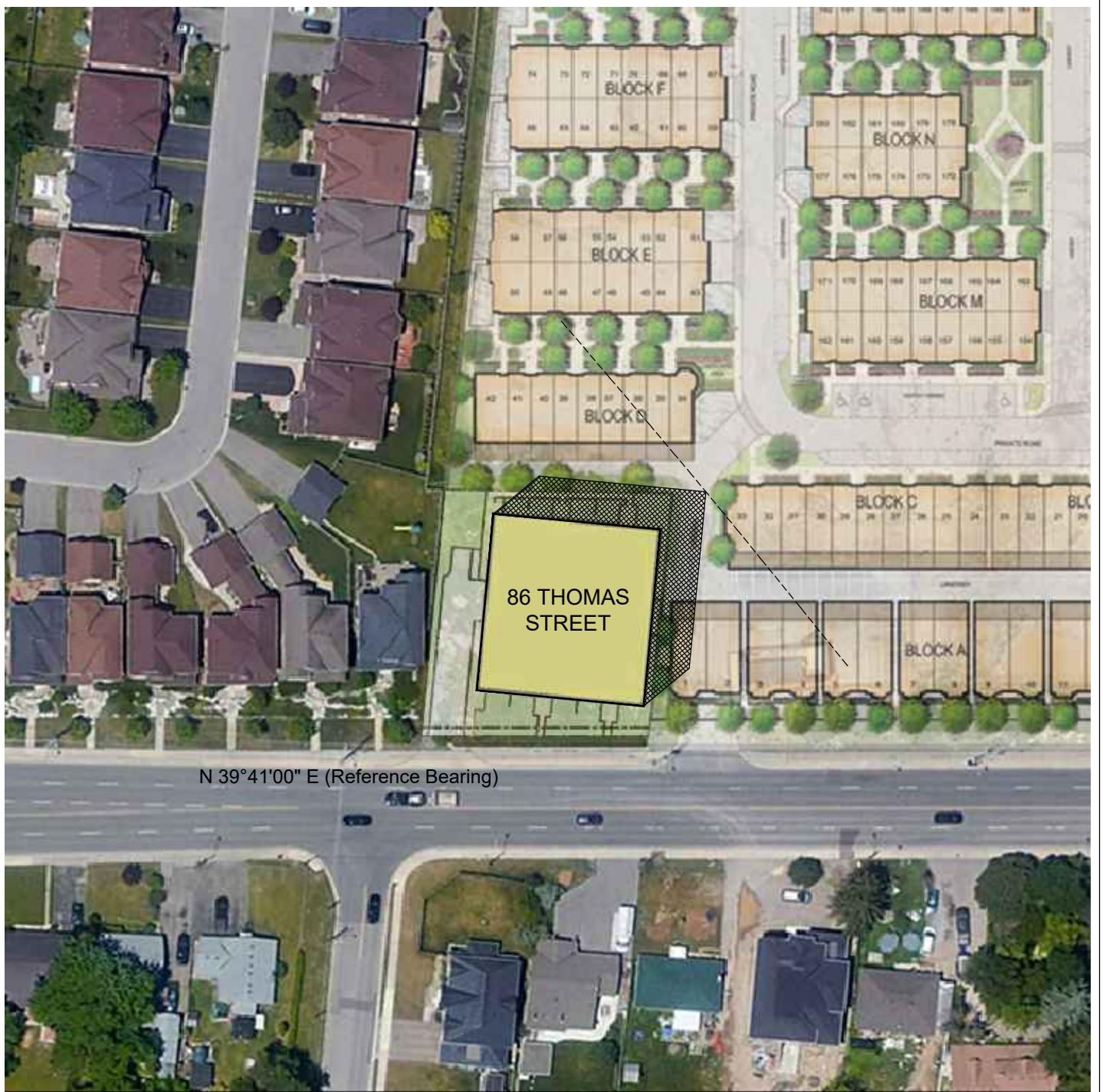
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 12:12 EDT
SN - 1 hr.

Scale: 1:1000



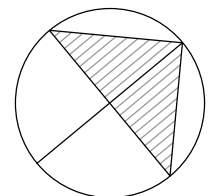
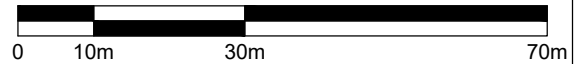


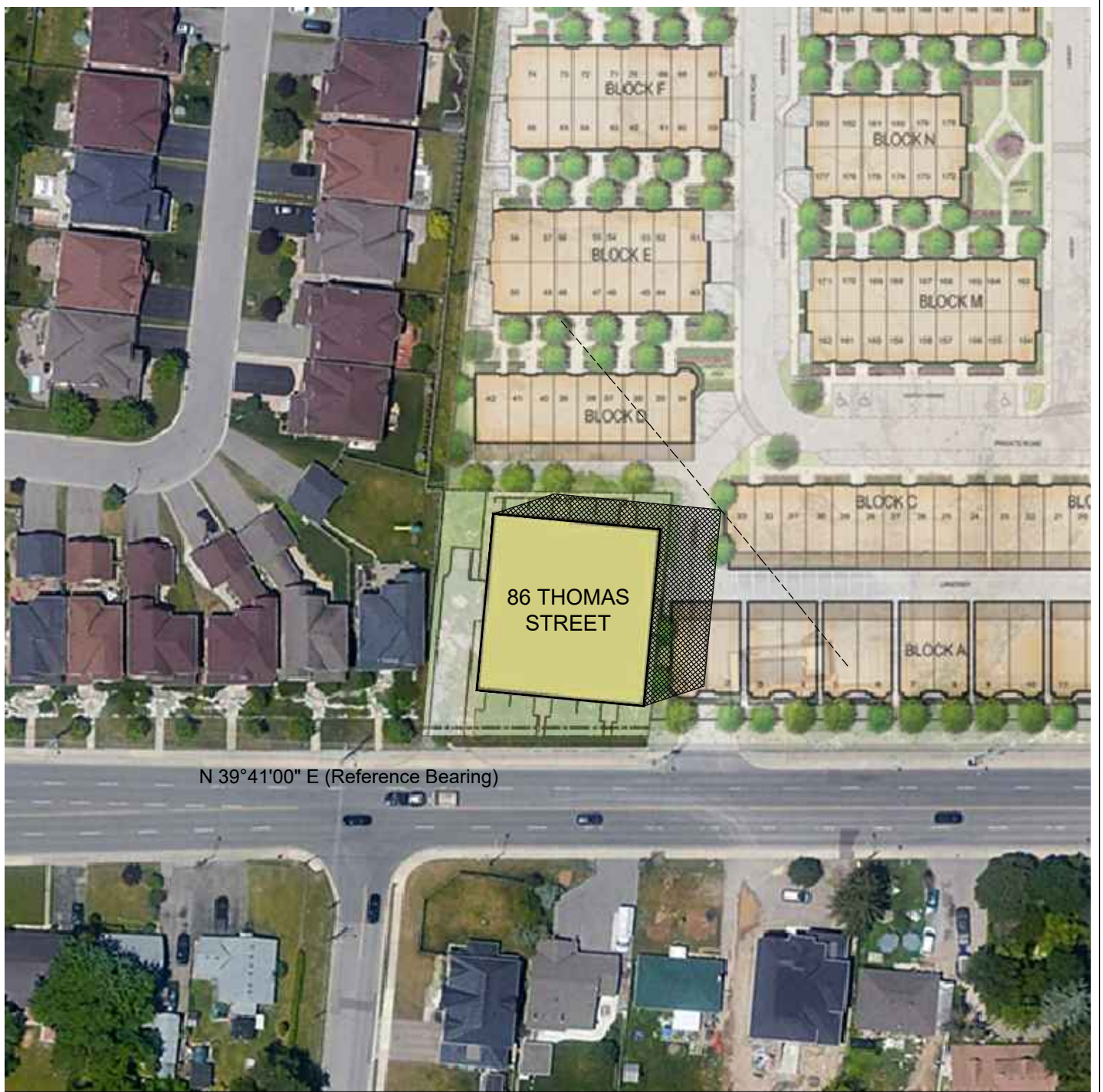
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 13:12 EDT
Solar Noon (SN)

Scale: 1:1000



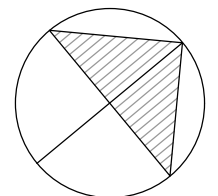
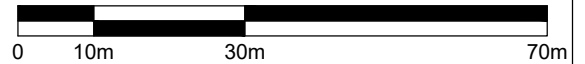


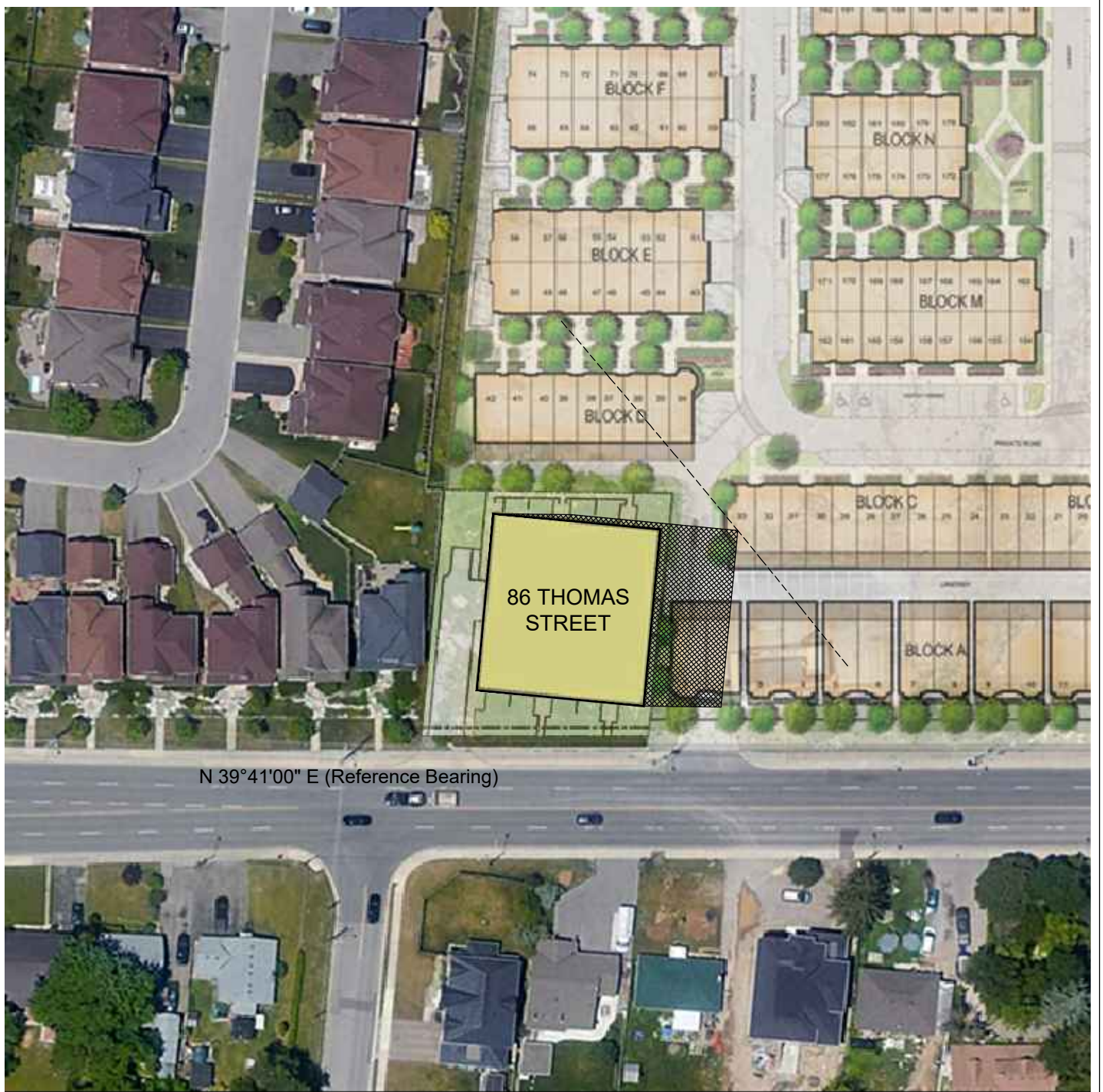
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 14:12 EDT
 SN + 1 hr.

Scale: 1:1000



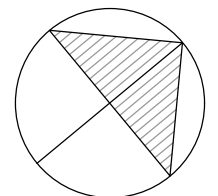
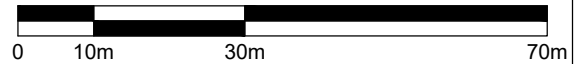


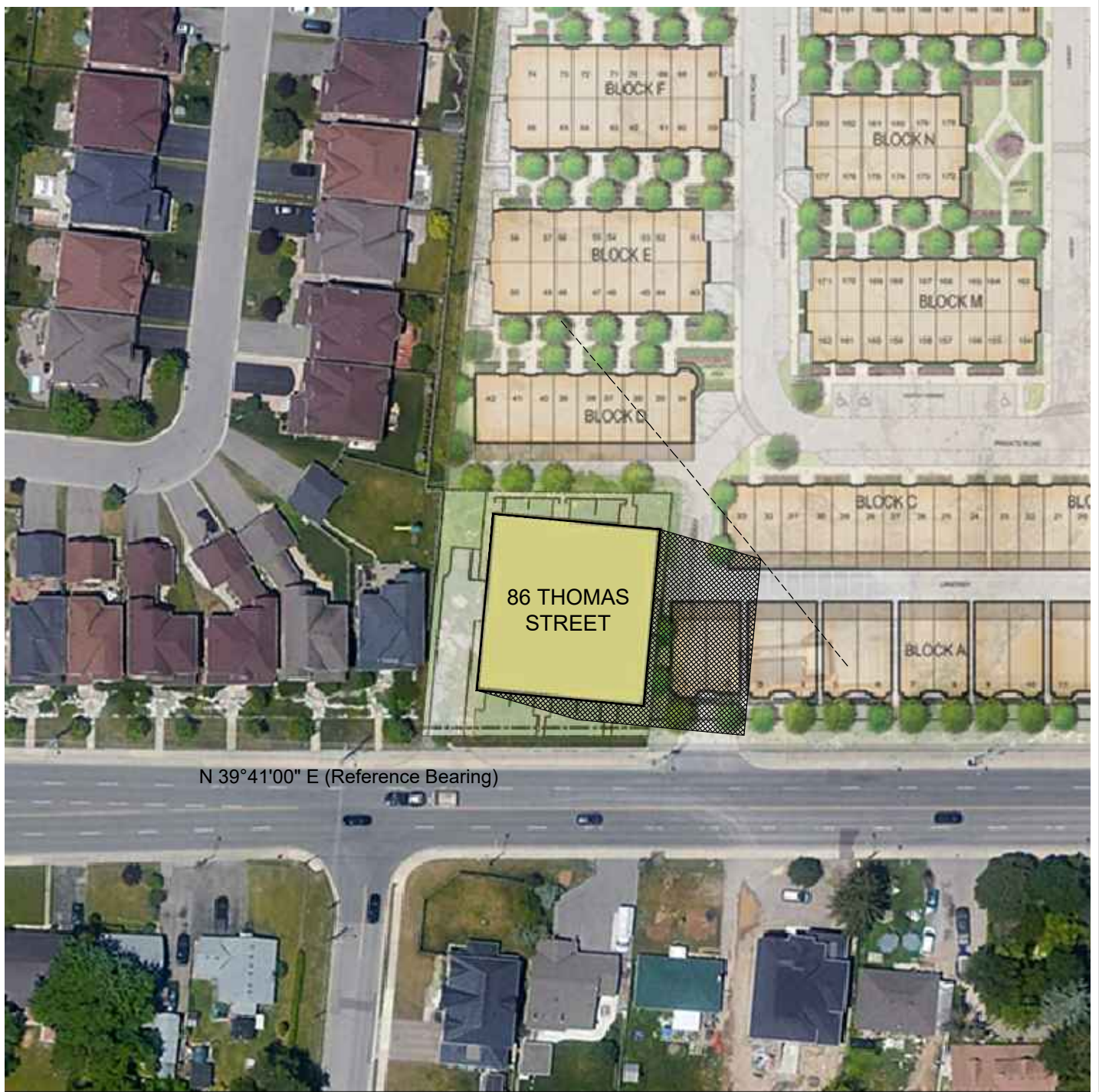
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 15:12 EDT
SN + 2 hr.

Scale: 1:1000



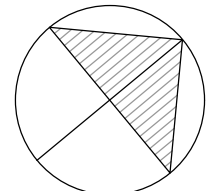
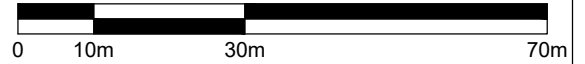


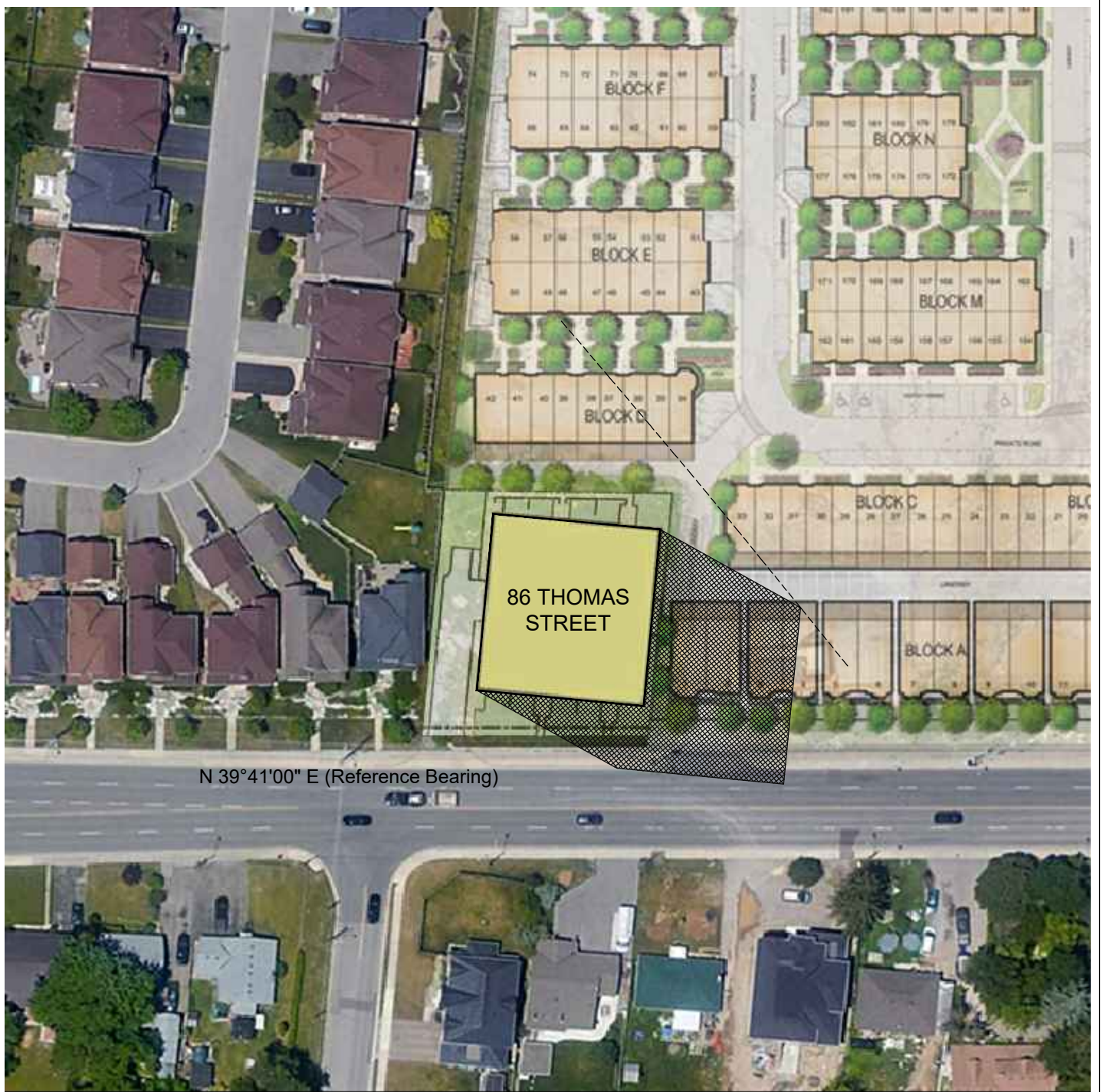
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 16:12 EDT
 SN + 3 hr.

Scale: 1:1000



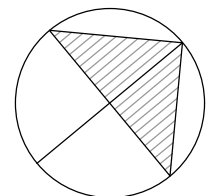
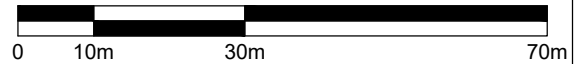


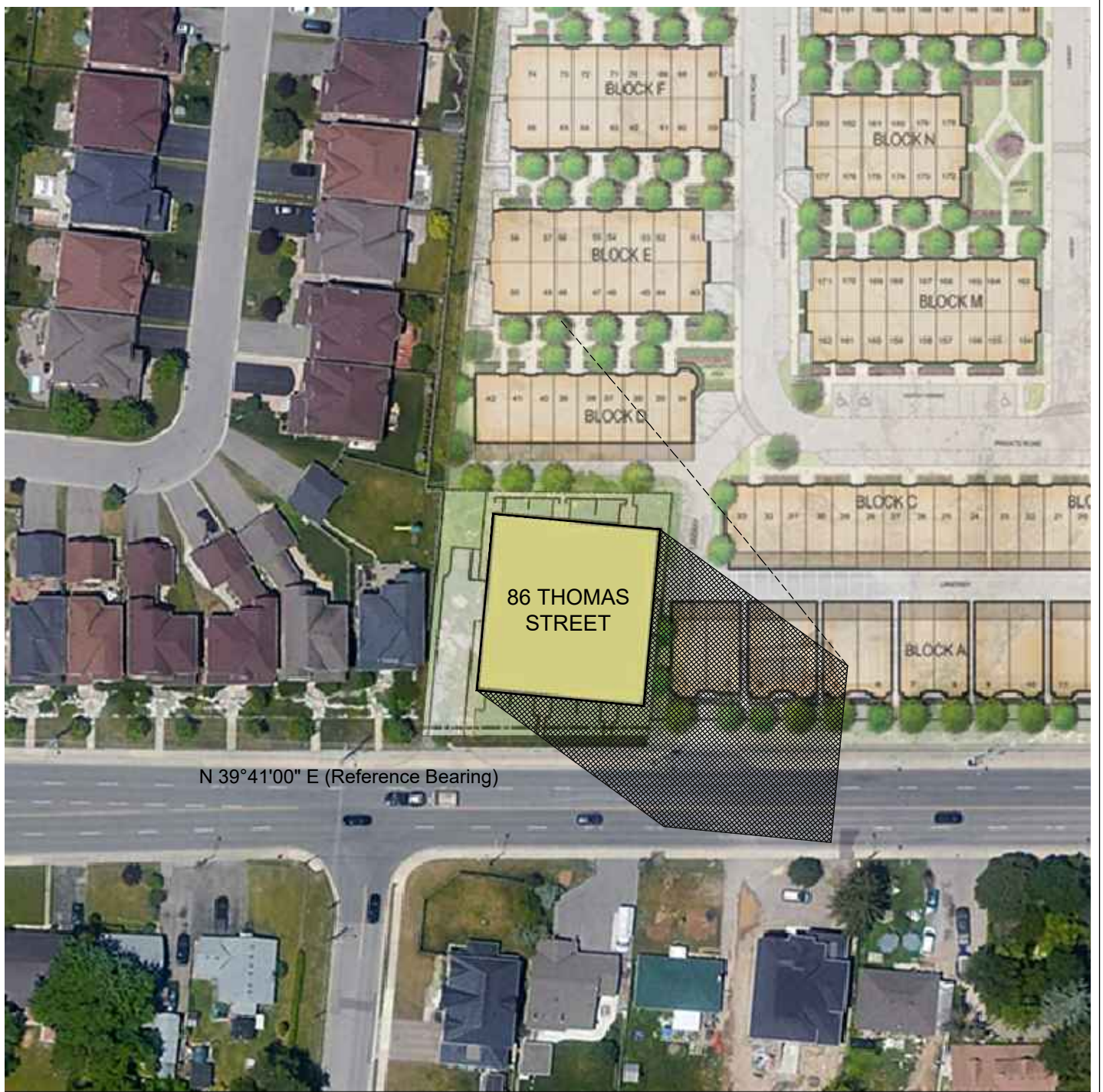
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 17:12 EDT
 SN + 4 hr.

Scale: 1:1000



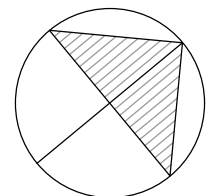
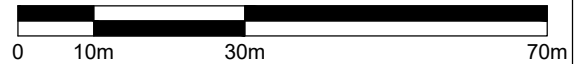


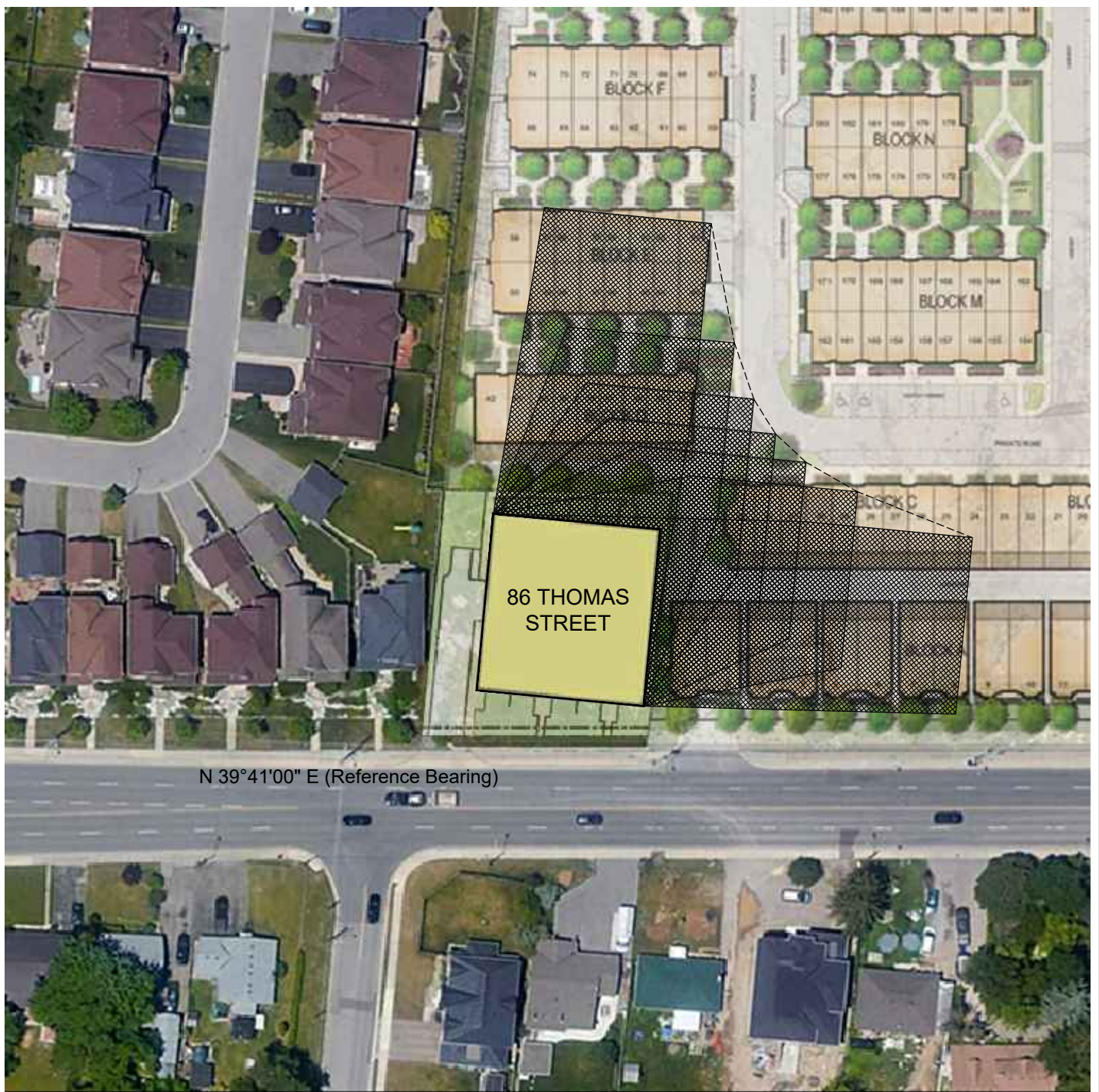
N 39°41'00" E (Reference Bearing)

Shadow diagram

September 21 17:48 EDT
 Set - 1.5 hr.

Scale: 1:1000



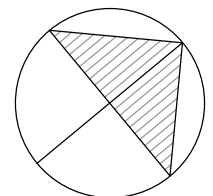
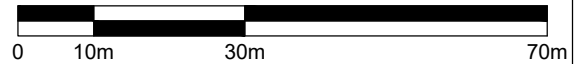


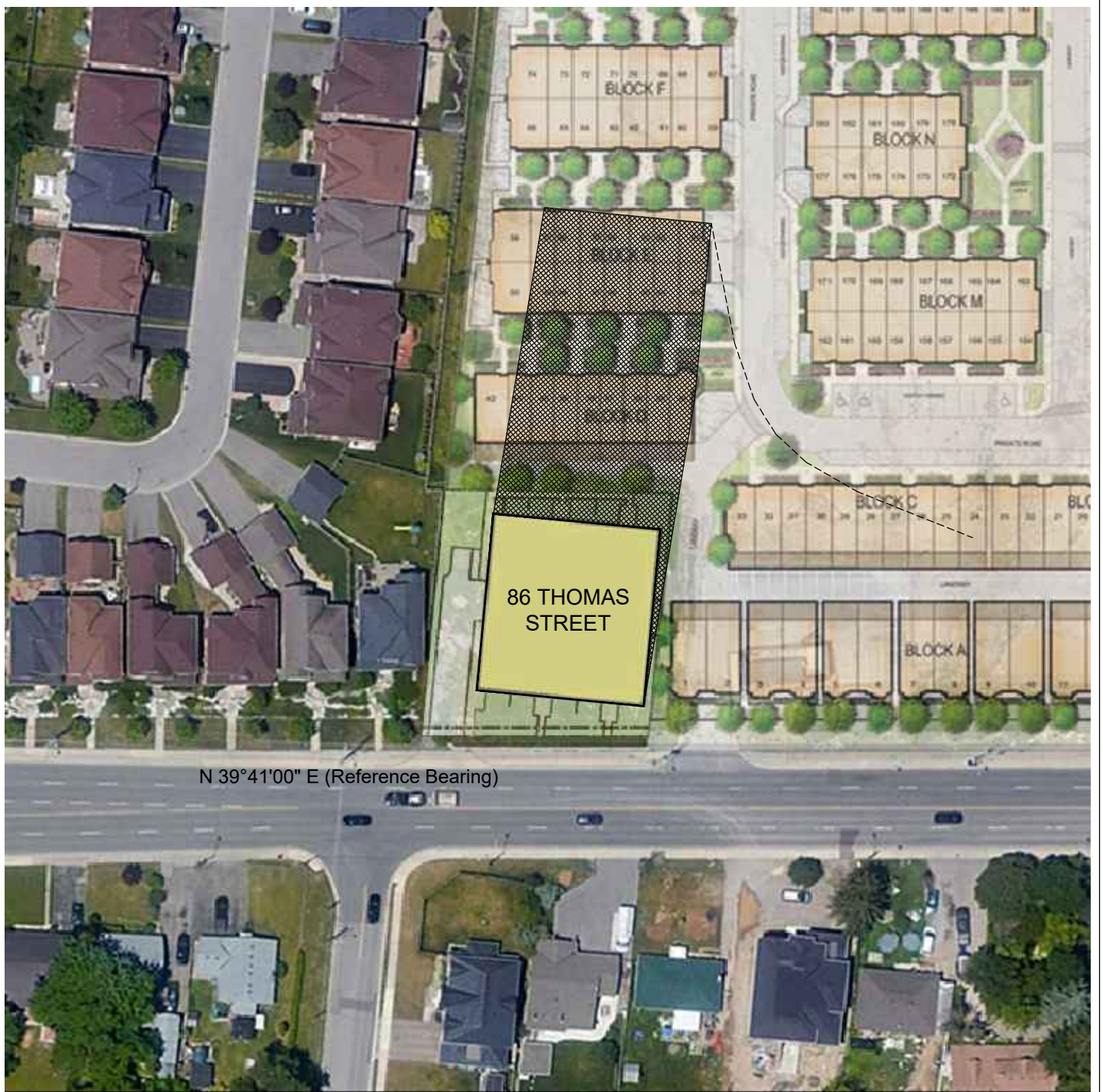
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 All hours

Scale: 1:1000



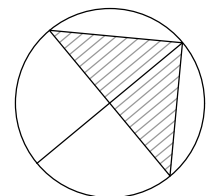
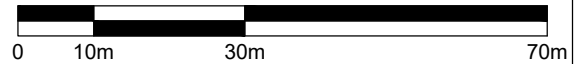


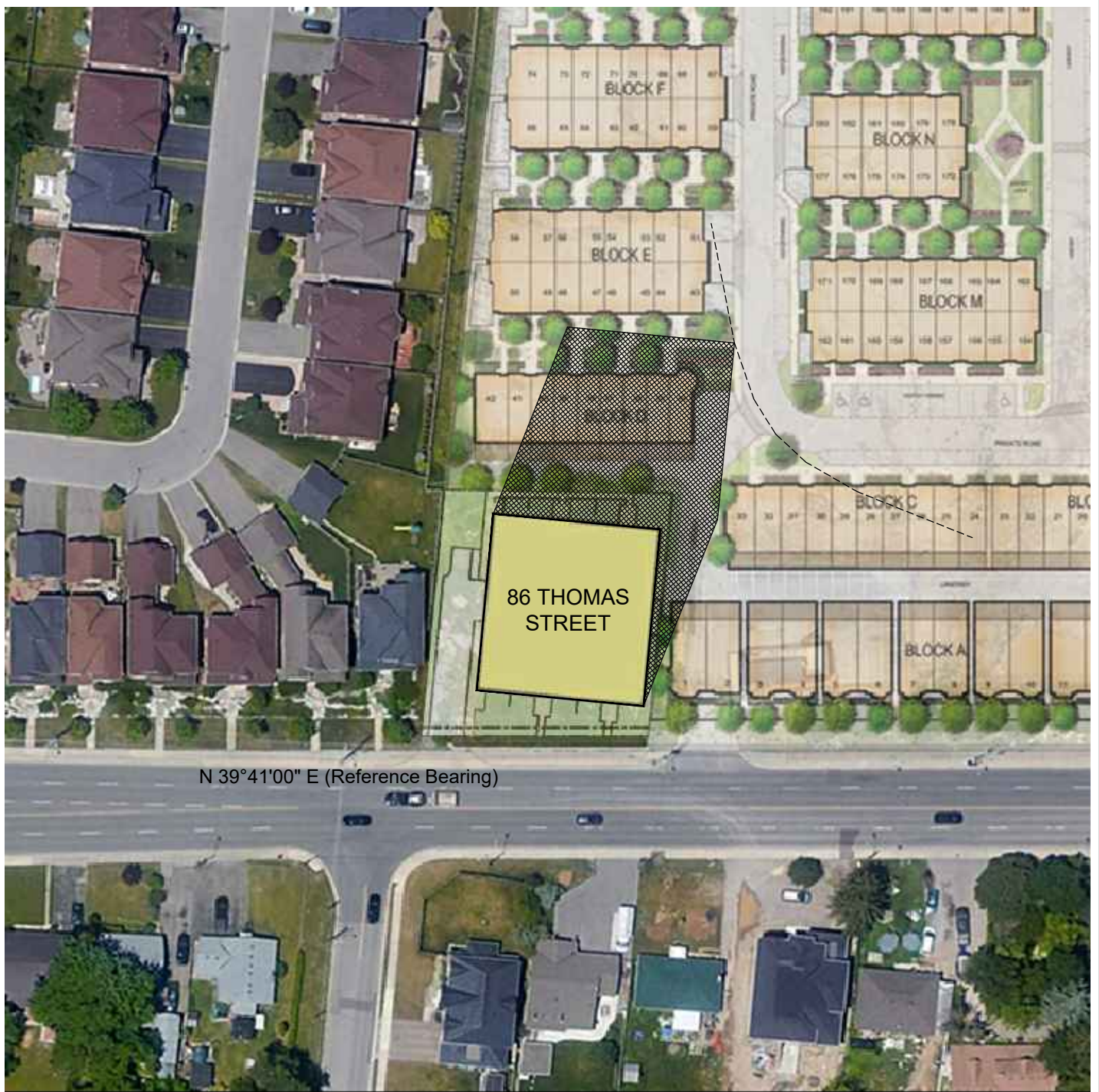
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 9:19 EDT
Rise + 1.5 hr.

Scale: 1:1000



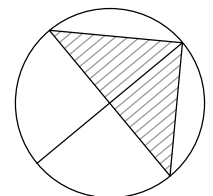
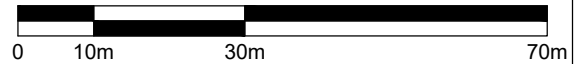


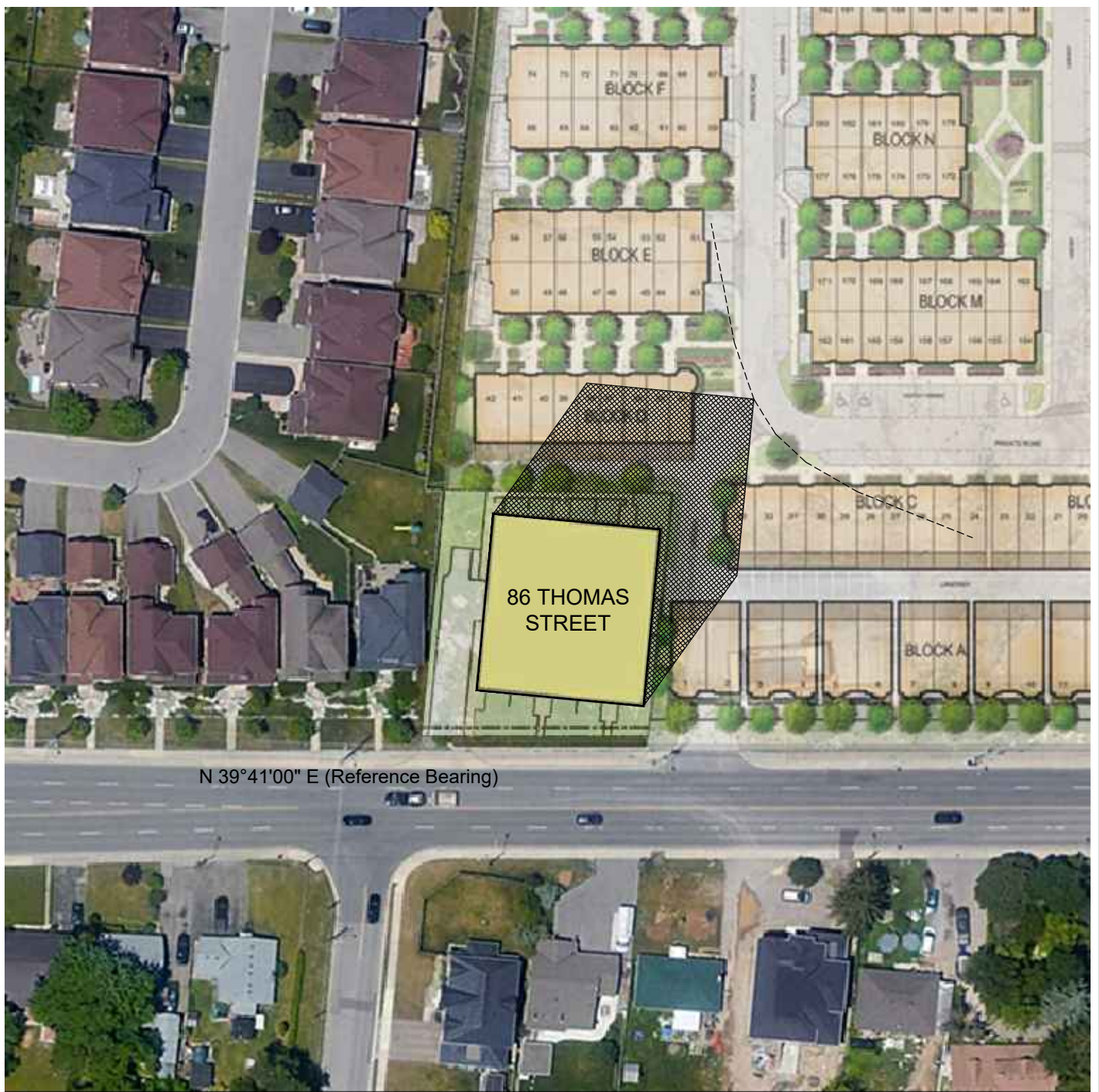
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 10:17 EDT
 SN - 2 hr.

Scale: 1:1000



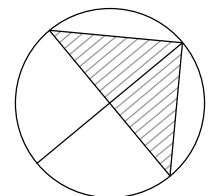
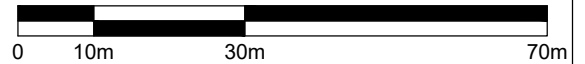


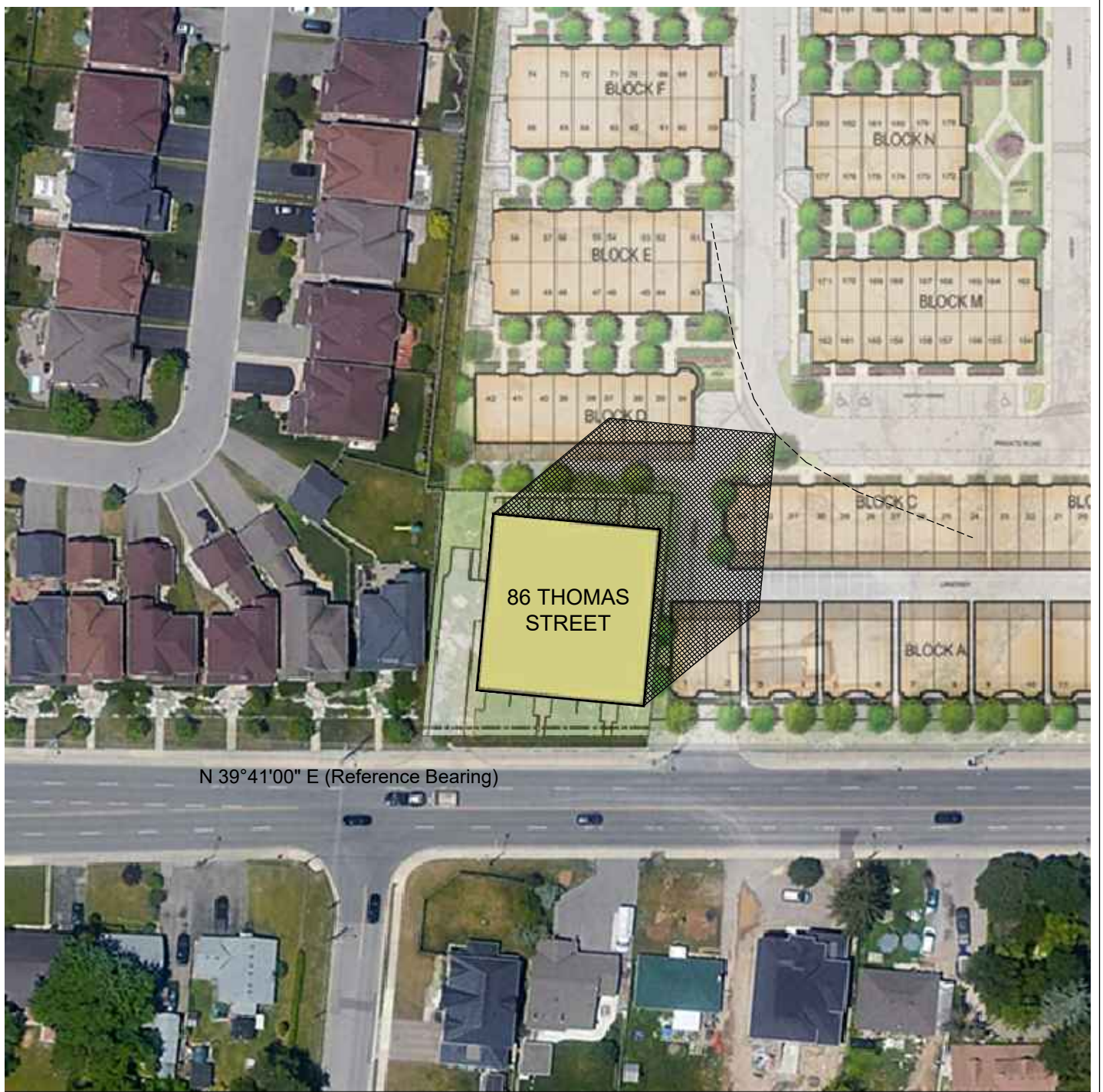
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 11:17 EDT
SN - 1 hr.

Scale: 1:1000



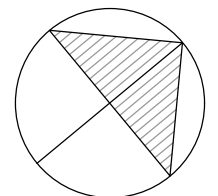
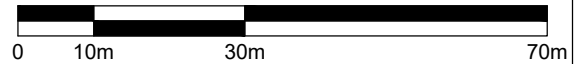


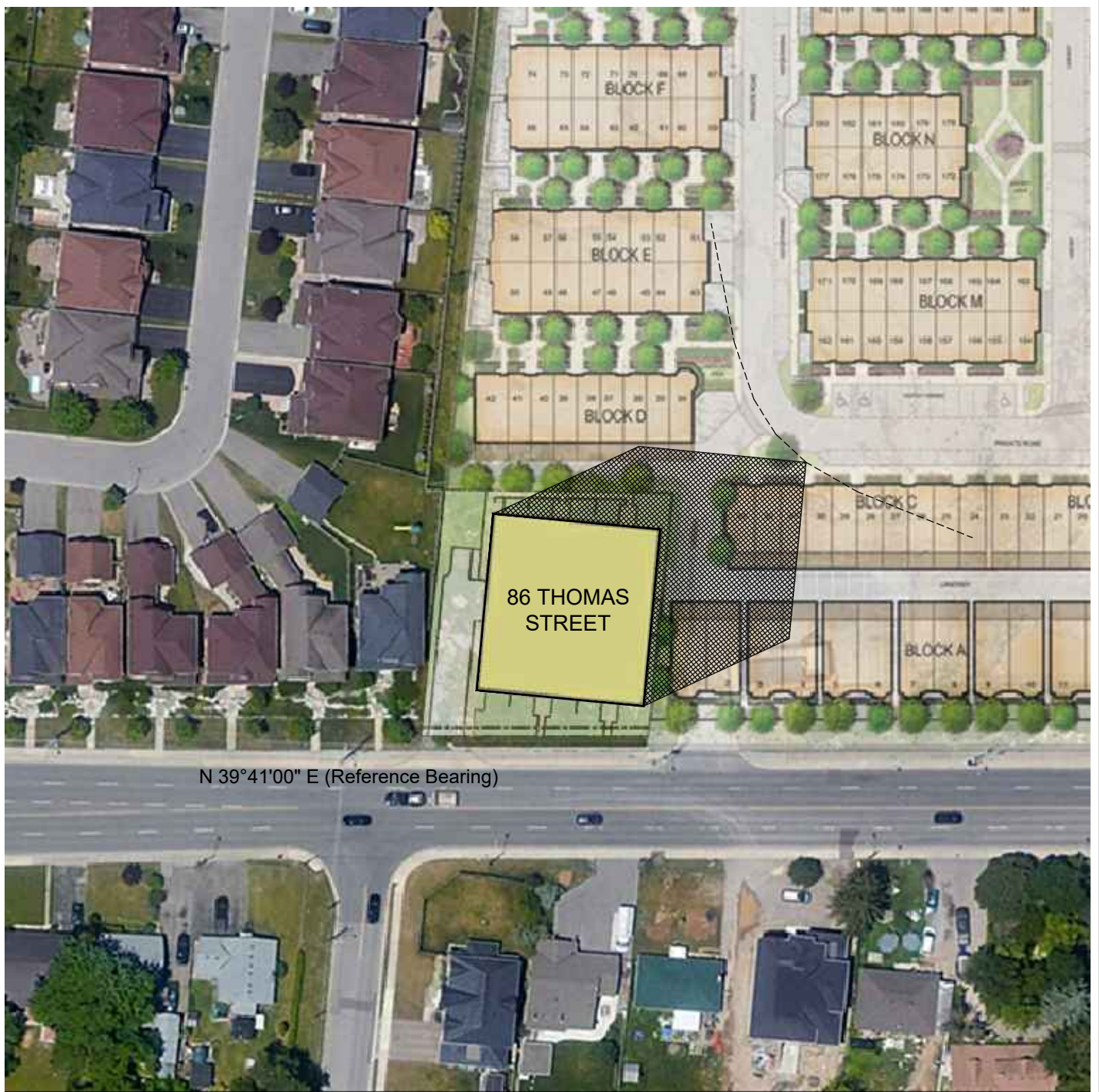
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 12:17 EDT
Solar Noon (SN)

Scale: 1:1000



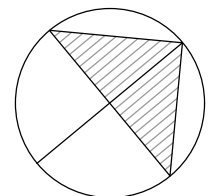
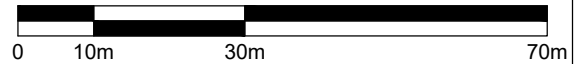


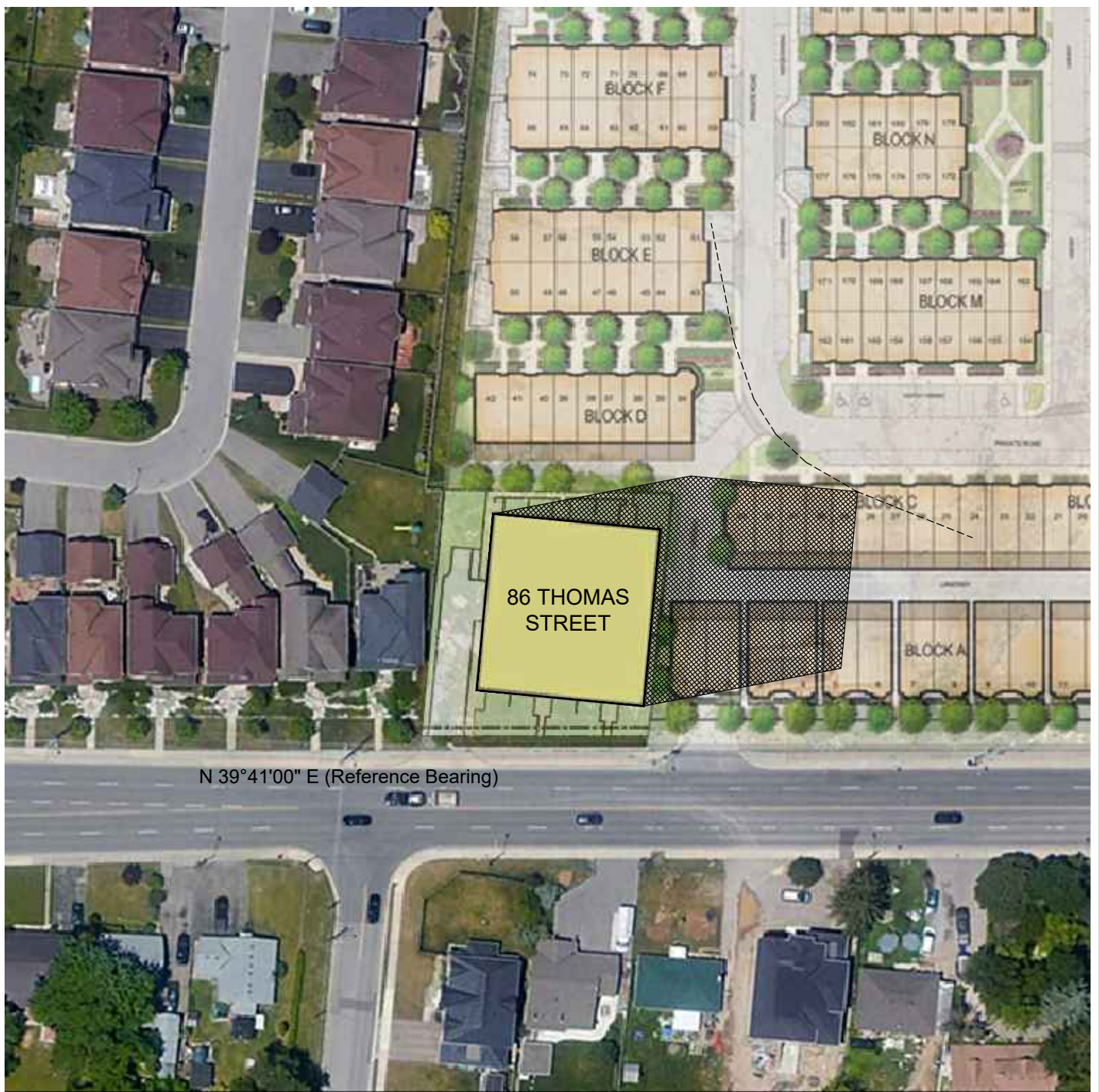
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 13:17 EDT
 SN + 1 hr.

Scale: 1:1000



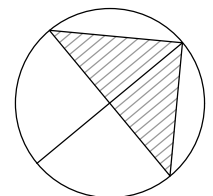
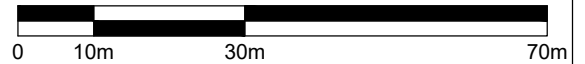


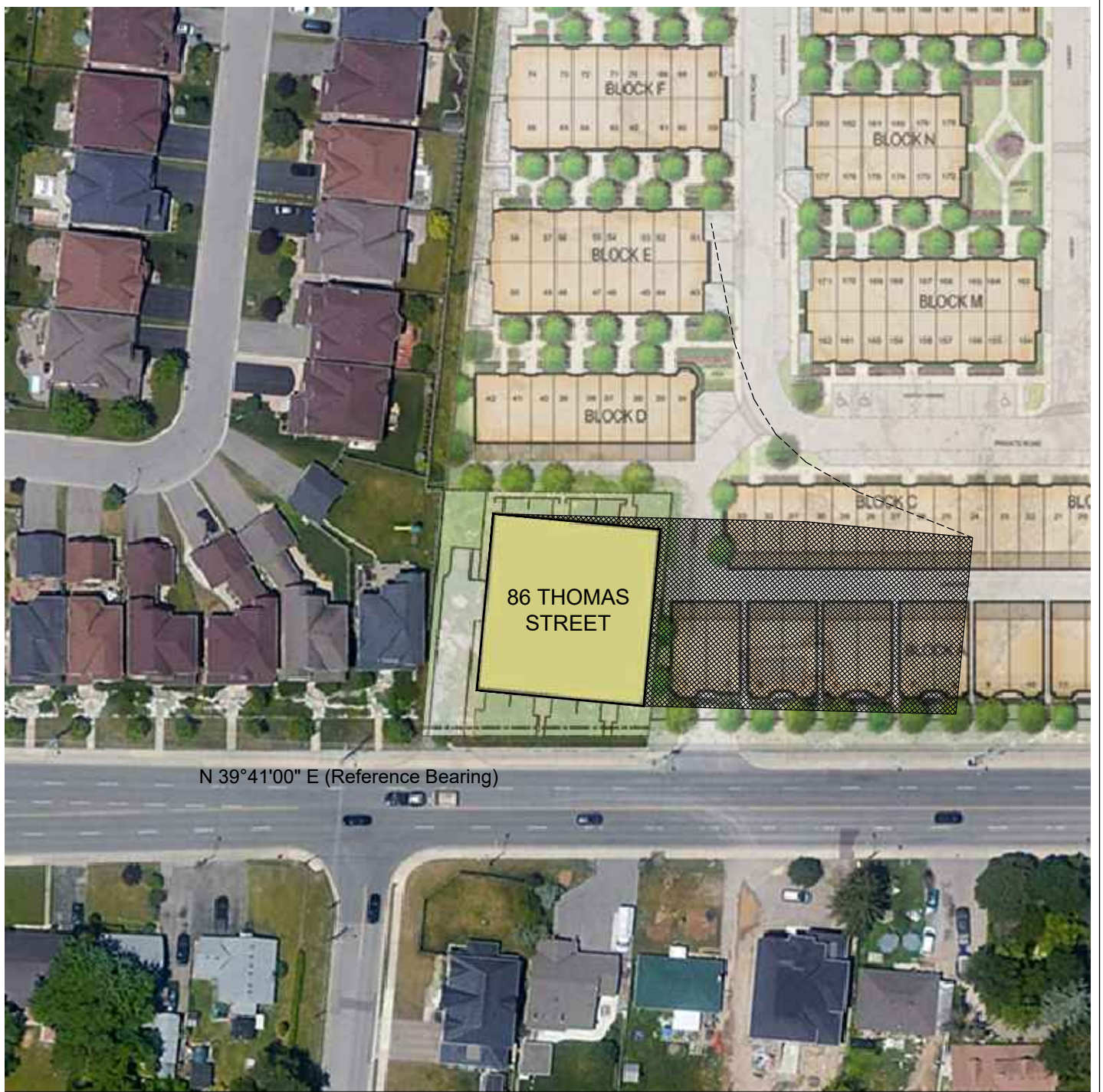
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 14:17 EDT
SN + 2 hr.

Scale: 1:1000



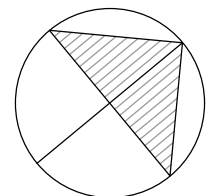
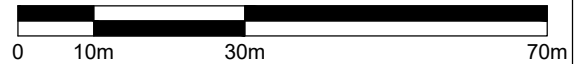


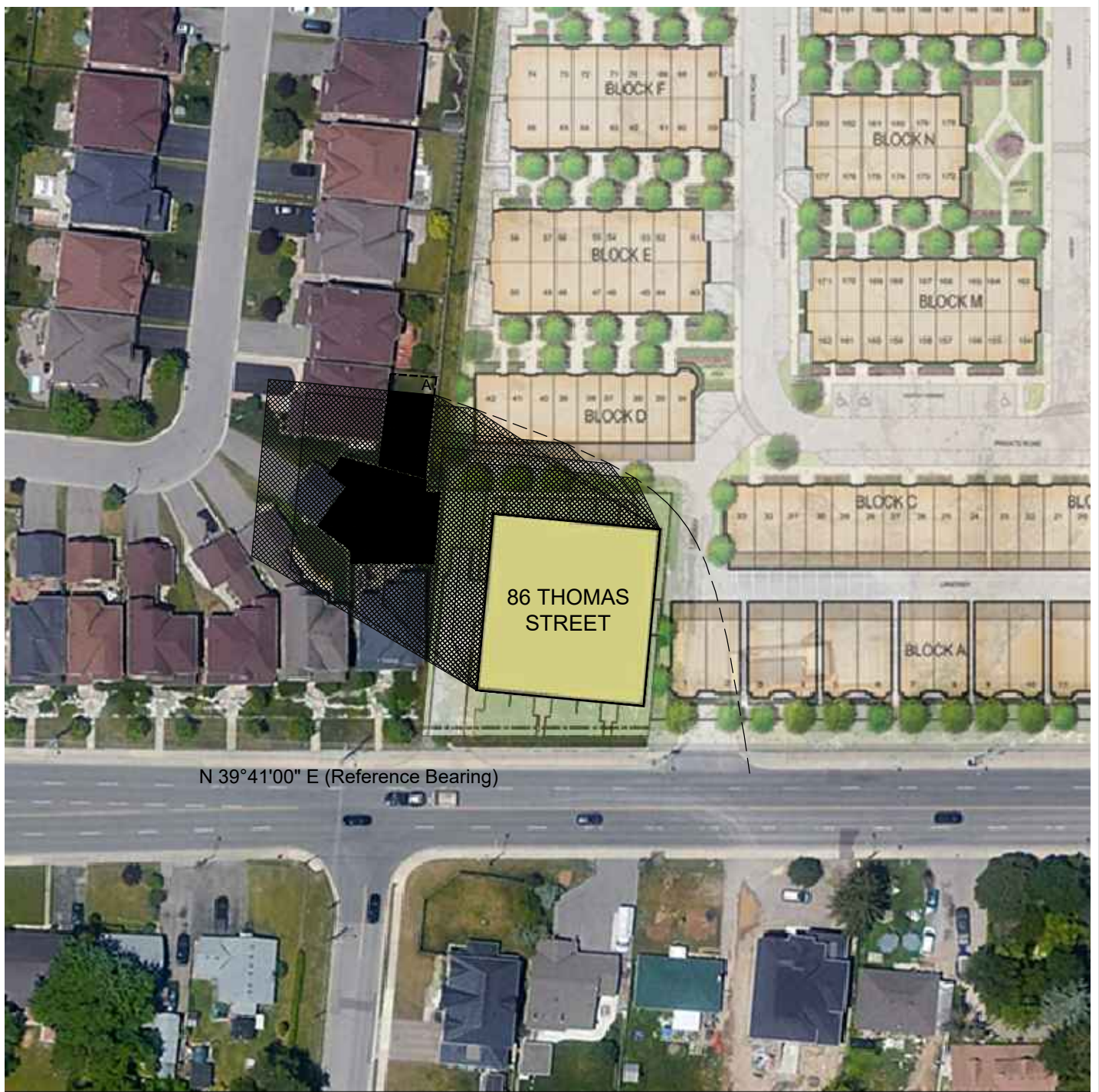
N 39°41'00" E (Reference Bearing)

Shadow diagram

December 21 15:15 EDT
Set - 1.5 hr.

Scale: 1:1000

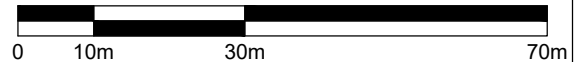




N 39°41'00" E (Reference Bearing)

Shadow Impact on Residential Private Outdoor Amenity Space (rear yard) adjacent to the west

Scale: 1:1000

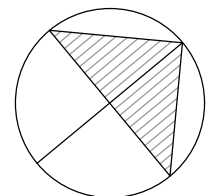


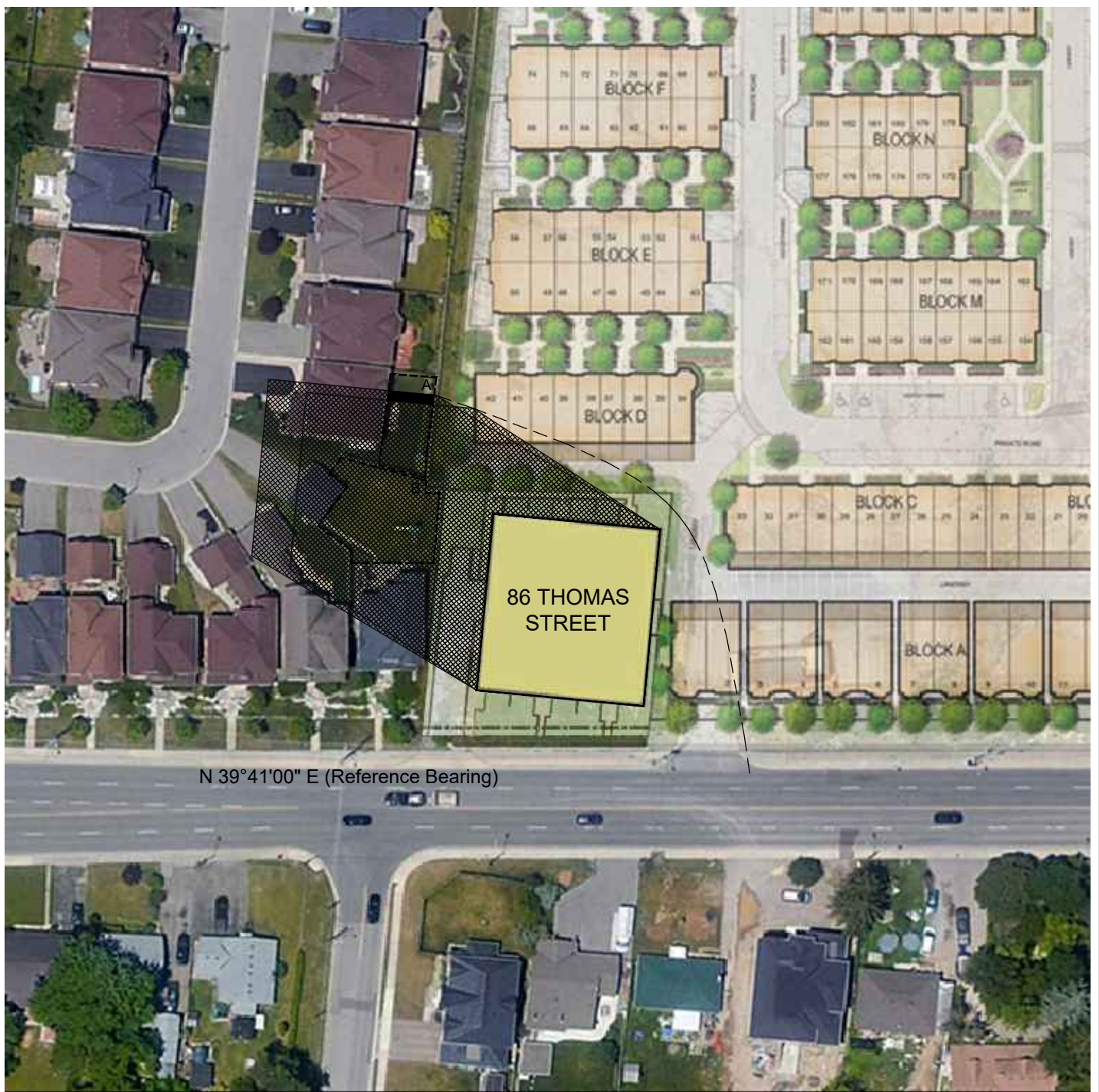
June 21 7:07 to 10:20 EDT

No Impact Zone Area A = 131.87 m²
 108.71 m² (82.44 %): up to 3 hrs. 13 min. of shadow.

No Impact Zone Area B = 274.27 m²
 274.27 m² (100.00 %): up to 3 hrs. 13 min. of shadow.

RYT May 20, 2021

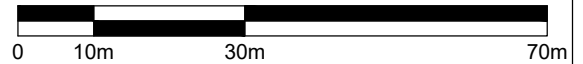




N 39°41'00" E (Reference Bearing)

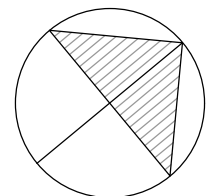
Shadow Impact on Residential Private Outdoor Amenity Space (rear yard) adjacent to the west

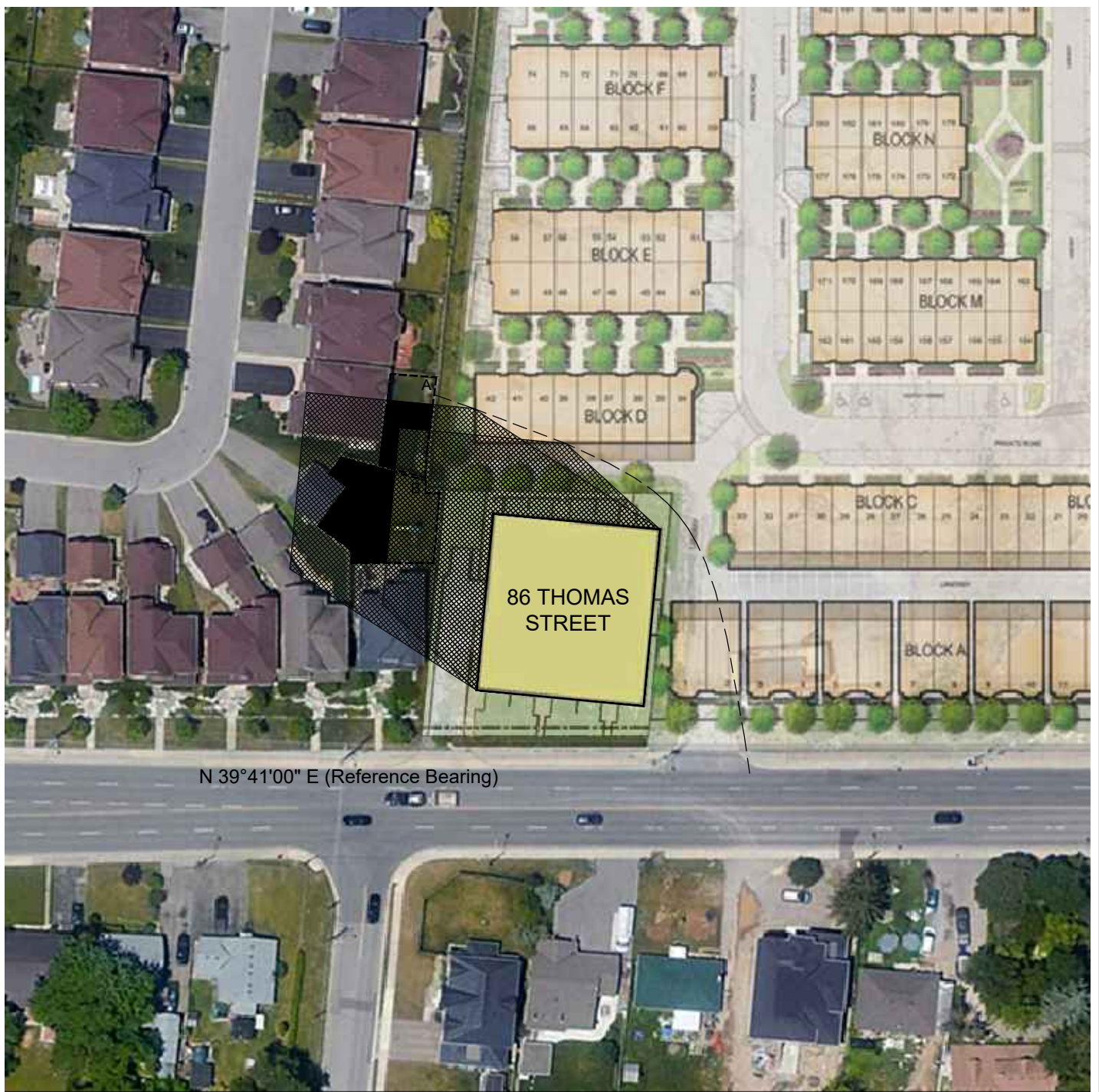
Scale: 1:1000



June 21 7:07 to 7:20 EDT

No Impact Zone Areas A = 131.87 m²
 13.04 m² (9.89%) up to 13 minutes of shadow.
 B = 274.27 m², 0 m² of shadow.

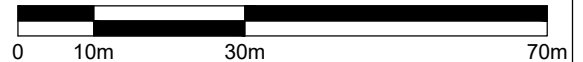




N 39°41'00" E (Reference Bearing)

Shadow Impact on Residential Private Outdoor Amenity Space (rear yard) adjacent to the west

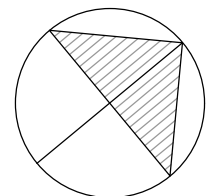
Scale: 1:1000

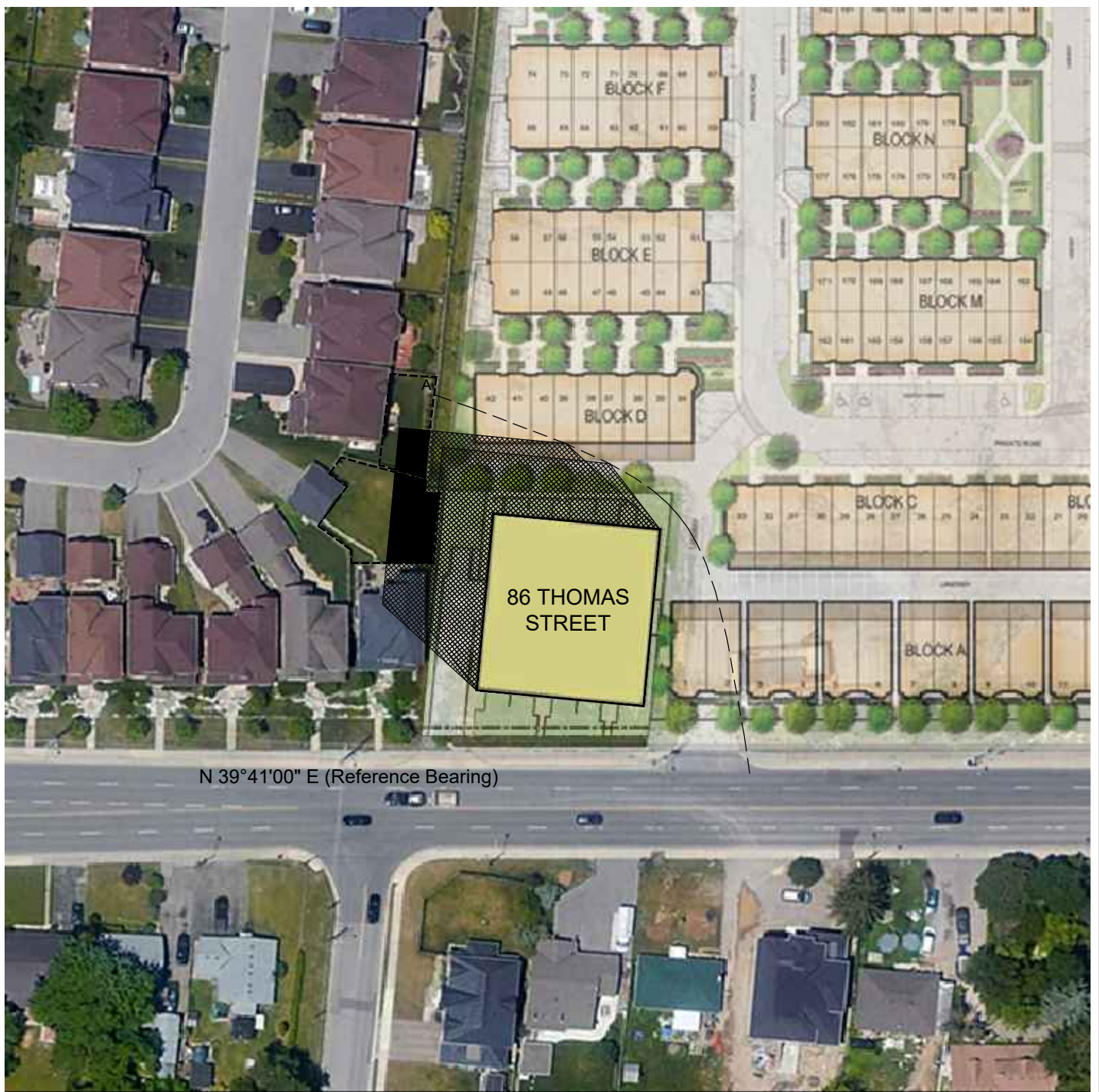


June 21 7:20 to 8:20 EDT

- No Impact Zone Area A = 131.87 m²
- 55.12 m² (41.80%): up to 1 additional hour of shadow.
- No Impact Zone Area B = 274.27 m²
- 160.91 m² (58.67%): up to 1 hour of shadow.

RY2 May 20, 2021

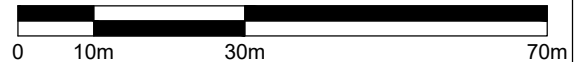




N 39°41'00" E (Reference Bearing)

Shadow Impact on Residential Private Outdoor Amenity Space (rear yard) adjacent to the west

Scale: 1:1000



June 21 8:20 to 9:20 EDT

No Impact Zone Areas A = 131.87 m²

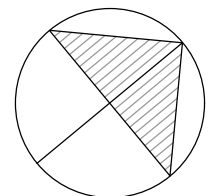
40.56 m² (30.76%): up to 1 additional hour of shadow.

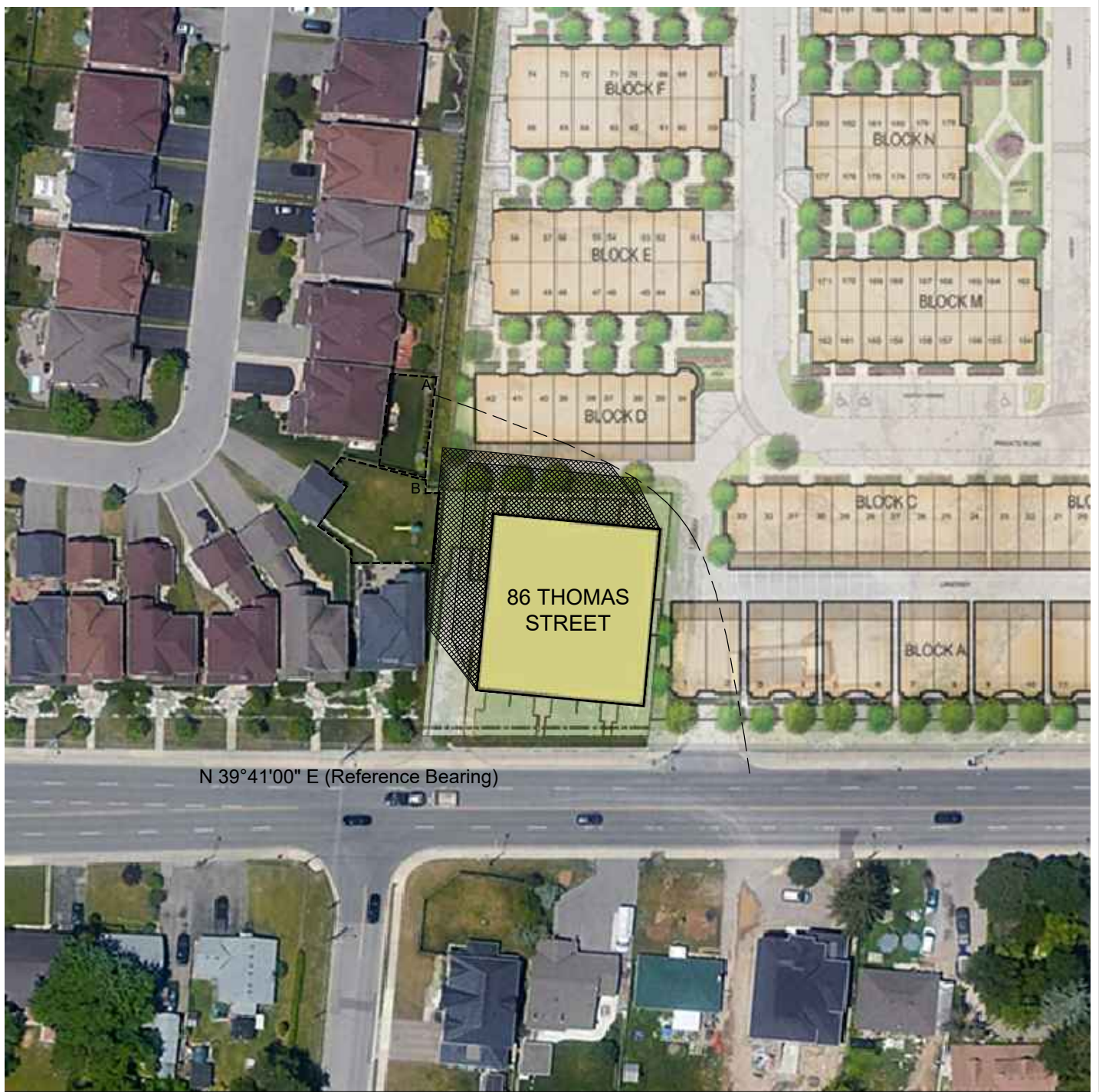
No Impact Zone Area B = 274.27 m²

109.98 m² (40.10%): up to 1 additional hour of shadow.

RY3

May 20, 2021

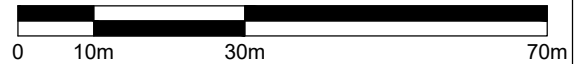




N 39°41'00" E (Reference Bearing)

Shadow Impact on Residential Private Outdoor Amenity Space (rear yard) adjacent to the west

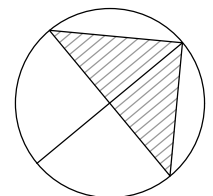
Scale: 1:1000

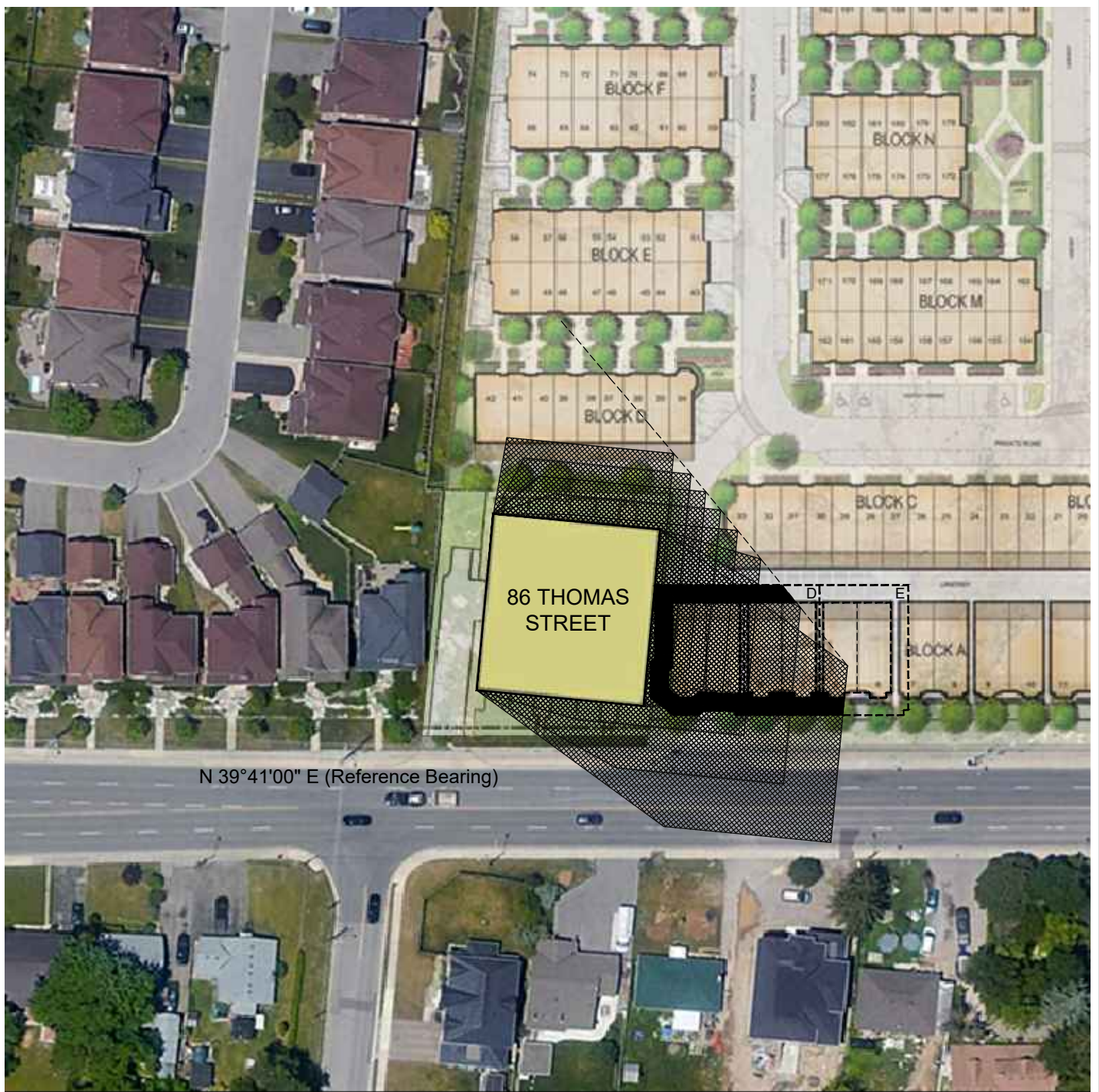


June 21 9:20 to 10:20 EDT

No Impact Zone Area B = 274.27 m²

3.38 m² (1.23 %): up to 3.59 additional minutes of shadow.





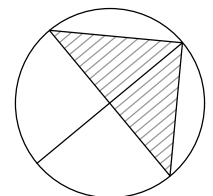
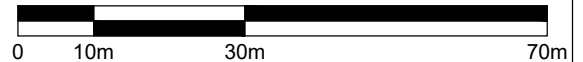
N 39°41'00" E (Reference Bearing)

Shadow Impact on Semi-Detached Dwellings adjacent to the east

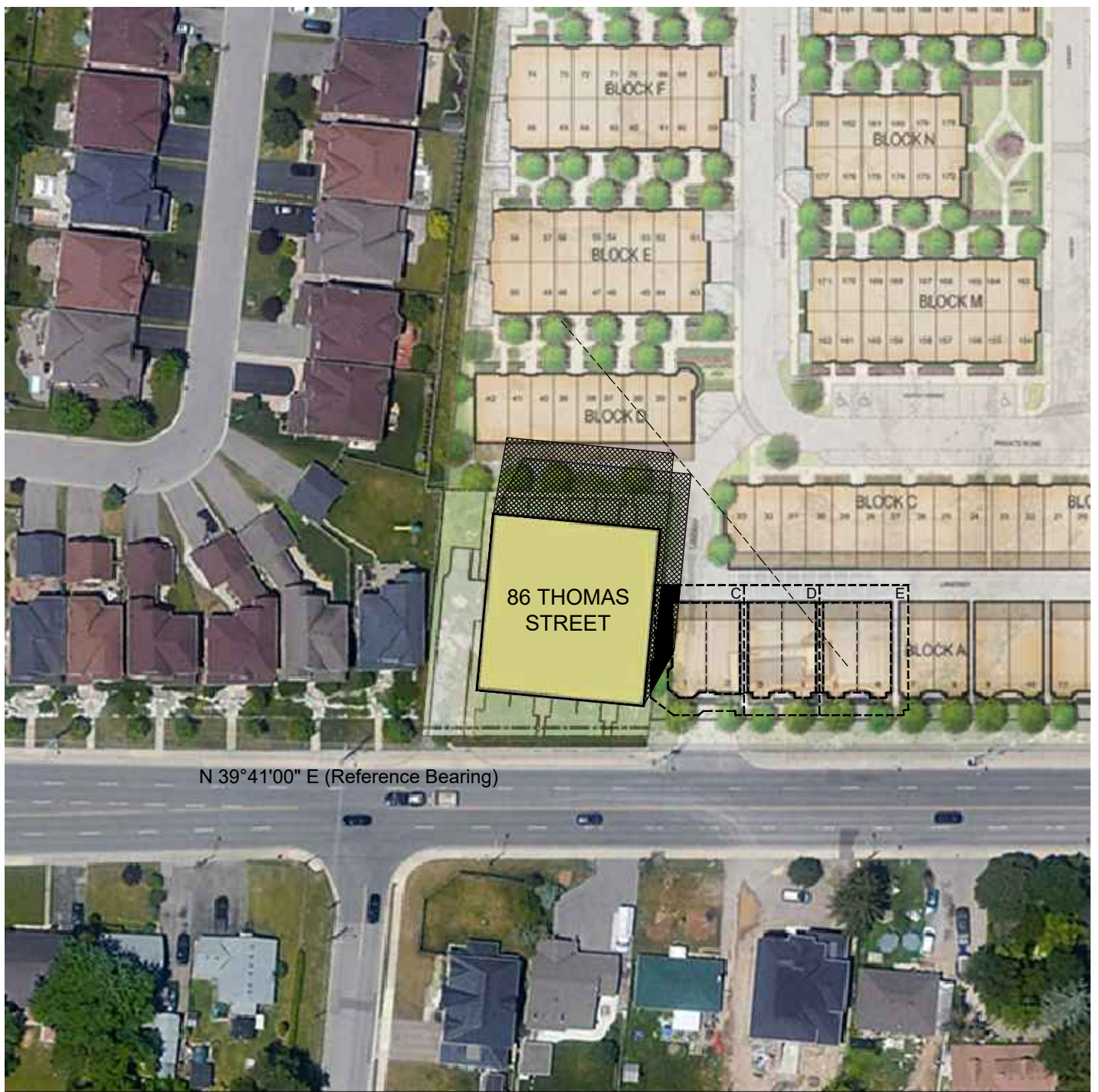
September 21 11:12 to 17:48 EDT

- No Impact Zone Area C = 142.72 m²
142.72 m² (100 %) has up to 6 hrs. 36 min. of shadow.
- No Impact Zone Area D = 84.55 m²
68.72 m² (81.28 %) has up to 2 hrs. 36 min. of shadow.
- No Impact Zone Area E = 146.38 m²
13.88 m² (9.48 %) has up to 36 minutes of shadow.

Scale: 1:1000



ART May 20, 2021



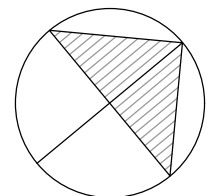
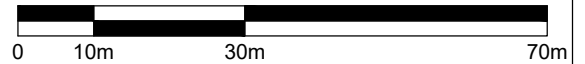
N 39°41'00" E (Reference Bearing)

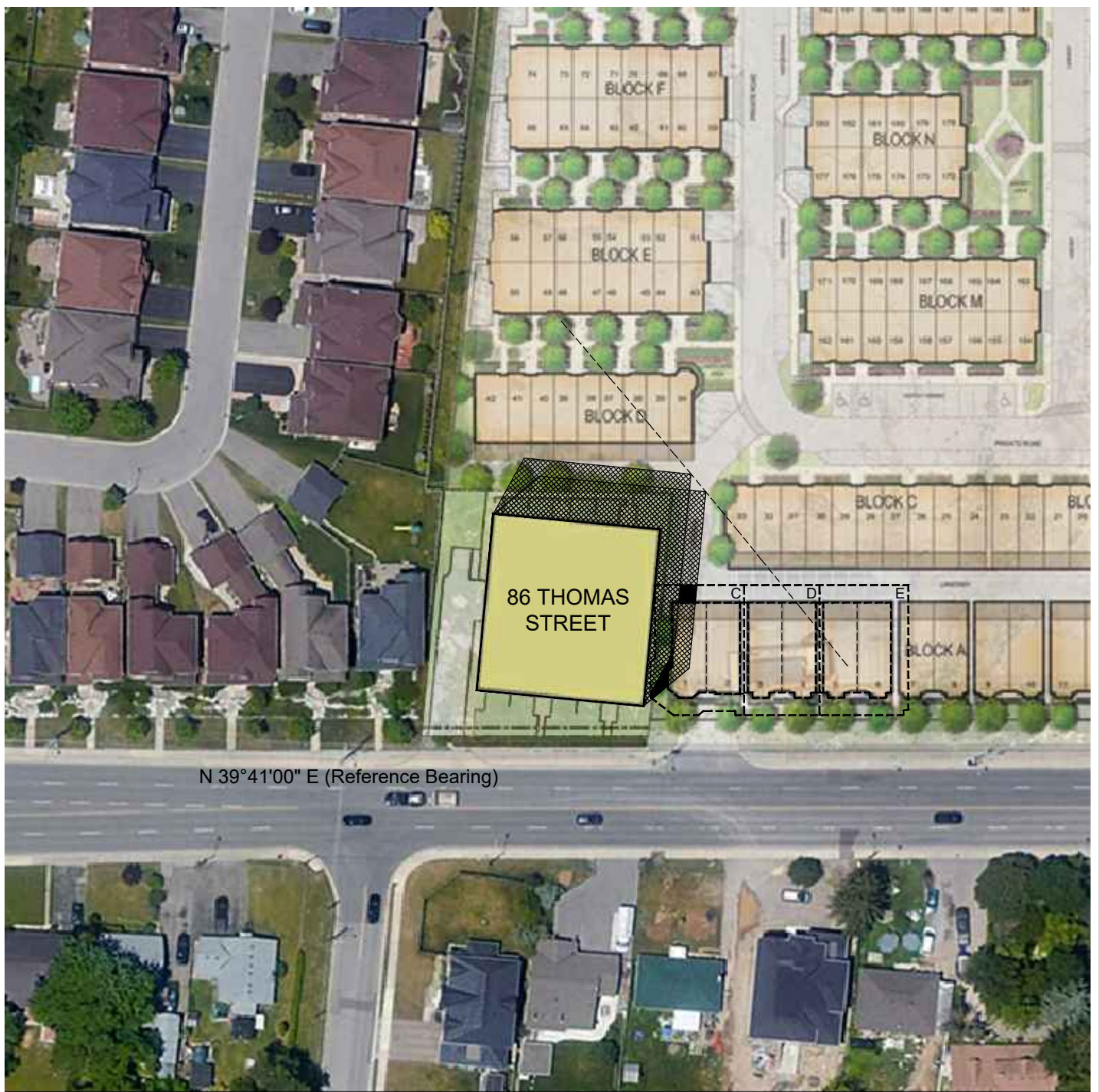
Shadow Impact on Semi-Detached Dwellings adjacent to the east

September 21 11:12 to 12:12 EDT

No Impact Zone Area C = 142.72 m².
 45.30 m² (31.74 %) has 1 hour of shadow.

Scale: 1:1000





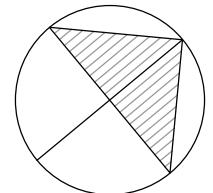
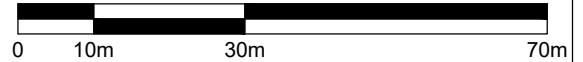
N 39°41'00" E (Reference Bearing)

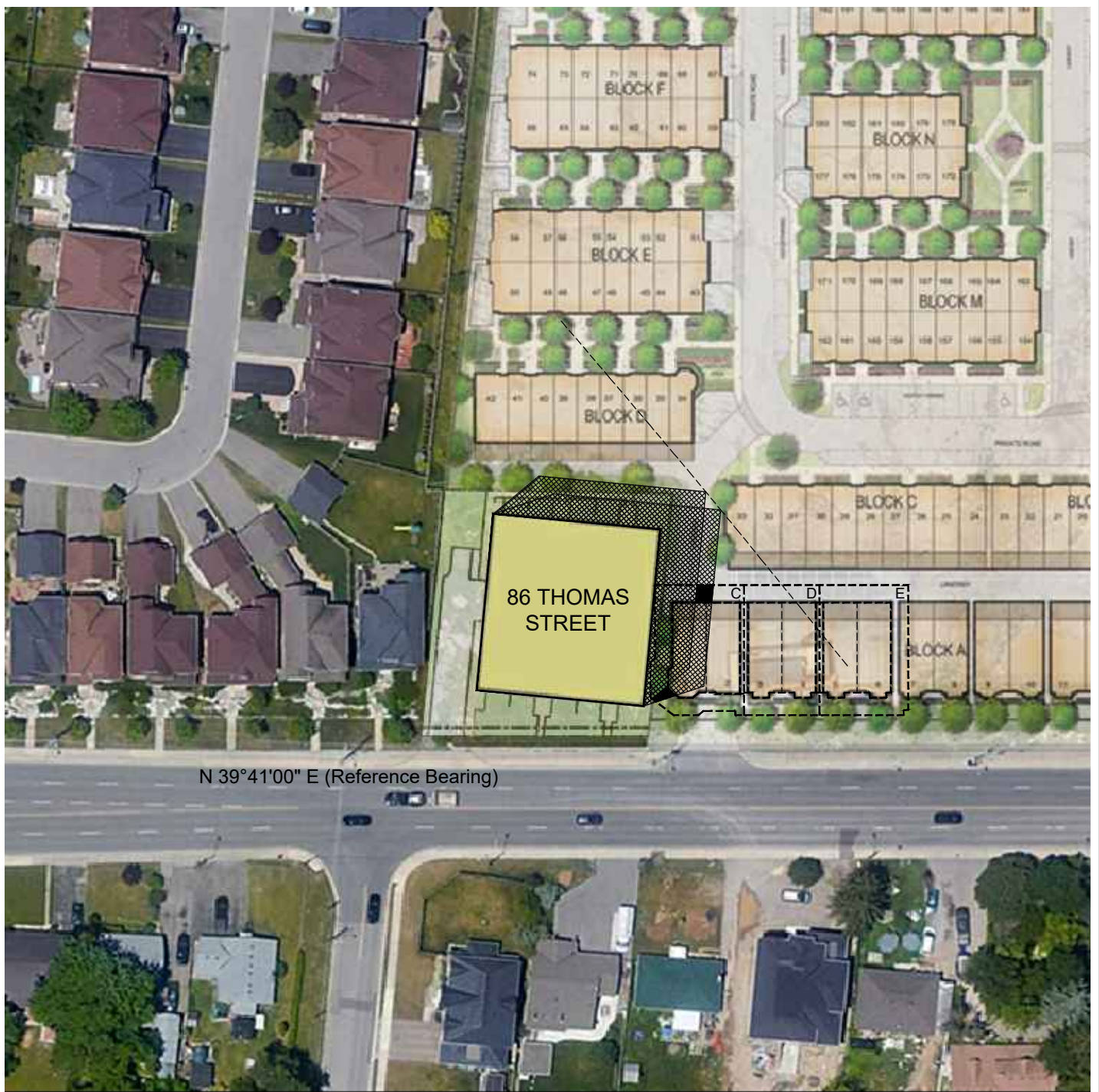
Shadow Impact on Semi-Detached Dwellings adjacent to the east

September 21 12:12 to 13:12 EDT

No Impact Zone Area C = 142.72 m².
 18.07 m² (12.66 %) has 1 additional hour of shadow.

Scale: 1:1000





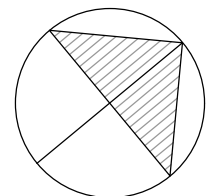
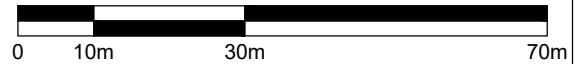
N 39°41'00" E (Reference Bearing)

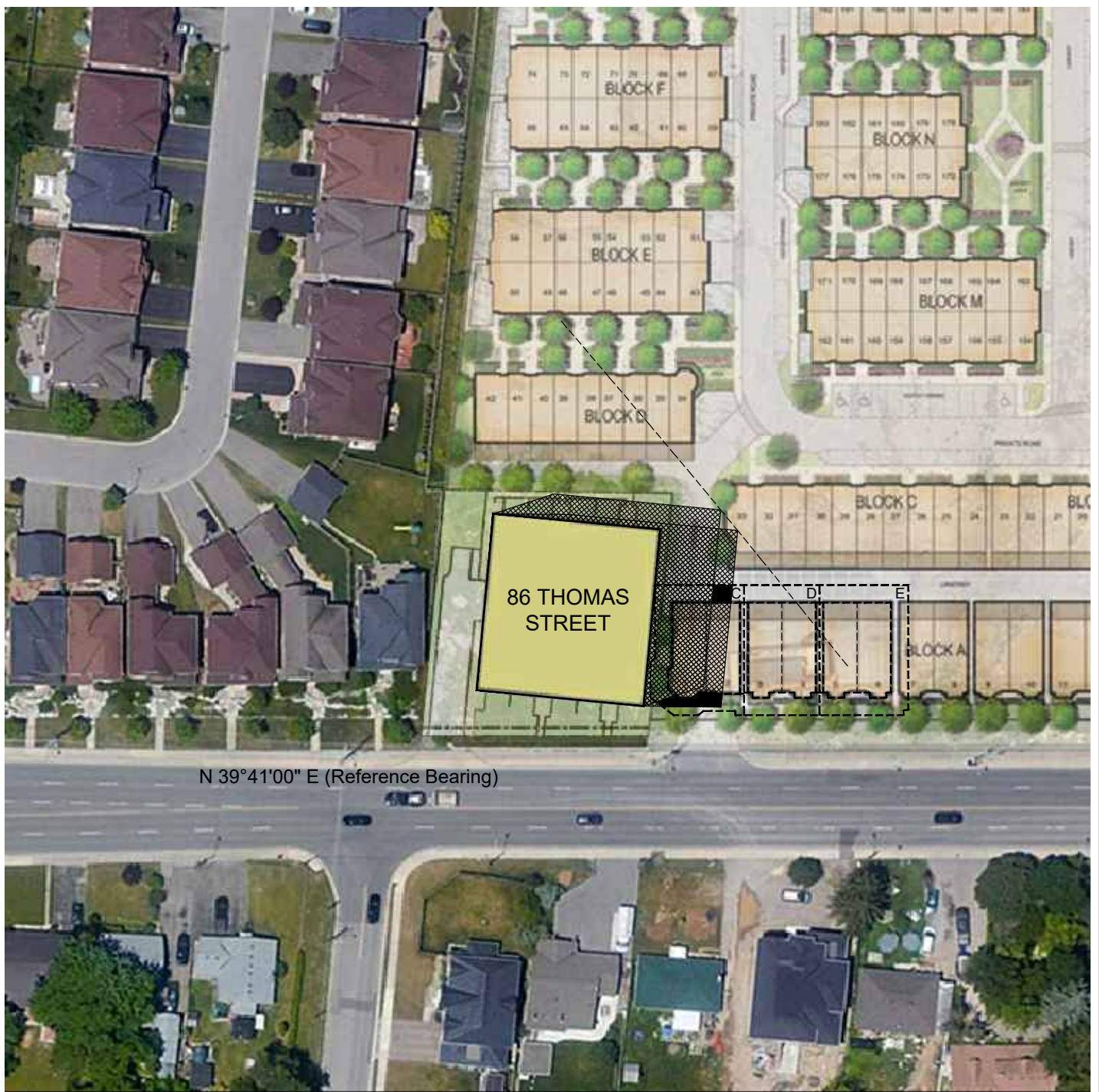
Shadow Impact on Semi-Detached Dwellings adjacent to the east

September 21 13:12 to 14:12 EDT

No Impact Zone Area C = 142.72 m².
 13.35 m² (9.35 %) has 1 additional hour of shadow.

Scale: 1:1000





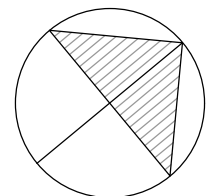
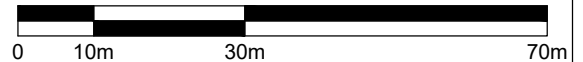
N 39°41'00" E (Reference Bearing)

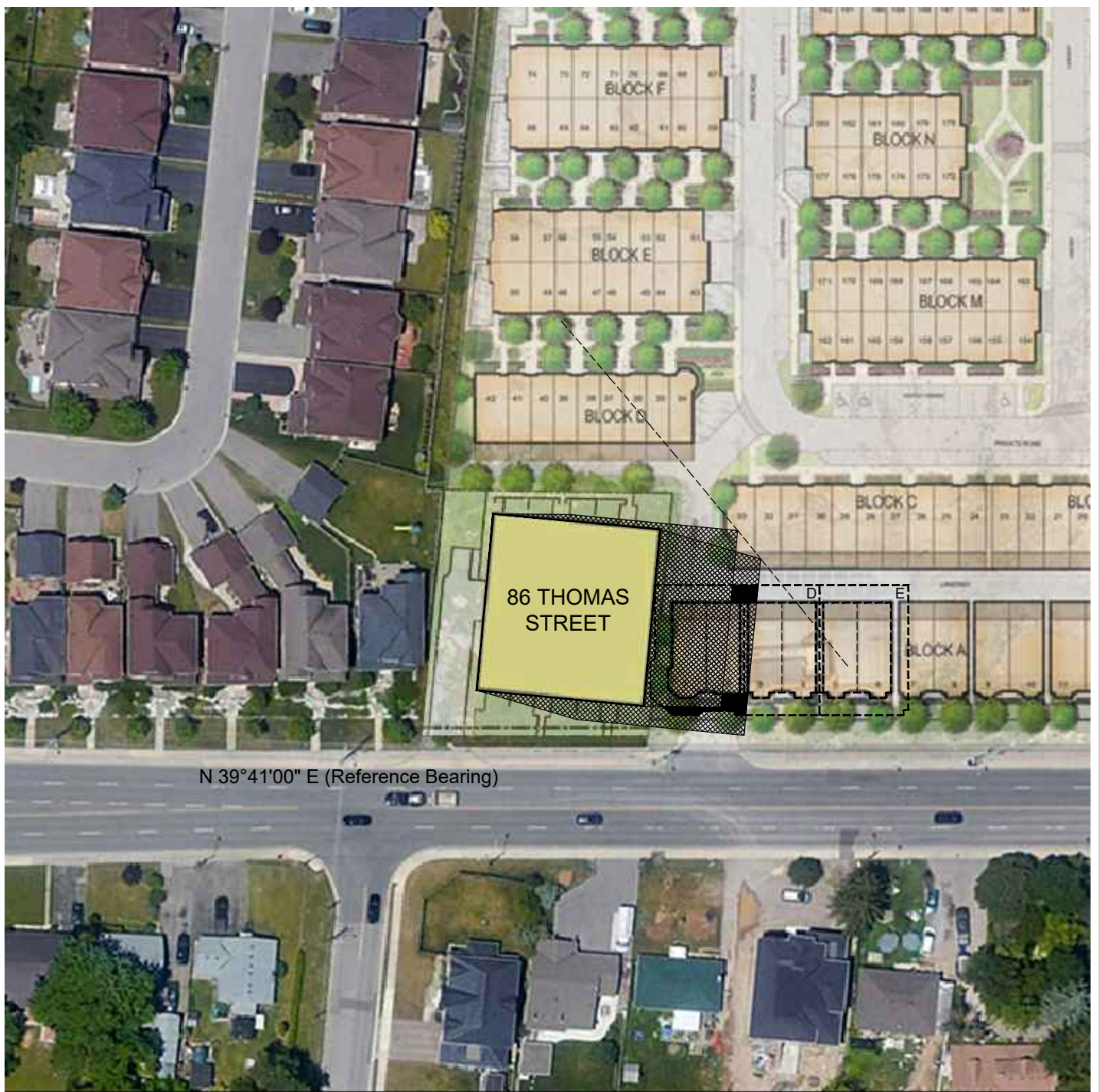
Shadow Impact on Semi-Detached Dwellings adjacent to the east

September 21 14:12 to 15:12 EDT

No Impact Zone Area C = 142.72 m²
 30.16 m² (21.13 %) has 1 additional hour of shadow.

Scale: 1:1000





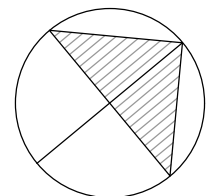
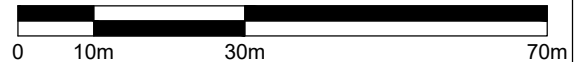
N 39°41'00" E (Reference Bearing)

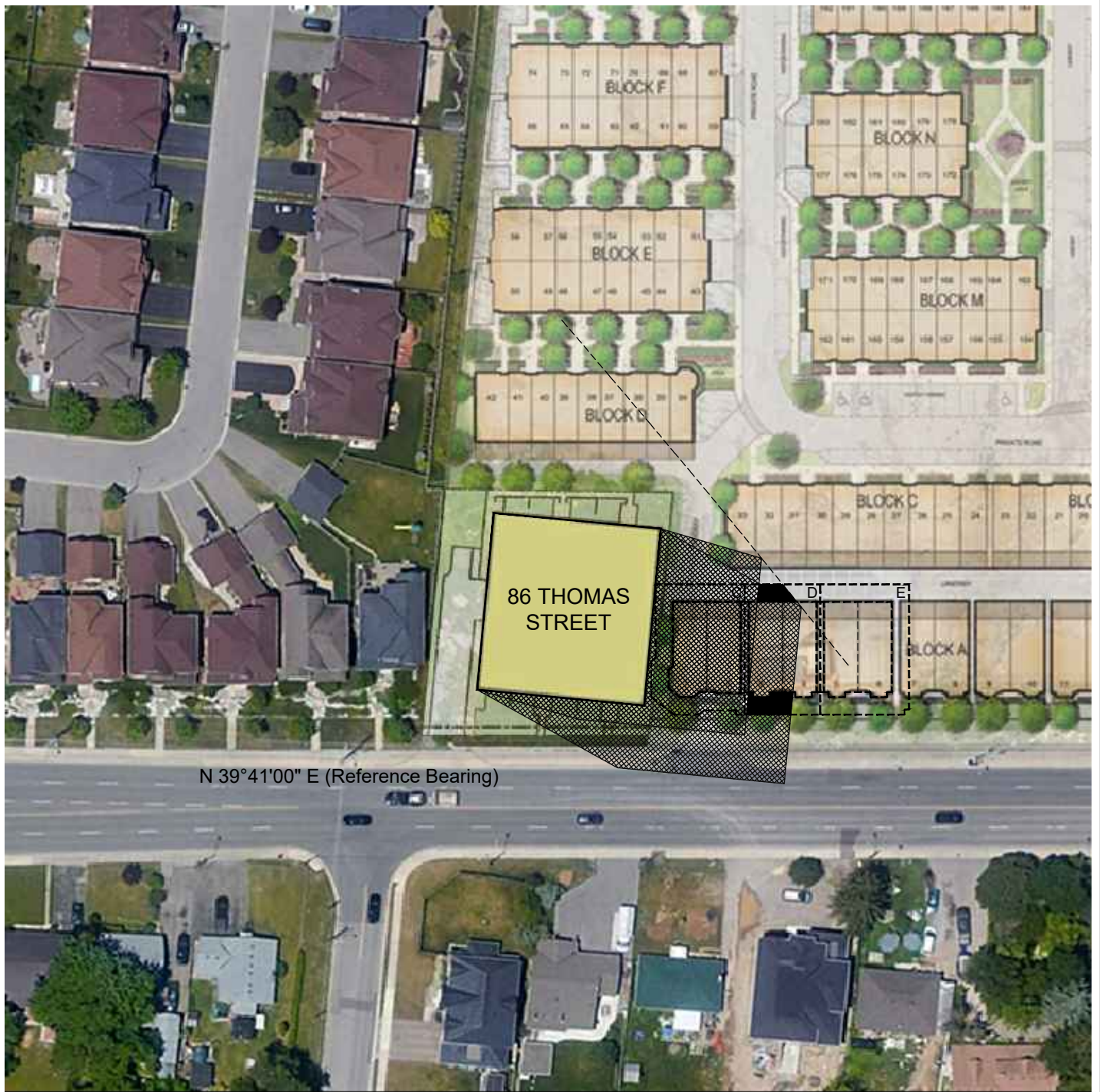
Shadow Impact on Semi-Detached Dwellings adjacent to the east

September 21 15:12 to 16:12 EDT

No Impact Zone Area C = 142.72 m²
 30.00 m² (21.02 %) has 1 additional hour of shadow.
 No Impact Zone Area D = 84.55 m²
 8.82 m² (10.43 %) has 1 additional hour of shadow.

Scale: 1:1000





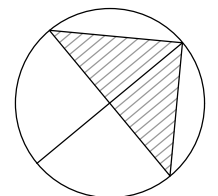
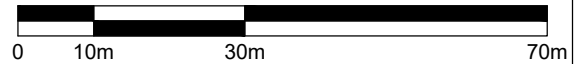
N 39°41'00" E (Reference Bearing)

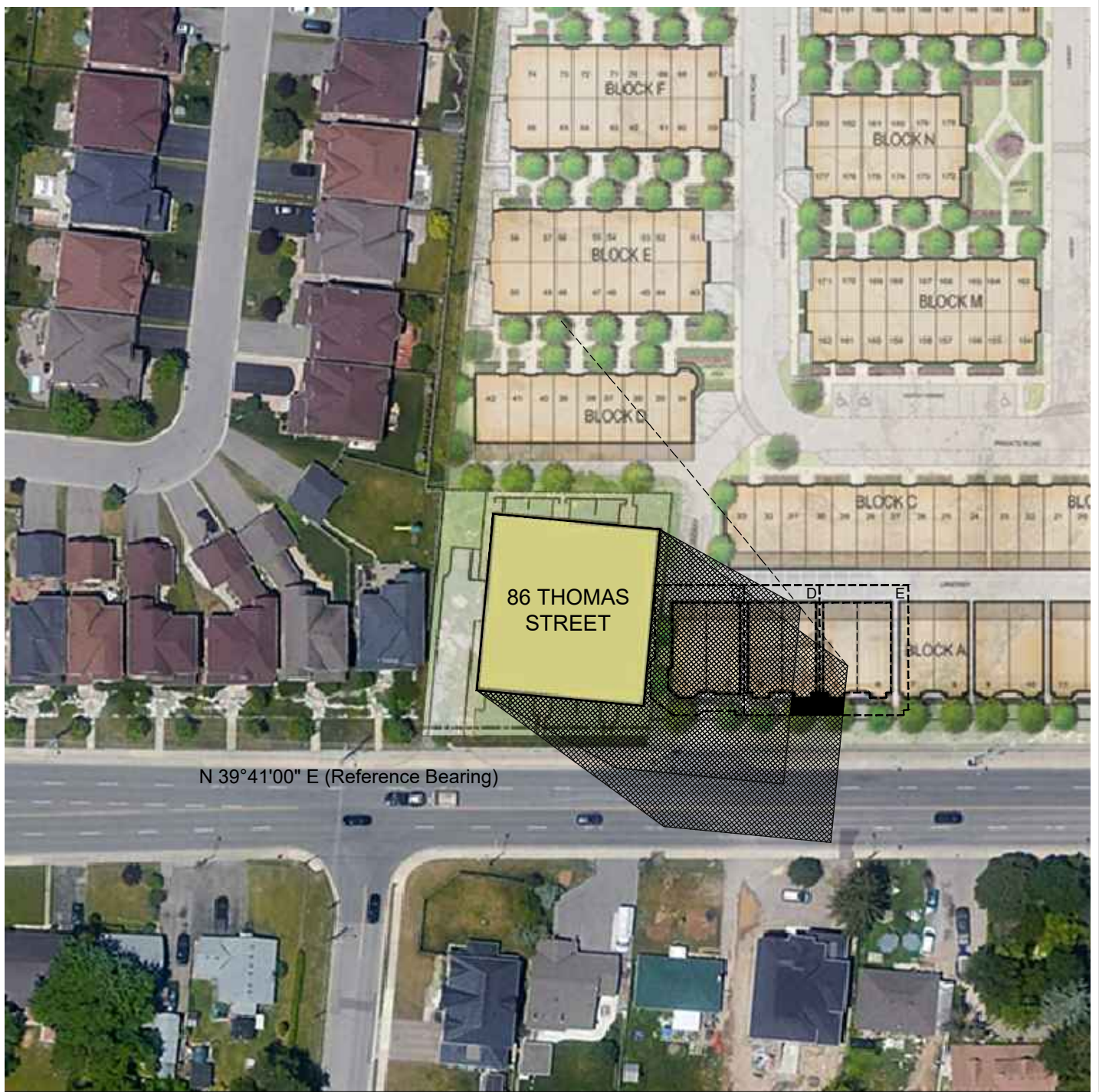
Shadow Impact on Semi-Detached Dwellings adjacent to the east

September 21 16:12 to 17:12 EDT

No Impact Zone Area D = 84.55 m²
 43.48 m² (51.43 %) has 1 additional hour of shadow.

Scale: 1:1000





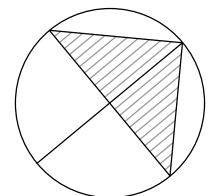
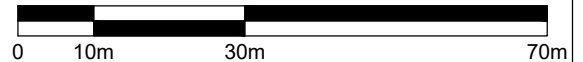
N 39°41'00" E (Reference Bearing)

Shadow Impact on Semi-Detached Dwellings adjacent to the east

September 21 17:12 to 17:48 EDT

No Impact Zone Area D = 84.55 m²
 16.42 m² (19.42 %) has 36 additional minutes of shadow.
 No Impact Zone Area E = 146.38 m²
 13.88 m² (9.48 %) has 36 additional minutes of shadow.

Scale: 1:1000



Shadow Study

86 Thomas Street, Mississauga, Ontario