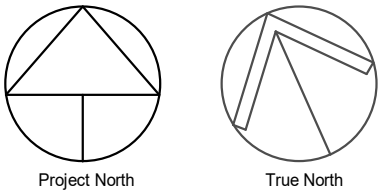


SHADOW STUDY

785 GORDON ST, GUELPH, ON



PROPOSAL DETAILS

Lot Area: 8,462.20 m²
Building Area: 3,330 m²
Gross Floor Area: 28,877.44 m²
Building Height: 30.0 m

SITE CONDITIONS

The following shadow studies demonstrates the shadow impacts of the proposed development during the Spring, Fall, Summer, Winter on the dates & times as shown. Daylight savings time is being considered and accounted for.

The shadow impact study is required to take place from 8:00am until 7:00pm at hourly intervals at the times and dates specified per the the *Sun and Shadow Study Terms of Reference by the City of Guelph*, dated May 2019. Daylight savings is taken into consideration during the shadow studies as per the parameters used in the observation software but an additional hr of observation times were added from Spring to Fall mornings as well as an extra measure of observation.

Currently, the proposed site has a building comprised of a 2-storey hotel. The property is located in a SC.1-11 zoning site.

The proposed building is a 10-Storey residential building consisting of 389 units and 586.46m² of Commercial Area at ground level.

COORDINATES

Latitude: N43 degrees: 31' 29.2"
Longitude: W80 degrees:13' 13.8"

Sun Altitude: 34.15 Degrees

SPRING	April 21 Sunrise:	±6:27am
	April 21 Sunset:	±8:11pm
SUMMER	June 21 Sunrise:	±5:39am
	June 21 Sunset:	±9:05pm
FALL	September 21 Sunrise:	±7:07am
	September 21 Sunset:	±7:20pm
WINTER	December 21 Sunrise:	±8:50am
	December 21 Sunset:	±5:47am

TEST DATES & TIMES

April 21: 8:00am hourly until 6:00pm*
June 21: 8:00am hourly until 7:00pm*
September 12: 7:00 hourly until 5:00pm*
December 21: 10:00am hourly until 3:00pm

*An additional hr observation included Spring-Fall as an extra measure of observation in addition to the settings used that use daylight savings time in the analysis software used.

STUDY AREA



Google satellite image of proposed site

SOURCE OF BASE MAPPING

3D Modeling in Revit was used with sun exposure parameters as per the location data & coordinates as shown here.

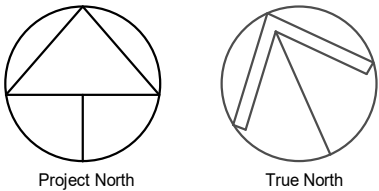
SHADOW STUDIES
785 GORDON STREET

21017
02/18/22
REVIEW



SHADOW STUDY

785 GORDON ST, GUELPH, ON



ANALYSIS CRITERIA

The proposed development MEETS the following criteria as per the *Sun and Shadow Study Terms of Reference by the City of Guelph*:

1. **Residential Amenity Spaces** - Met if Incremental Shadows occur for no more than two consecutive test times.
2. **Children's Play Spaces** - Met if the Sun Access Factor is at least 50% on each of the test dates. Incremental Shadows cast on any school yards, tot-lots, play areas and park features shall be assessed.
3. **Public Realm (Sidewalks)** - Met if no Incremental Shadow on opposite sidewalks at 12, 1, and 2pm and at any two consecutive times in each of AM and PM groups or three (3) consecutive times in either the AM or PM group.
4. **Public Realm (Public Open Space & Plazas)** - Met if Sun Access Factor is at least 50% on September 21. Incremental Shadows cast on public open spaces or plazas shall be assessed.
5. **Community Gardens and Public Park Gardens** - Met if full sun provided on any 7 test times on September 21.
6. **Cultural heritage resources** - Met if no incremental shadows fall on identified cultural heritage resources on any of the test dates and times (*Notes: Impacts assessed on case-by-case basis).

VISUAL CRITERIA REVIEW

The proposed development MEETS the following criteria as per the *Sun and Shadow Study Terms of Reference by the City of Guelph*:

- **Children's Play Spaces**
- **Public Realm (Public Open Space & Plazas)**
- **Community Gardens and Public Park Gardens**
- **Cultural heritage resources**

The proposed development DOES NOT MEET and requires further review of the following criteria as per the *Sun and Shadow Study Terms of Reference by the City of Guelph*:

- **Residential Amenity Spaces**

Both Harvard Dr & Gordon St need to be assessed. Public Plaza location to be assessed.

- **Public Realm (Sidewalks)**

Following diagrams to be assessed:

1. Spring 7am* - across Harvard Dr.
2. Spring 8am - across Harvard Dr.
3. Spring 9am - across Harvard Dr.
4. Spring 10am - across Harvard Dr.
5. Summer 7am* - across Harvard Dr.
6. Summer 8am - across Harvard Dr.
7. Summer 9am - across Harvard Dr.
8. Winter 10am - across Harvard Dr. & Gordon St.
9. Winter 11am - across Harvard Dr. & Gordon St.
10. Winter 12pm - across Harvard Dr. & Gordon St.
11. Winter 1pm - across Harvard Dr. & Gordon St.
12. Winter 2pm - across Harvard Dr. & Gordon St.
13. Winter 3pm - across Harvard Dr. & Gordon St.

OBSERVATIONS

The proposed development shows the following:

- **Minor impact** of shadows on the residential buildings East from the development during summer evenings 1h prior to sunset.
- **Impact** of shadows on the residential buildings North of the development across Gordon St. for 1h Winter morning, 1h Winter afternoon.
- **Minor impact** of shadow on the residential buildings North across from the development on Gordon St. Winter afternoons for 4h.
- **Impact** of shadow on the commercial development across from the development on Harvard Rd. 2h Spring morning, 1h Summer morning, 3h Fall morning, 3h Winter morning.
- **Minor impact** of shadows on the commercial (medical) building Southwest of the development 2h Spring mornings, 2h Summer mornings.

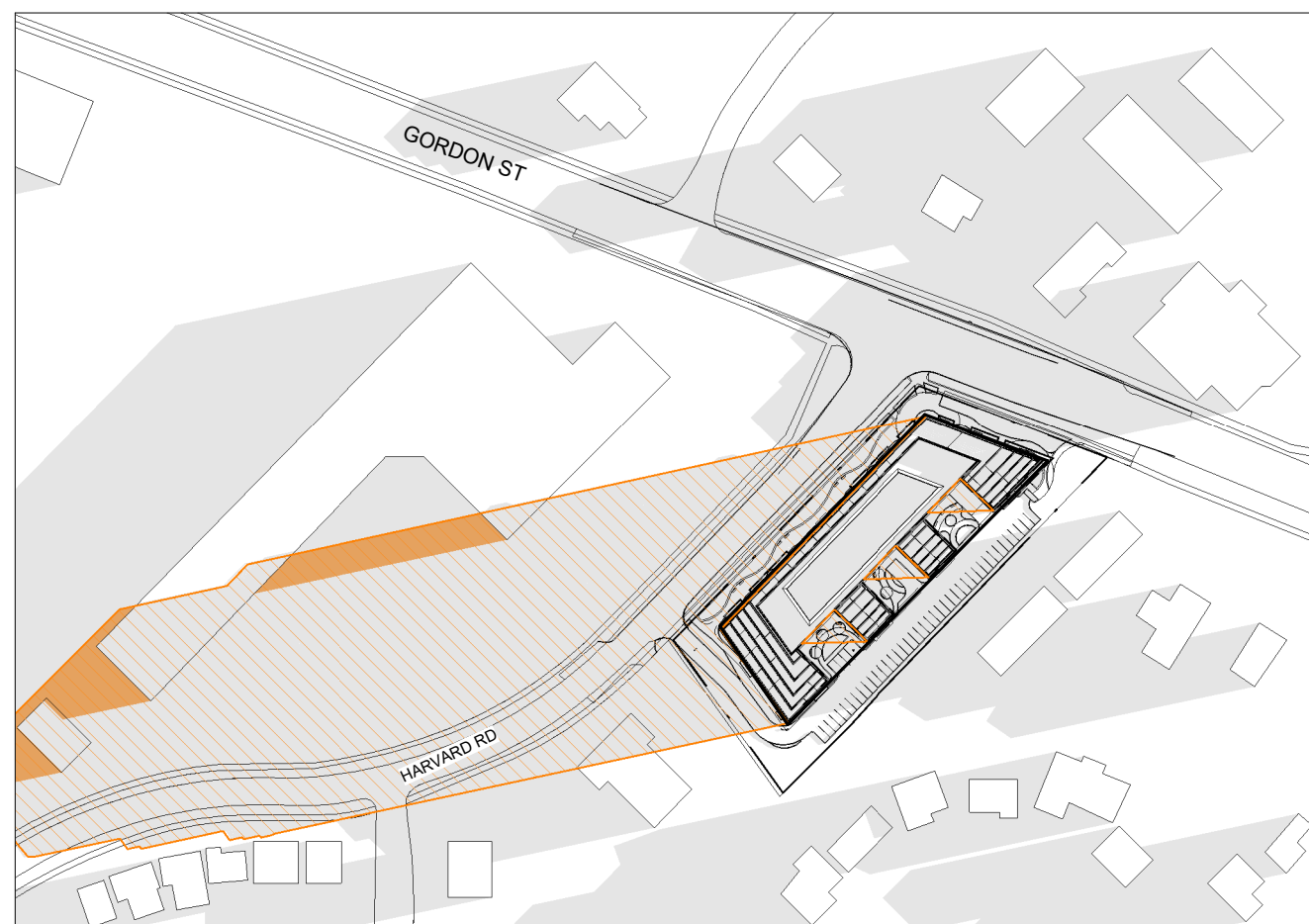
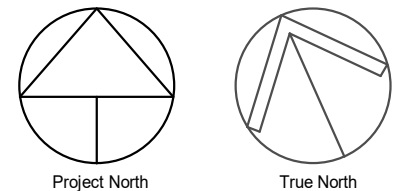
RESULTS

Based on the findings and upon analysis of the shadow study graphics, it is our opinion that the proposed development will generally not have a negative effect on the existing neighbourhood.

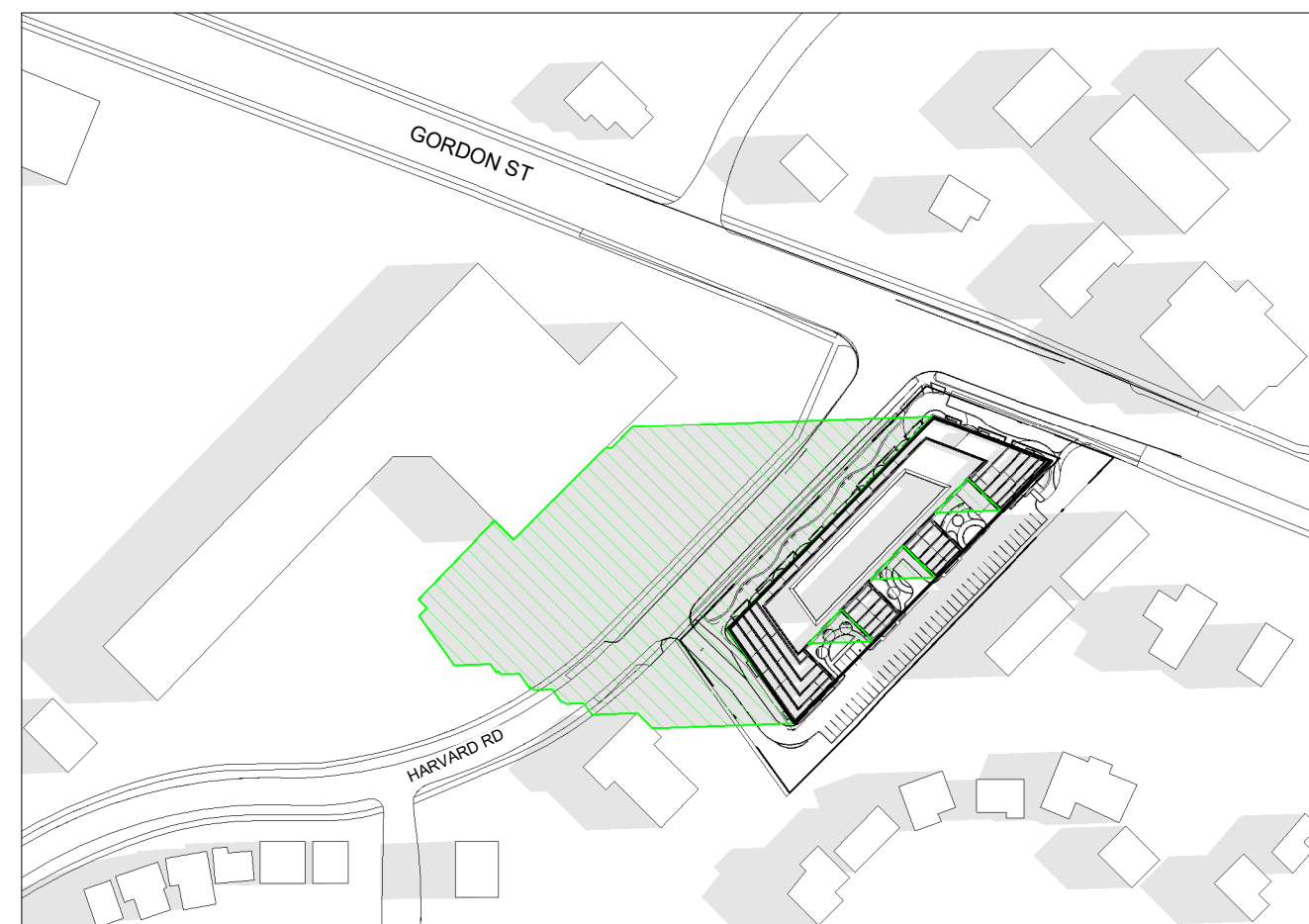
SHADOW STUDY - SUMMARY
785 GORDON STREET

21017
02/18/22
REVIEW







1 SHADOW STUDY - SPRING - 7AM*
1 : 2500





2 SHADOW STUDY - SPRING - 8AM
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

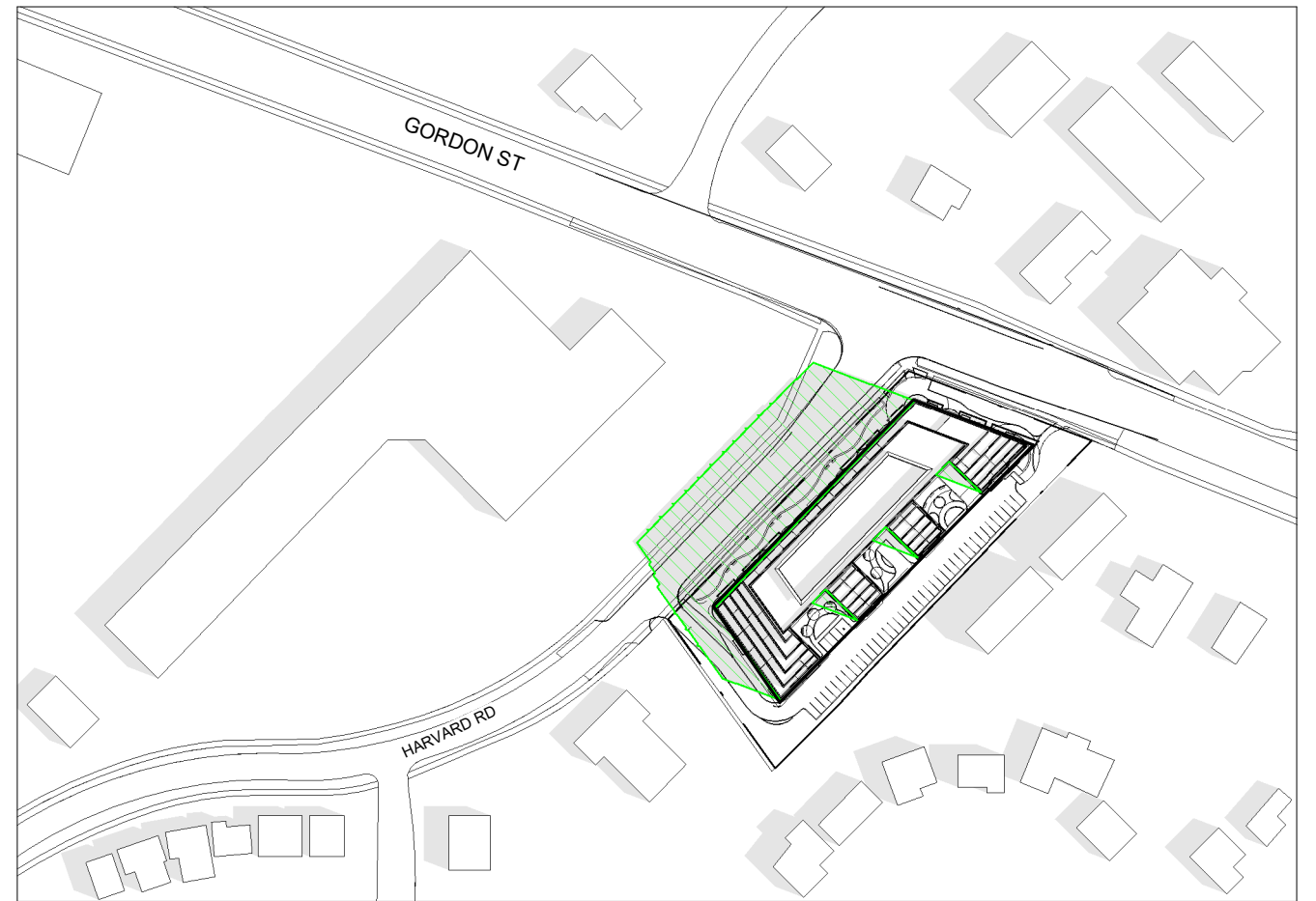
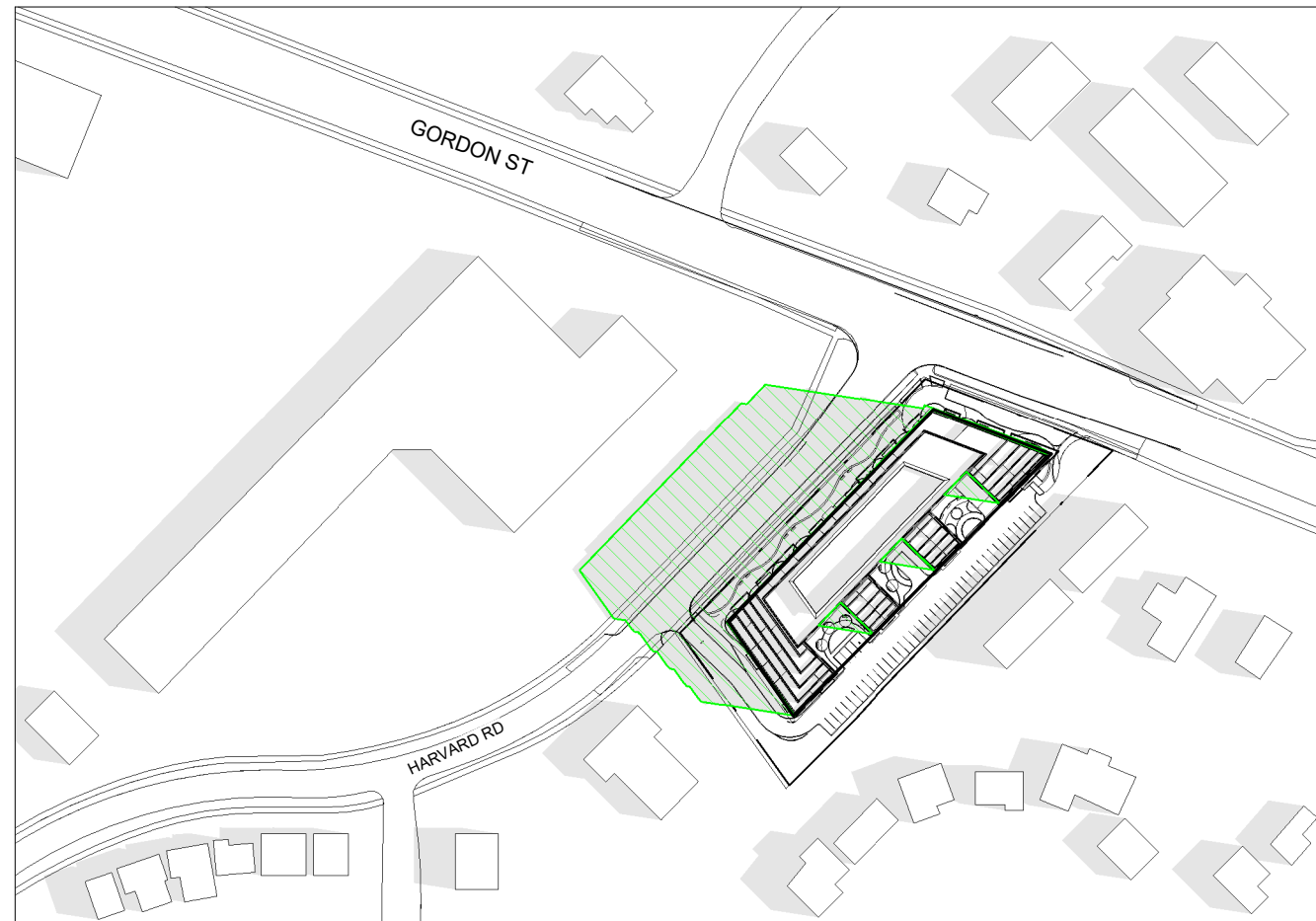
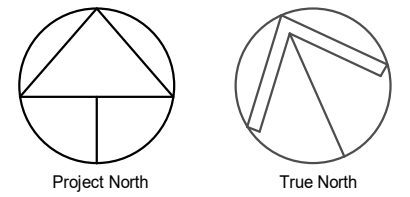
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SPRING SHADOW STUDIES
785 GORDON STREET

21017
02/18/22
REVIEW





1 **SHADOW STUDY - SPRING - 9AM**
1 : 2500

2 **SHADOW STUDY - SPRING - 10AM**
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



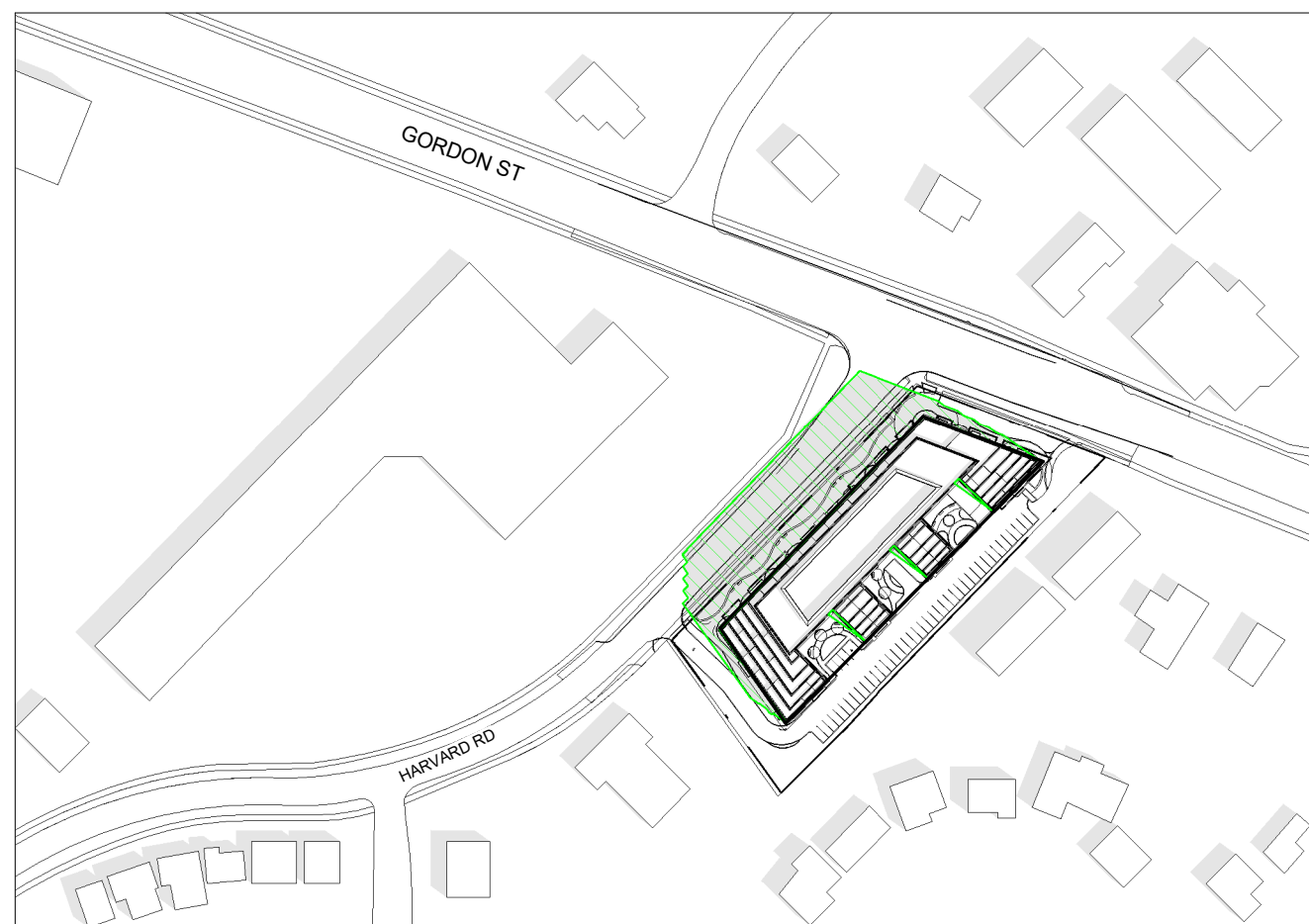
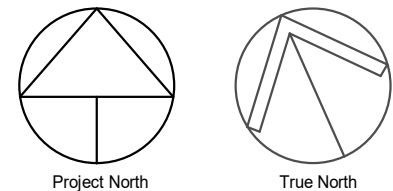
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SPRING SHADOW STUDIES 2
785 GORDON STREET

21017
02/18/22
REVIEW





1 **SHADOW STUDY - SPRING - 11AM**
1 : 2500



2 **SHADOW STUDY - SPRING - 12PM**
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



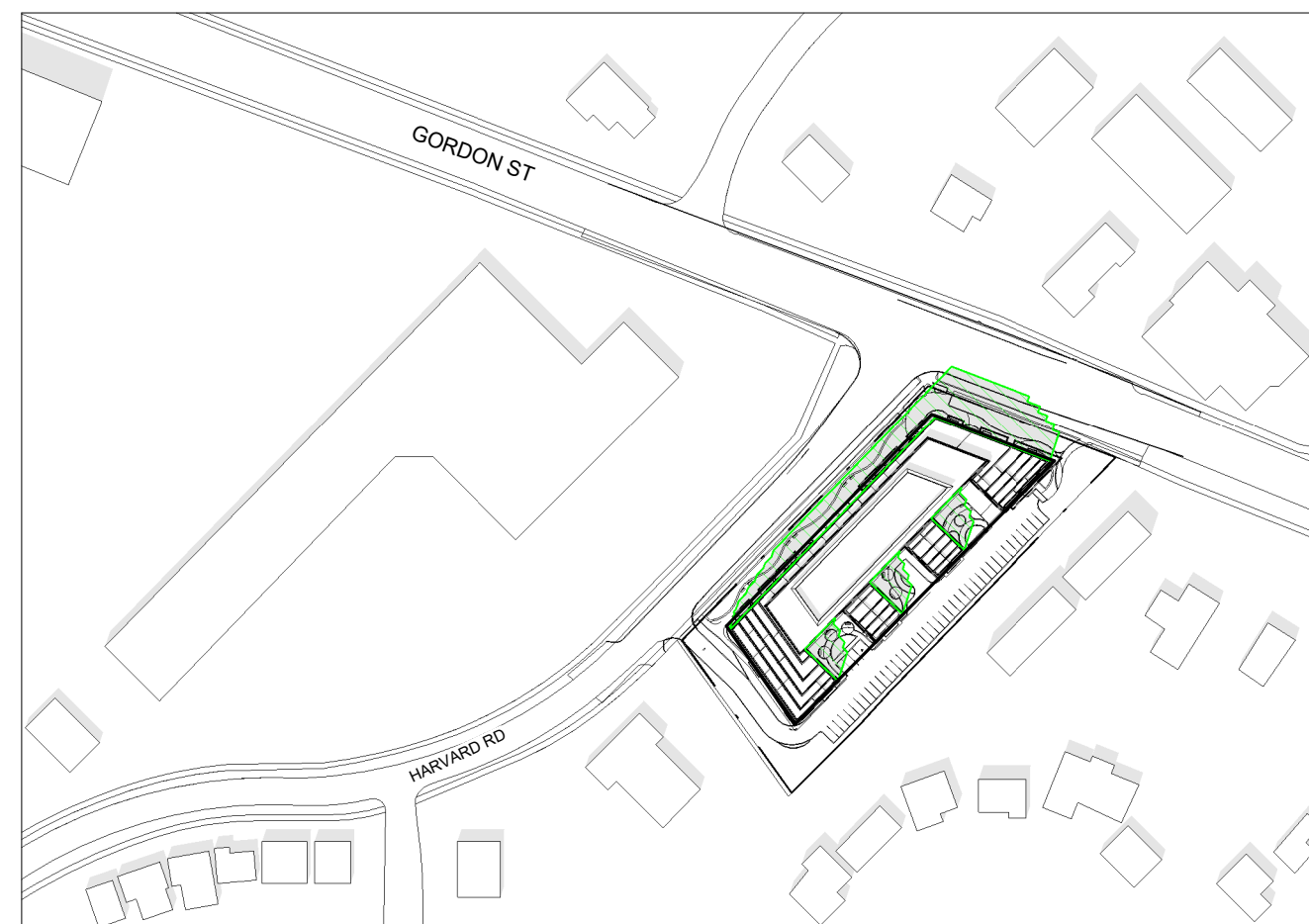
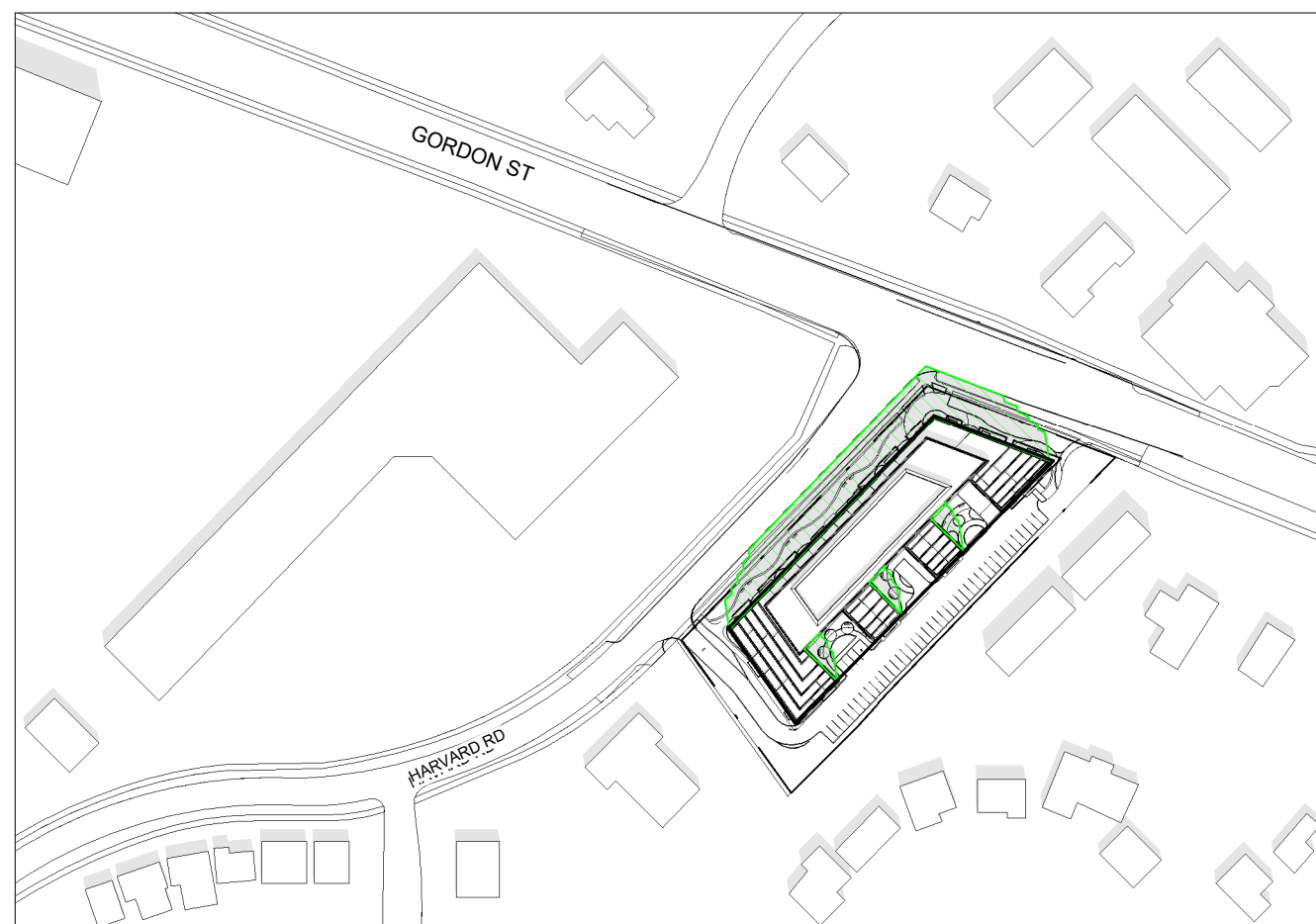
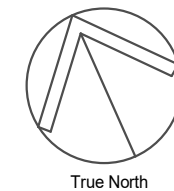
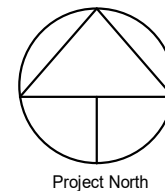
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SPRING SHADOW STUDIES 3
785 GORDON STREET

21017
02/18/22
REVIEW






1 **SHADOW STUDY - SPRING - 1PM**
1 : 2500


2 **SHADOW STUDY - SPRING - 2PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

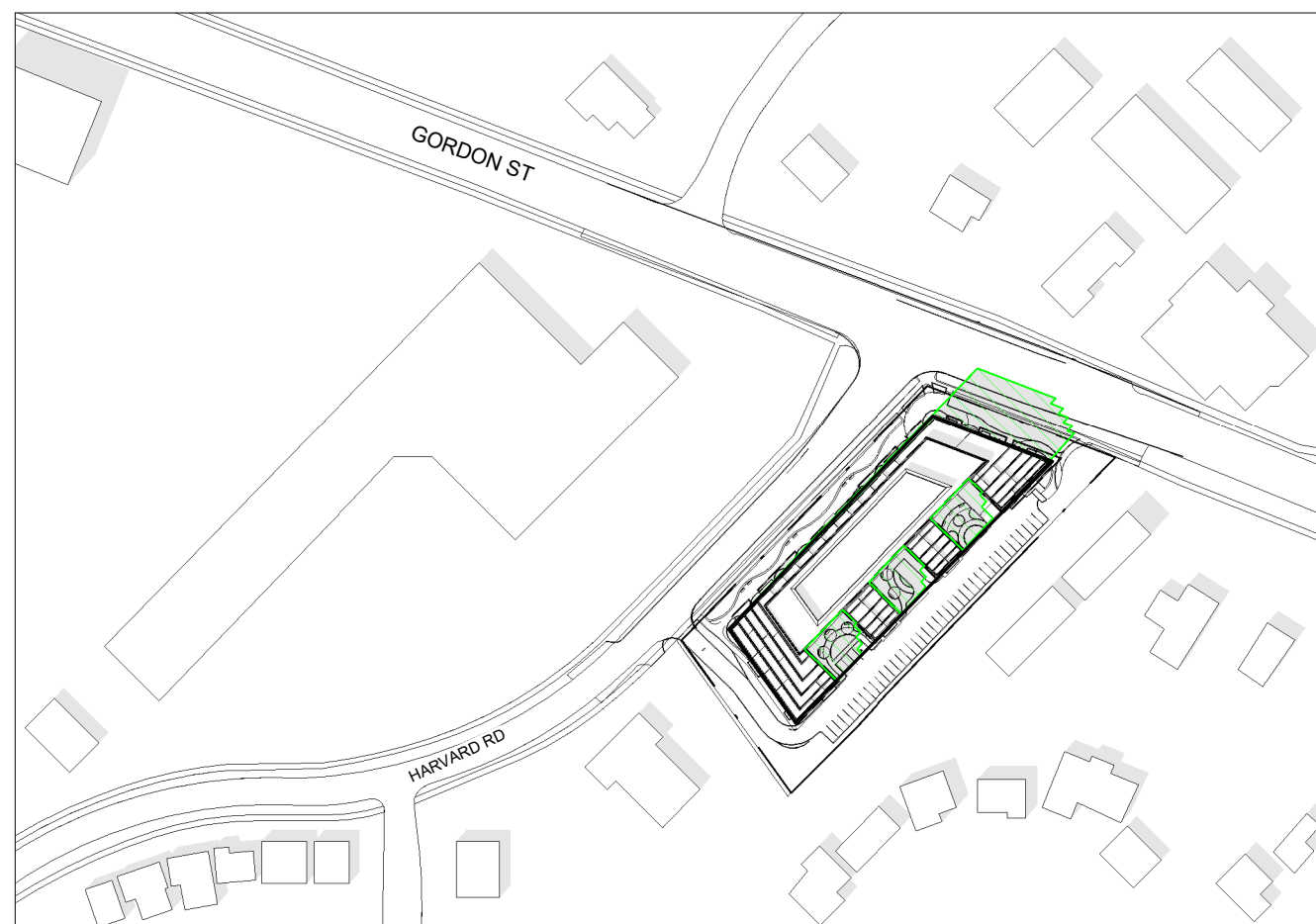
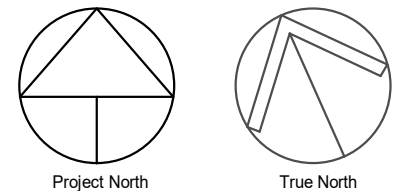
 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS

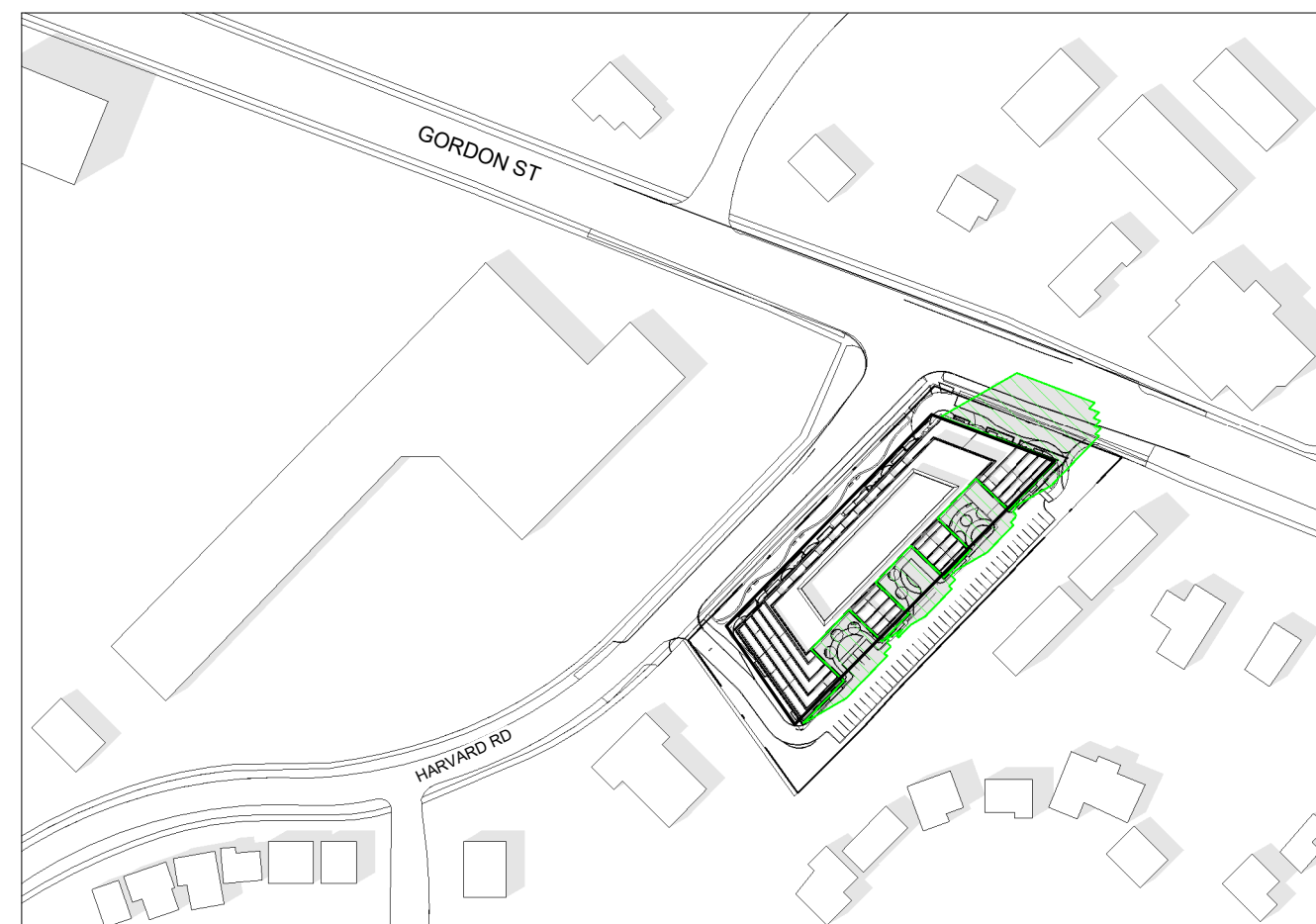


SPRING SHADOW STUDIES 4
785 GORDON STREET

21017
02/18/22
REVIEW



1 **SHADOW STUDY - SPRING - 3PM**
1 : 2500



2 **SHADOW STUDY - SPRING - 4PM**
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



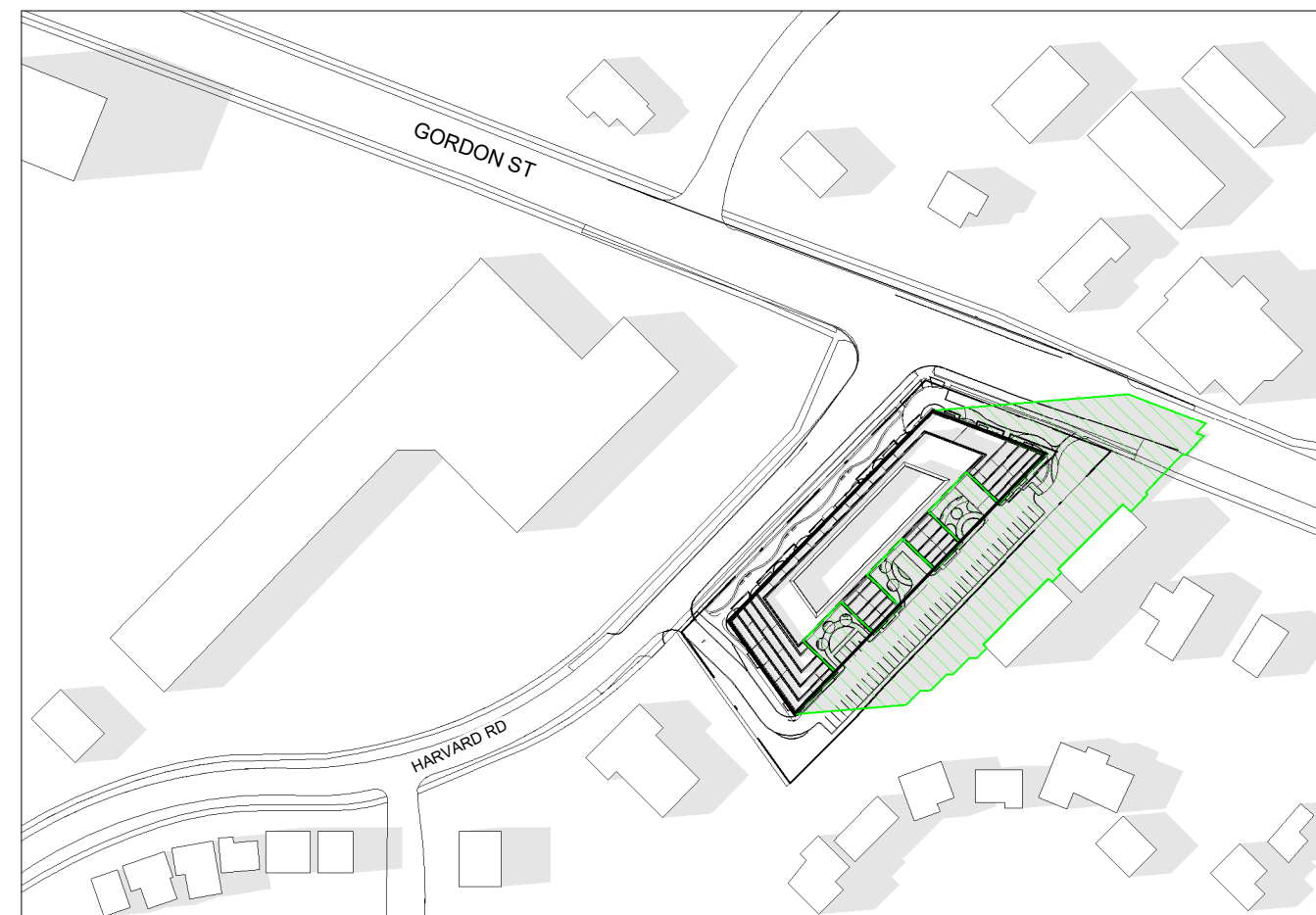
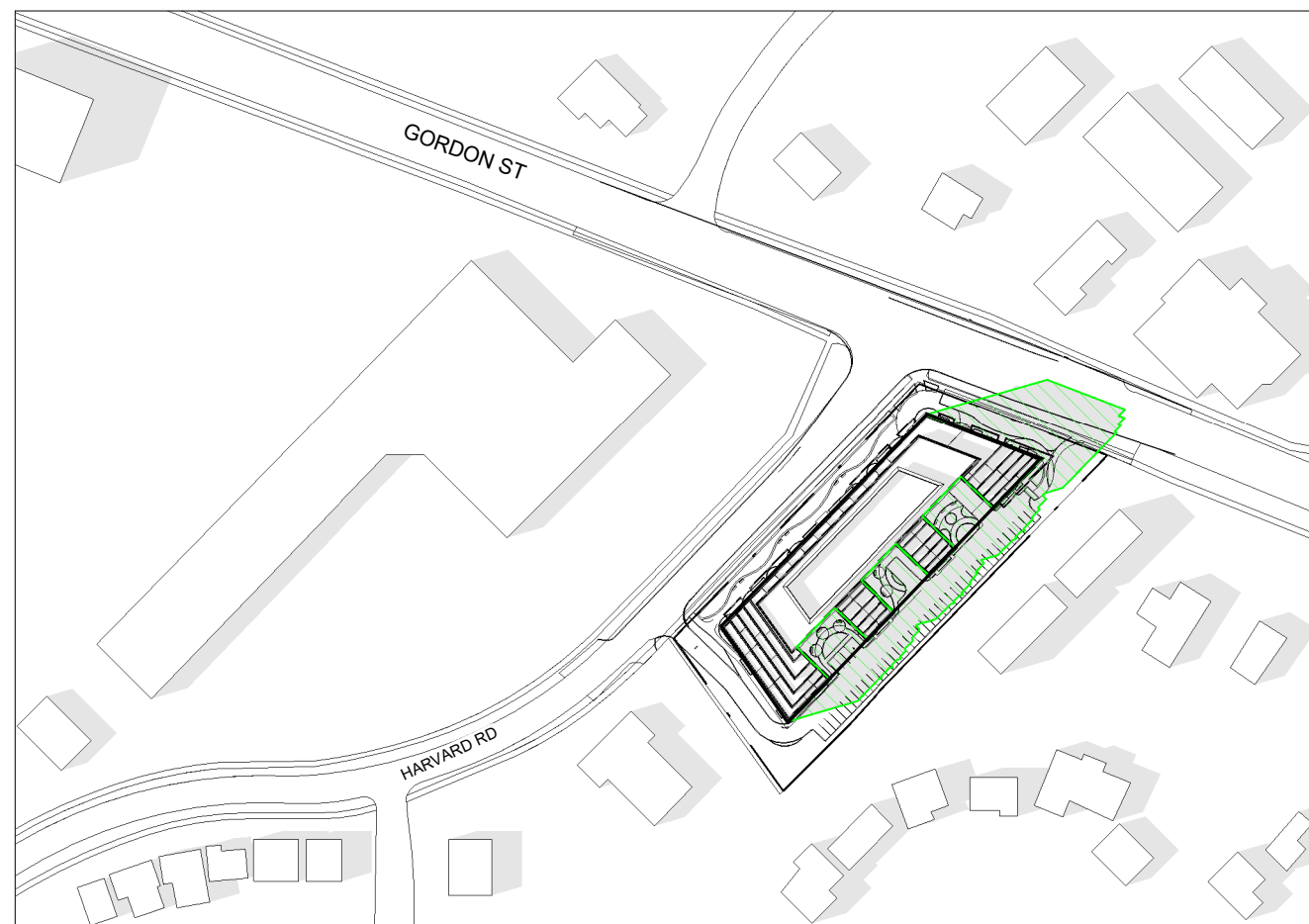
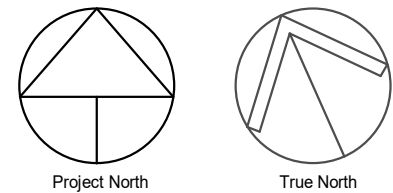
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SPRING SHADOW STUDIES 5
785 GORDON STREET

21017
02/18/22
REVIEW








1 **SHADOW STUDY - SPRING - 5PM**
1 : 2500


2 **SHADOW STUDY - SPRING - 6PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

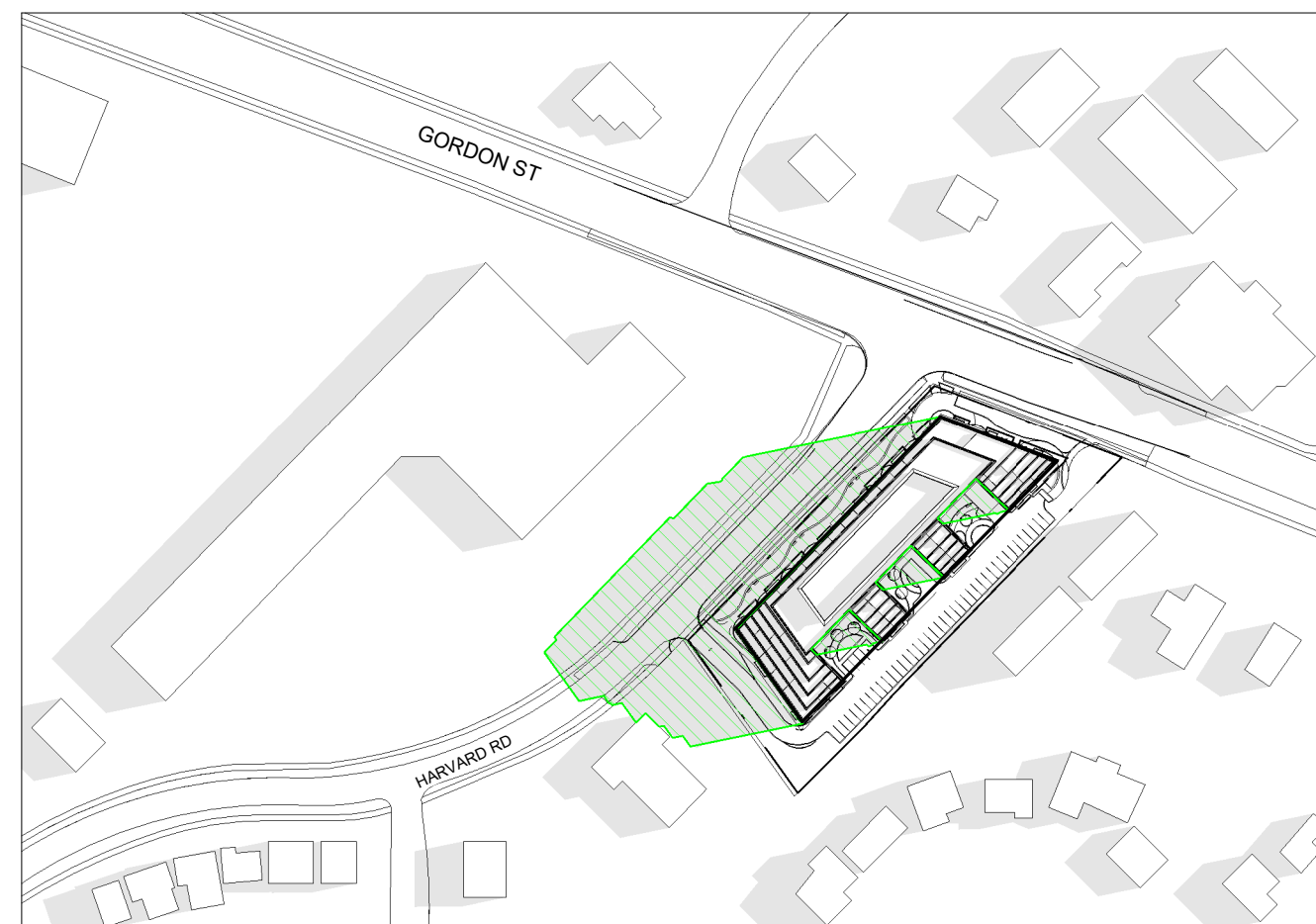
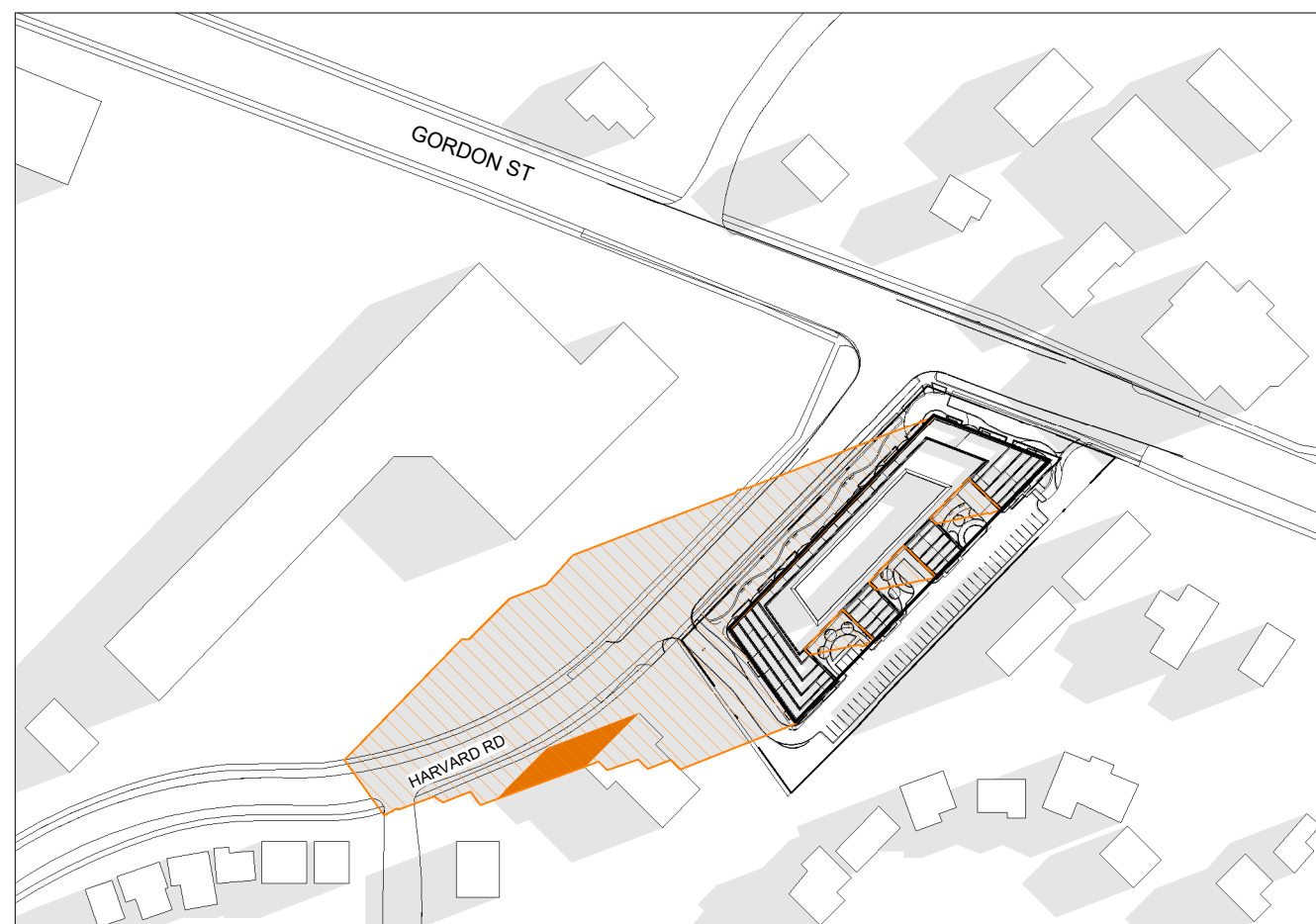
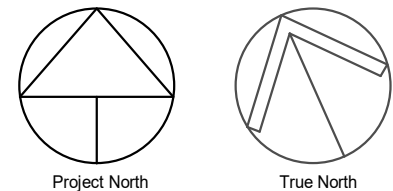
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SPRING SHADOW STUDIES 6
785 GORDON STREET

21017
02/18/22
REVIEW








1 **SHADOW STUDY - SUMMER SOLSTICE - 7AM***
1 : 2500


2 **SHADOW STUDY - SUMMER SOLSTICE - 8AM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

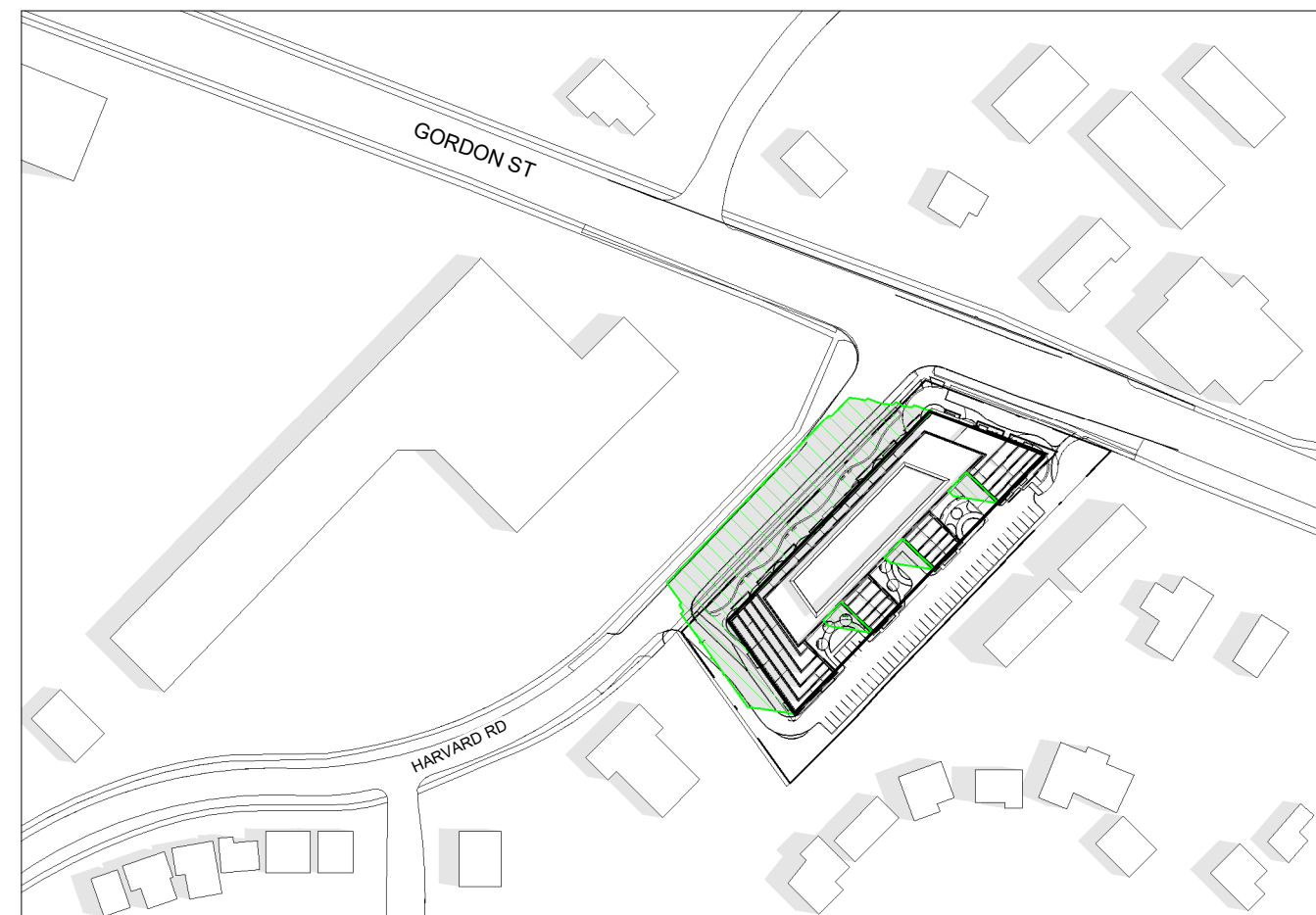
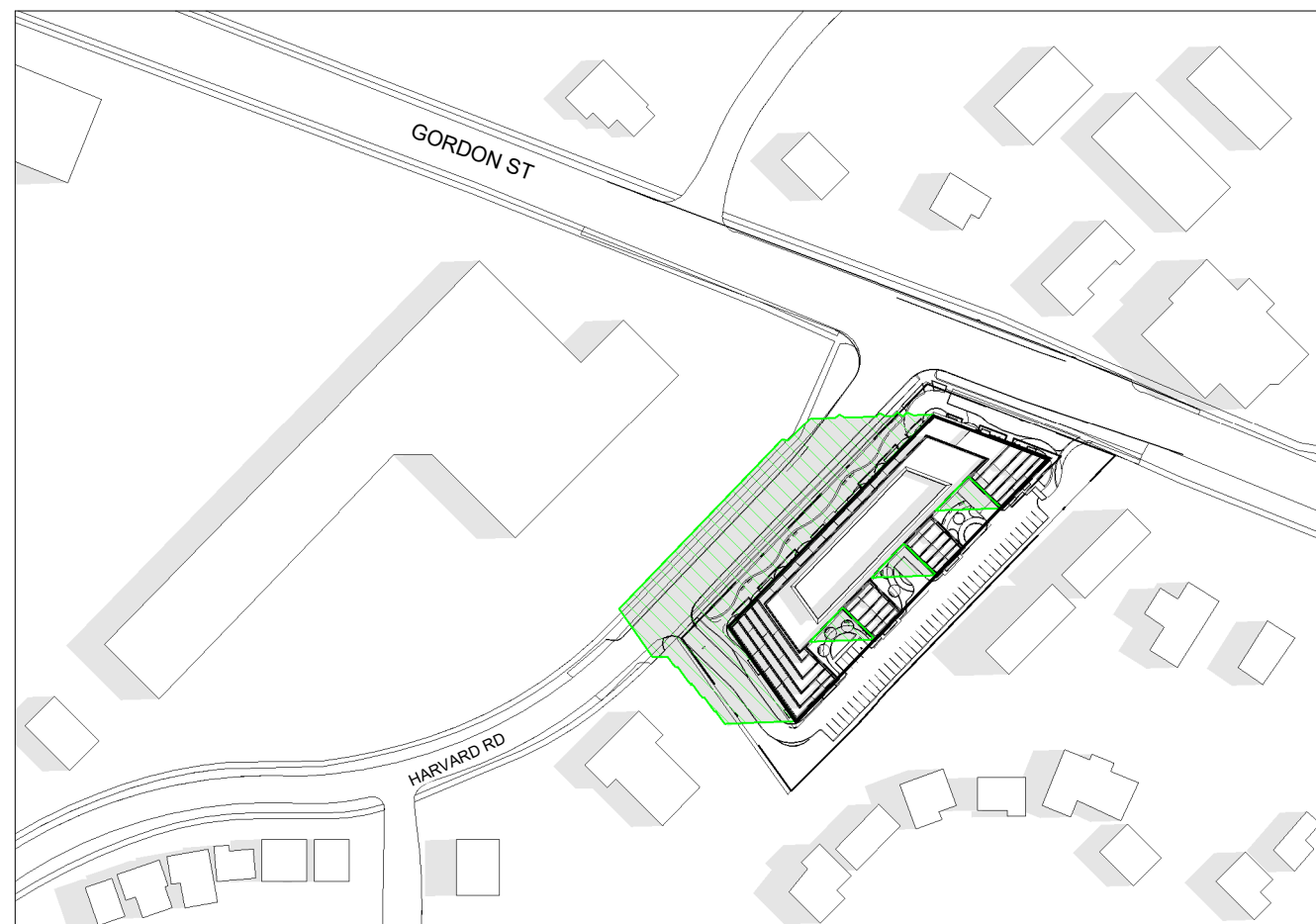
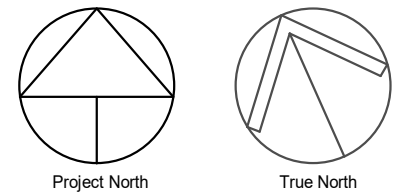
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SUMMER SHADOW STUDIES 1
785 GORDON STREET

21017
02/18/22
REVIEW








1 **SHADOW STUDY - SUMMER SOLSTICE - 9AM**
1 : 2500


2 **SHADOW STUDY - SUMMER SOLSTICE - 10AM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

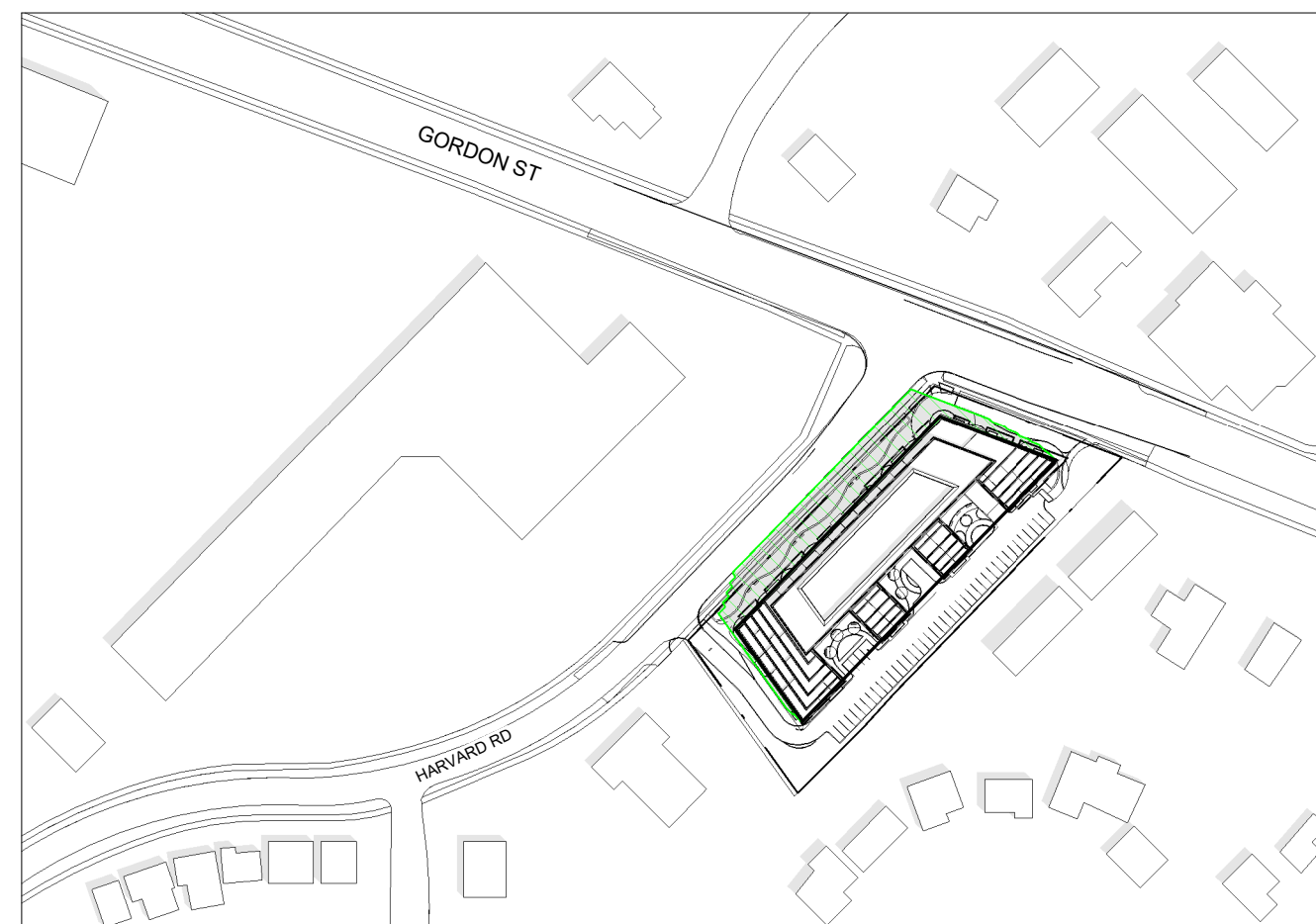
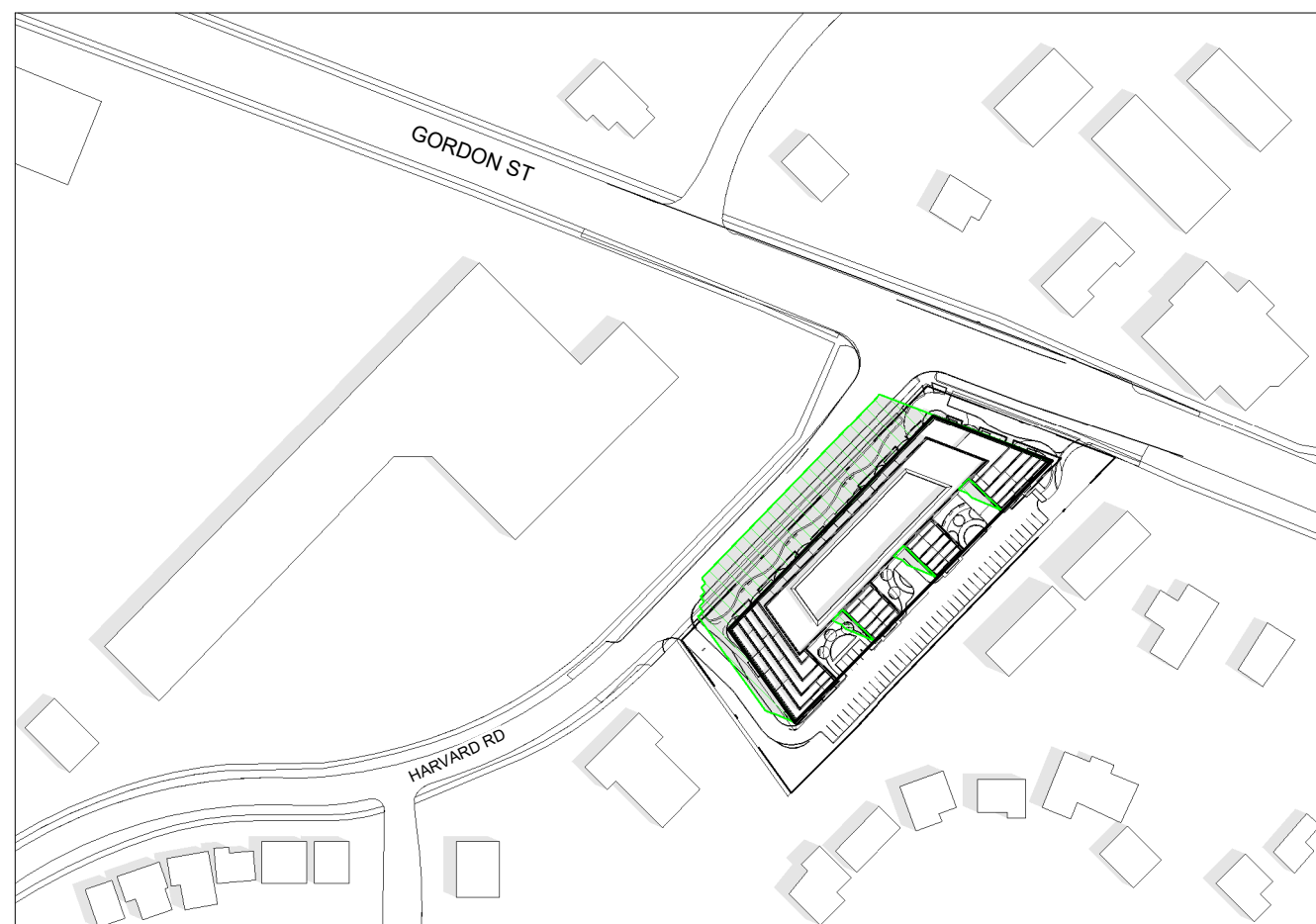
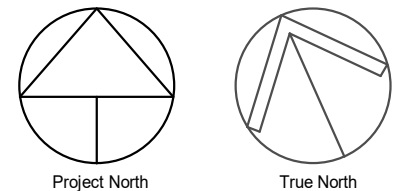
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SUMMER SHADOW STUDIES 2
785 GORDON STREET

21017
02/18/22
REVIEW








1 **SHADOW STUDY - SUMMER SOLSTICE - 11AM**
1 : 2500


2 **SHADOW STUDY - SUMMER SOLSTICE - 12PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

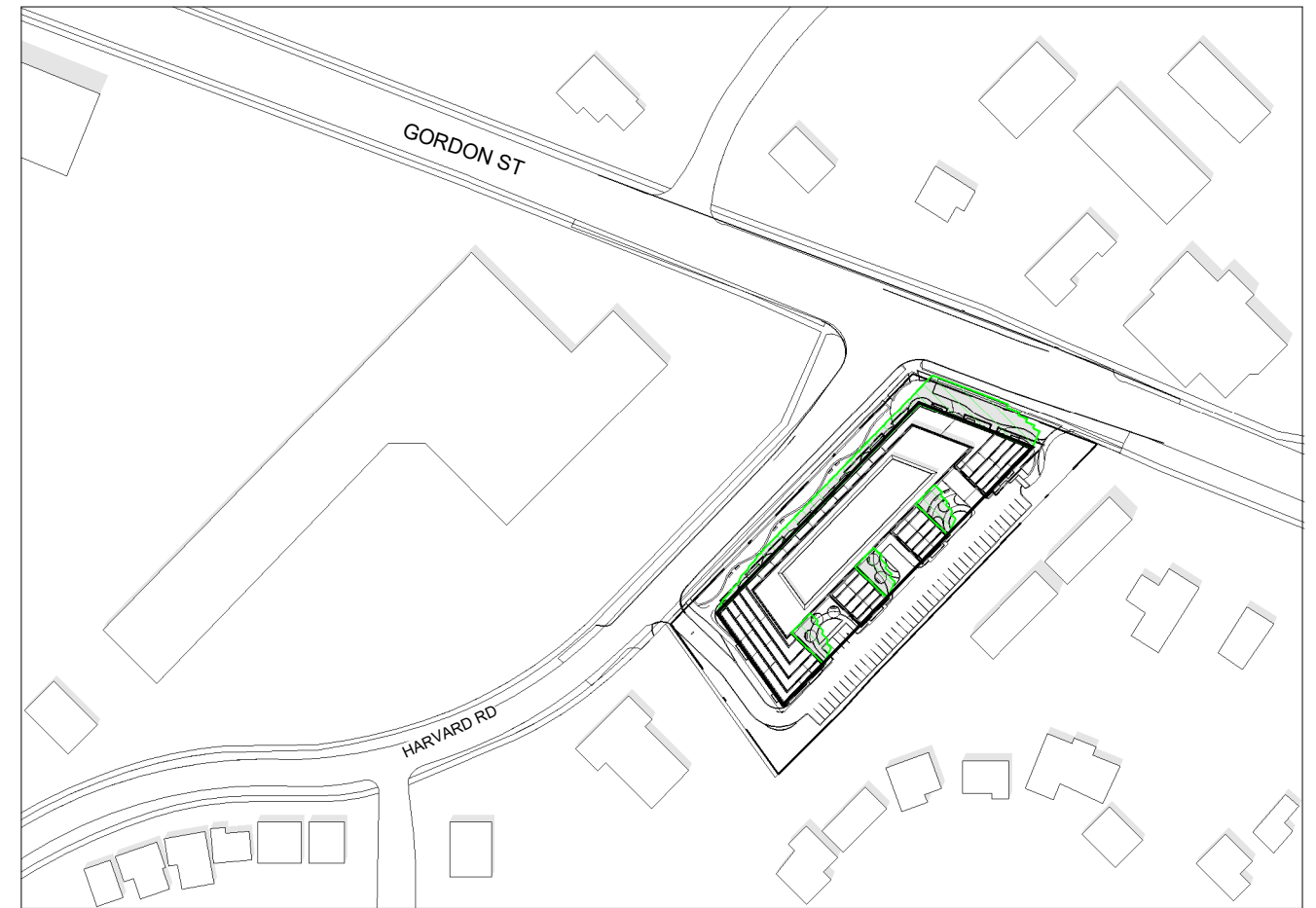
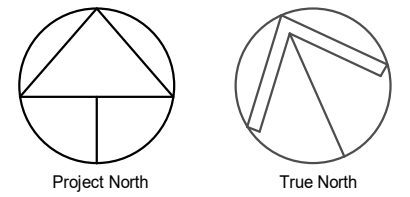
 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SUMMER SHADOW STUDIES 3
785 GORDON STREET


21017
02/18/22
REVIEW





1 **SHADOW STUDY - SUMMER SOLSTICE - 1PM**
1 : 2500


2 **SHADOW STUDY - SUMMER SOLSTICE - 2PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

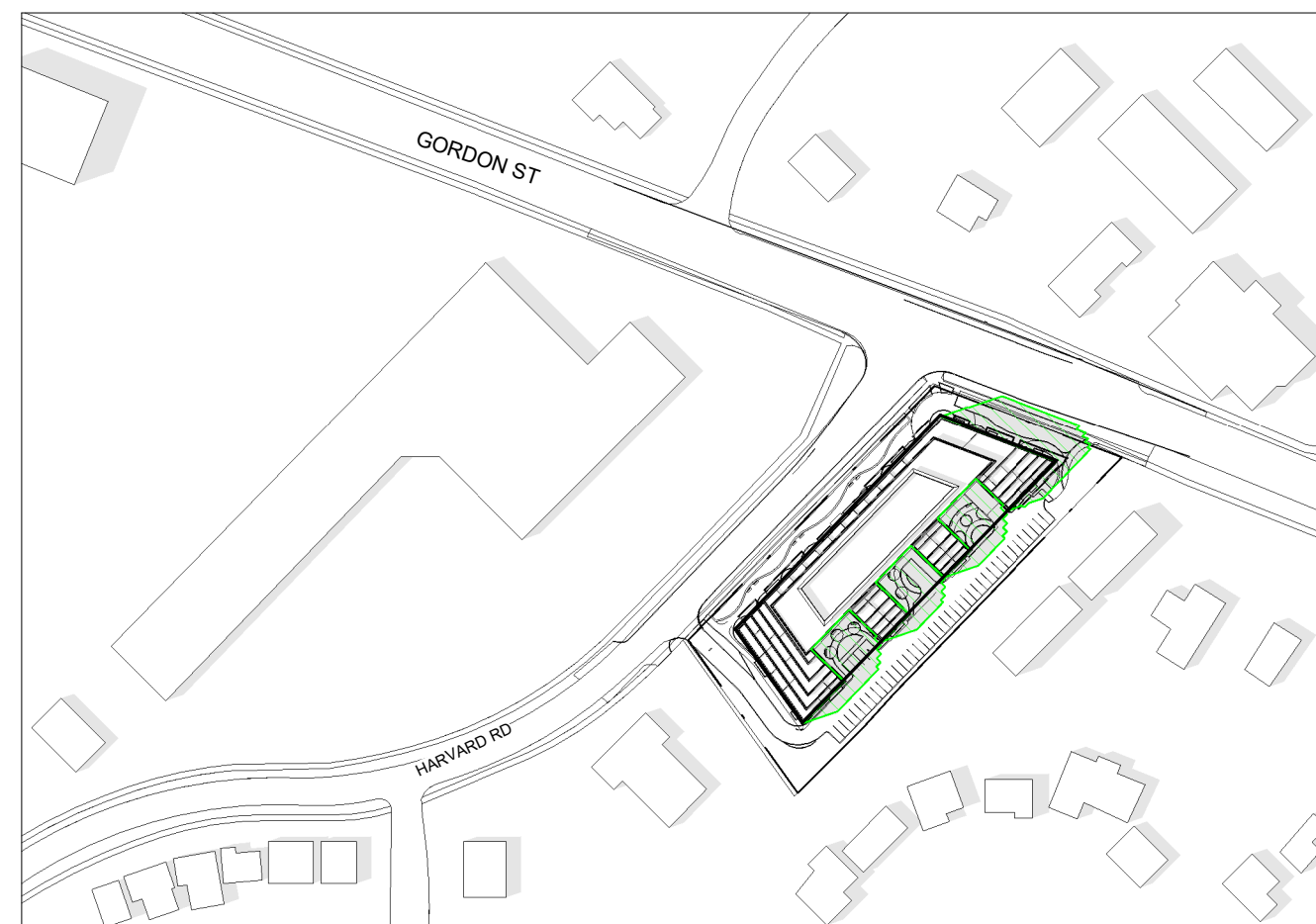
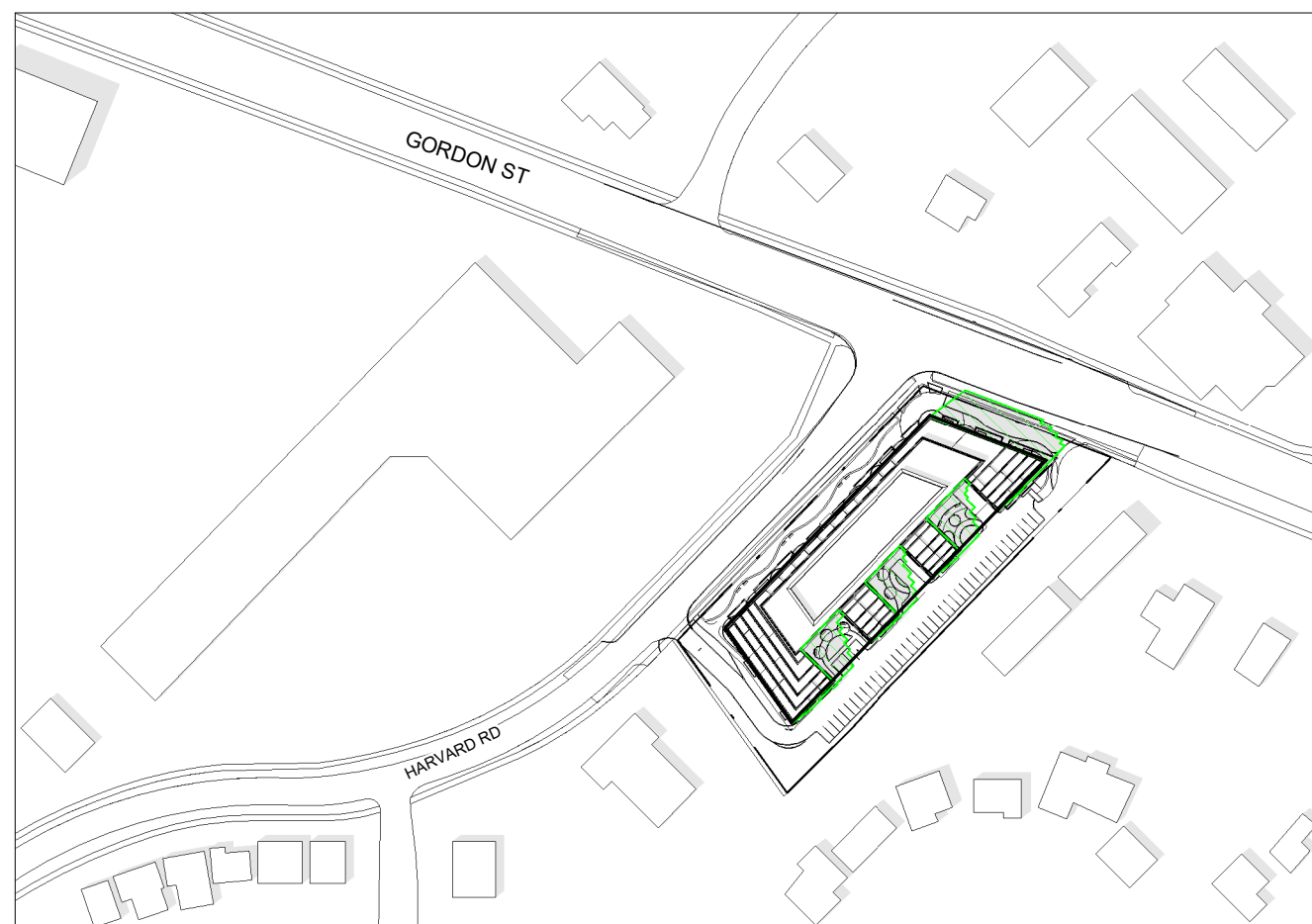
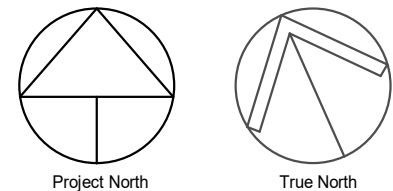
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SUMMER SHADOW STUDIES 4
785 GORDON STREET

21017
02/18/22
REVIEW








1 **SHADOW STUDY - SUMMER SOLSTICE - 3PM**
1 : 2500


2 **SHADOW STUDY - SUMMER SOLSTICE - 4PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

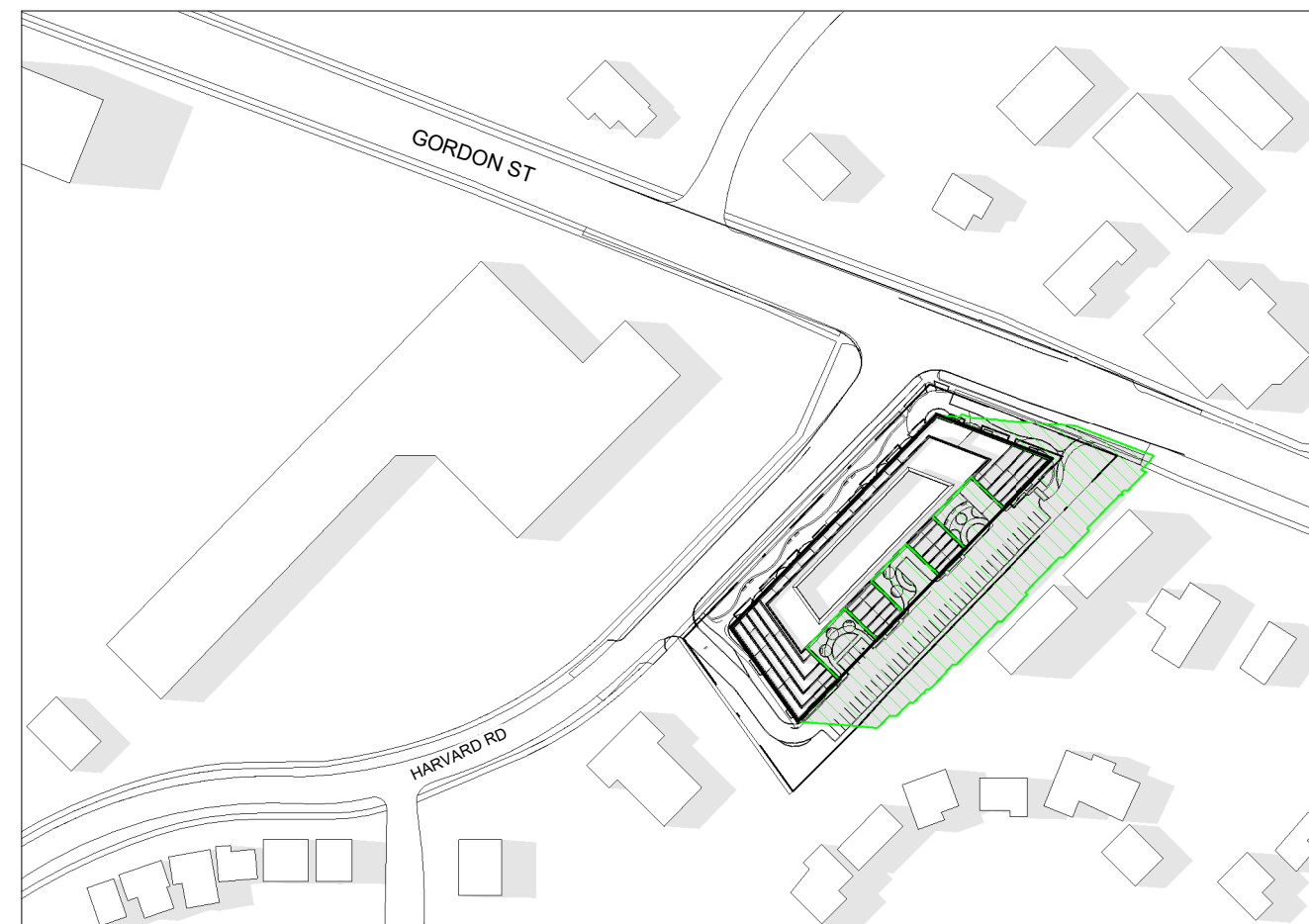
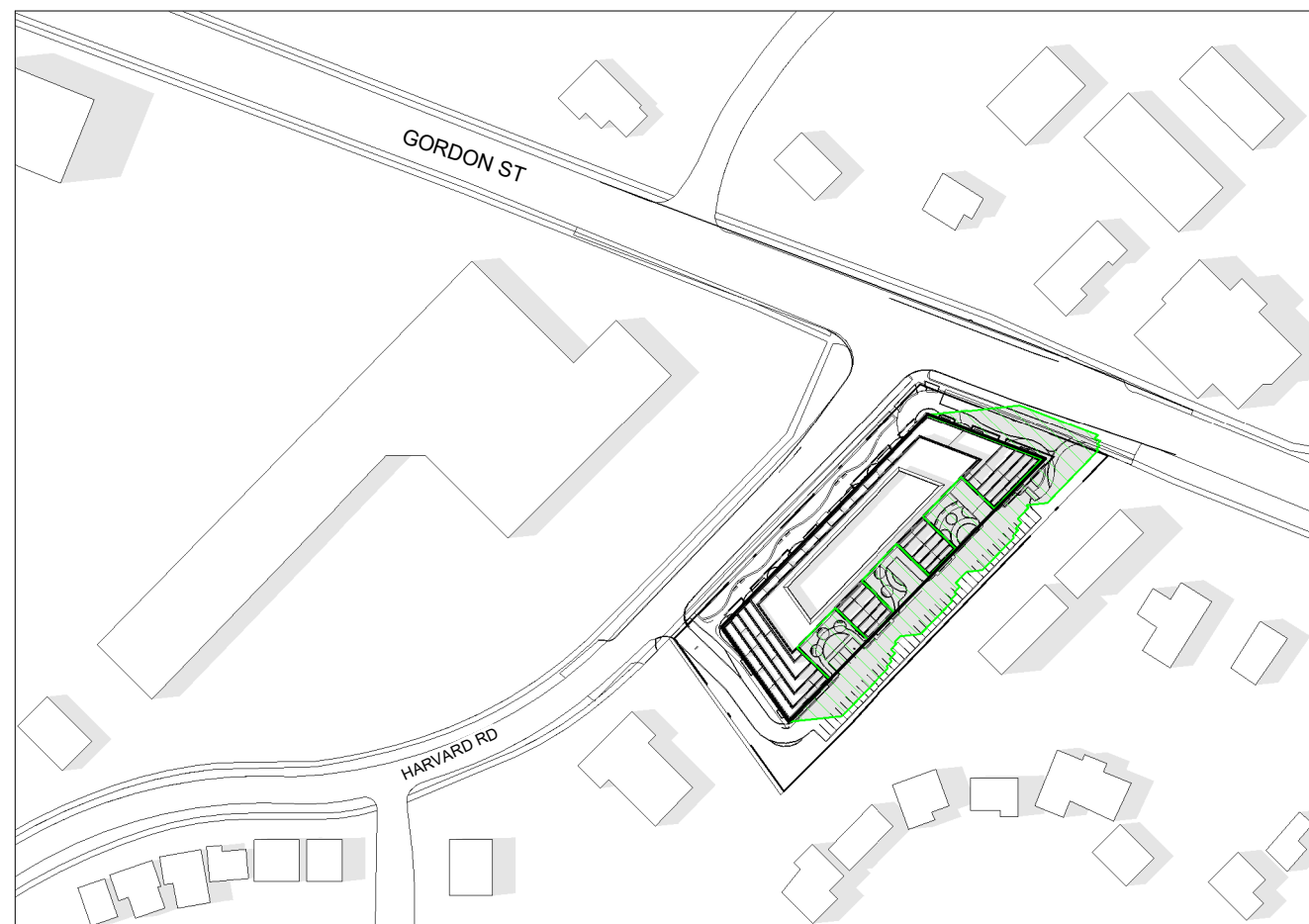
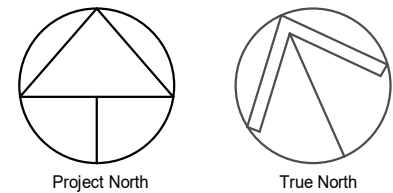
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SUMMER SHADOW STUDIES 5
785 GORDON STREET

21017
02/18/22
REVIEW








1 **SHADOW STUDY - SUMMER SOLSTICE - 5PM**
1 : 2500


2 **SHADOW STUDY - SUMMER SOLSTICE - 6PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

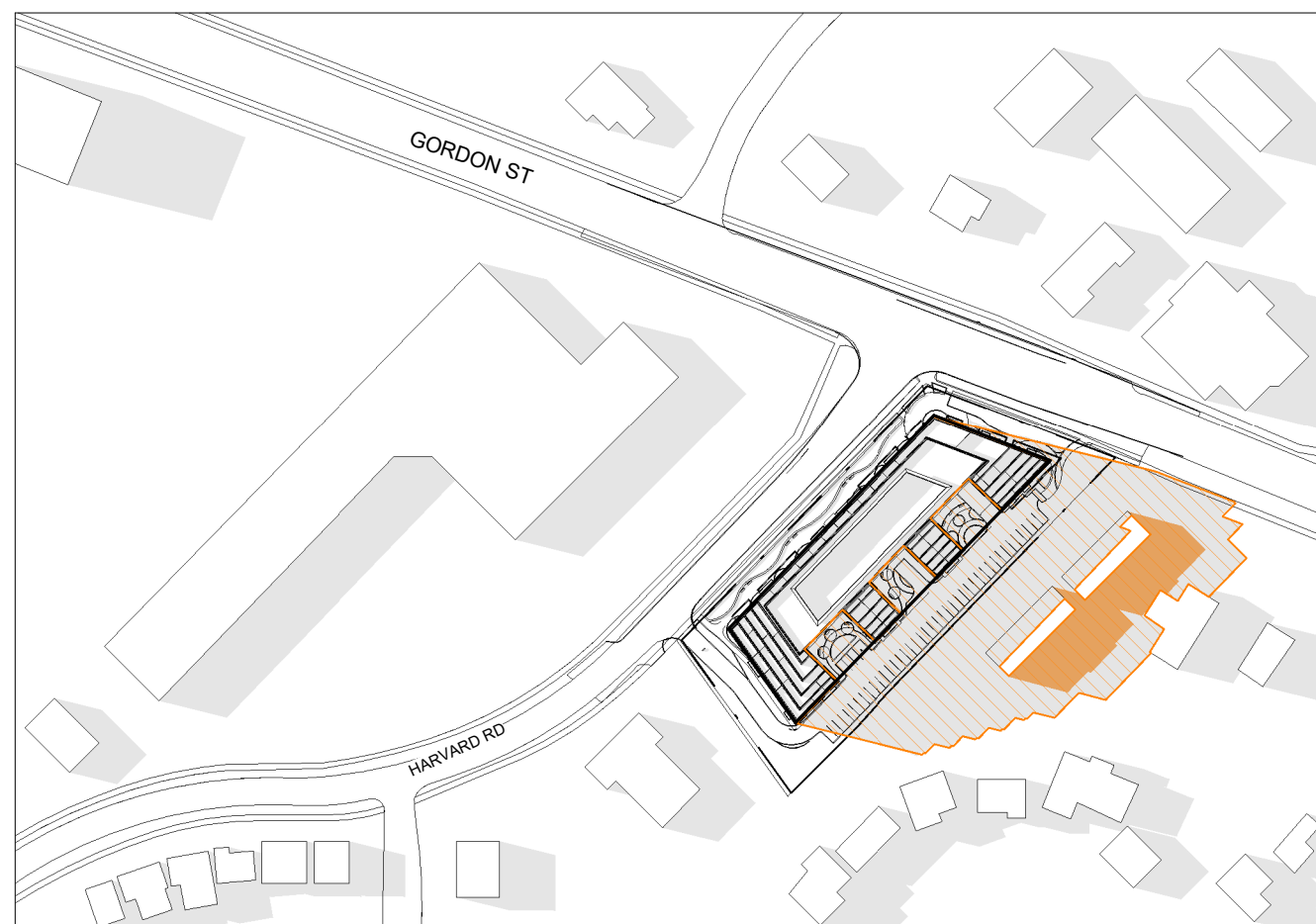
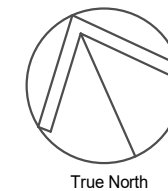
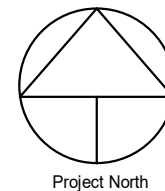
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



SUMMER SHADOW STUDIES 6
785 GORDON STREET

21017
02/18/22
REVIEW





1 **SHADOW STUDY - SUMMER SOLSTICE - 7PM**
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



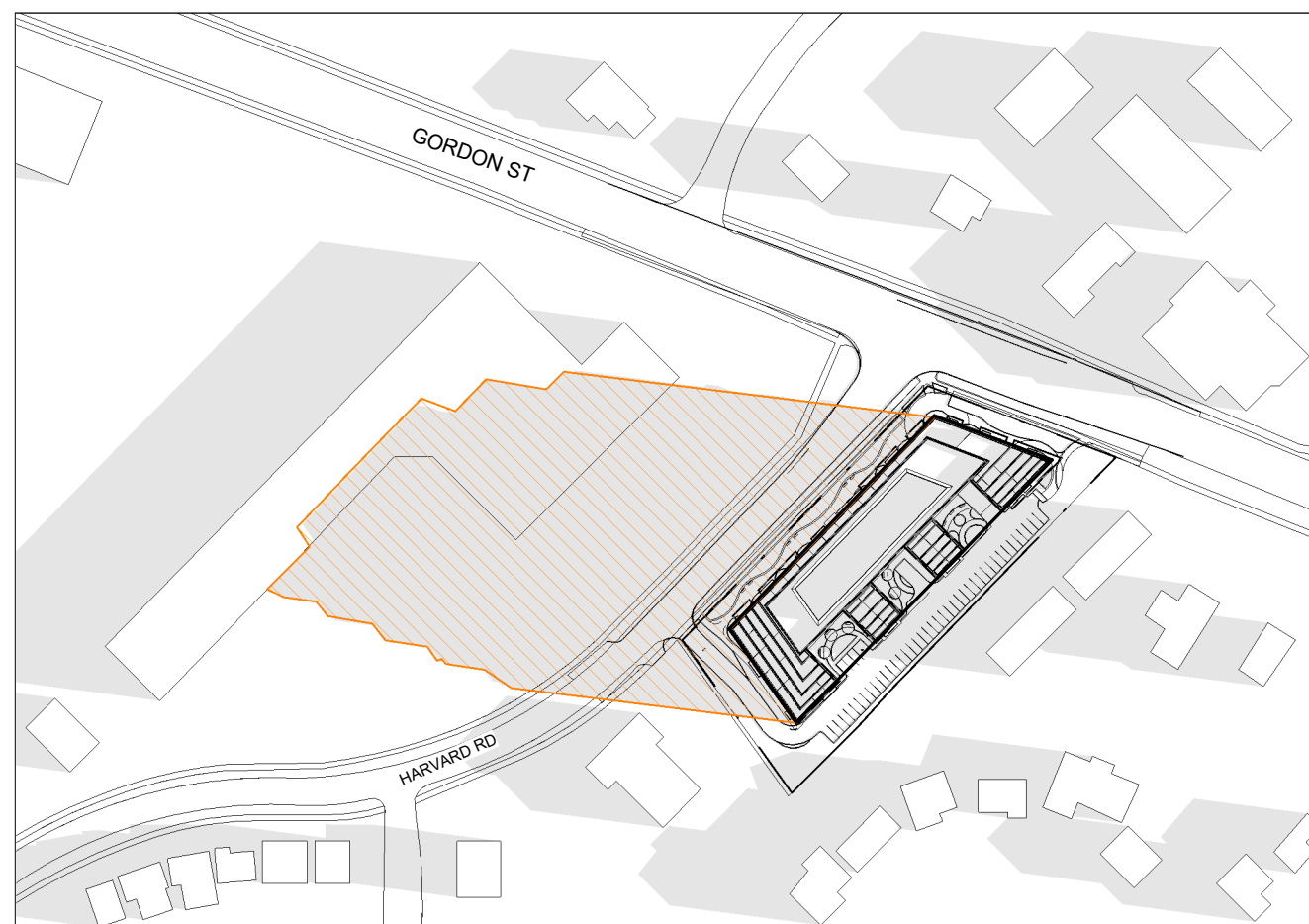
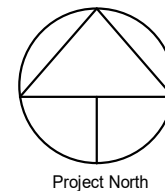
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



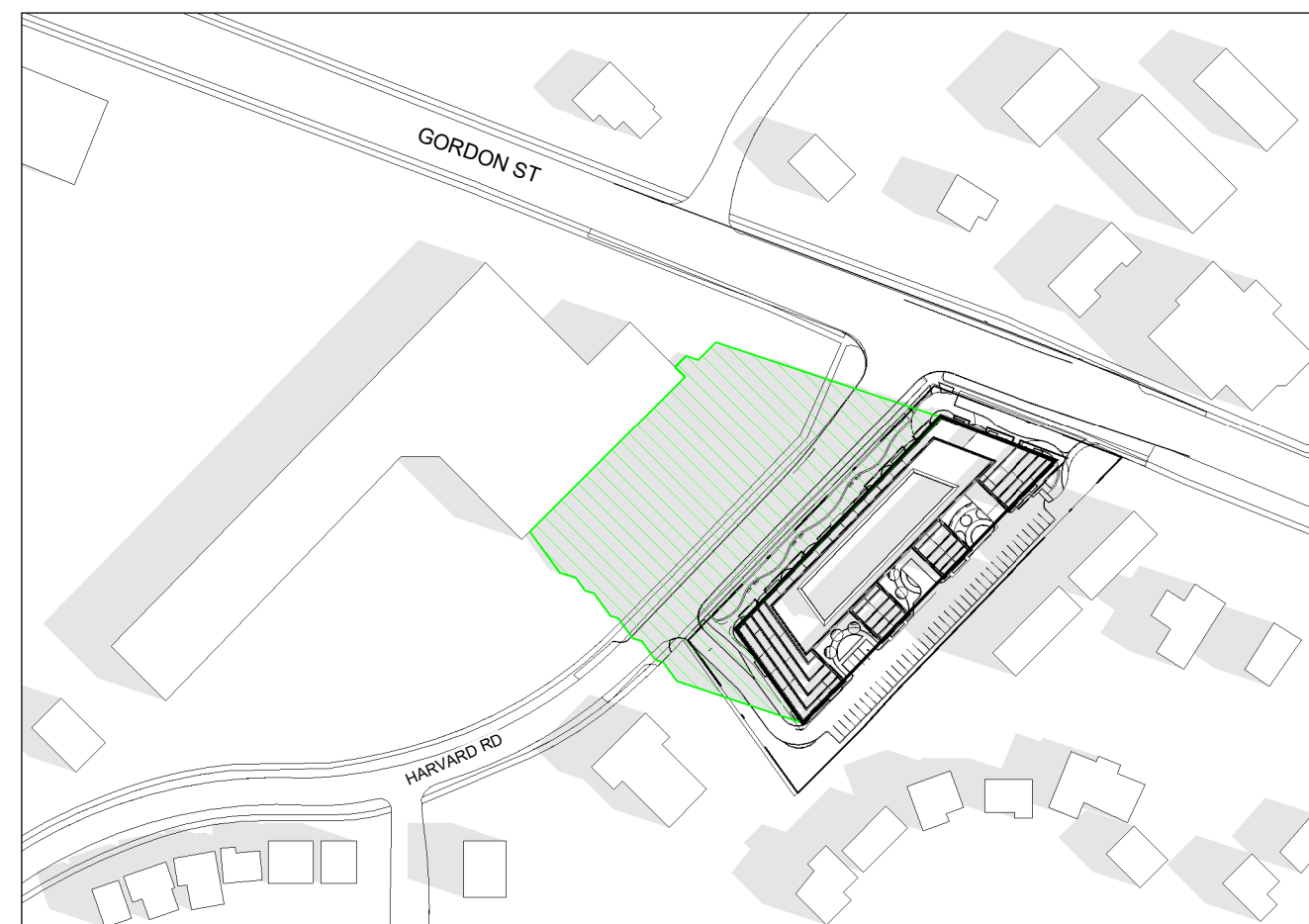
SUMMER SHADOW STUDIES 7
785 GORDON STREET

21017
02/18/22
REVIEW





1 **SHADOW STUDY - FALL - 8AM***
1 : 2500



2 **SHADOW STUDY - FALL - 9AM**
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



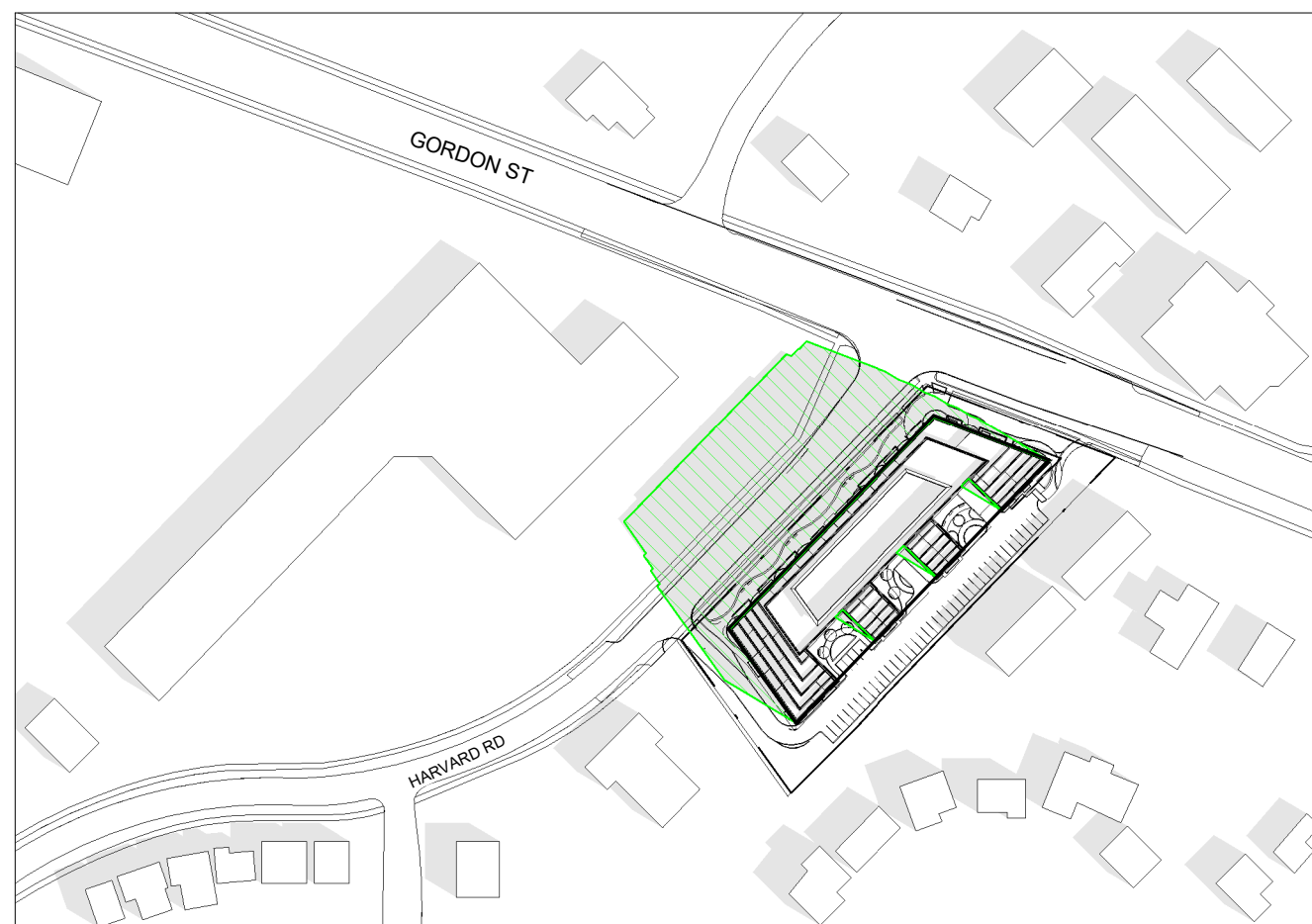
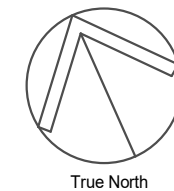
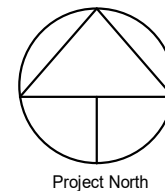
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



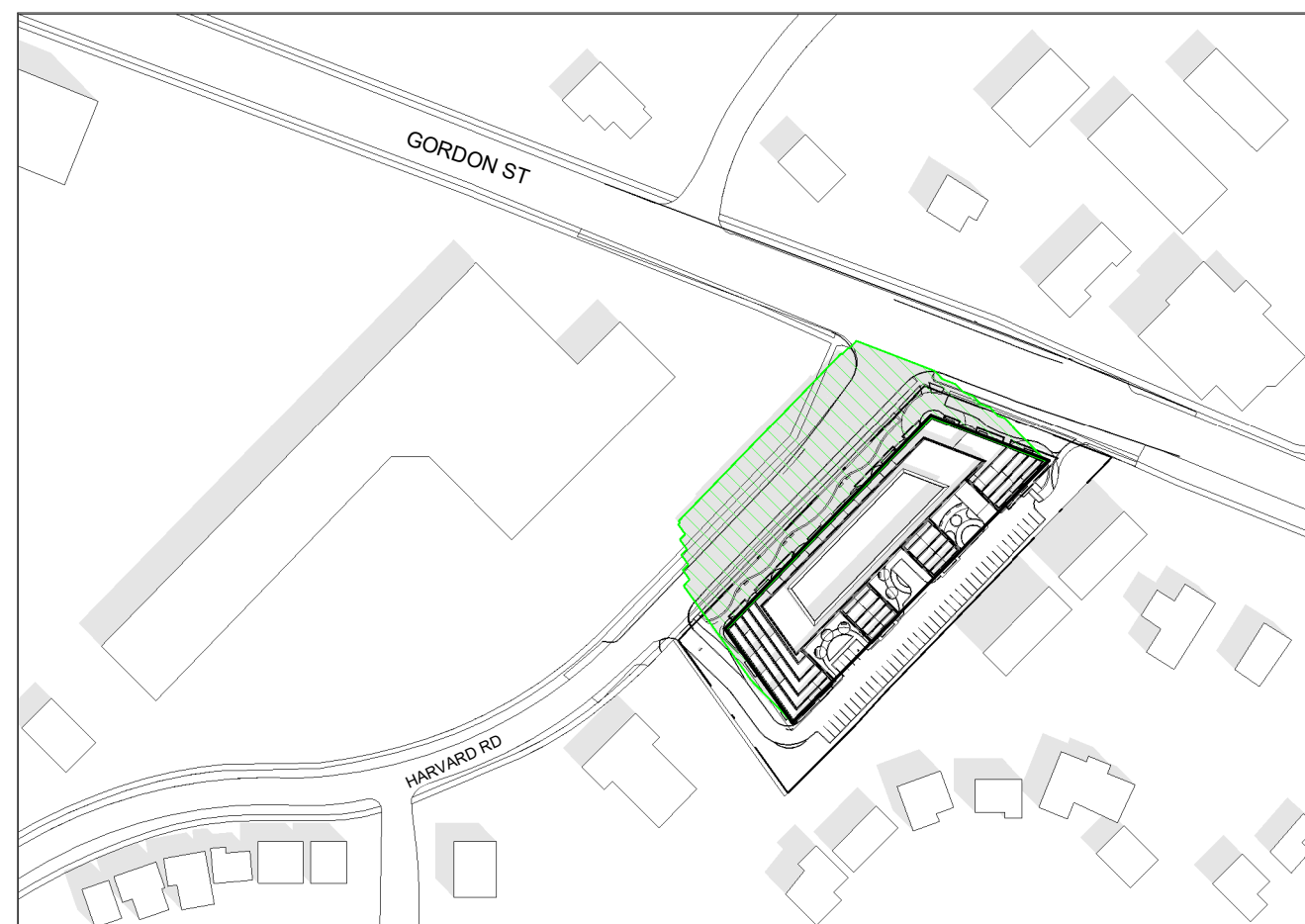
FALL SHADOW STUDIES 1
785 GORDON STREET

21017
02/18/22
REVIEW





1 **SHADOW STUDY - FALL - 10AM**
1 : 2500



2 **SHADOW STUDY - FALL - 11AM**
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



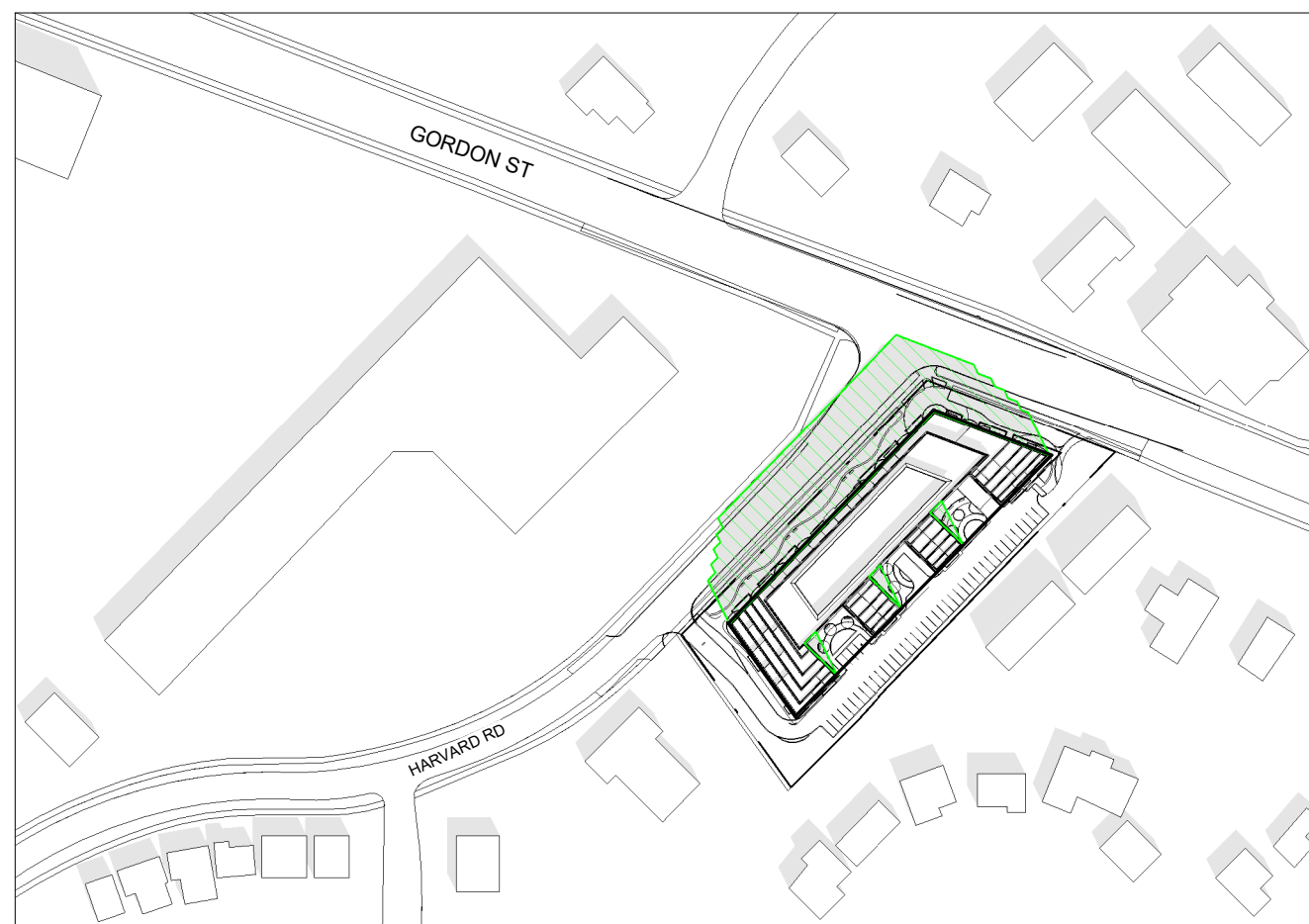
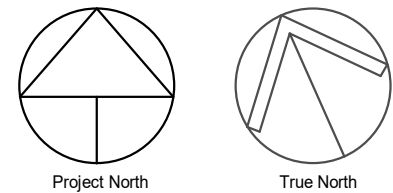
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



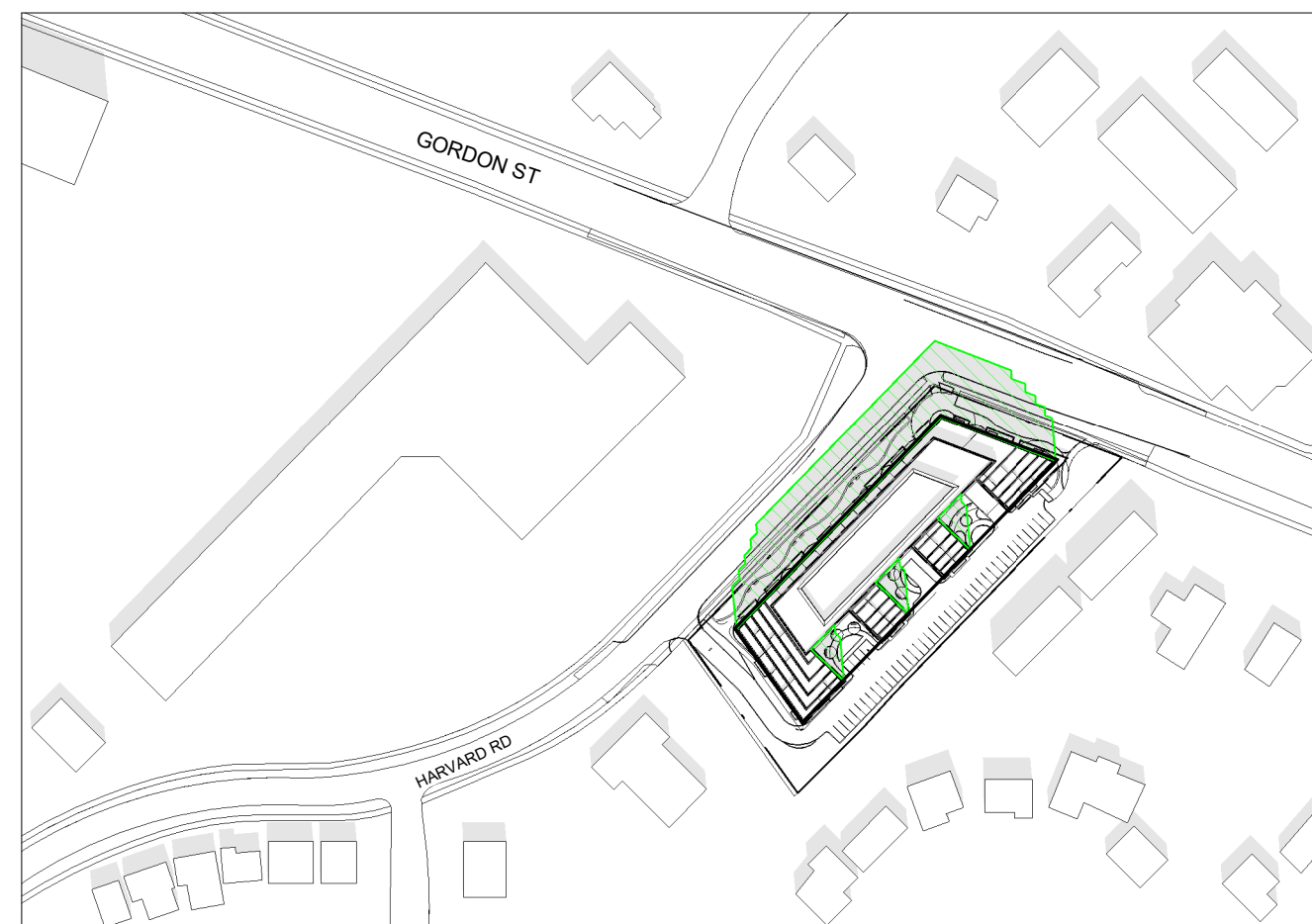
FALL SHADOW STUDIES 2
785 GORDON STREET

21017
02/18/22
REVIEW







1 **SHADOW STUDY - FALL - 12PM**
1 : 2500





2 **SHADOW STUDY - FALL - 1PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

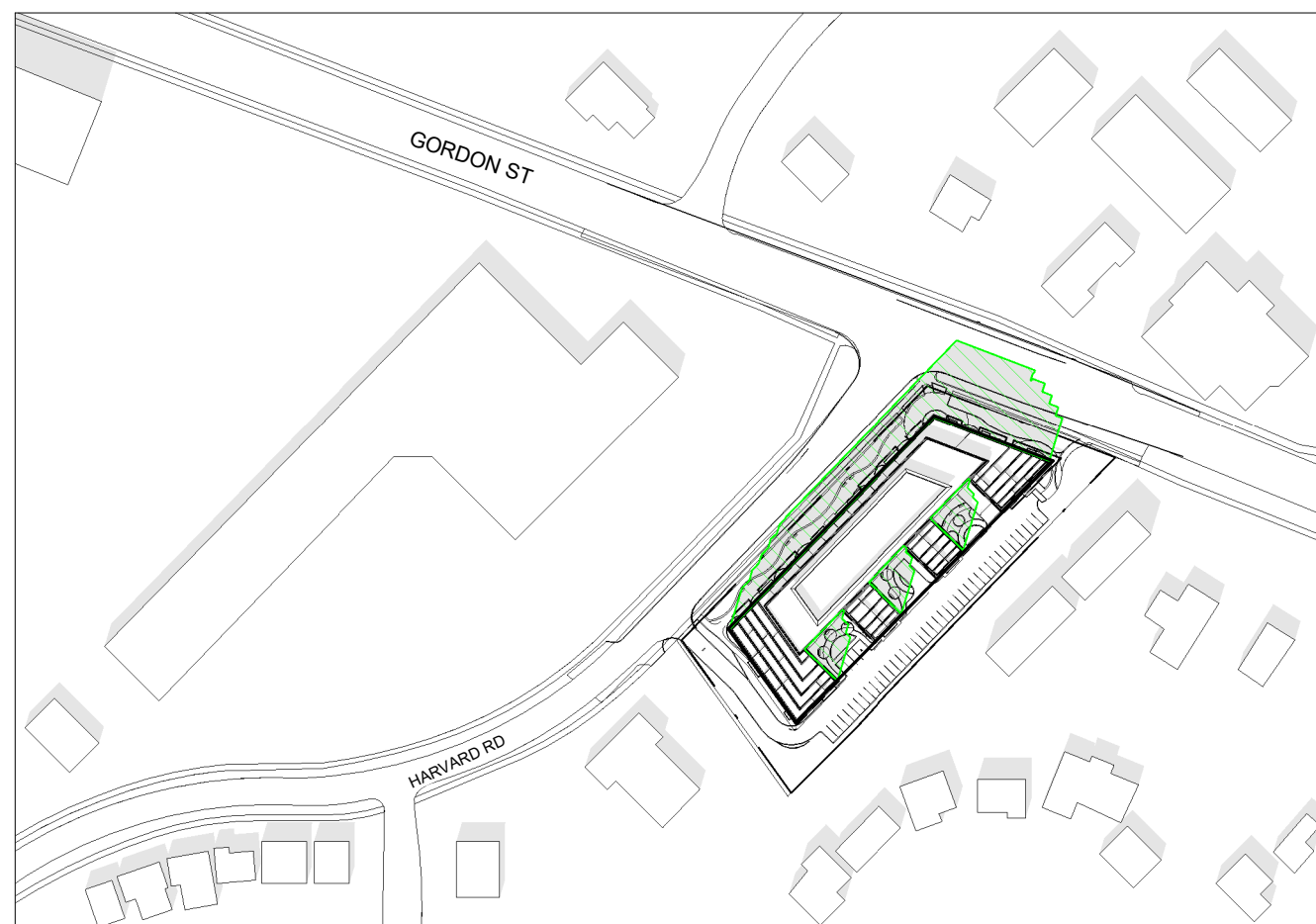
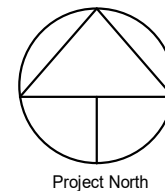
 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS

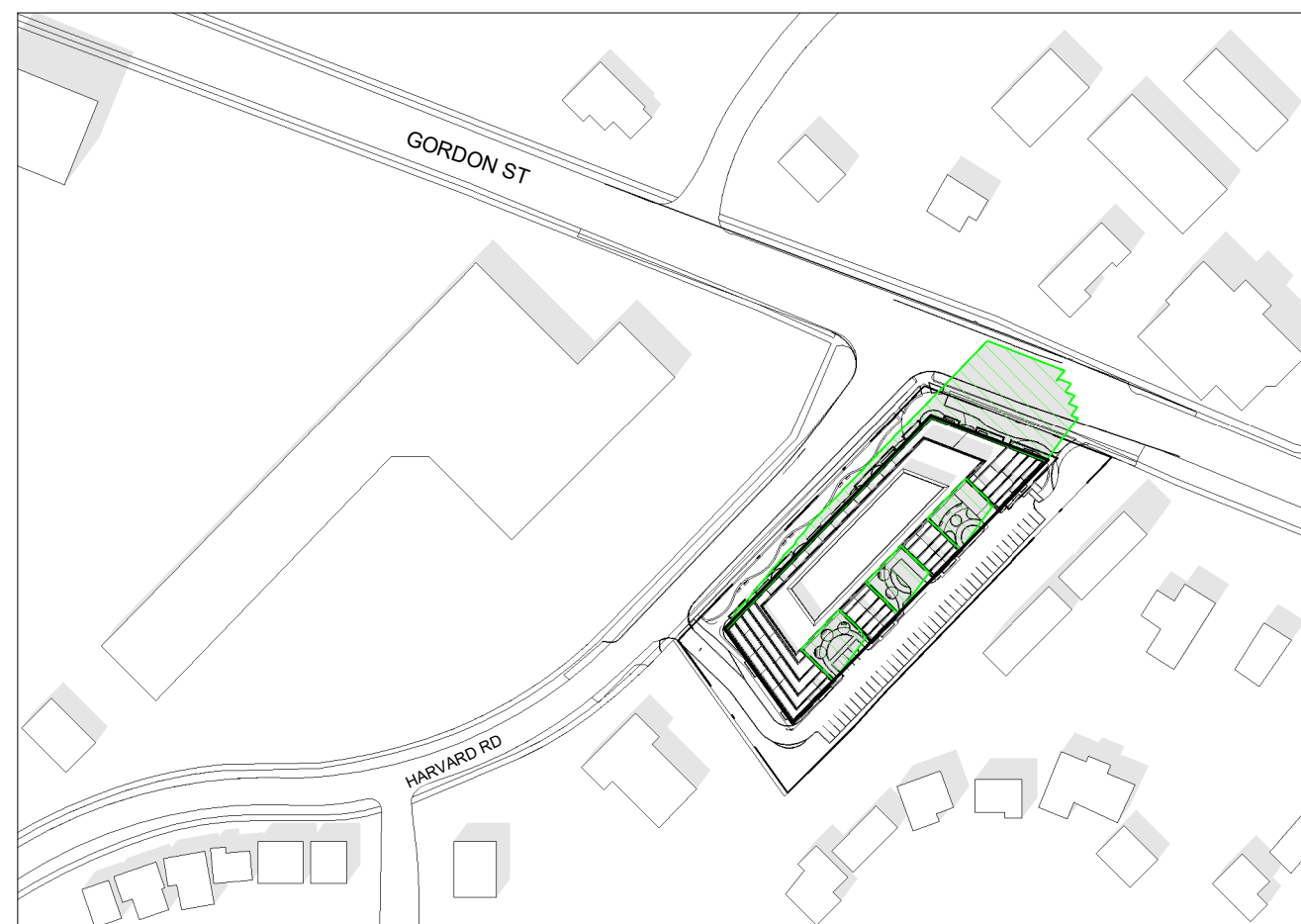


FALL SHADOW STUDIES 3
785 GORDON STREET

21017
02/18/22
REVIEW



1 **SHADOW STUDY - FALL - 2PM**
1 : 2500



2 **SHADOW STUDY - FALL - 3PM**
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



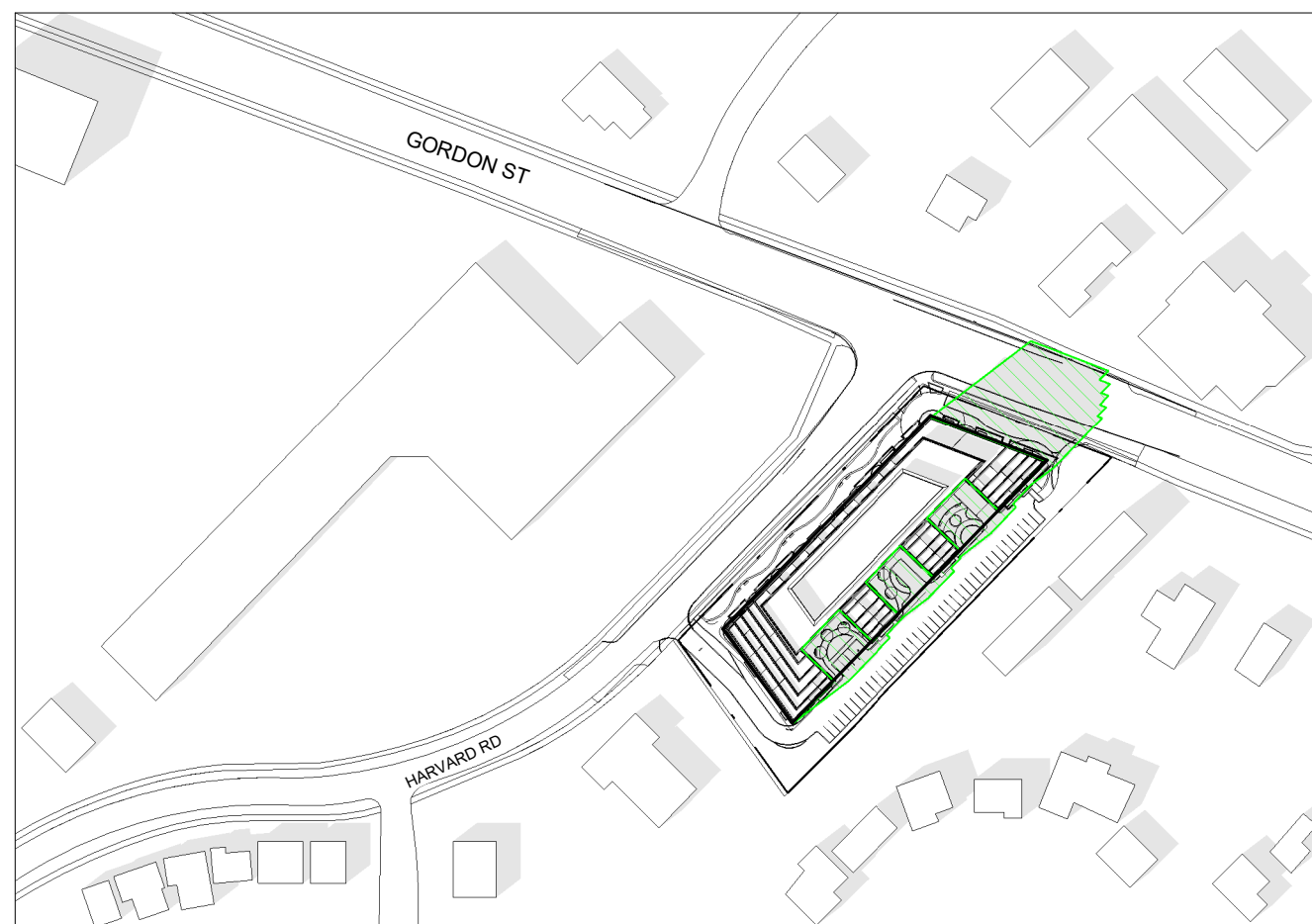
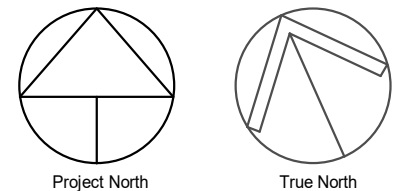
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



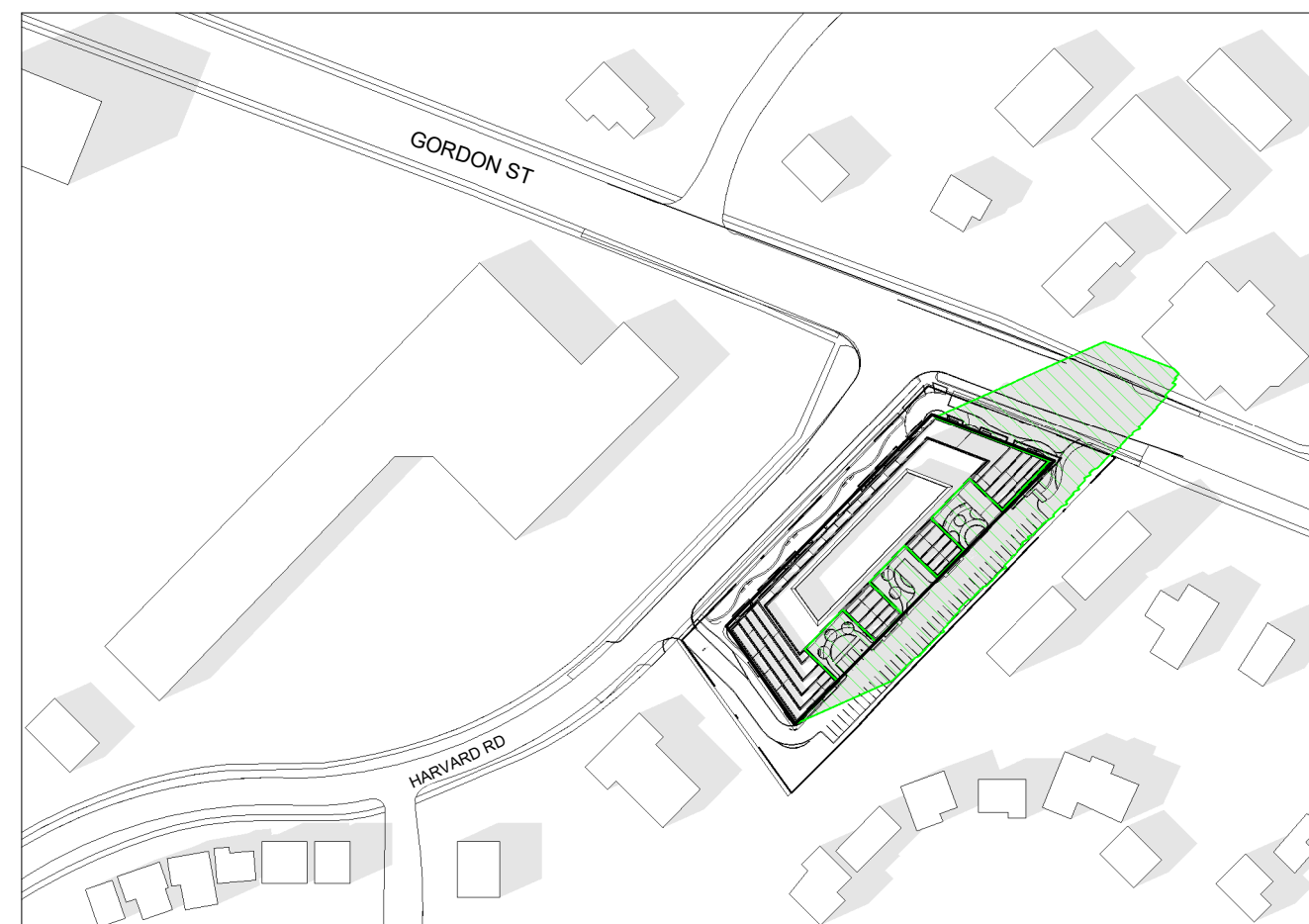
FALL SHADOW STUDIES 4
785 GORDON STREET

21017
02/18/22
REVIEW







1 **SHADOW STUDY - FALL - 4PM**
1 : 2500





2 **SHADOW STUDY - FALL - 5PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

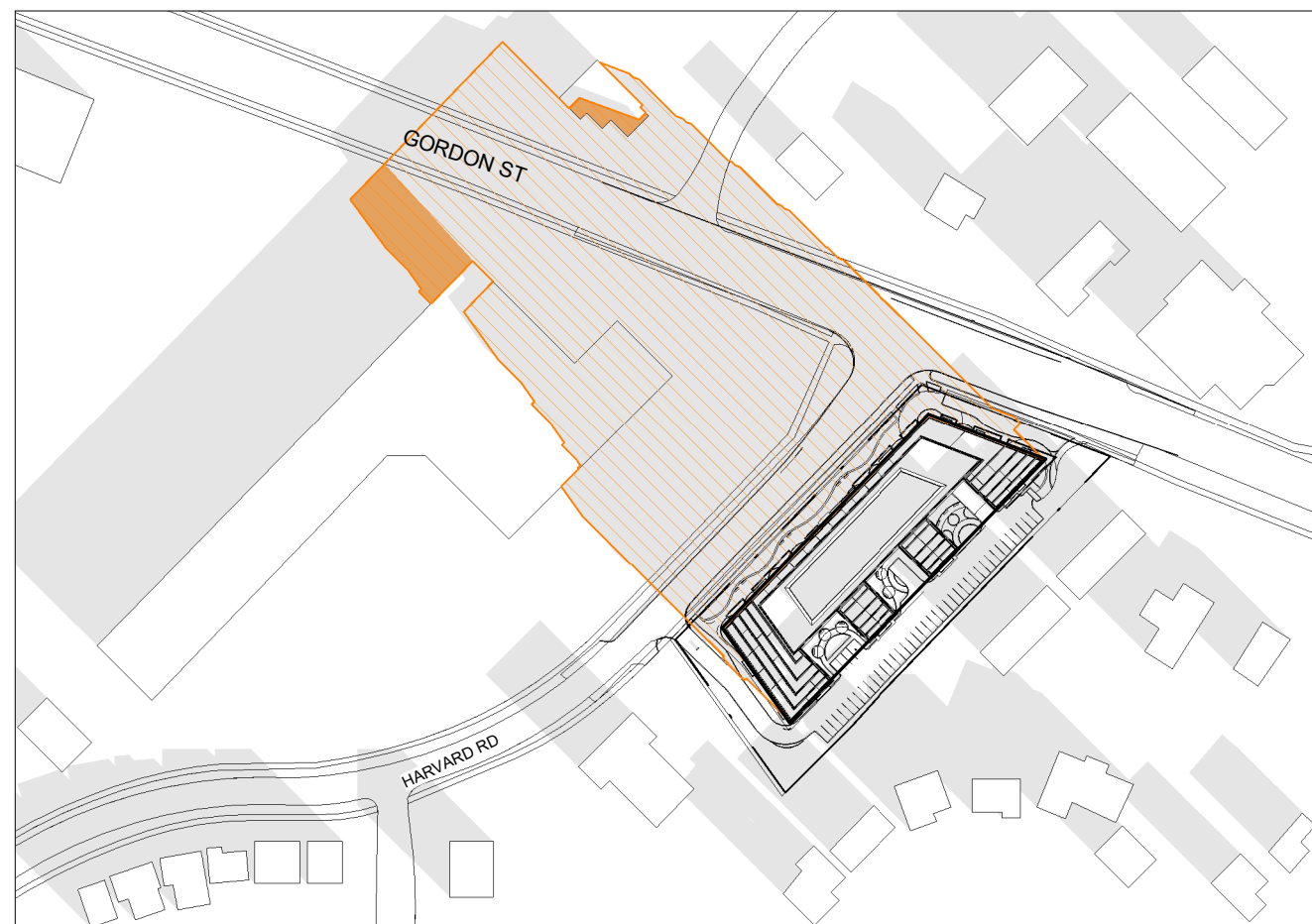
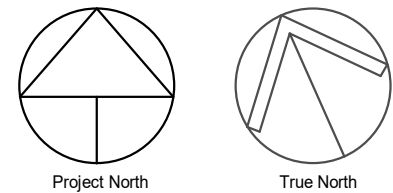
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



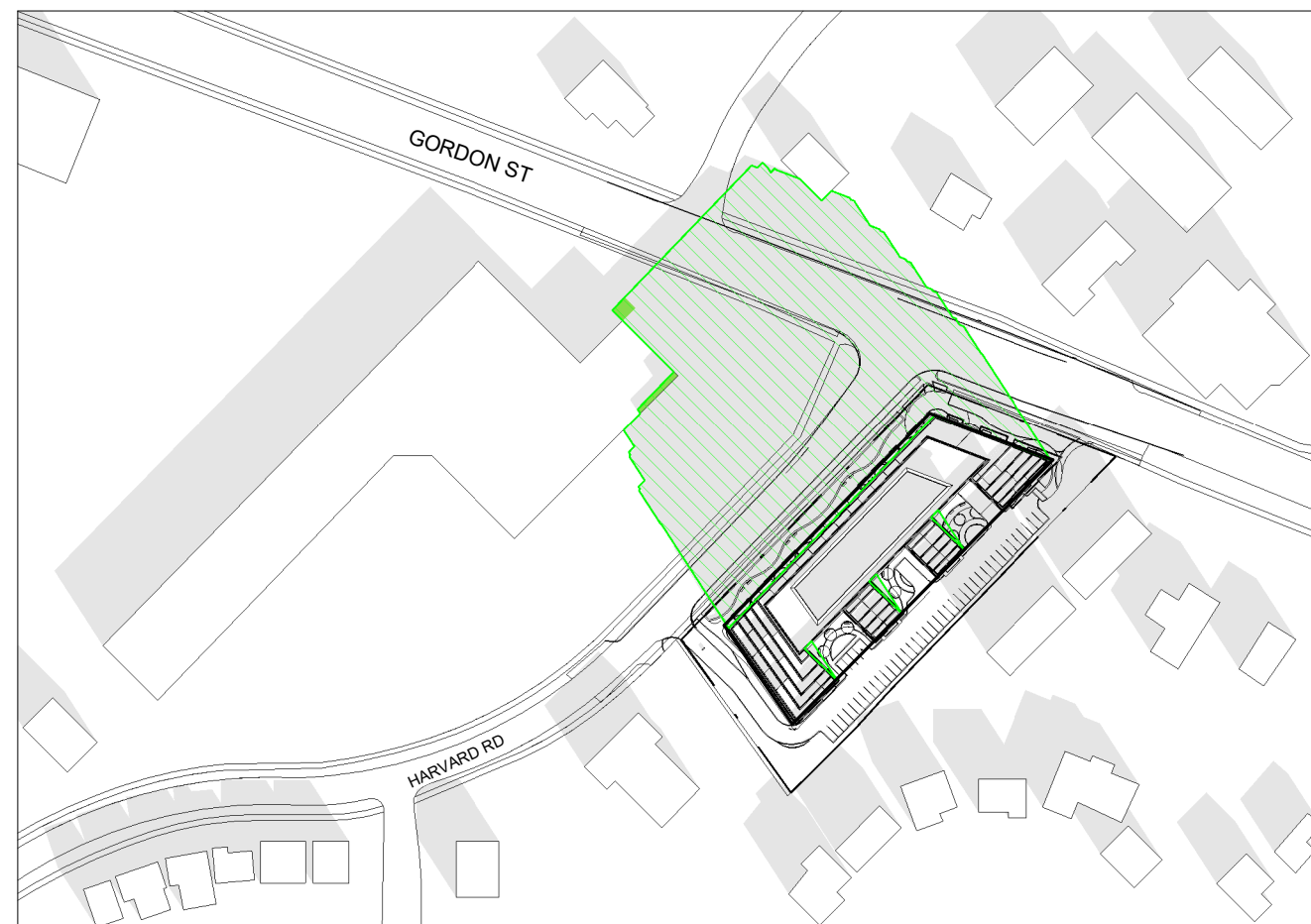
FALL SHADOW STUDIES 5
785 GORDON STREET

21017
02/18/22
REVIEW





1 SHADOW STUDY - WINTER SOLSTICE - 10AM
1 : 2500



2 SHADOW STUDY - WINTER SOLSTICE - 11AM
1 : 2500

LEGEND



PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS



PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS



PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS



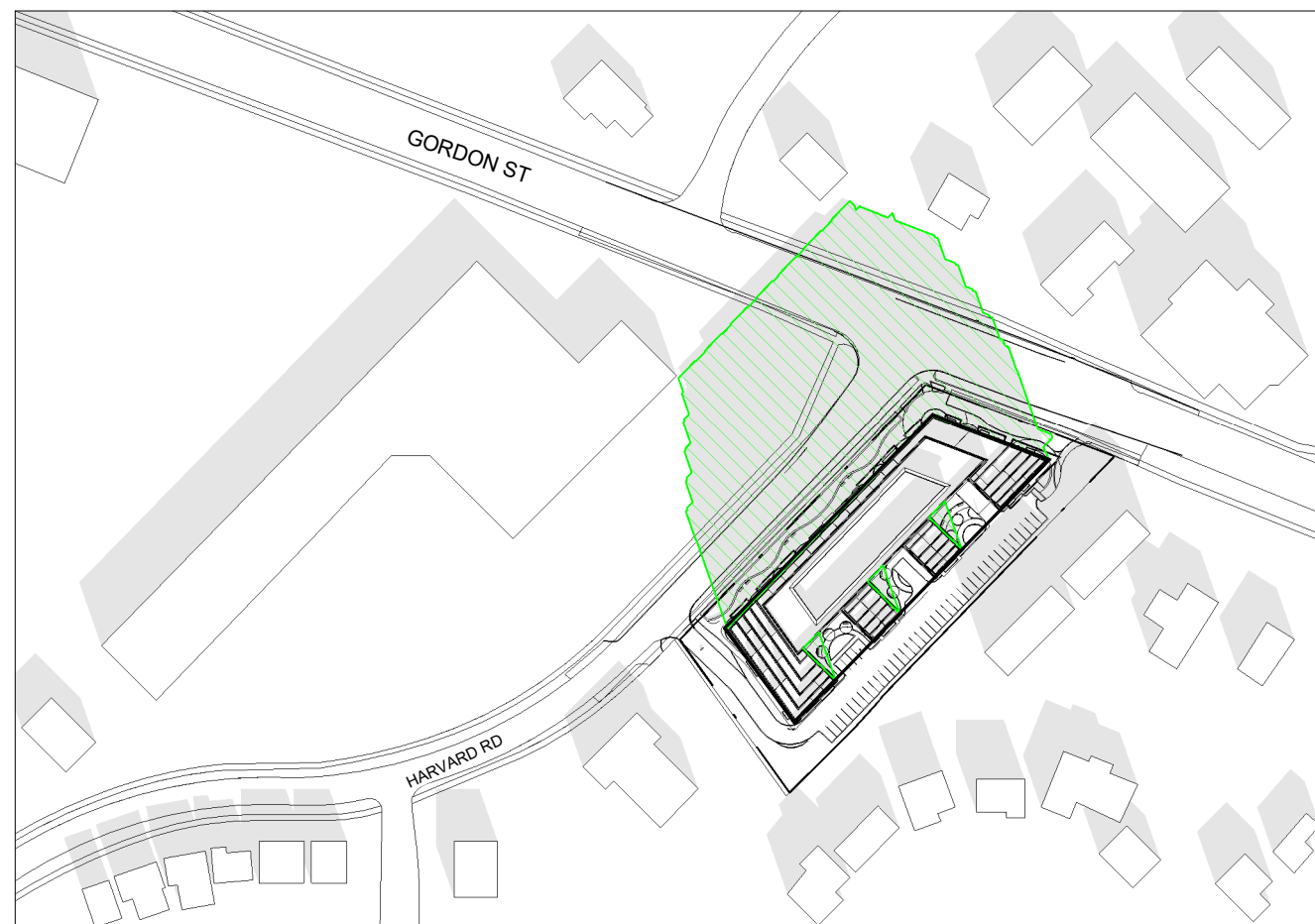
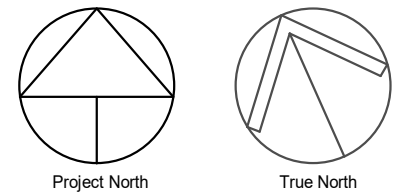
PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



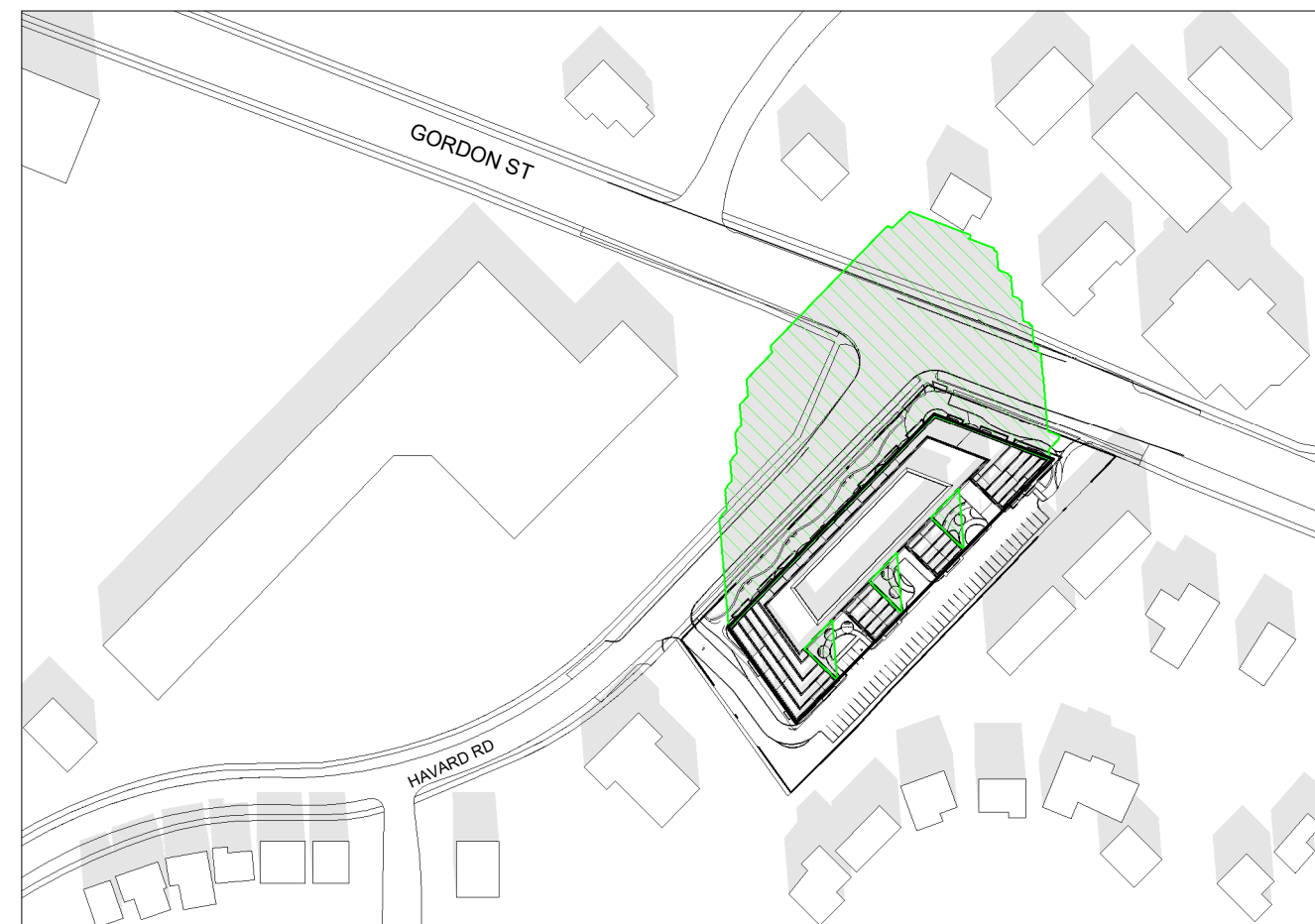
WINTER SHADOW STUDIES 1
785 GORDON STREET

21017
02/18/22
REVIEW







1 **SHADOW STUDY - WINTER SOLSTICE - 12PM**
1 : 2500





2 **SHADOW STUDY - WINTER SOLSTICE - 1PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

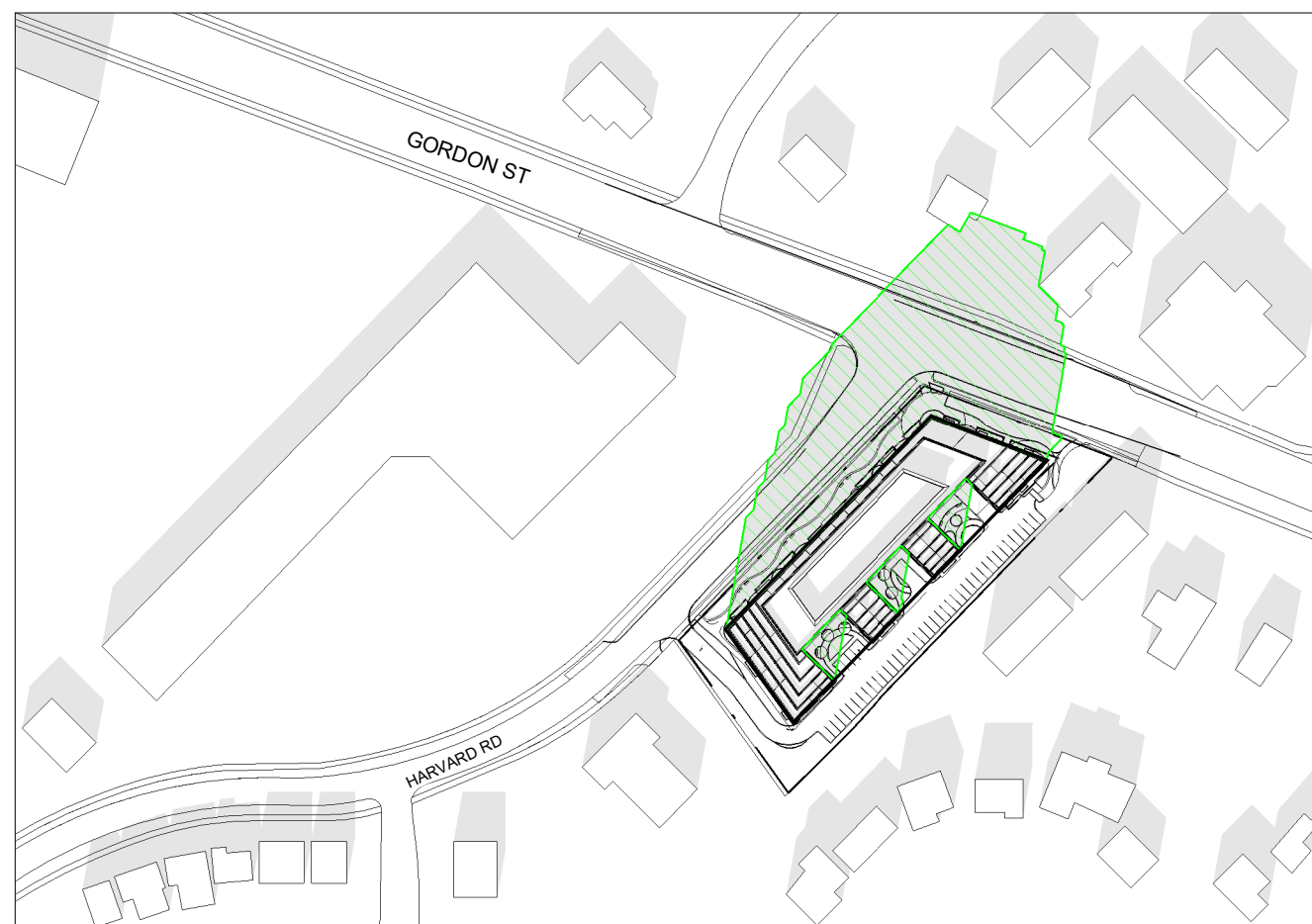
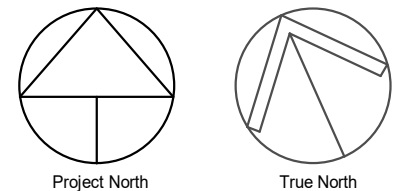
 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



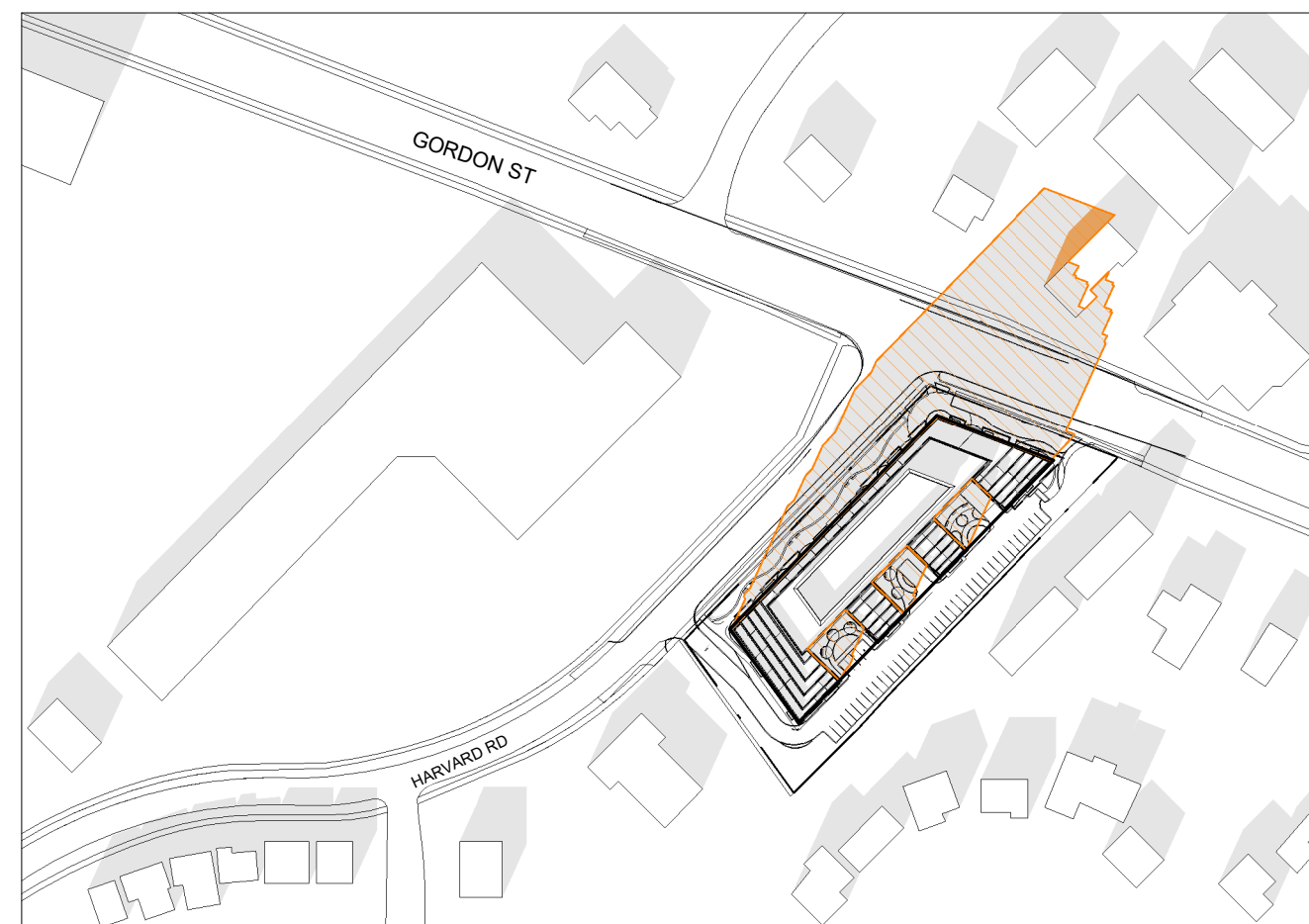
WINTER SHADOW STUDIES 2
785 GORDON STREET

21017
02/18/22
REVIEW



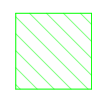



1 **SHADOW STUDY - WINTER SOLSTICE - 2PM**
1 : 2500





2 **SHADOW STUDY - WINTER SOLSTICE - 3PM**
1 : 2500

LEGEND

 PROPOSED DEVELOPMENT SHADOW
W/ NO INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ NO INCREMENTAL SHADOWS

 PROPOSED DEVELOPMENT SHADOW
W/ INCREMENTAL SHADOWS

 PROPOSED / EXISTING SHADOW OVERLAP
W/ INCREMENTAL SHADOWS



WINTER SHADOW STUDIES 3
785 GORDON STREET

21017
02/18/22
REVIEW

