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27 Church Avenue, Mascot
Solar Access Review & Assessment

Report Number 610.15343-R1

16 June 2015

City of Botany Council
141 Coward Street
MASCOT NSW 2020

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27 Church Avenue, Mascot

Solar Access Review & Assessment

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DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
610.15343-R1	Revision 1	16 June 2015	Peter Hayman	Neihad Al-Khalidy	Neihad Al-Khalidy
610.15343-R1	Revision 0	2 June 2015	Peter Hayman	Neihad Al-Khalidy	Neihad Al-Khalidy

Executive Summary

SLR has been engaged by the City of Botany Council to review previous daylighting studies for the proposed mixed use development at 27 Church Avenue in Mascot and if necessary to conduct a further assessment. SLR have also been asked to review and if required assess the development at 23 Church Avenue.

SLR has reviewed the solar access assessments for both sites which conclude that 27 Church Avenue receives at least two hours of solar access to 70.5% of the apartments, and 23 Church Avenue receives at least two hours of solar access to 48.8% of the apartments. The plans used for these assessments show the true north bearing at 18 degrees.

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

- Living rooms and private open spaces for at least 70 % in a development should receive a minimum of three hours of direct sunlight between 9.00 am and 3.00 pm in mid-winter. In dense urban areas a minimum of two hours may be acceptable.

From the 3D models, amended survey plan for the site (SLR have used a true north bearing of 9.5 degrees) and plans provided SLR has calculated that 49.5% of the apartments meet the two hour requirement for 27 Church Avenue and 57.9% of the apartments meet the two hour requirement for 23 Church Avenue.

Overall 53.7% of the apartments meet the two hour requirement across the two developments.

Additionally 61.1% of the apartments meet the two hour requirement when there is no development on 23 Church Street.

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1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) has been engaged by the City of Botany Council to review previous daylighting studies for the proposed mixed use development at 27 Church Avenue in Mascot and if necessary to conduct a further assessment. SLR have also been asked to review and if required assess the development at 23 Church Avenue.

1.1 Development Site

The site is bounded on the north by Church Avenue and on the south by John Street. To the immediate west of the site are three high-rise buildings approximately eight storeys high, and to the east is a low level commercial building followed by another three high-rise buildings.

Figure 1 Site Location

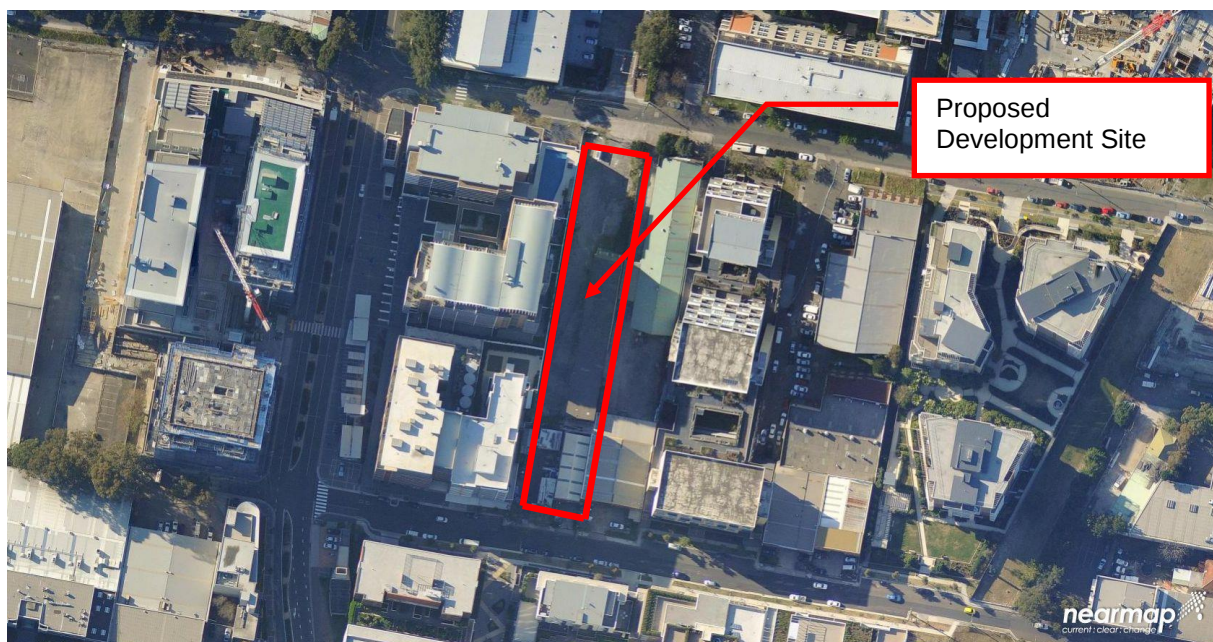


Image: Nearmap

1.1 Surrounds

The area surrounding the site contains many mid-rise and high-rise in all directions. Beyond this there are low level residential buildings to the east, commercial warehouse type buildings to the north and west and to the south are some low level residential buildings followed by Sydney Airport. As seen from **Figure 3** the proposed site, is surrounded by mid to high rise buildings.

Figure 2 Surrounds



Image: Nearmap

Figure 3 Surrounds – View of the South

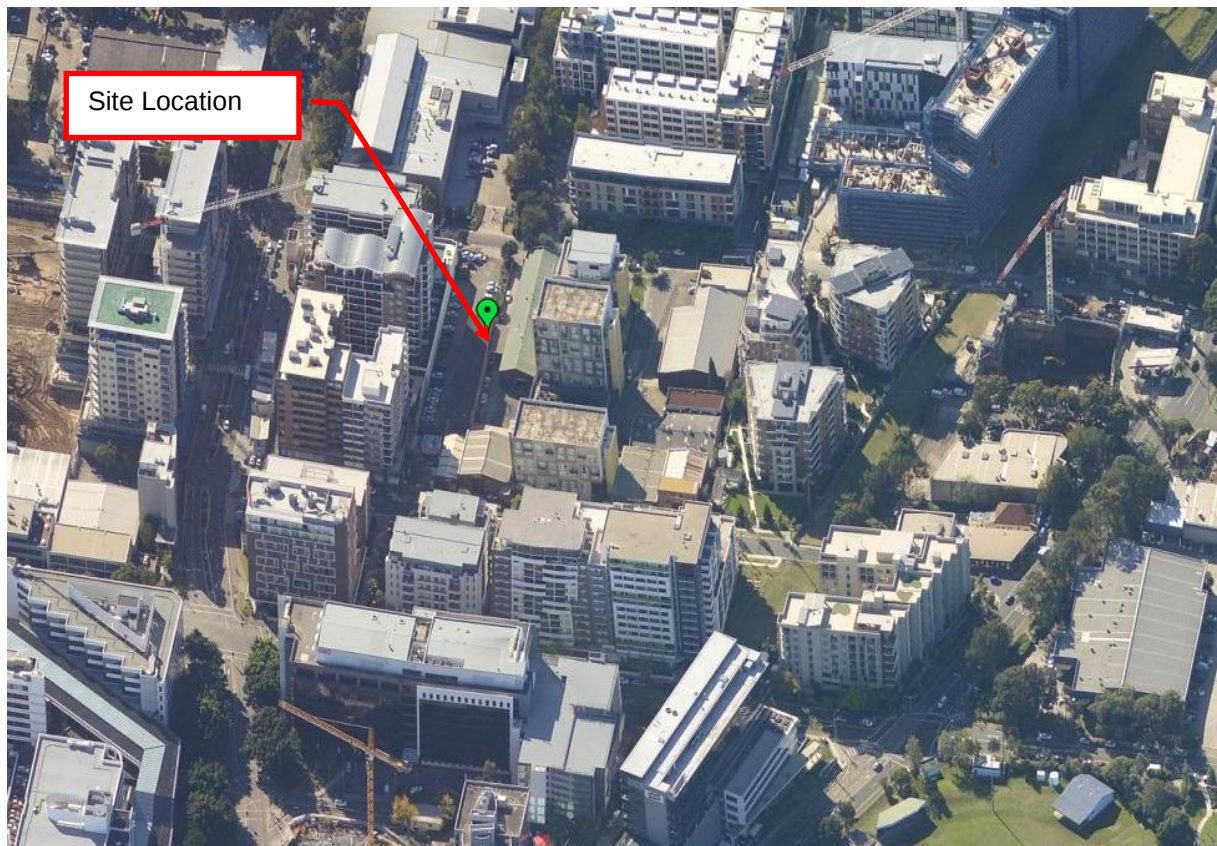


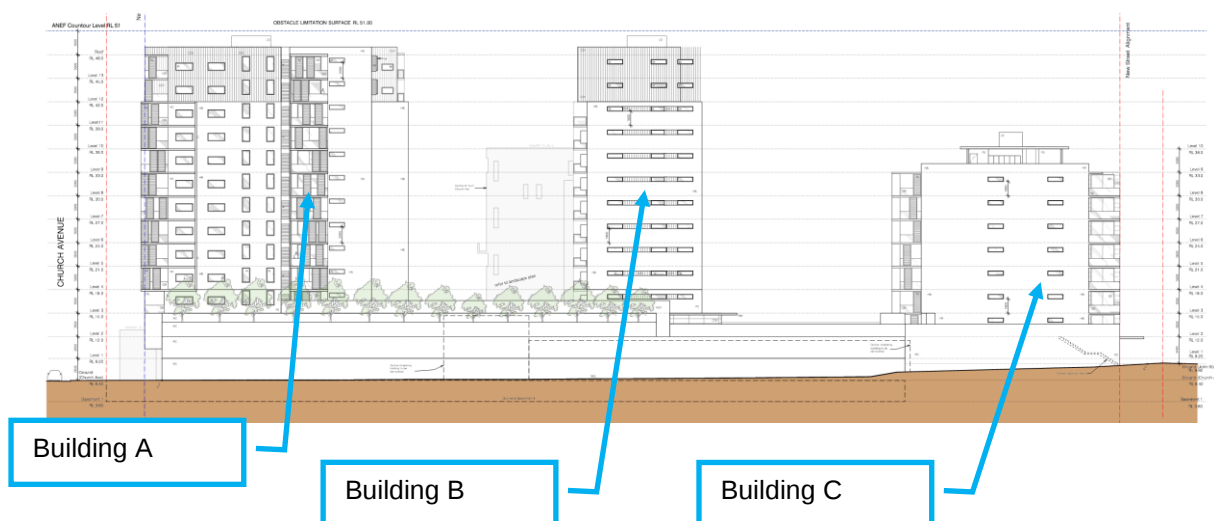
Image: Nearmap

1.2 Proposed Development Description

The proposed development consists of three towers over a podium of two different heights with a maximum height of 13 storeys. Building A is a 13-storey tower on Church Avenue, Building B is 13-storey also in the middle of the site and Building C is a 9-storey tower on John Street. There are a total of 95 dwellings in the development. The following breakdown has been made using the Issue H drawings provided by Olsson & Associate Architects Pty Ltd.

- One basement level of underground car parking;
- Ground level with the Church Avenue entrance, one retail tenancy and car parking;
- Ground level (Level 1) with John Street entrance, one commercial tenancy and car parking;
- Level 2 with two apartments in Building A, car parking and three apartments in Building C;
- Level 3-13 with apartments;
- Community room on Level 9 (top floor) of Building C.

Figure 4 West Elevation of Proposed Development



2 SOLAR ACCESS REVIEW OF PREVIOUS ASSESSMENT

For 27 Church Avenue Olsson & Associates have provided shadow diagrams from which it has been calculated that 67 or 70.5% of the apartments meet the two hour solar access requirements.

- From the 3D model provided the true north bearing used for this study was 18 degrees.
- Shadow diagrams shown are at hourly or half hourly intervals.

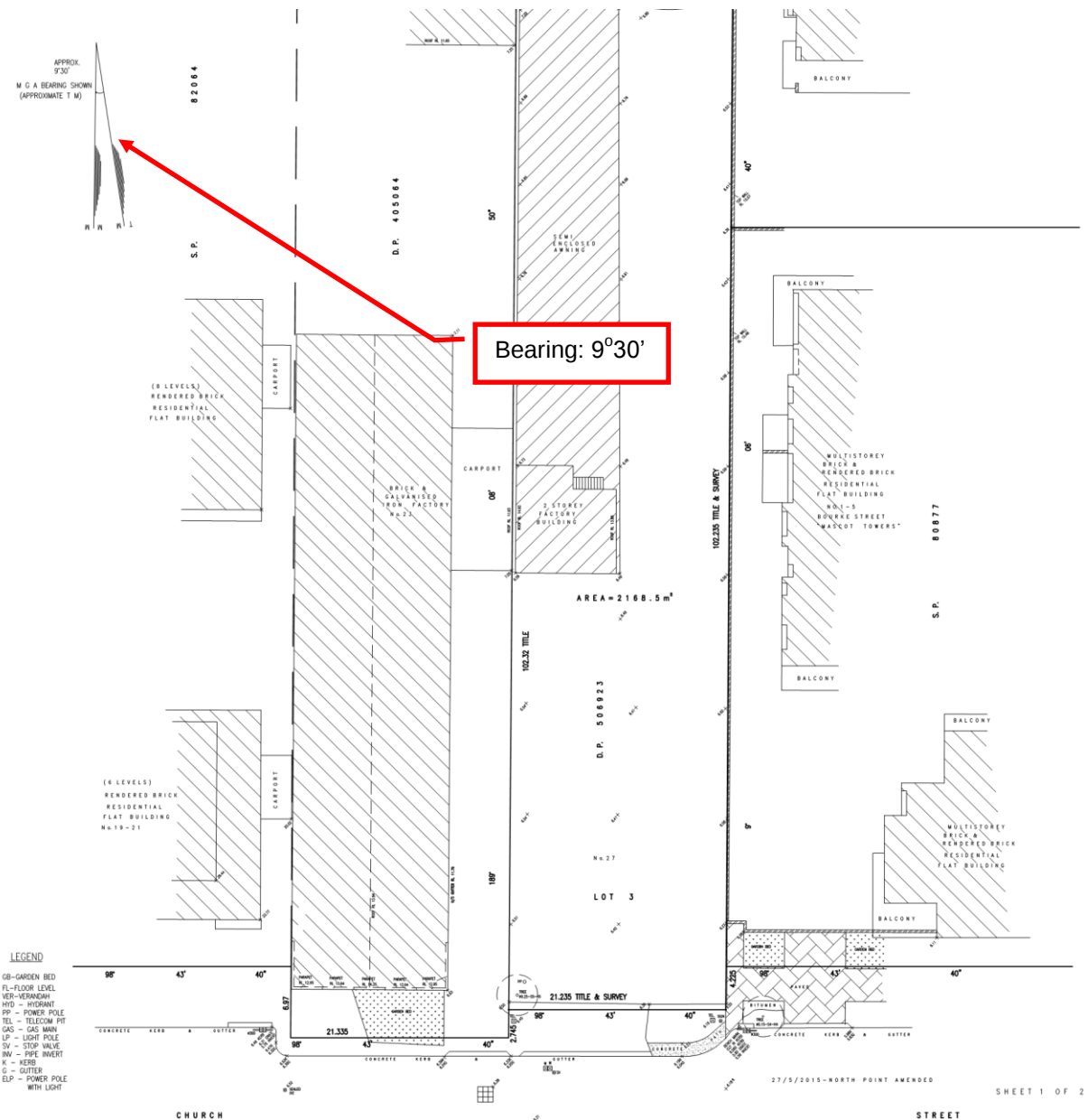
For 23 Church Avenue Rothe Lowman have provided shadow diagrams from which it has been calculated that 46 or 48.4% of the apartments meet the two hour solar access requirements, and 37 or 38.9% of the apartments meet the three hour solar access requirements.

- From the plans provided the true north bearing used for this study was 18 degrees.
- Shadow diagrams shown are at hourly intervals.

3 SLR SOLAR ACCESS TO RESIDENTIAL BUILDINGS

SLR has conducted a solar access assessment of the two sites. The 3D model used for 23 Church Avenue is a mirror image of 27 Church Avenue. SLR has used a true north bearing of 9.5 degrees as per the amended survey data for the site dated 27 May 2016 (Refer Figure 5).

Figure 5 Amended Survey



3.1 Daylighting Considerations

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

- Living rooms and private open spaces for at least 70 % in a development should receive a minimum of three hours of direct sunlight between 9.00 am and 3.00 pm in mid-winter. In dense urban areas a minimum of two hours may be acceptable.

The City of Botany Council Development Control Plan Part 4C Section 5.8, C1 and C2 state that:

- Residential flat buildings shall comply with the principles and provisions of State Environmental Planning Policy No 65 (SEPP 65) and the Residential Flat Design Code in relation to solar access.
- Development must demonstrate that living rooms and private open spaces for at least 70% of apartments in a development should receive a minimum of three hours direct sunlight between 9am and 3pm in mid-winter.

3.2 Solar Access Analysis

3.2.1 9:00 am – 3:00 pm on the Winter Solstice 21st June

Using Ecotect, sun's eye view diagrams were generated for each 15 minute interval between 9:00 am and 3:00 pm on the Winter Solstice (21st June). Sun's Eye View diagrams prepared for each 15 minute interval are shown in **Appendix A and Appendix B**. Detailed hours of the direct sunlight calculation to each unit are shown in **Appendix C and Appendix D**

Results of solar access to the living rooms and private open spaces of apartments in the development on June 22nd (winter solstice) between the hours of 9:00 am and 4:00 pm inclusive are summarised in the table below.

Table 1 Solar Access Summary for 27 Church Avenue within the development between 9:00am to 3:00pm on June 21st

Building	Number of Apartments	Number of Apartments with 2 hr solar access	Percentage of with 2 hr solar access	Number of Apartments with 3 hr solar access	Percentage of with 3 hr solar access
A	46	24	52.2%	24	52.2%
B	22	14	63.6%	10	45.5%
C	27	9	33.3%	0	0.0%
Total	95	47	49.5%	34	35.8%

27 Church Avenue was found to provide **49.5%** of the apartments with 2 hours of direct sunlight on the winter solstice between the hours of 9:00 am to 3:00 pm at a 'sampling rate' of 15 minutes.

Table 2 Solar Access Summary for 23 Church Avenue within the development between 9:00am to 3:00pm on June 21st

Building	Number of Apartments	Number of Apartments with 2 hr solar access	Percentage of with 2 hr solar access	Number of Apartments with 3 hr solar access	Percentage of with 3 hr solar access
A	46	24	52.2%	24	52.2%
B	22	22	100.0%	10	45.5%
C	27	9	33.3%	0	0.0%
Total	95	55	57.9%	34	35.8%

23 Church Avenue was found to provide **57.9%** of the apartments with 2 hours of direct sunlight on the winter solstice between the hours of 9:00 am to 3:00 pm at a 'sampling rate' of 15 minutes.

Table 3 Solar Access Summary

Block	Number of Apartments	Number of Apartments with 2 hr solar access	Percentage of with 2 hr solar access	Number of Apartments with 3 hr solar access	Percentage of with 3 hr solar access
23	95	55	52.2%	34	35.8%
27	95	47	100.0%	34	35.8%
Total	190	102	53.7%	68	35.8%

Overall the two developments provide **53.7%** of the apartments with 2 hours of direct sunlight on the winter solstice between the hours of 9:00 am to 3:00 pm at a 'sampling rate' of 15 minutes.

The City of Botany Council has also asked that the following planning principles be applied to the site.

- For a window, door or glass wall to be assessed as being in sunlight, half of its area should be in sunlight. For private open space to be assessed as being in sunlight, either half its area or a useable strip adjoining the living area should be in sunlight, depending on the size of the space. The amount of sunlight on private open space should be measured at ground level.

Using the sun eye views SLR has approximated this principle in the above analysis.

- To be assessed as being in sunlight, the sun should strike a vertical surface at a horizontal angle of 22.5 degrees or more.

This principle has not been included in the above analysis. If it were the percentage of passing apartments would be reduced to **51.1%**.

4 ADDITIONAL ANALYSIS

The above analyses have been made with a mirrored building on the neighbouring block as shown in Appendix A and Appendix B. SLR has been asked to conduct an additional calculation for 27 Church Street with no mirrored building on 23 Church Street. The results for this calculation are shown in Table 4.

Table 4 Solar Access Summary for 27 Church Avenue within the development between 9:00am to 3:00pm on June 21st

Building	Number of Apartments	Number of Apartments with 2 hr solar access	Percentage of with 2 hr solar access	Number of Apartments with 3 hr solar access	Percentage of with 3 hr solar access
A	46	24	52.2%	24	52.2%
B	22	22	100.0%	18	81.8%
C	27	12	44.4%	5	18.5%
Total	95	58	61.1%	47	49.5%

Detailed hours of the direct sunlight calculation to each unit are shown in **Appendix E**

Again SLR has not used the principle that to be assessed as being in sunlight, the sun should strike a vertical surface at a horizontal angle of 22.5 degrees or more. If it were the percentage of passing apartments would be reduced to **57.9%**

5 CONCLUSION

SLR has been engaged by the City of Botany Council to review previous daylighting studies for the proposed mixed use development at 27 Church Avenue in Mascot and if necessary to conduct a further assessment. SLR have also been asked to review and if required assess the development at 23 Church Avenue.

SLR has reviewed the solar access assessments for both sites which conclude that 27 Church Avenue receives at least two hours of solar access to 70.5% of the apartments, and 23 Church Avenue receives at least two hours of solar access to 48.8% of the apartments. The plans used for these assessments show the true north bearing at 18 degrees.

The State Environmental Planning Policy (SEPP) 65 supported by the Residential Flat Design Code - Part 03 Building Design, 'Rules of Thumb' is relevant to the assessment of the daylight access into residential components of the proposed development. The above regulation states that:

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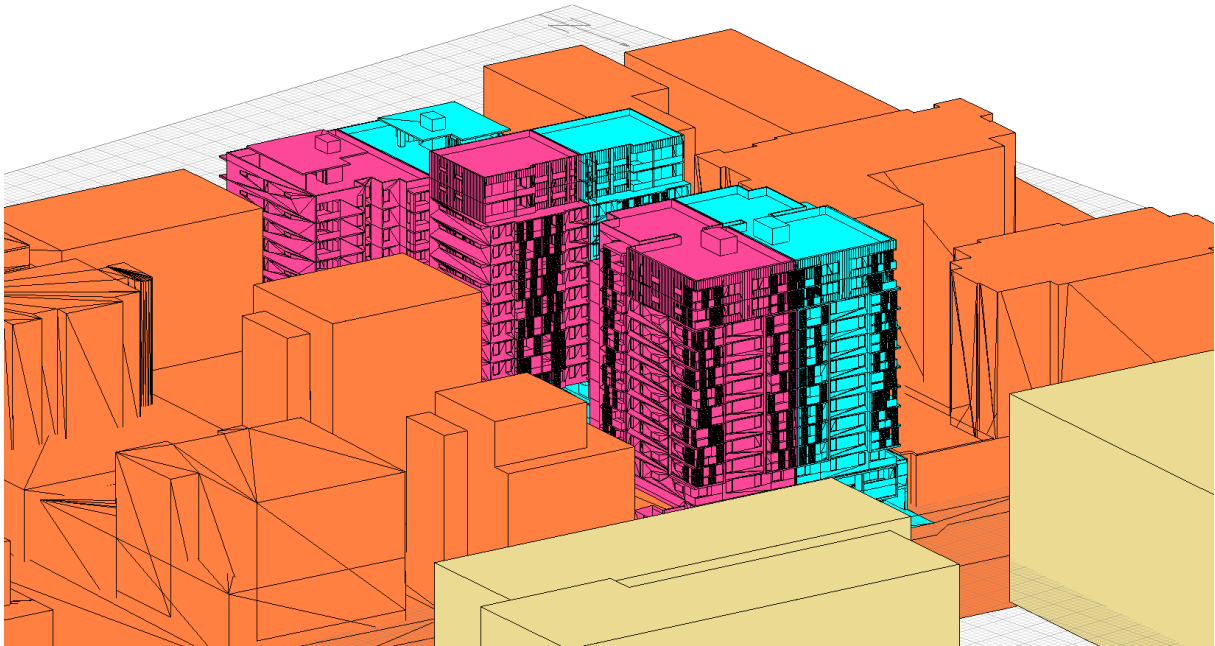
From the 3D models and plans provided SLR has calculated that 49.5% of the apartments meet the two hour requirement for 27 Church Avenue and 57.9% of the apartments meet the two hour requirement for 23 Church Avenue.

Overall 53.7% of the apartments meet the two hour requirement across the two developments.

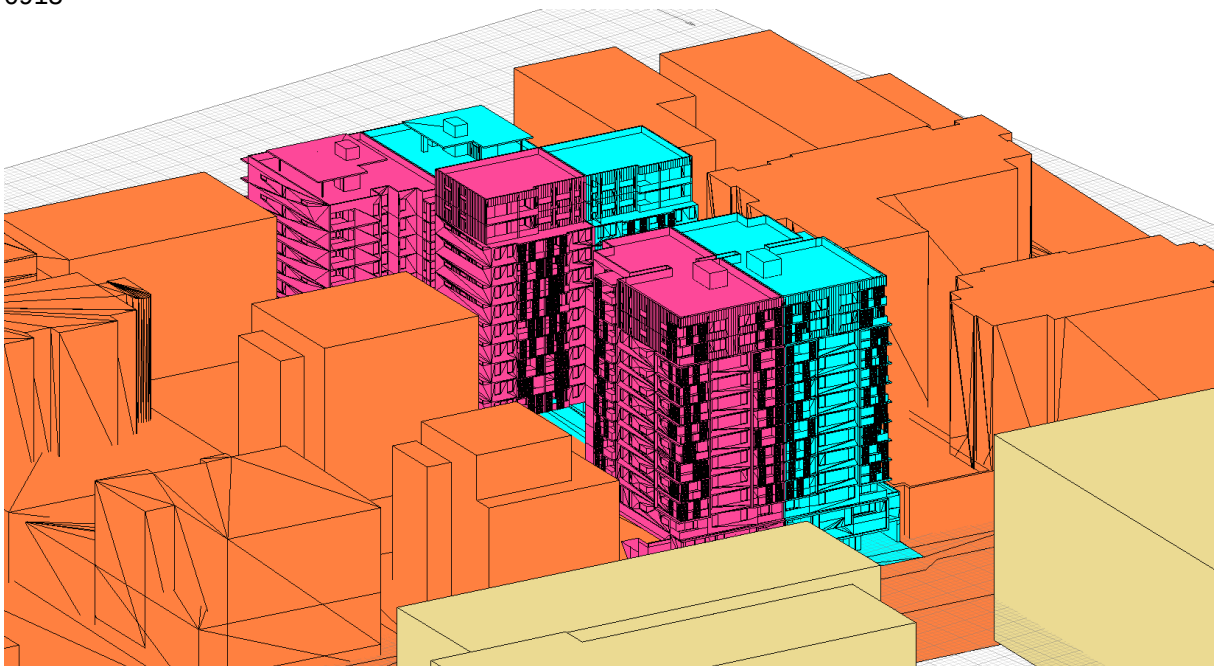
Additionally 61.1% of the apartments meet the two hour requirement when there is no development on 23 Church Street.

SUN EYE VIEWS 27 CHURCH AVENUE

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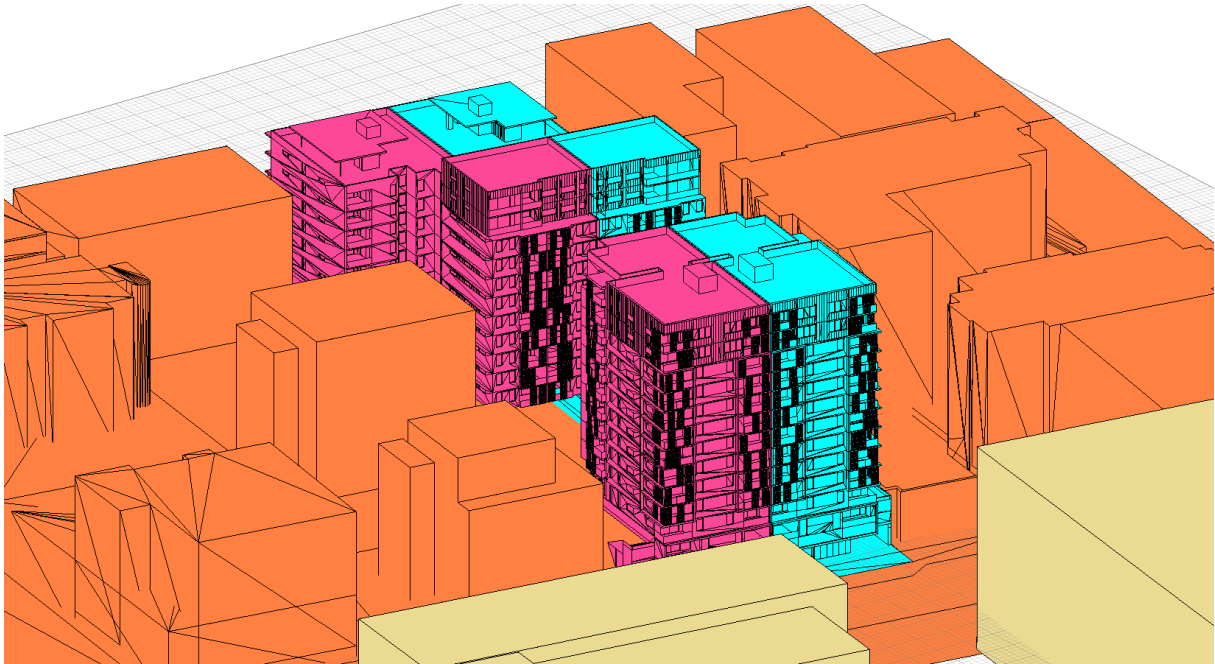


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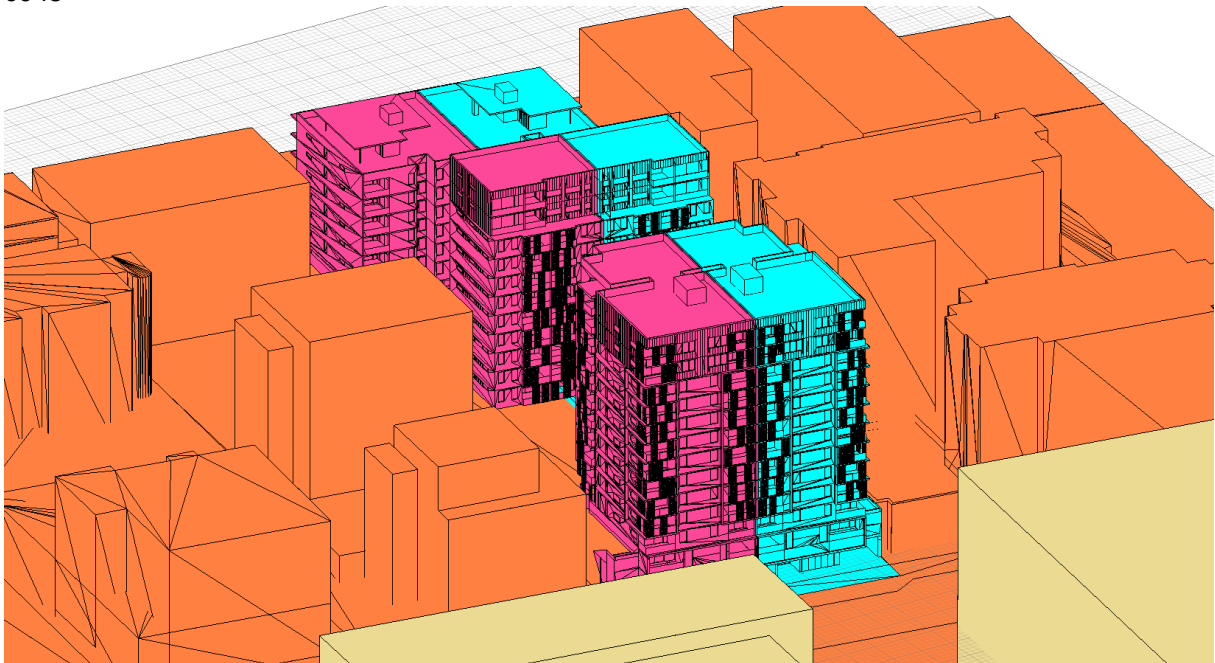


SUN EYE VIEWS 27 CHURCH AVENUE

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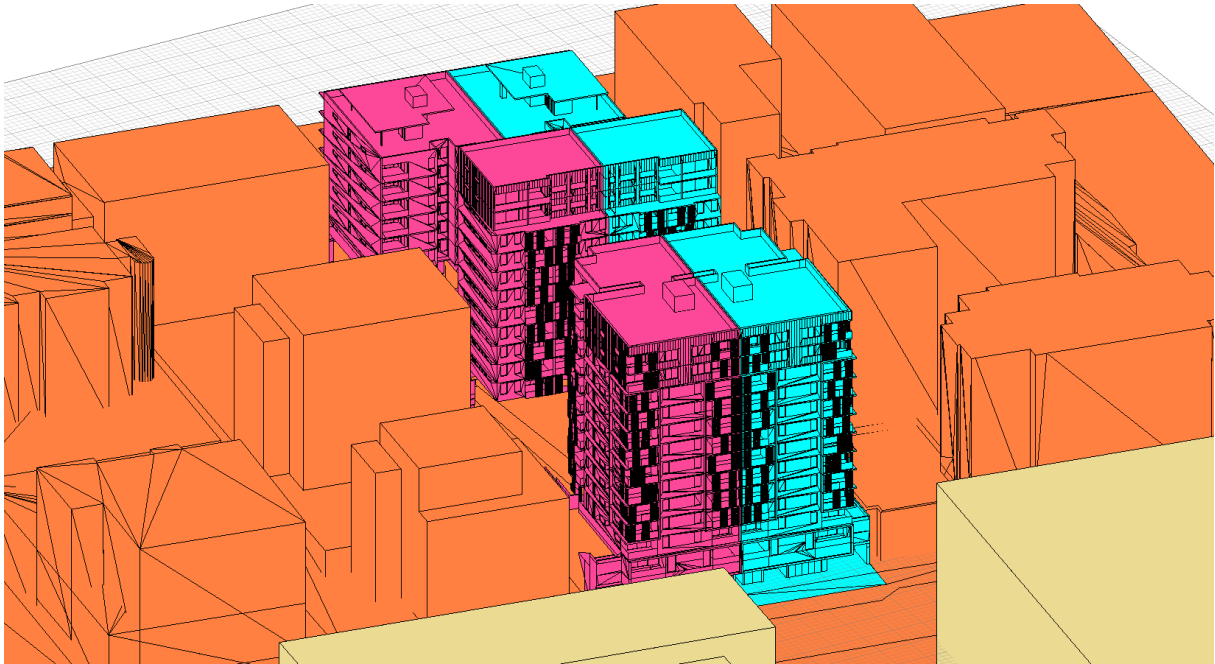


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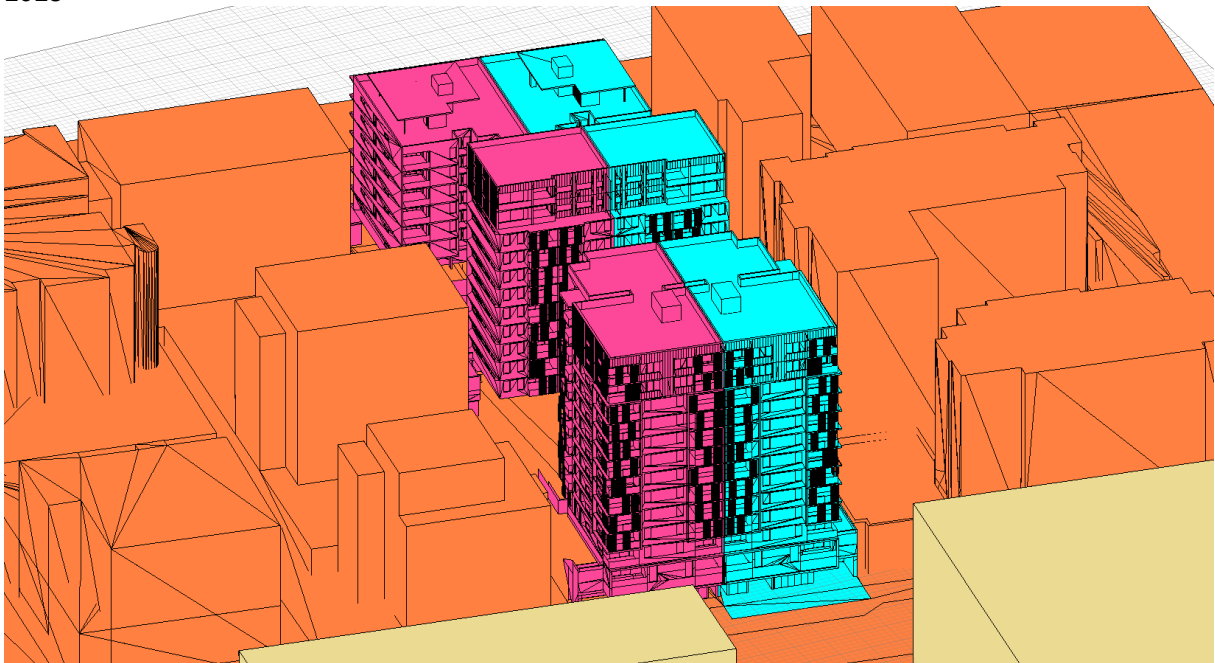


SUN EYE VIEWS 27 CHURCH AVENUE

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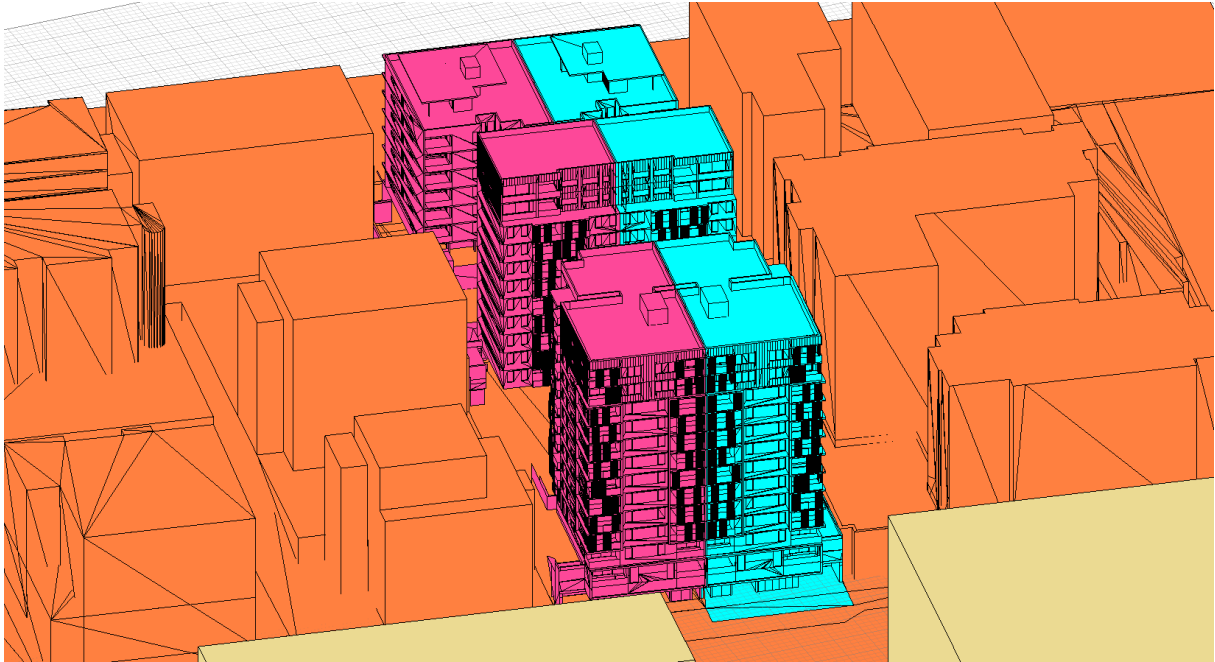


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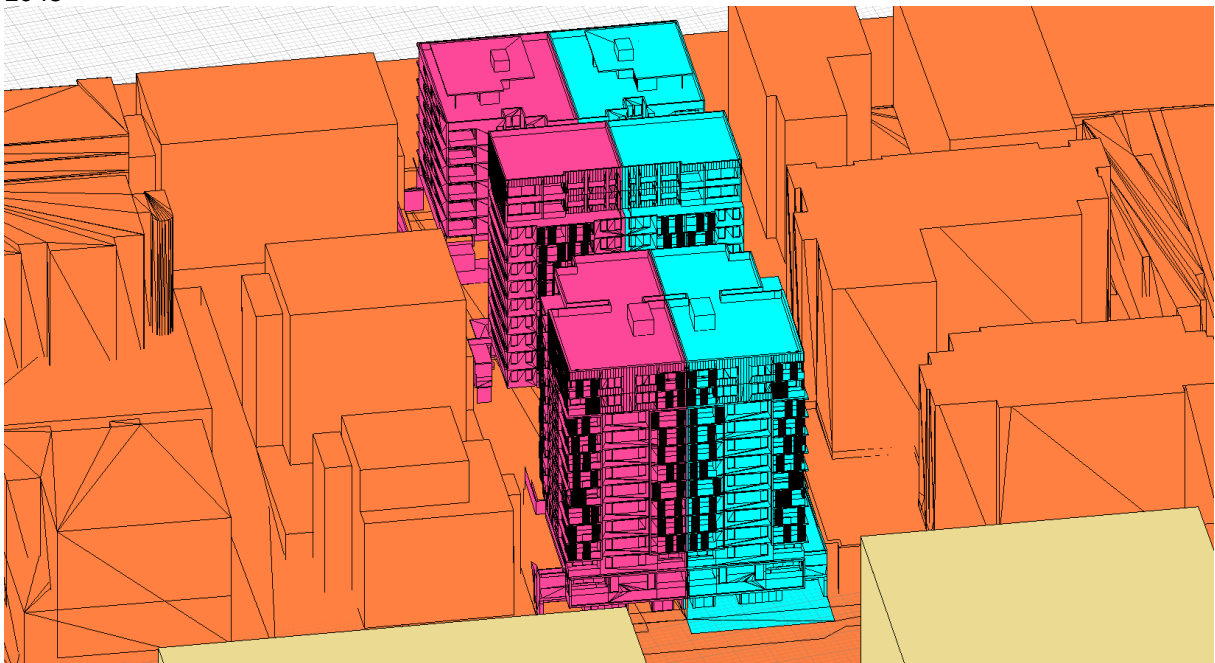


SUN EYE VIEWS 27 CHURCH AVENUE

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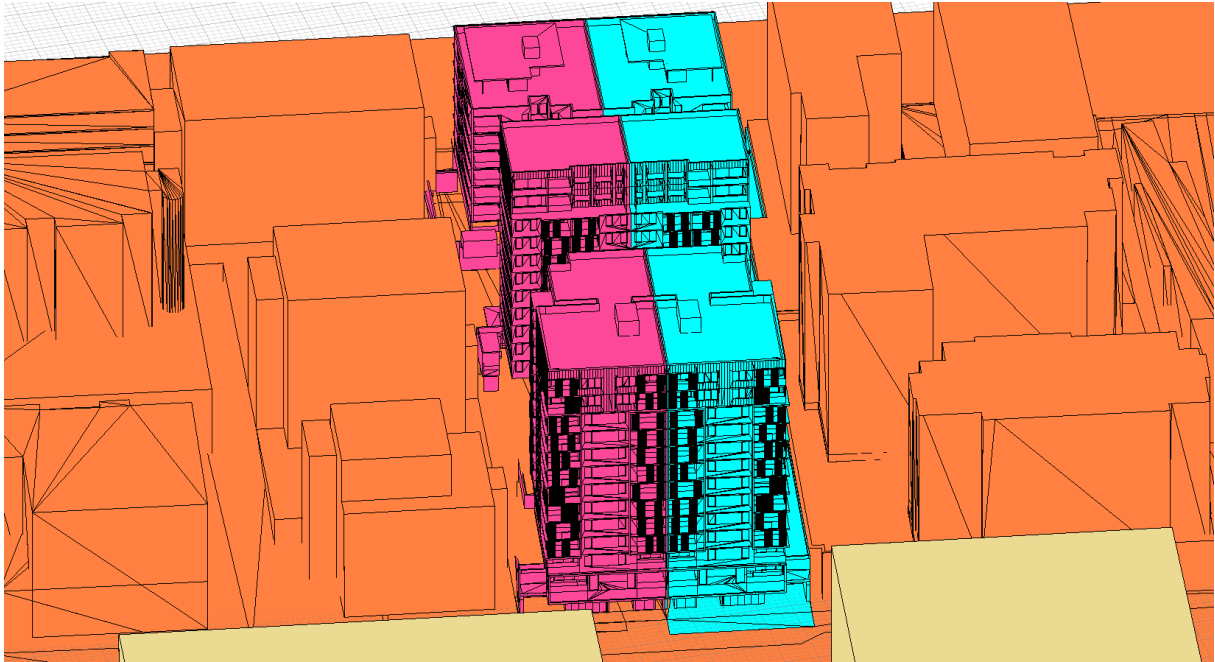


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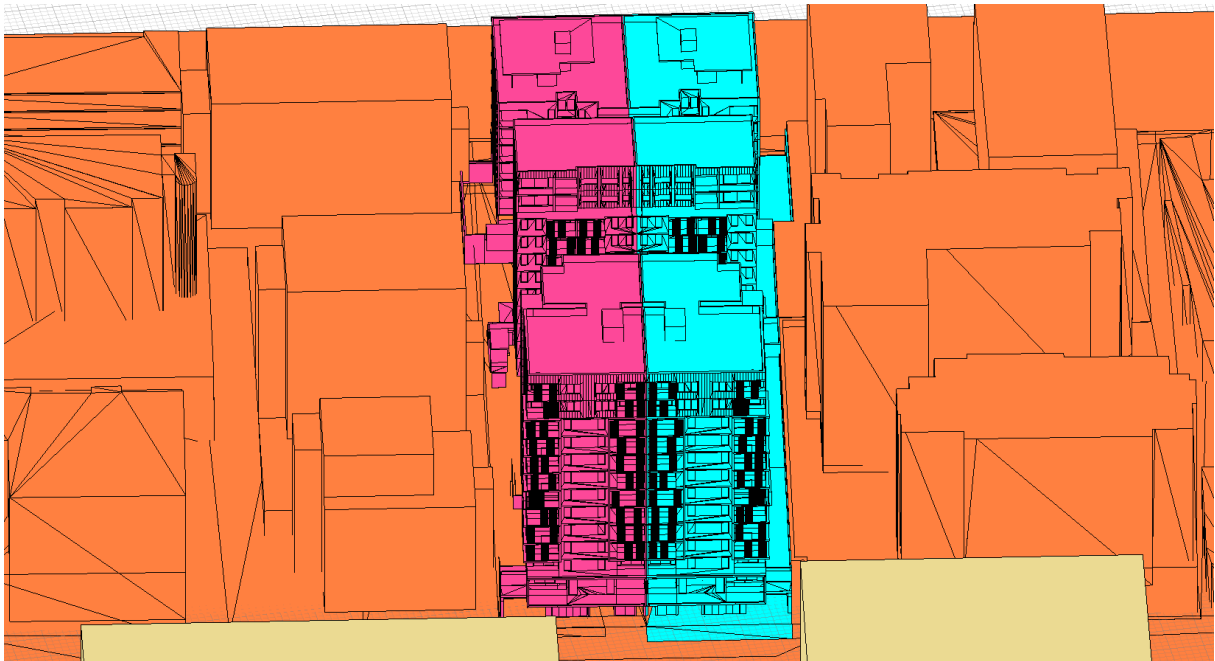


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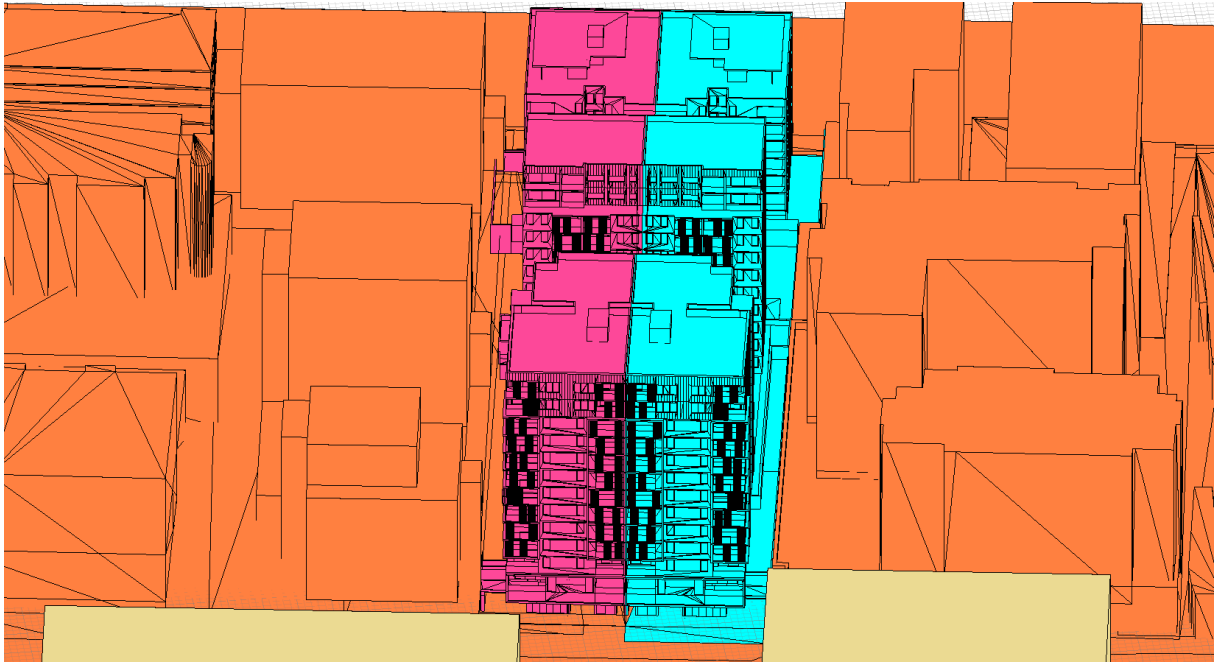


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SUN EYE VIEWS 27 CHURCH AVENUE

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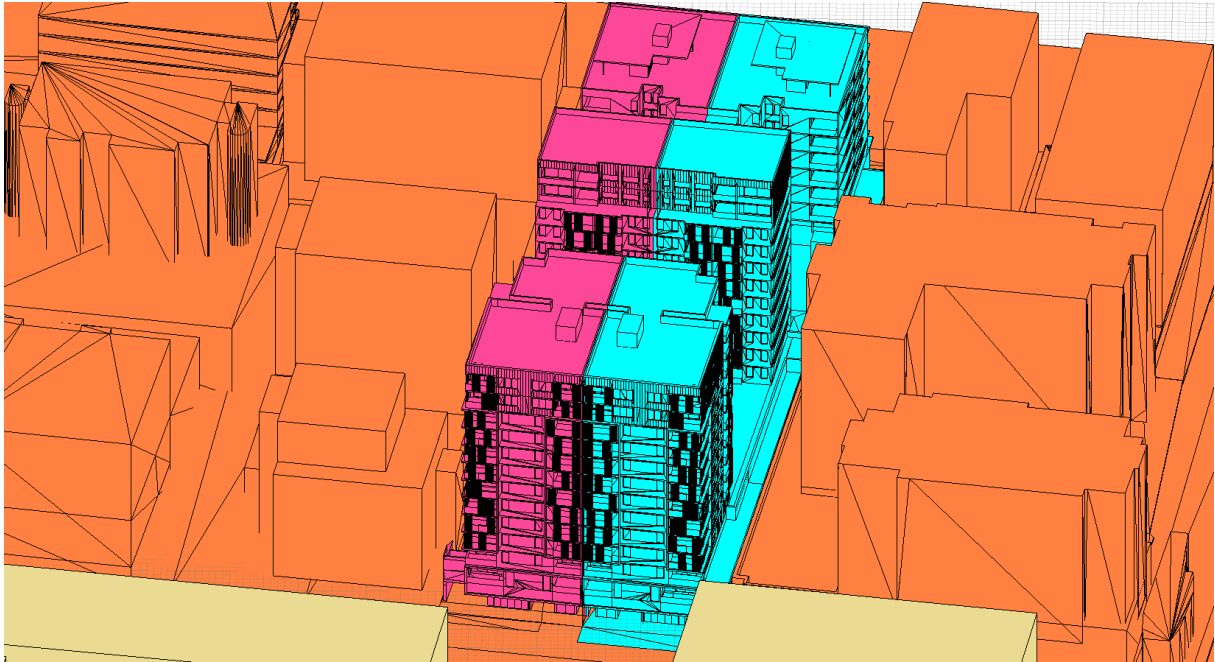


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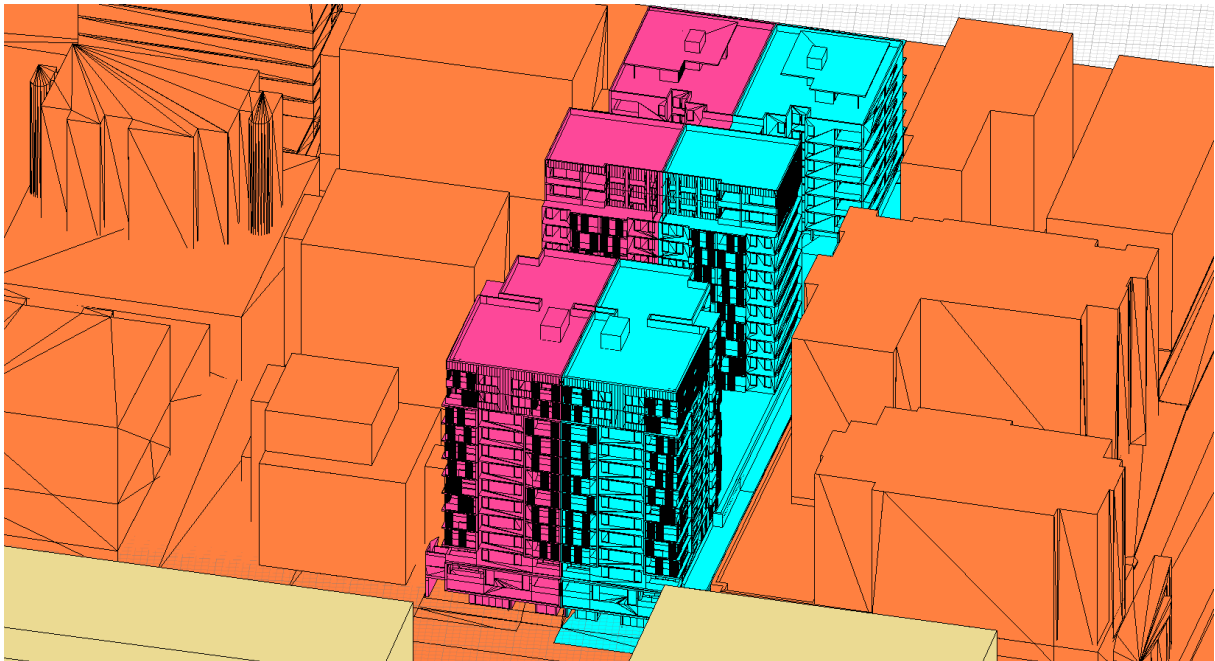


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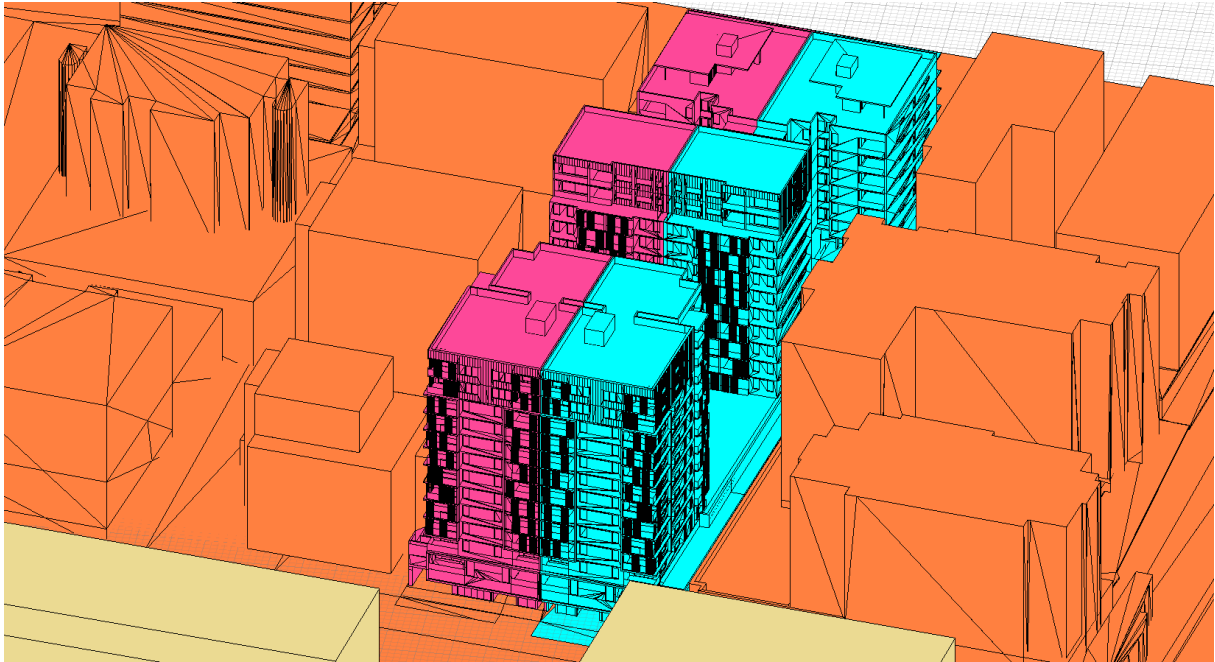


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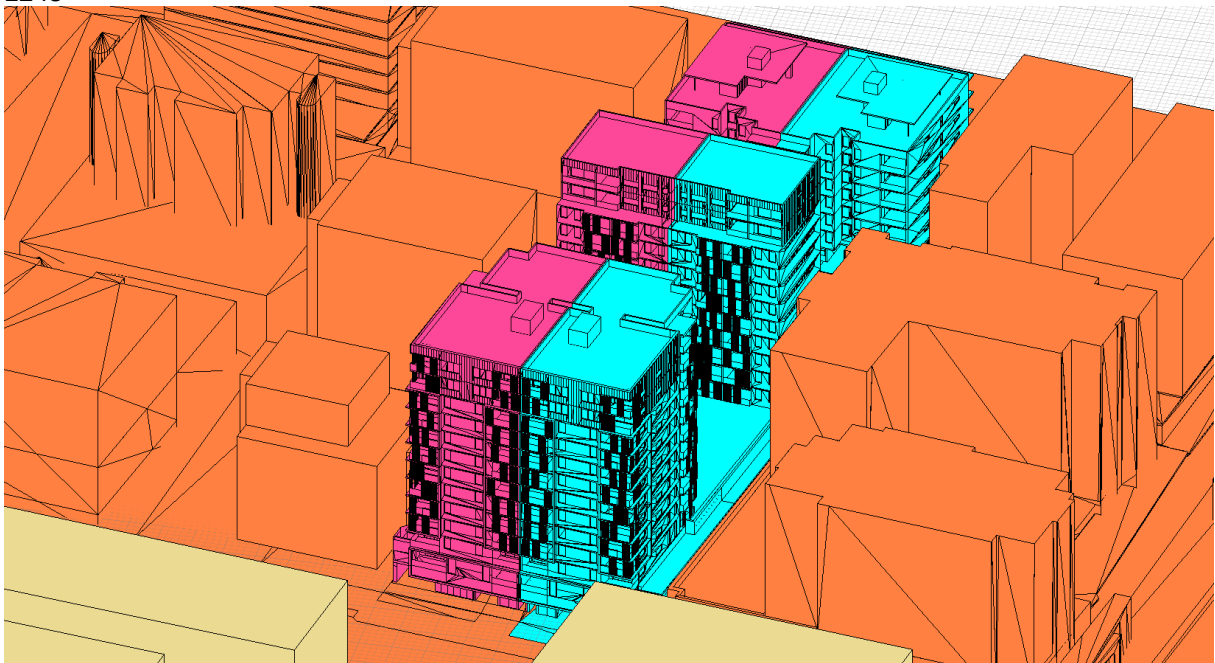


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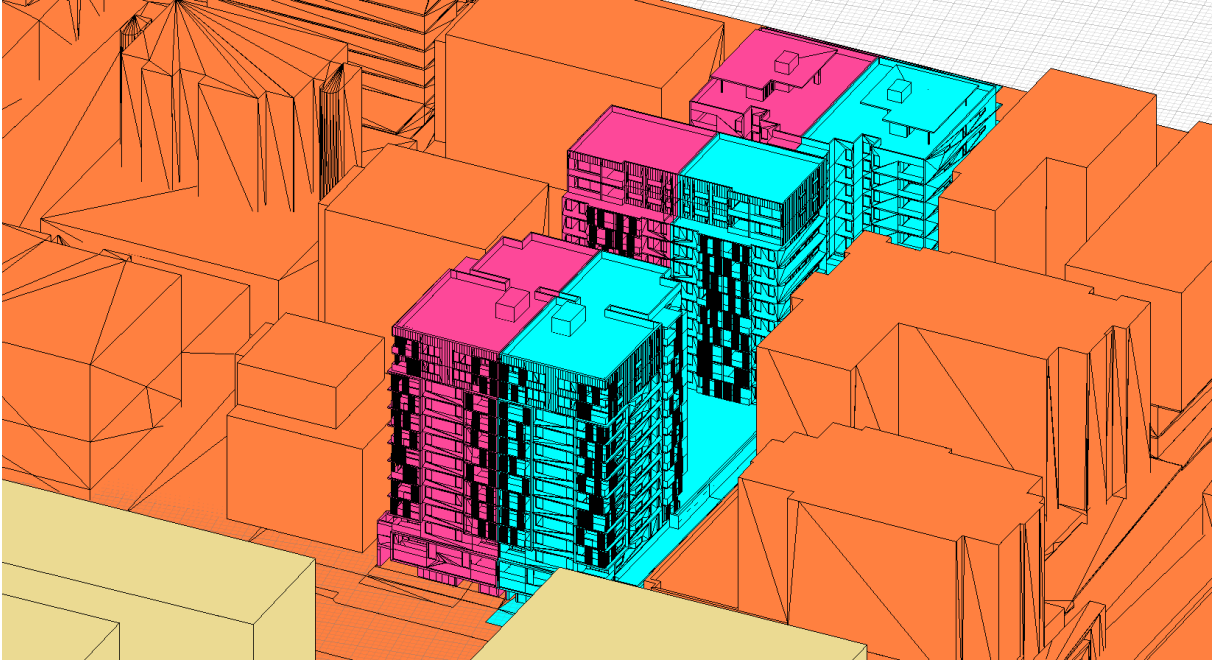


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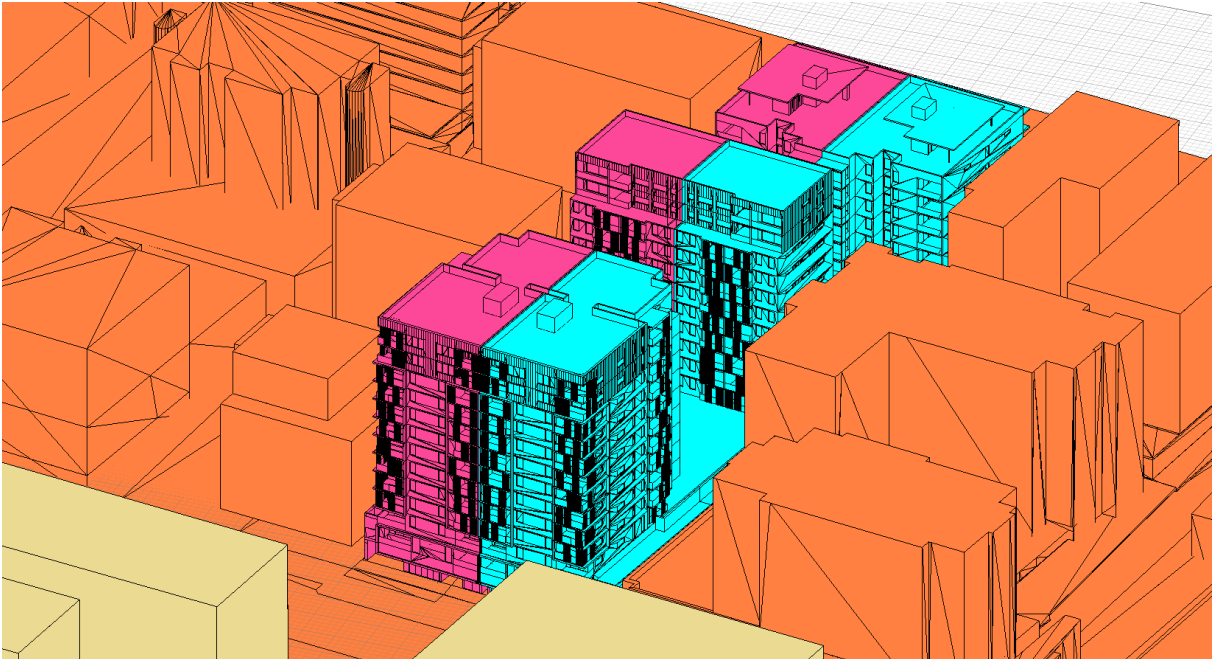


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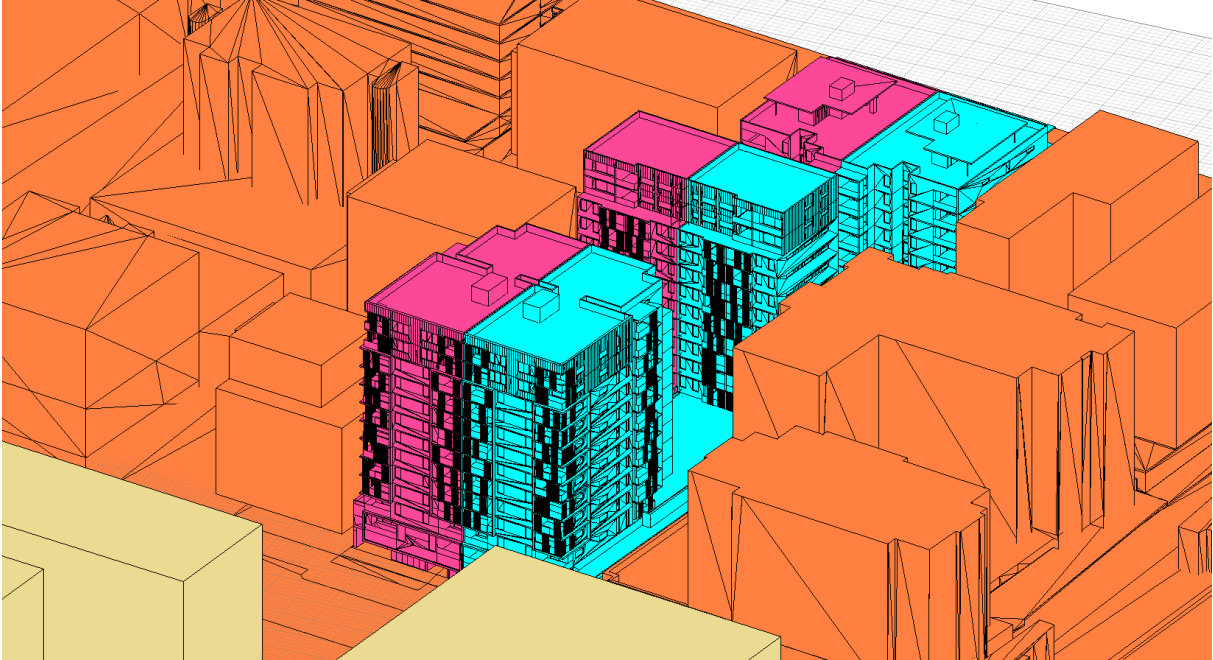


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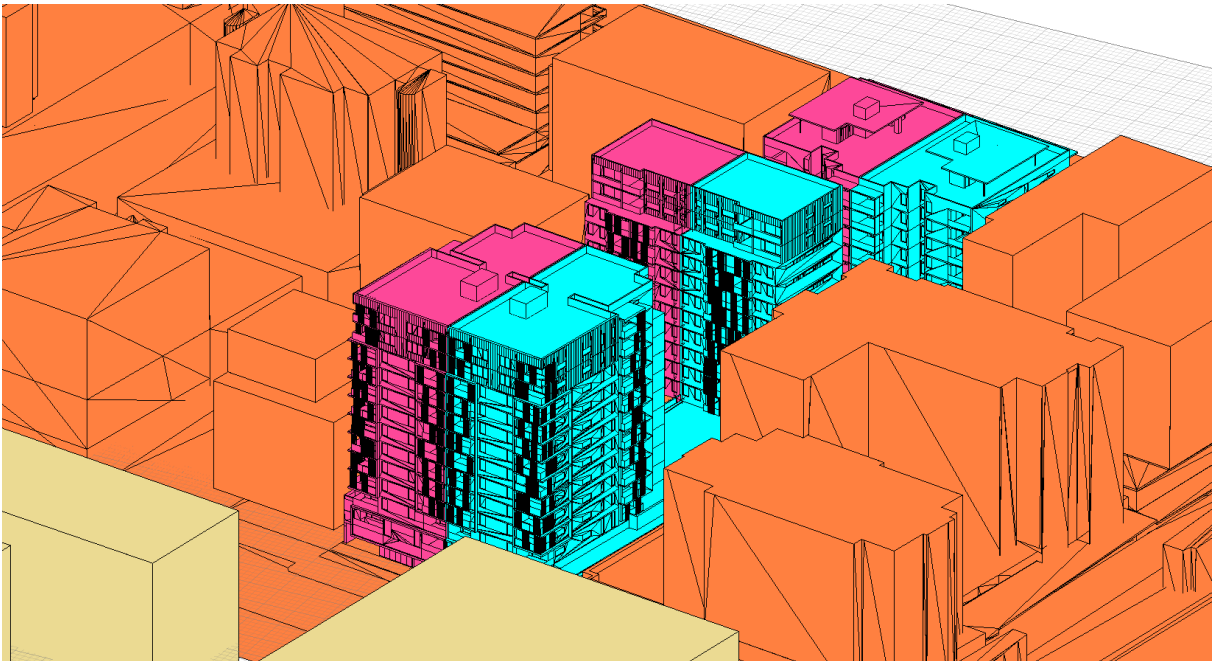


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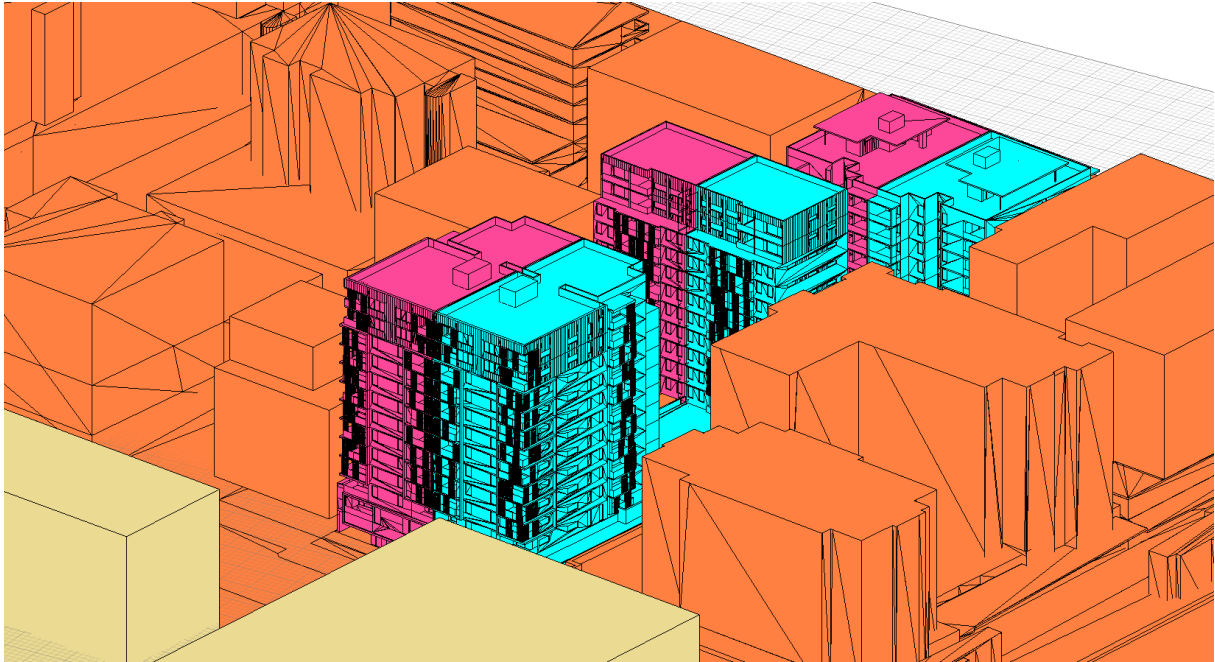


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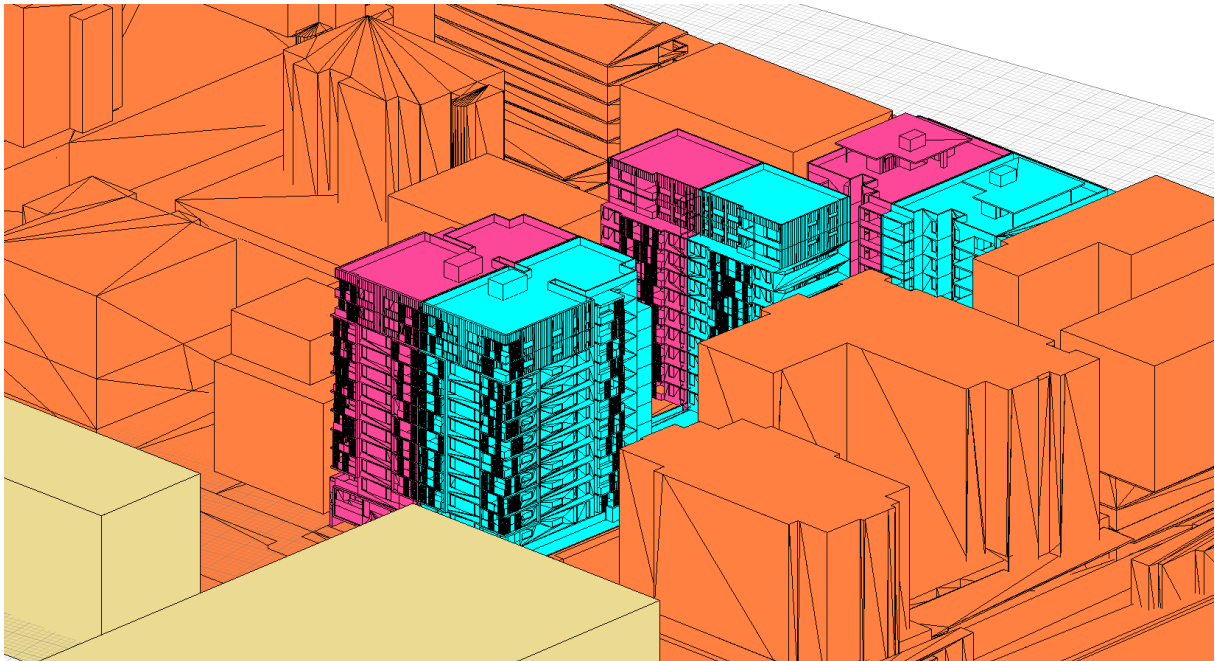


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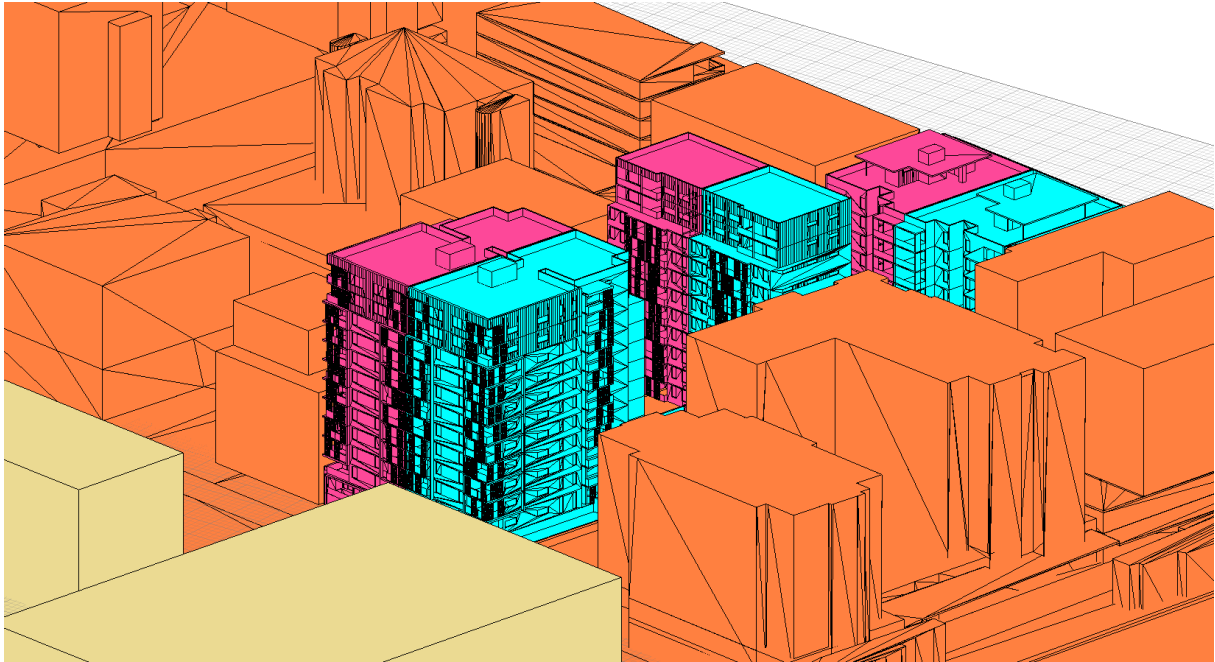


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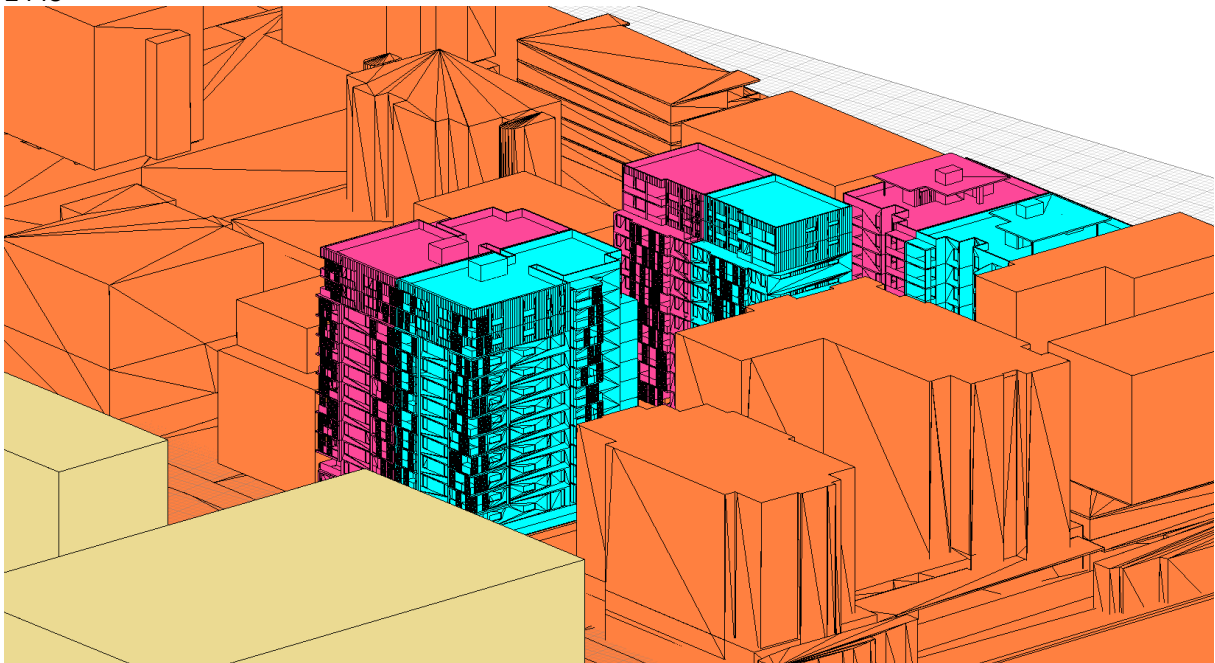


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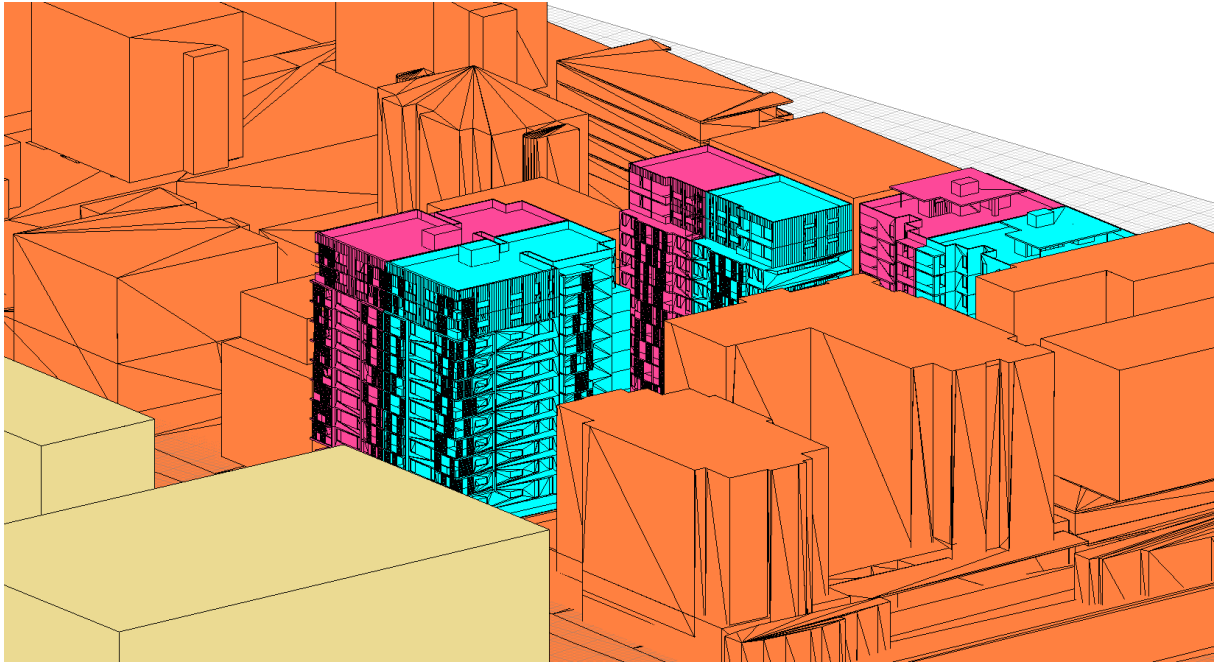


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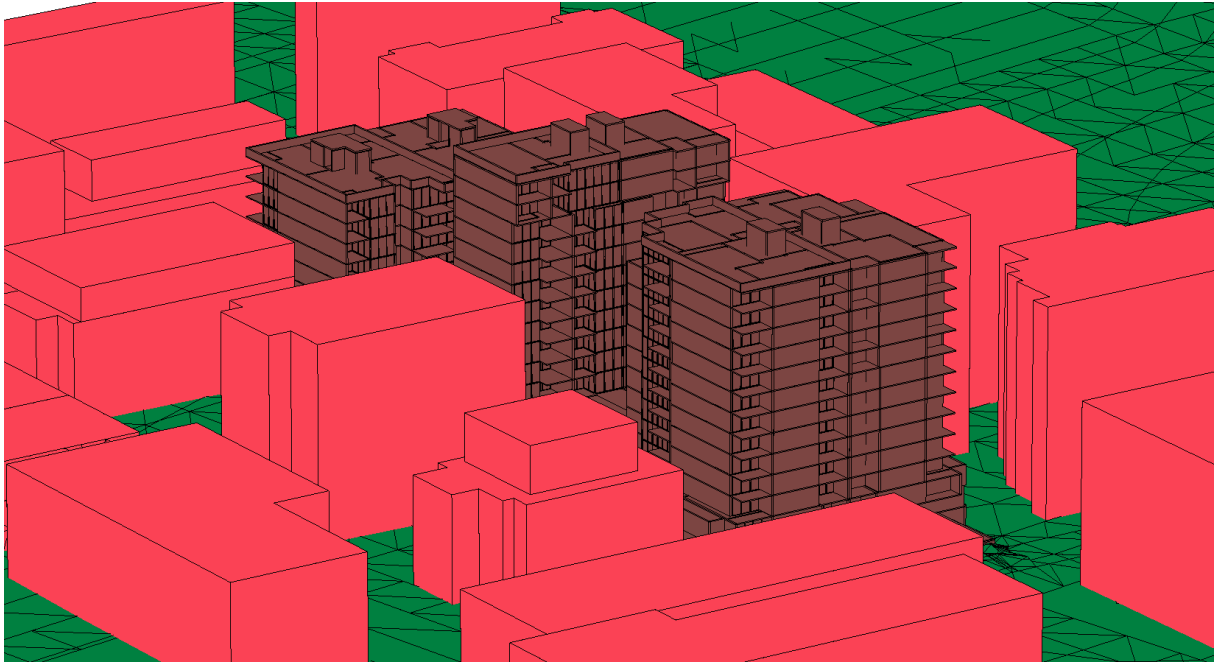
SUN EYE VIEWS 27 CHURCH AVENUE

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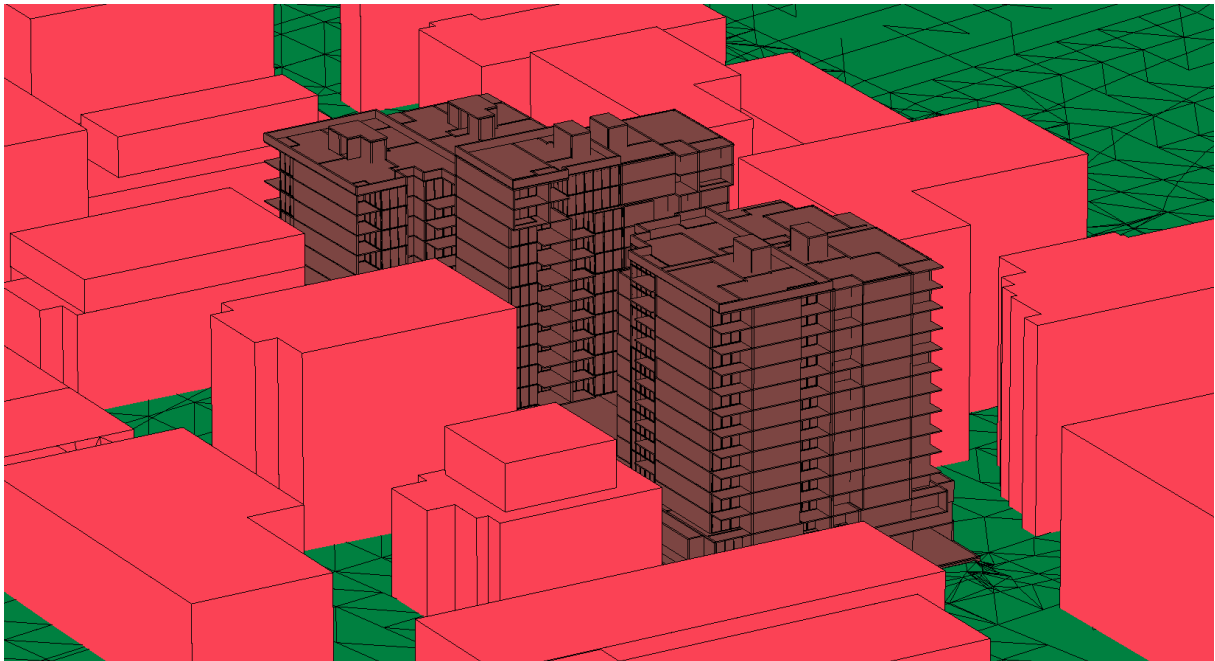


SUN EYE VIEWS 23 CHURCH AVENUE

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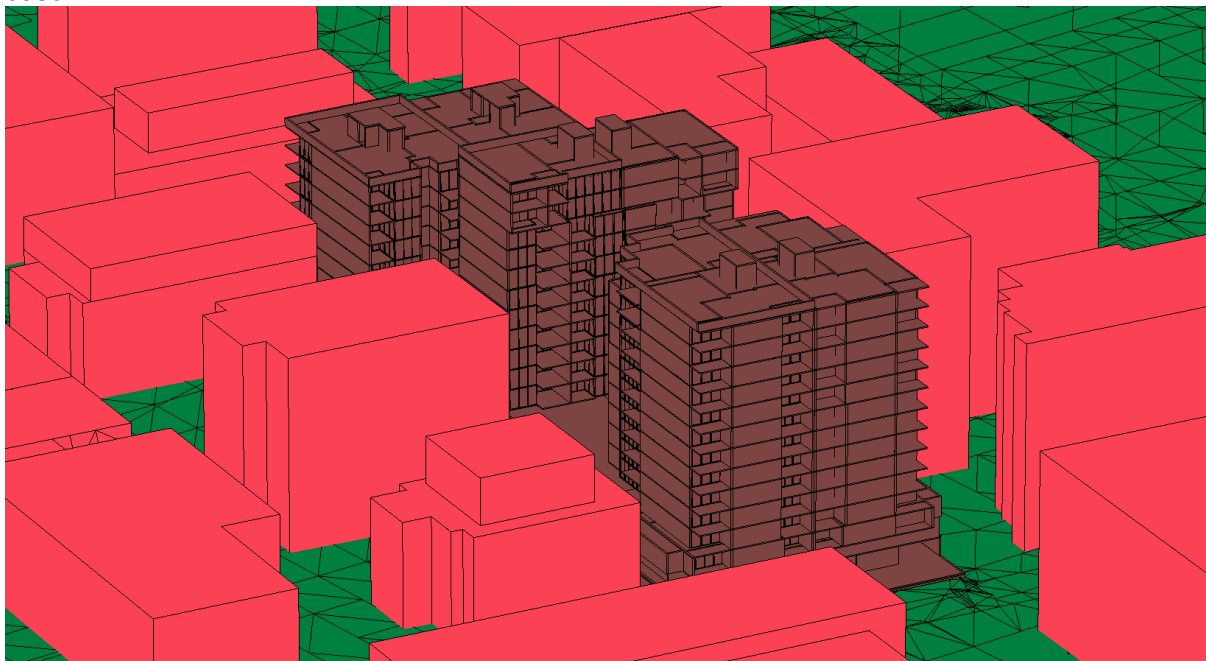


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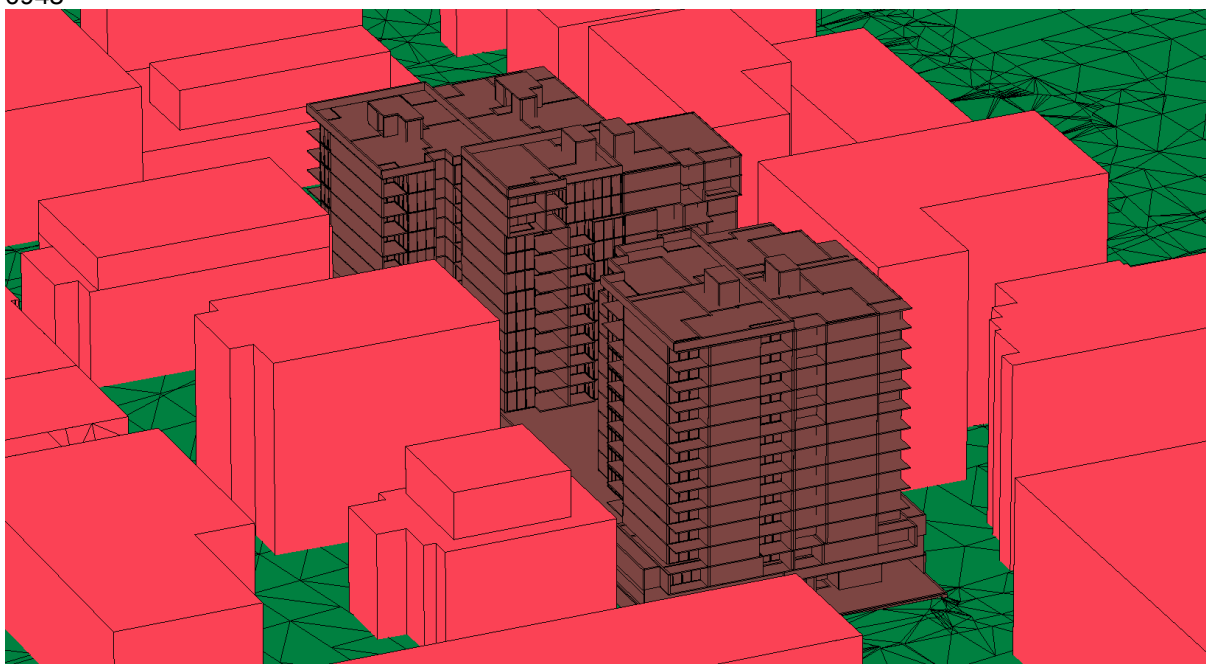


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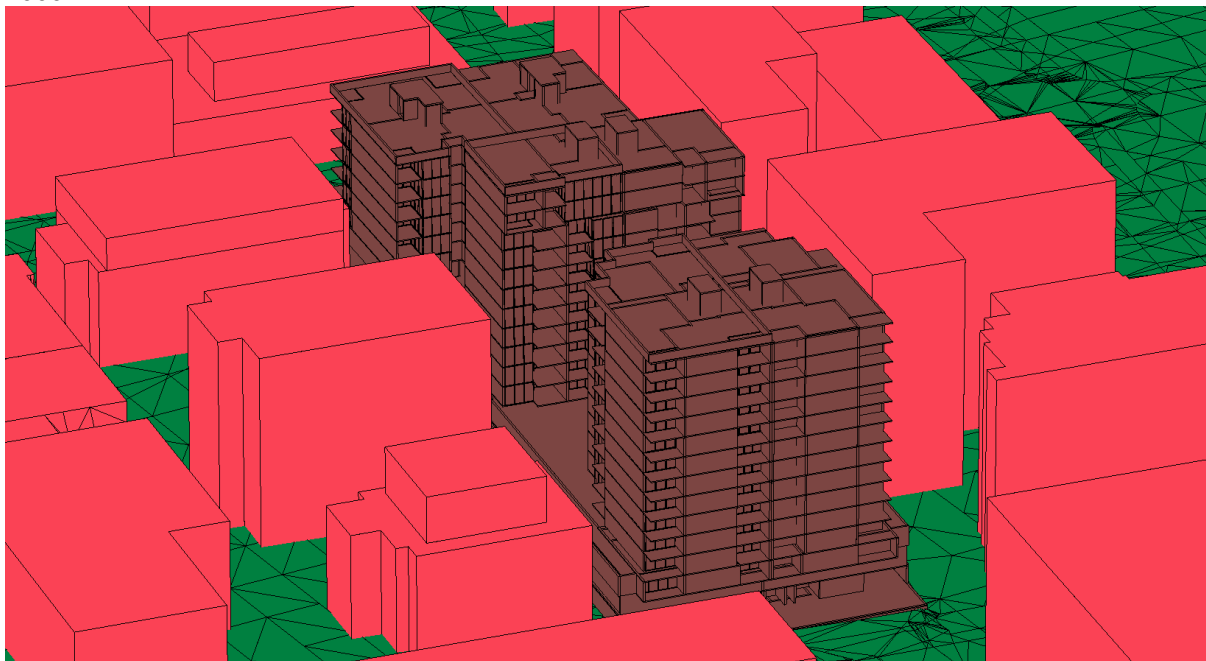


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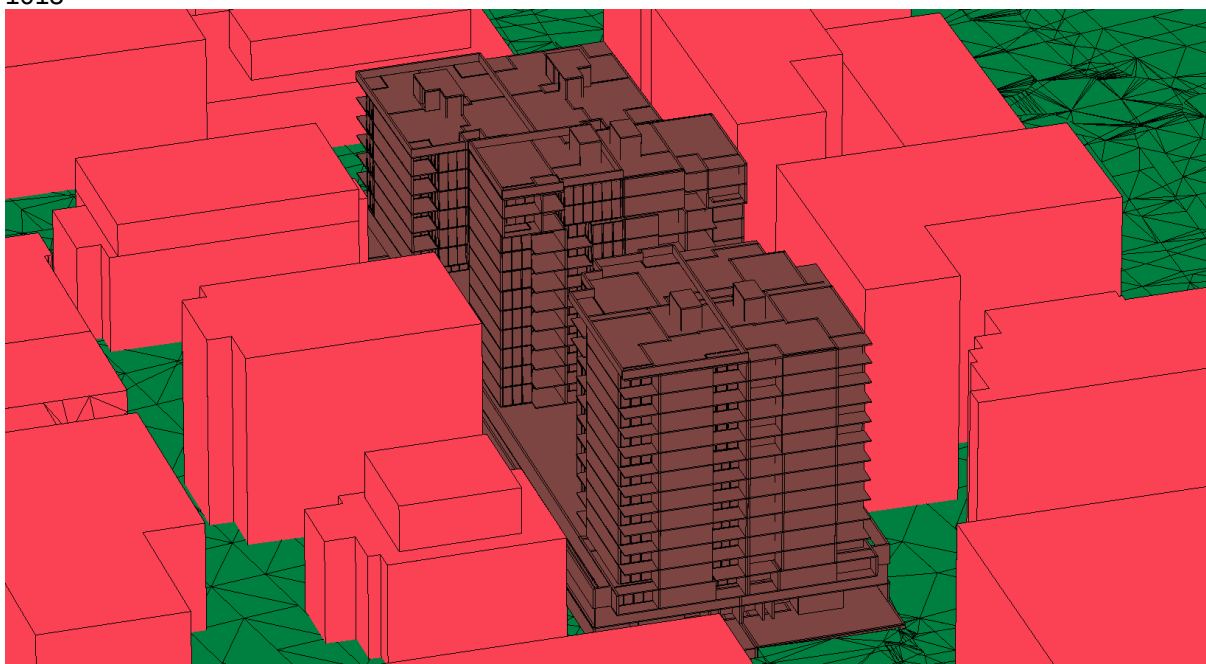


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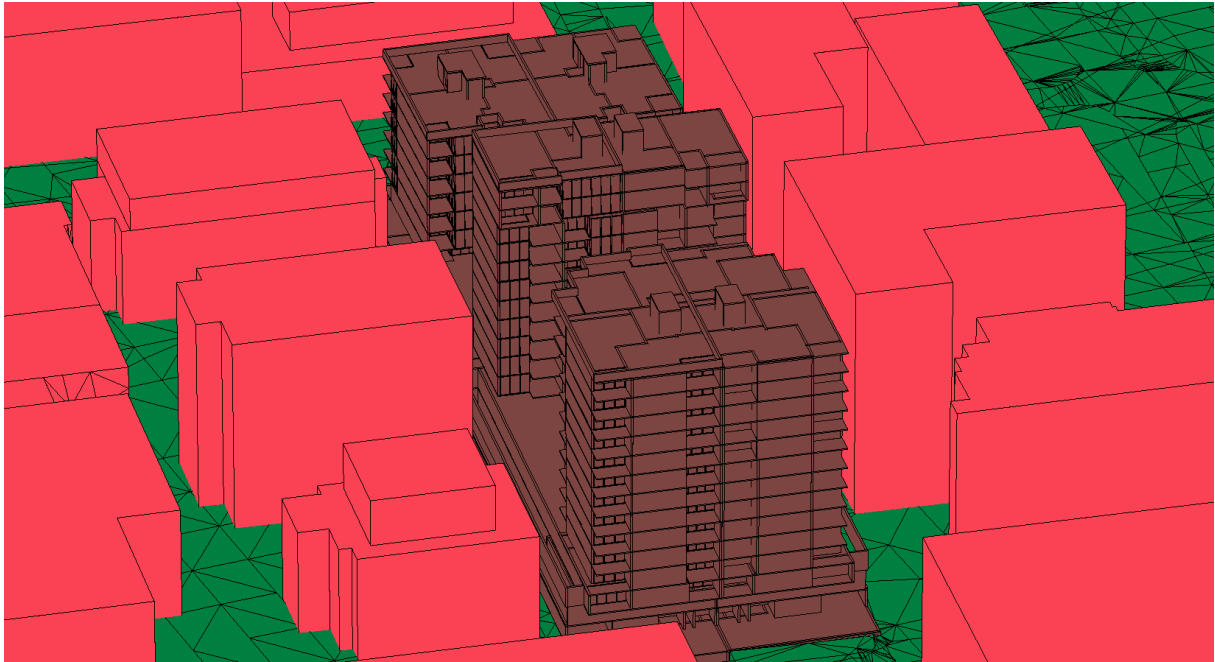


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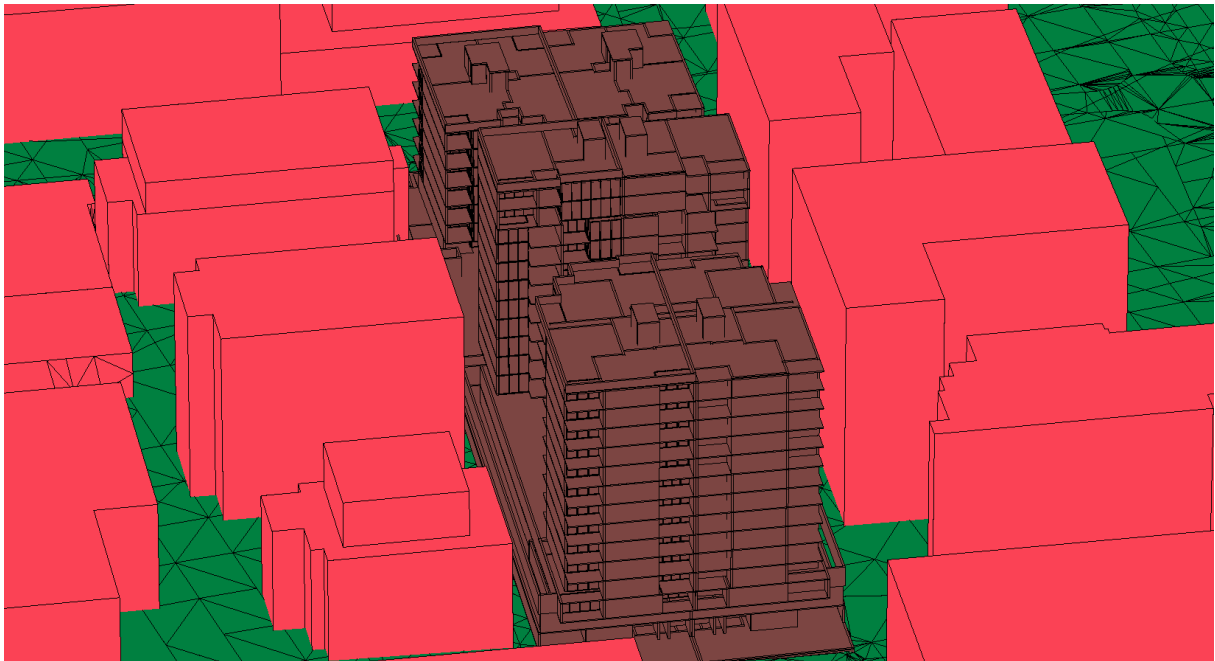


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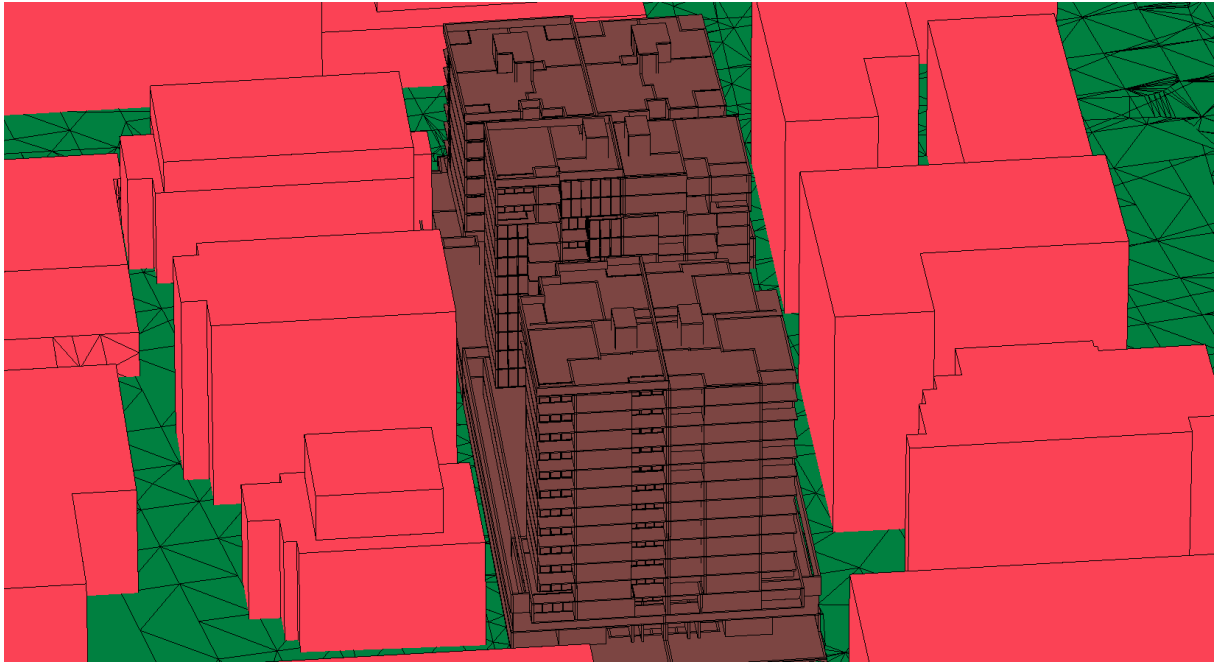


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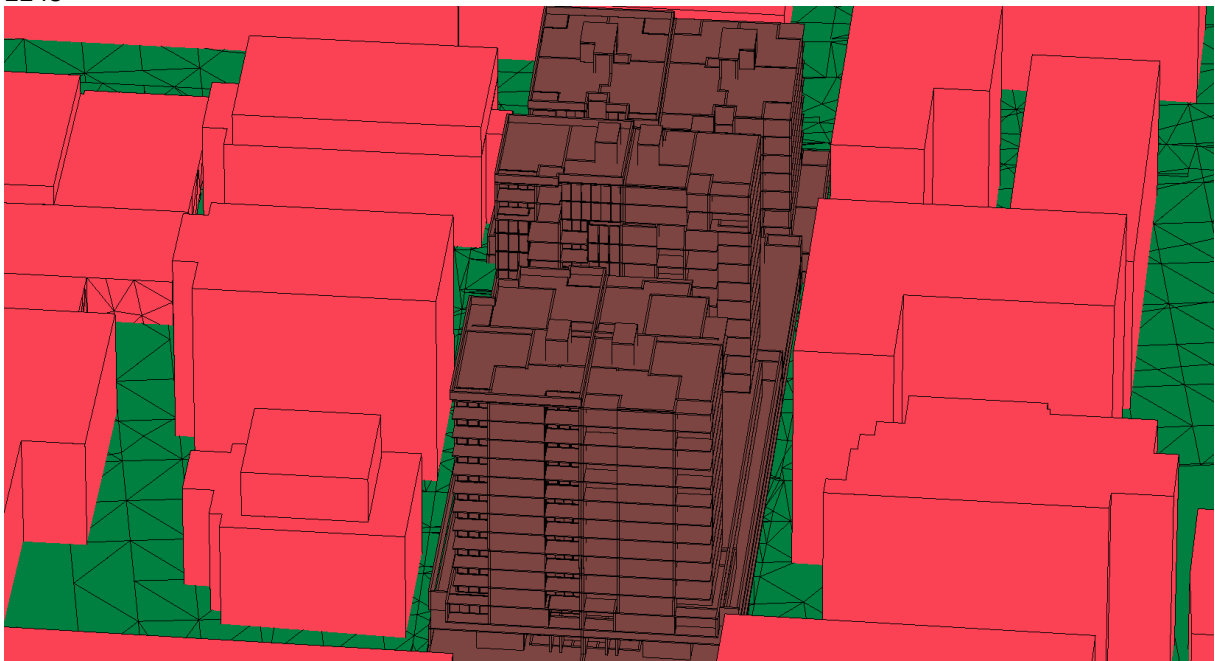


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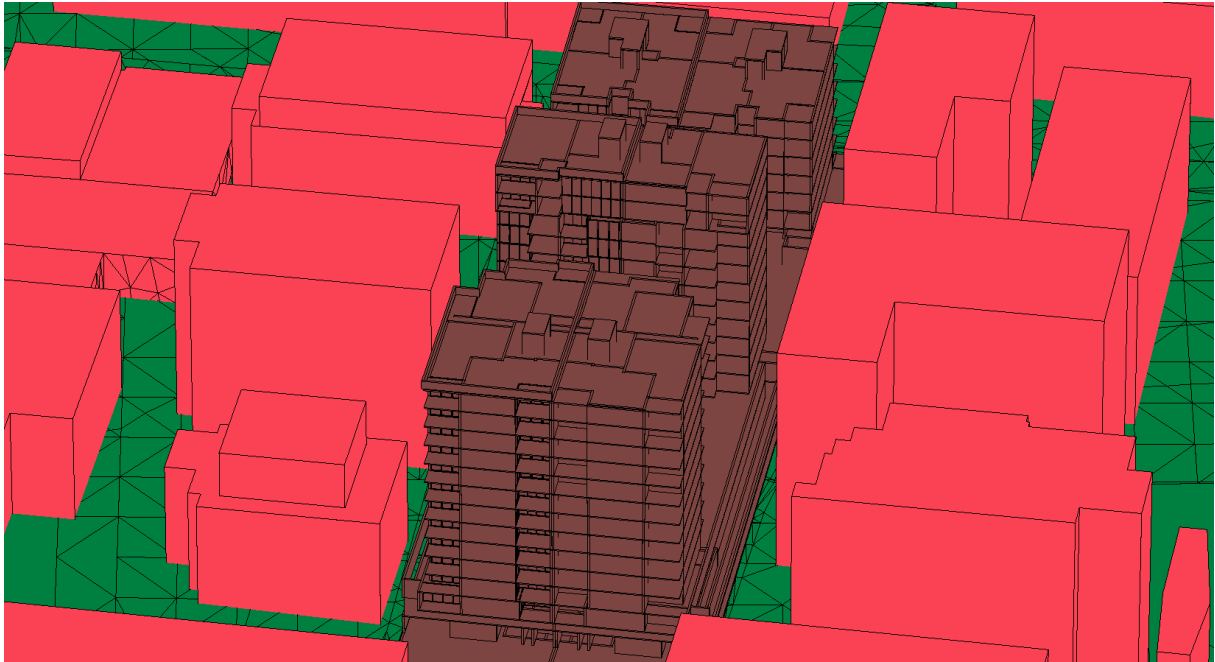


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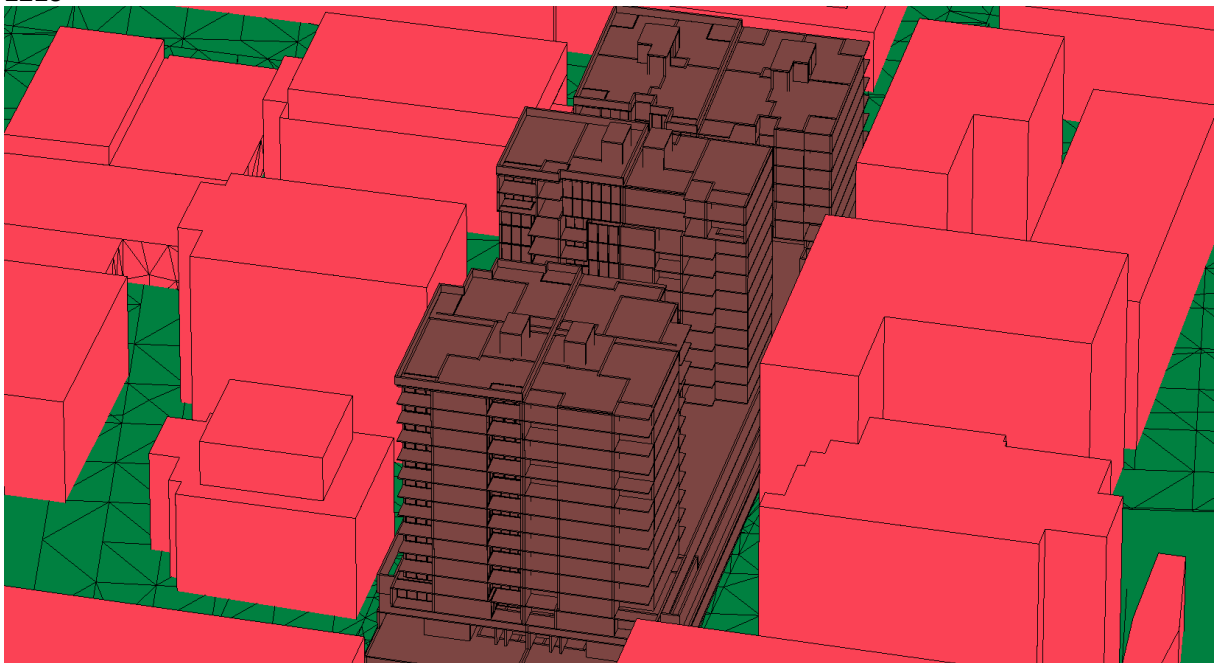


SUN EYE VIEWS 23 CHURCH AVENUE

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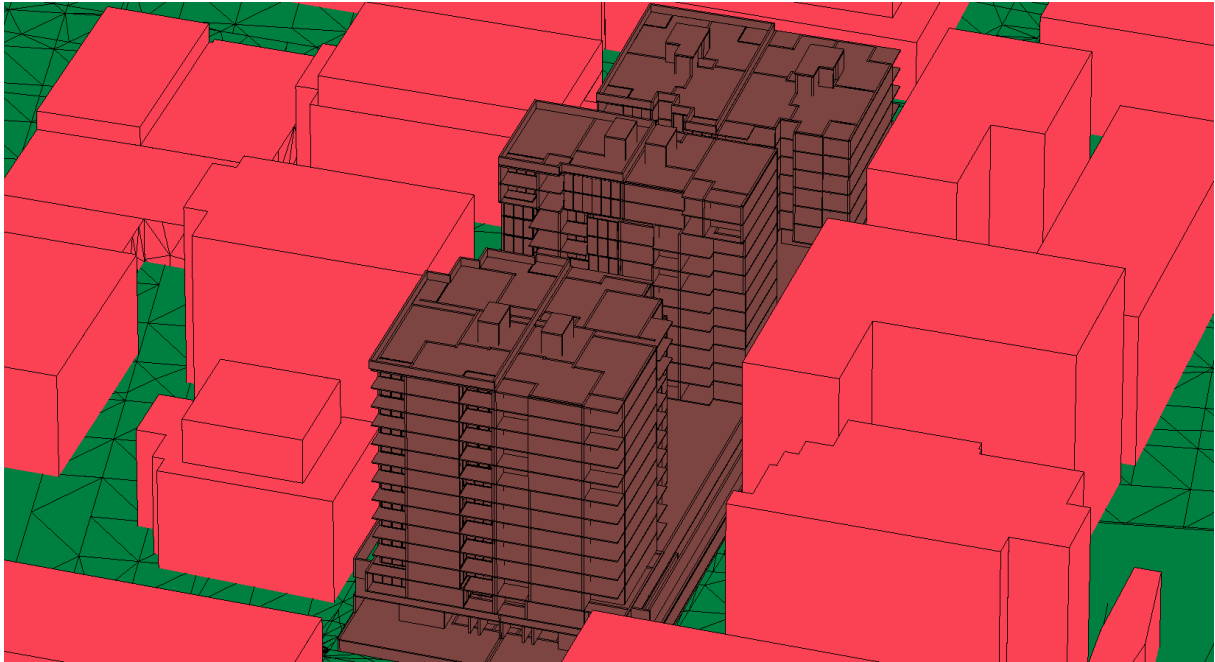


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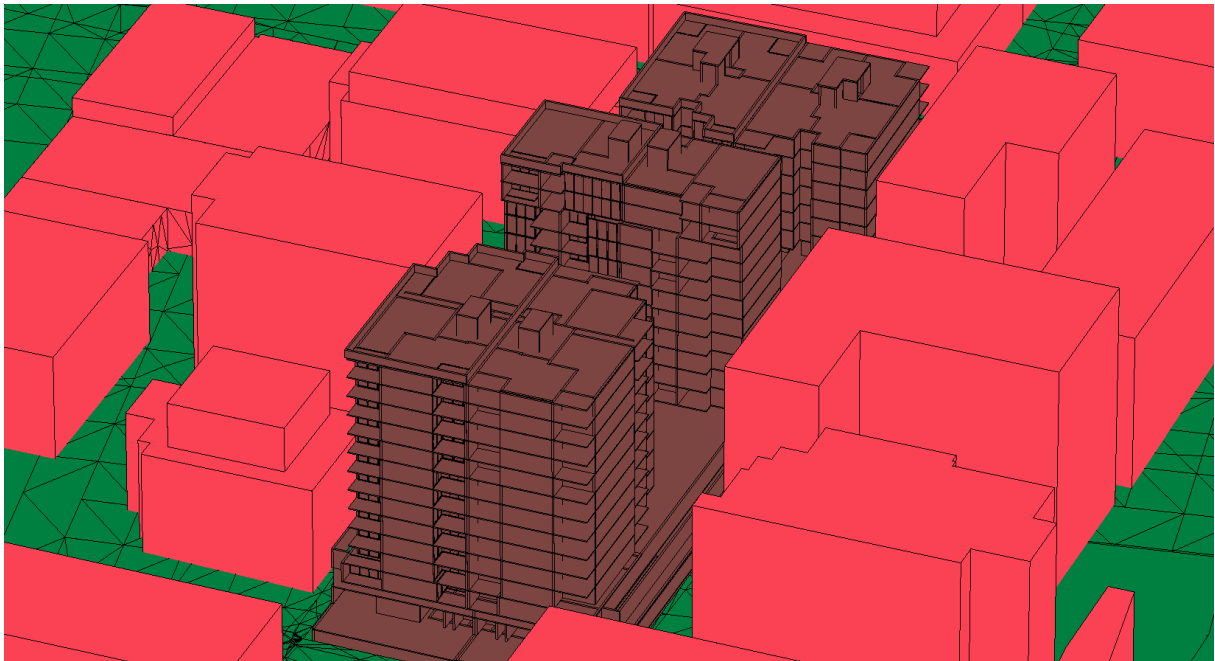


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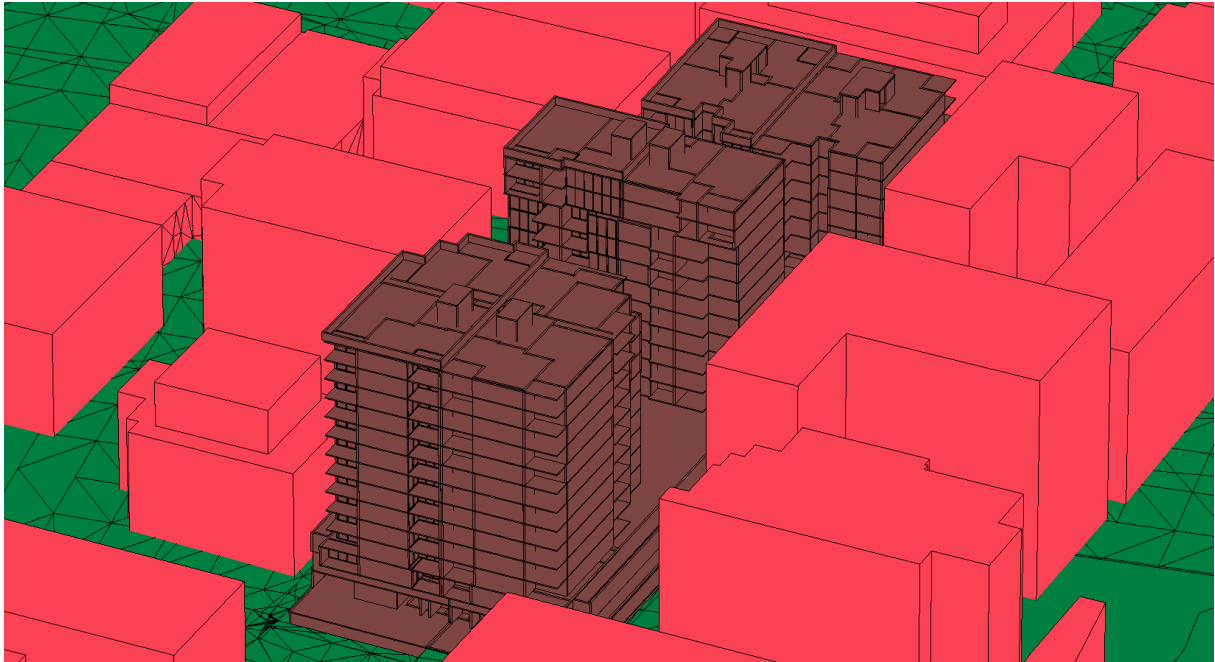


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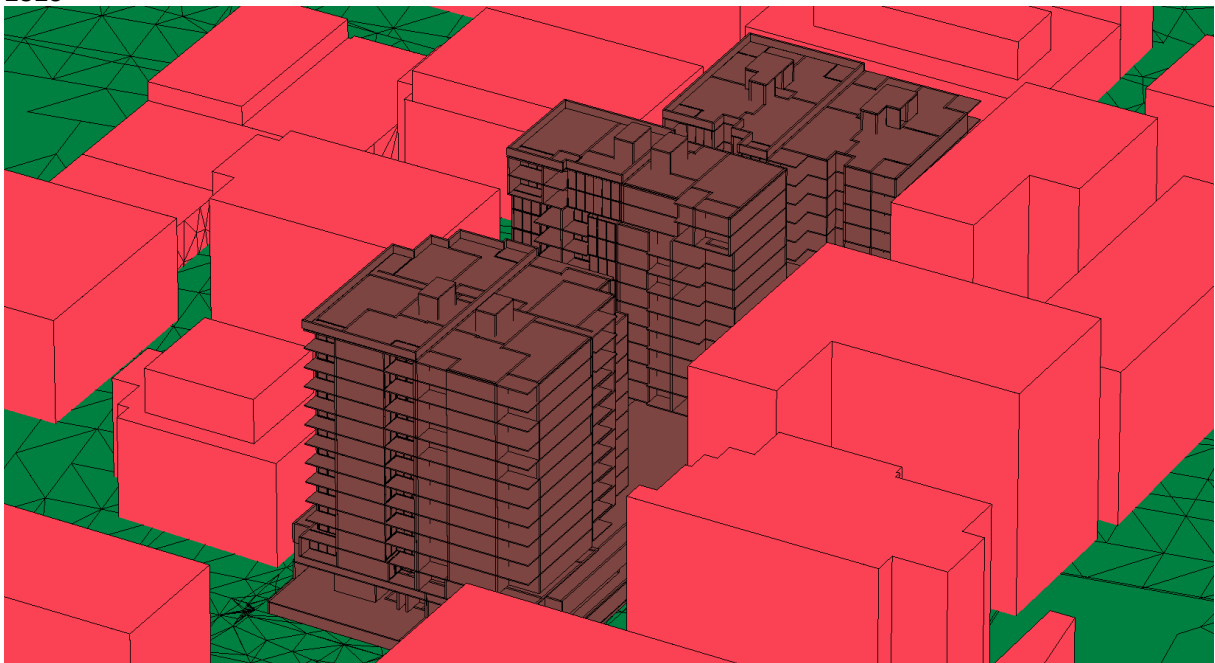


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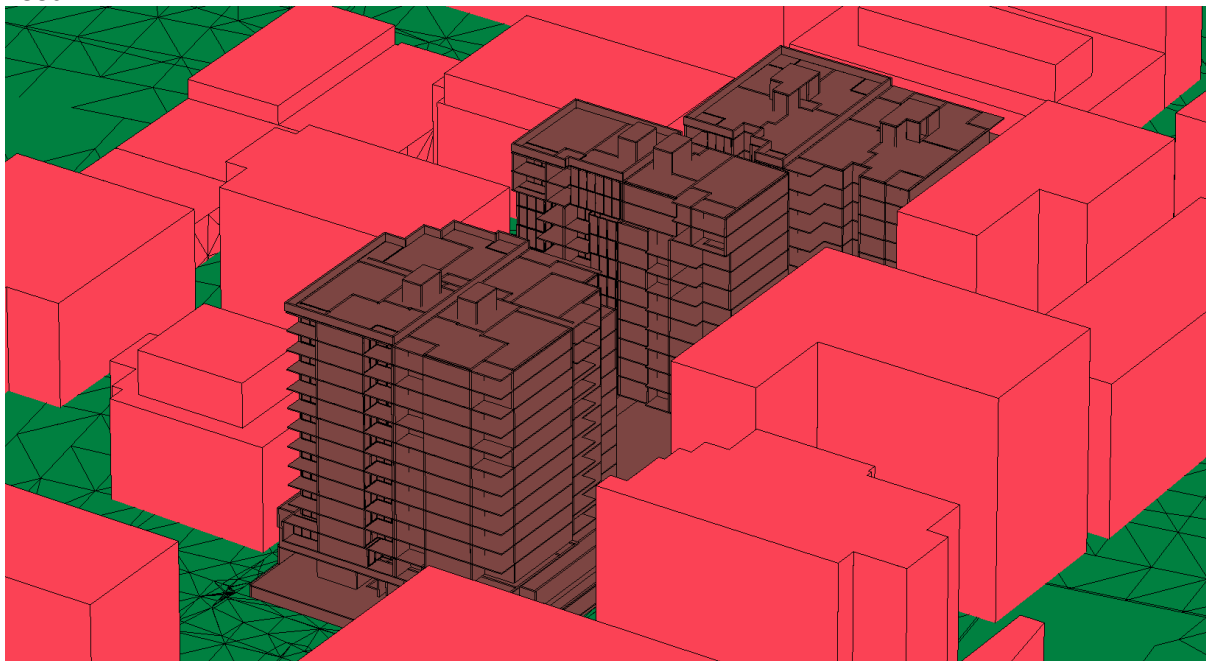


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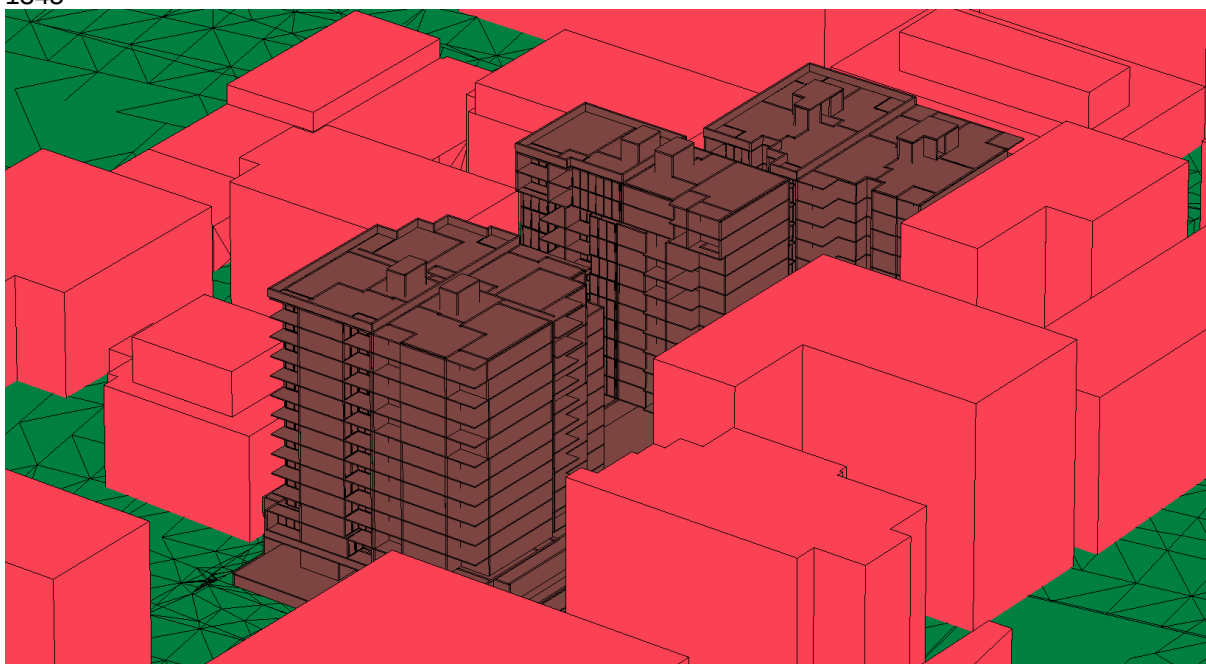


SUN EYE VIEWS 23 CHURCH AVENUE

1330

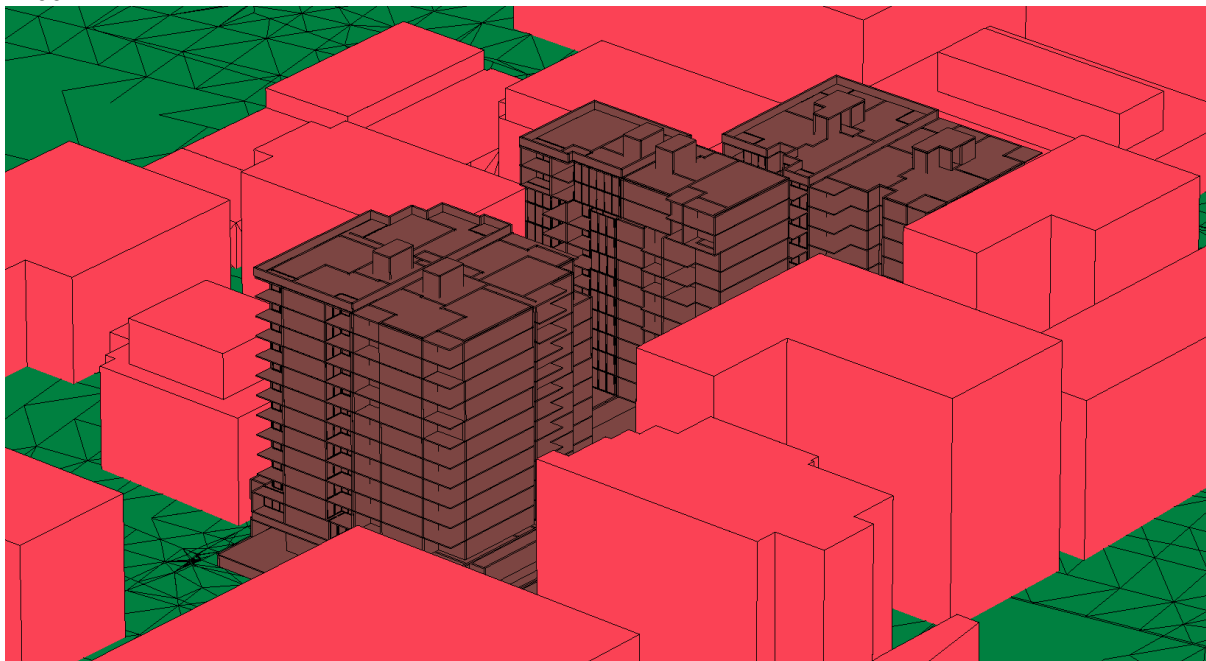


1345

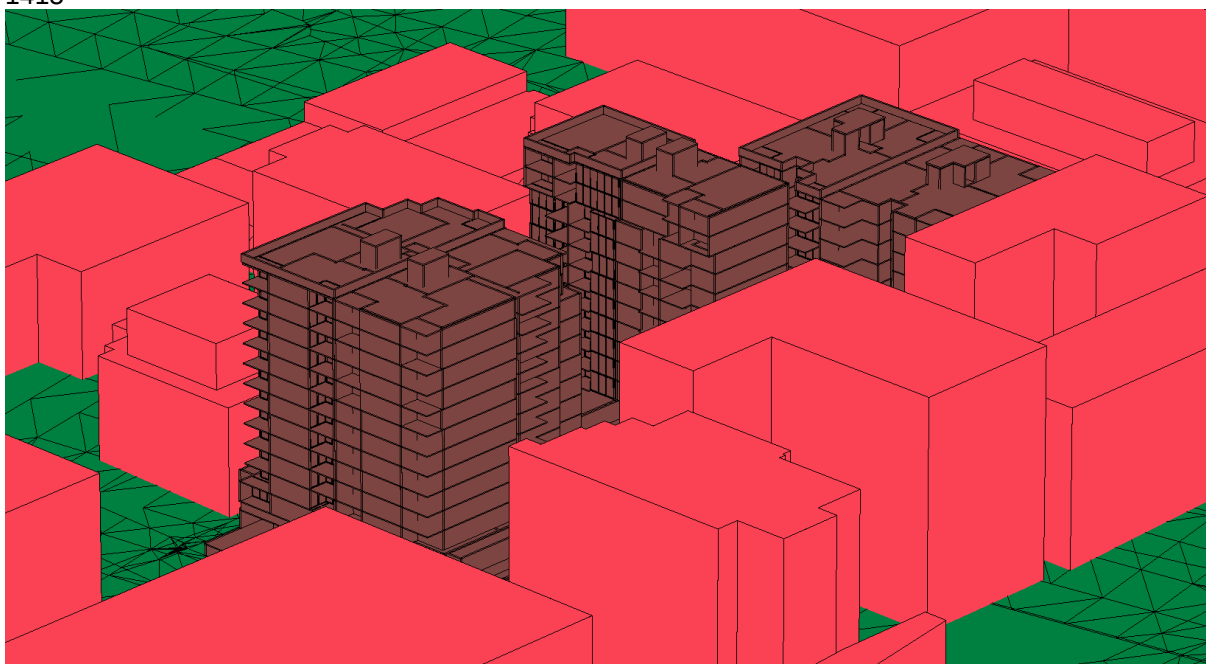


SUN EYE VIEWS 23 CHURCH AVENUE

1400

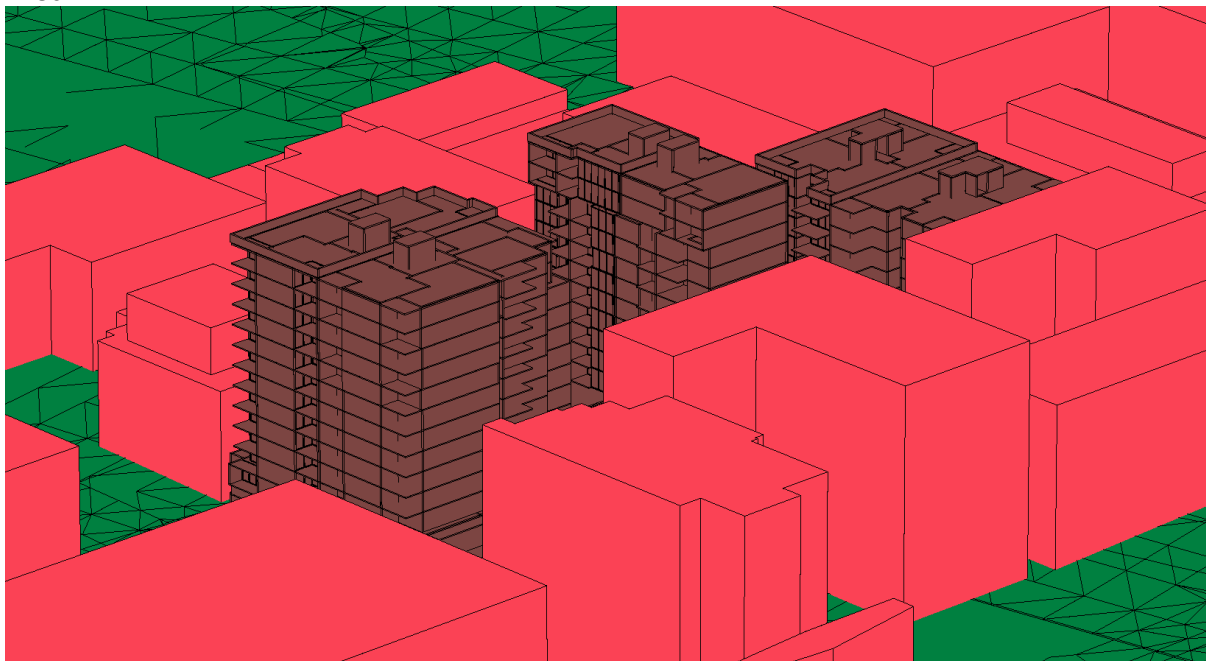


1415

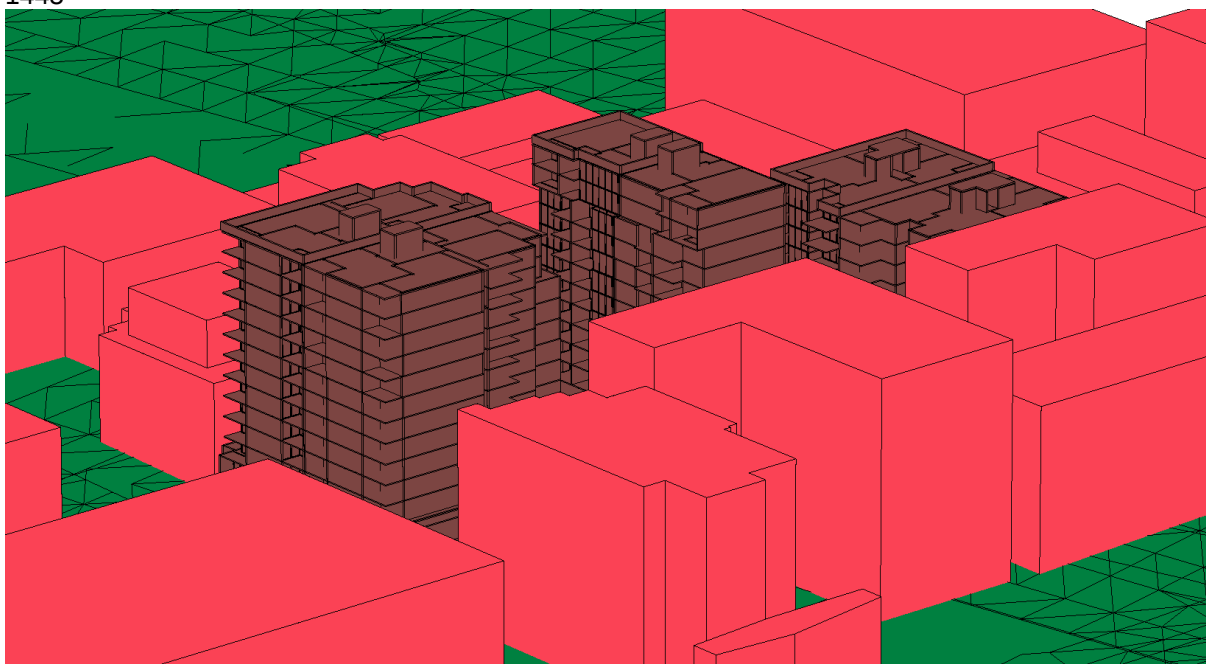


SUN EYE VIEWS 23 CHURCH AVENUE

1430

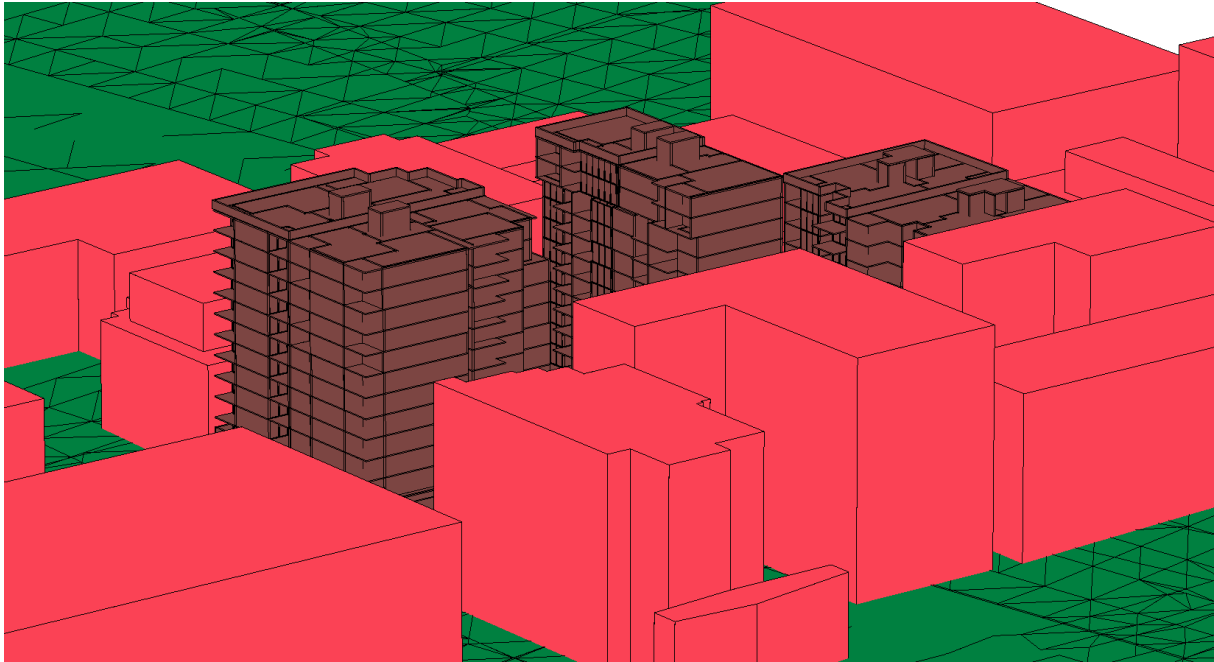


1445



SUN EYE VIEWS 23 CHURCH AVENUE

1500



DETAILED SOLAR ACCESS CALCULATION 27 CHURCH AVENUE

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am- 3pm	2hr sunlight betw 9.00- 15.00	3hr sunlight betw 9.00- 15.00
A	2	201				0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							4	1	1
		202		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							3.25	1	1
	3	301		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						4.75	1	1
		302		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		303																				0.25	0.25	0.25	0.25		1	0	0	
		305																					0.25	0.25			0	0	0	
	4	401		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		402		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		403																					0.25	0.25	0.25	0.25		1	0	0
		405																										0	0	0
	5	501		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		502		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		503																					0.25	0.25	0.25	0.25		1	0	0
		505																						0.25	0.25			0	0	0
	6	601		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		602		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		603																					0.25	0.25	0.25	0.25		1	0	0
		605																										0	0	0
	7	701		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		702		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		703																					0.25	0.25	0.25	0.25	0.25	1.5	0	0
		705																										0	0	0
	8	801		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		802		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		803																					0.25	0.25	0.25	0.25	0.25	1.5	0	0
		805																										0	0	0
	9	901		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		902		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		903																					0.25	0.25	0.25	0.25	0.25	1.5	0	0
		904																										0	0	0
	10	1001		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		1002		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1003																					0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1005																										0	0	0
	11	1101		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		1102		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1103																					0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1105																										0	0	0
	12	1201		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		1202		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1203																					0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1205																										0	0	0
	13	1301		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1
		1302		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1303																					0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1305																										0	0	0
B	3	306														0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				1.75	0	0
		307											0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				1.75	0	0	
	4	406															0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				1.75	0	0
		407												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				1.75	0	0
	5	506															0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				1.75	0	0

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am- 3pm	2hr sunlight betw 9.00- 15.00	3hr sunlight betw 9.00- 15.00		
		507												0.25	0.25	0.25	0.25		0.25	0.25	0.25	0.25	0.25	0.25	0.25			1.75	0	0		
	6	606																0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			1.75	0	0		
		607												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		1.75	0	0		
	7	706														0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		2.5	1	0		
		707										0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			0.25	2.5	1	0			
	8	806															0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.75	1	0		
		807										0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.75	1	0		
	9	906												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.5	1	1		
		907									0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		3.5	1	1			
	10	1006					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.25	1	1		
		1007					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.25	1	1		
	11	1106		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
		1107		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
	12	1206		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
		1207		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
	13	1306		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
		1307		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
C	2	208																										0	0	0		
		209												0.25	0.25	0.25												0.75	0	0		
		210															0.25	0.25										0.5	0	0		
	3	308																			0.25							0.25	0	0		
		309																										0	0	0		
		310												0.25	0.25	0.25												0.75	0	0		
		311												0.25	0.25	0.25	0.25	0.25										1.25	0	0		
	4	408																		0.25	0.25							0.5	0	0		
		409																										0	0	0		
		410												0.25	0.25	0.25												0.75	0	0		
		411												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							2	1	0		
	5	508																		0.25	0.25	0.25	0.25	0.25	0.25			1.5	0	0		
		509																										0	0	0		
		510												0.25	0.25	0.25	0.25											1	0	0		
		511												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							2	1	0		
	6	608																		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2	1	0		
		609																										0	0	0		
		610												0.25	0.25	0.25	0.25	0.25										1.25	0	0		
		611												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							2	1	0		
	7	708																		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2	1	0		
		709																										0	0	0		
		710												0.25	0.25	0.25	0.25	0.25	0.25	0.25								1.75	0	0		
		711												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						2.25	1	0		
	8	808																		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2	1	0		
		809																										0	0	0		
		810												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						2.25	1	0		
		811												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			2.75	1	0		
		Total apartments																												95		
																														Total		47
																														Percentage		49.47%
																																34
																																35.79%

DETAILED SOLAR ACCESS CALCULATION 23 CHURCH AVENUE

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am- 3pm	2hr sunlight betw 9.00- 15.00	3hr sunlight betw 9.00- 15.00
A	2	201		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						4.75	1	1
		202		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
	3	301		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		302		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		303			0.25	0.25																						0.5	0	0
		305																										0	0	0
	4	401		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		402		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		403		0.25	0.25	0.25	0.25																					1	0	0
		405																										0	0	0
	5	501		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		502		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		503		0.25	0.25	0.25	0.25																					1	0	0
		505																										0	0	0
	6	601		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		602		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		603		0.25	0.25	0.25	0.25																					1	0	0
		605																										0	0	0
	7	701		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		702		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		703		0.25	0.25	0.25	0.25																					1	0	0
		705																										0	0	0
	8	801		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		802		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		803		0.25	0.25	0.25	0.25																					1	0	0
		805																										0	0	0
	9	901		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		902		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		903		0.25	0.25	0.25	0.25																					1	0	0
		904																										0	0	0
	10	1001		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		1002		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		1003		0.25	0.25	0.25	0.25																					1	0	0
		1005																										0	0	0
	11	1101		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		1102		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		1103		0.25	0.25	0.25	0.25																					1	0	0
		1105																										0	0	0
	12	1201		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		1202		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		1203		0.25	0.25	0.25	0.25																					1	0	0
		1205																										0	0	0
	13	1301		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			5.5	1	1
		1302		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		5.75	1	1
		1303		0.25	0.25	0.25	0.25																					1	0	0
		1305																										0	0	0
B	3	306		0.25	0.25	0.25	0.25	0.25															0.25	0.25	0.25			2	1	0
		307		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25														0.25		2.5	1	0
	4	406		0.25	0.25	0.25	0.25	0.25															0.25	0.25	0.25			2	1	0
		407		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25														0.25		2.5	1	0
	5	506		0.25	0.25	0.25	0.25	0.25															0.25	0.25	0.25			2	1	0

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am- 3pm	2hr sunlight betw 9.00- 15.00	3hr sunlight betw 9.00- 15.00
		507		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25															0.25	2.5	1	0
	6	606		0.25	0.25	0.25	0.25	0.25															0.25	0.25	0.25	0.25	0.25	2.25	1	0
		607		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25															0.25	2.5	1	0
	7	706		0.25	0.25	0.25	0.25	0.25	0.25														0.25	0.25	0.25	0.25	0.25	2.75	1	0
		707		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25															0.25	2.5	1	0
	8	806		0.25	0.25	0.25	0.25	0.25															0.25	0.25	0.25	0.25	0.25	2.75	1	0
		807		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25													0.25	0.25	2.75	1	0	
	9	906		0.25	0.25	0.25	0.25	0.25	0.25						0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4.75	1	1
		907		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
	10	1006		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1007		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
	11	1106		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1107		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
	12	1206		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1207		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
	13	1306		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1307		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
C	2	208																										0	0	0
		209																										0	0	0
		210						0.25	0.25	0.25	0.25	0.25																1.25	0	0
	3	308																										0	0	0
		309																										0	0	0
		310							0.25	0.25	0.25	0.25																1	0	0
		311				0.25	0.25	0.25	0.25	0.25	0.25	0.25																1.75	0	0
	4	408																					0.25					0.25	0	0
		409																										0	0	0
		410					0.25	0.25	0.25	0.25	0.25	0.25																1.5	0	0
		411			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2	1	0
	5	508																					0.25	0.25	0.25	0.25		1	0	0
		509																										0	0	0
		510			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2	1	0
		511		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	1	0
	6	608																					0.25	0.25	0.25	0.25	0.25	1.25	0	0
		609																										0	0	0
		610		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	1	0
		611		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	1	0
	7	708																					0.25	0.25	0.25	0.25	0.25	1.25	0	0
		709																										0	0	0
		710		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	1	0
		711		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	1	0
	8	808																					0.25	0.25	0.25	0.25	0.25	1.25	0	0
		809																										0	0	0
		810		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	1	0
		811		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25																2.25	1	0
Total apartments																											95	Total	55	34
																											Percentage	57.89%	35.79%	

DETAILED SOLAR ACCESS CALCULATION 27 CHURCH AVENUE – without development on 23 Church St

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am- 3pm	2hr sunlight betw 9.00- 15.00	3hr sunlight betw 9.00- 15.00	
A	2	201				0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							4	1	1	
		202		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25								3.25	1	1
	3	301		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4.75	1	1	
		302		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1	
		303																				0.25	0.25	0.25	0.25			1	0	0	
		305		0.25	0.25	0.25	0.25	0.25	0.25														0.25	0.25	0.25	0.25		1.5	0	0	
	4	401		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		402		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		403																					0.25	0.25	0.25	0.25			1	0	0
		405		0.25	0.25	0.25	0.25	0.25	0.25	0.25														0.25	0.25	0.25	0.25		1.5	0	0
	5	501		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		502		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		503																					0.25	0.25	0.25	0.25			1	0	0
		505		0.25	0.25	0.25	0.25	0.25	0.25	0.25														0.25	0.25	0.25	0.25		1.5	0	0
	6	601		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		602		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		603																					0.25	0.25	0.25	0.25			1	0	0
		605		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
	7	701		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		702		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		703																					0.25	0.25	0.25	0.25	0.25	0.25	1.5	0	0
		705		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
	8	801		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		802		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		803																					0.25	0.25	0.25	0.25	0.25	0.25	1.5	0	0
		805		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
	9	901		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		902		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		903																					0.25	0.25	0.25	0.25	0.25	0.25	1.5	0	0
		904		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
	10	1001		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		1002		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1003																					0.25	0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1005		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
	11	1101		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		1102		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1103																					0.25	0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1105		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
	12	1201		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		1202		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1203																					0.25	0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1205		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
	13	1301		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				5	1	1	
		1302		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1
		1303																					0.25	0.25	0.25	0.25	0.25	0.25	1.5	0	0
		1305		0.25	0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0
B	3	306		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			3.75	1	1	
		307		0.25	0.25									0.25	0.25	0.25	0.25											2.25	1	0	
	4	406		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				3.75	1	1	
		407		0.25	0.25									0.25	0.25	0.25	0.25											2.25	1	0	

Block	Level	unit	9:00	9:15	9:30	9:45	10:00	10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	Total hr of sunlight betw 9am- 3pm	2hr sunlight betw 9.00- 15.00	3hr sunlight betw 9.00- 15.00		
		507		0.25	0.25									0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.25	1	0		
	6	606		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.75	1			
		607		0.25	0.25									0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	2.25	1	0		
	7	706		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25				0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4.5	1	1		
		707		0.25	0.25							0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1	1		
	8	806		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4.75	1	1		
		807		0.25	0.25							0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.25	1	1		
	9	906		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.5	1	1		
		907		0.25	0.25						0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4	1	1		
	10	1006		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
		1007					0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	5.25	1	1		
	11	1106		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
		1107		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
	12	1206		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
		1207		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
	13	1306		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
		1307		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6	1	1		
C	2	208																										0	0	0		
		209												0.25	0.25	0.25												0.75	0	0		
		210															0.25	0.25										0.5	0	0		
	3	308			0.25	0.25	0.25	0.25	0.25	0.25	0.25											0.25						2	1	0		
		309		0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0		
		310												0.25	0.25	0.25												0.75	0	0		
		311		0.25										0.25	0.25	0.25	0.25	0.25										1.5	0	0		
	4	408		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25										0.25	0.25						2.5	1	0		
		409		0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0		
		410												0.25	0.25	0.25												0.75	0	0		
		411		0.25										0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						2.25	1	0		
	5	508		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25									0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3.5	1	1		
		509		0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0		
		510												0.25	0.25	0.25	0.25											1	0	0		
		511		0.25										0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							2.25	1	0		
	6	608		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25									0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4	1	1		
		609		0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0		
		610												0.25	0.25	0.25	0.25	0.25										1.25	0	0		
		611		0.25										0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25							2.25	1	0		
	7	708		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25									0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4	1	1		
		709		0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0		
		710												0.25	0.25	0.25	0.25	0.25	0.25	0.25								1.75	0	0		
		711		0.25										0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						2.5	1	0		
	8	808		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25									0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	4	1	1		
		809		0.25	0.25	0.25	0.25	0.25	0.25																			1.5	0	0		
		810												0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25						2.25	1	0		
		811		0.25										0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	3	1	1		
		Total apartments																												95		
																														Total		58
																														Percentage		61.05%
																																47
																																49.47%