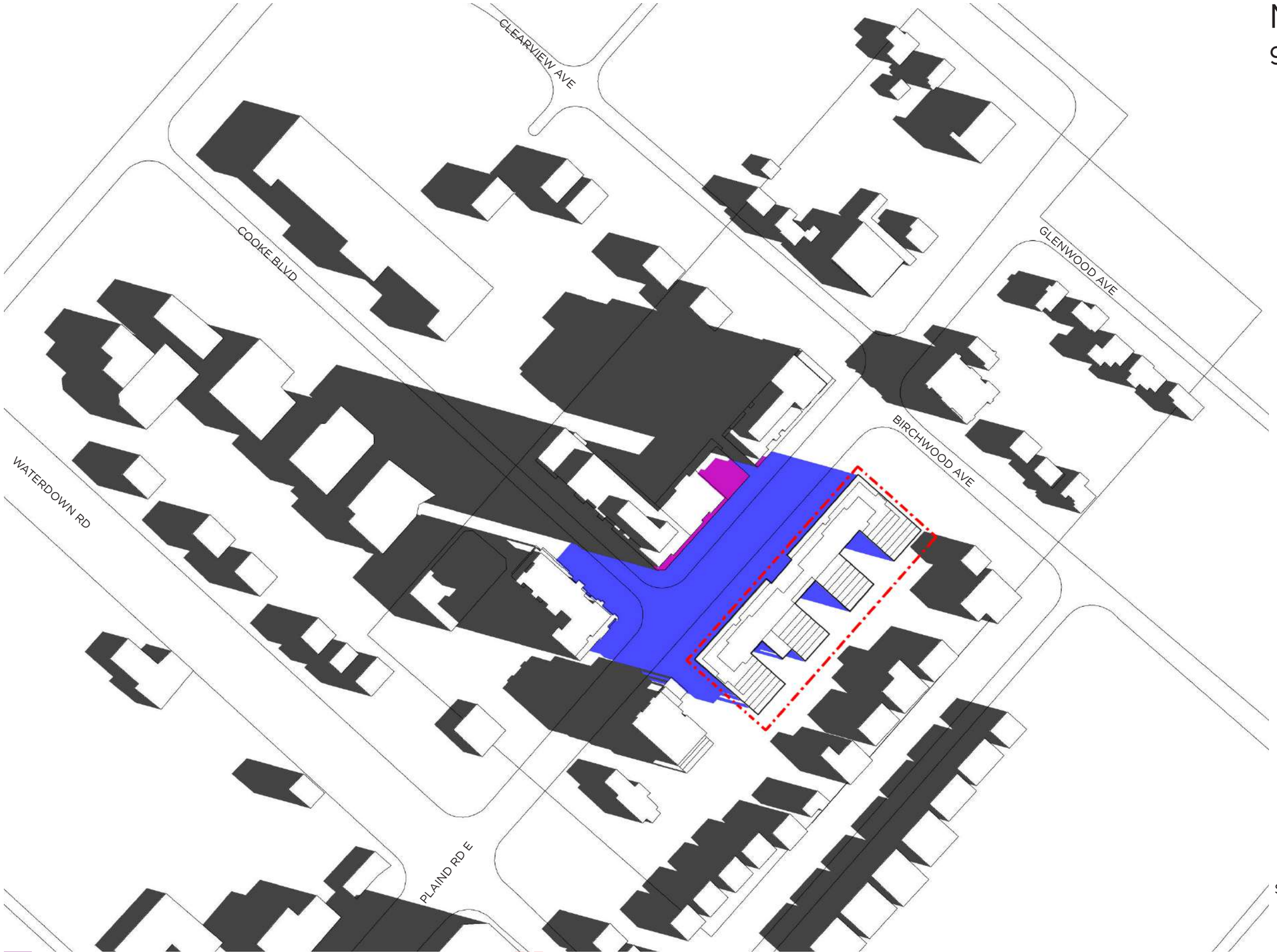
18035 - 40-70 PLAINS ROAD

SHADOW STUDY
JANUARY 21, 2021 | SCALE AS INDICATED

The proposed building at 40-70 Plains Road East, Burlington - and its resultant massing - fits all criteria with reference to the City's Shadow Impact Criteria. The specific points that relate to this site are as follows: Private Outdoor Amenity Spaces and Public Realm and Sidewalks. There are several private backyards to the South of the subject site, and a public sidewalk/boulevard adjacent to Plains Road to the North of the site. The proposed masing results in a calculated SAF of 0.79 for Private Outdoor Amenity Spaces and 0.64 for Public Realm and Sidewalks, well above the minimum requirement of 0.22 and 0.5 respectively.

MARCH 21
9:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
10:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
11:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
12:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
01:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
02:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
03:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

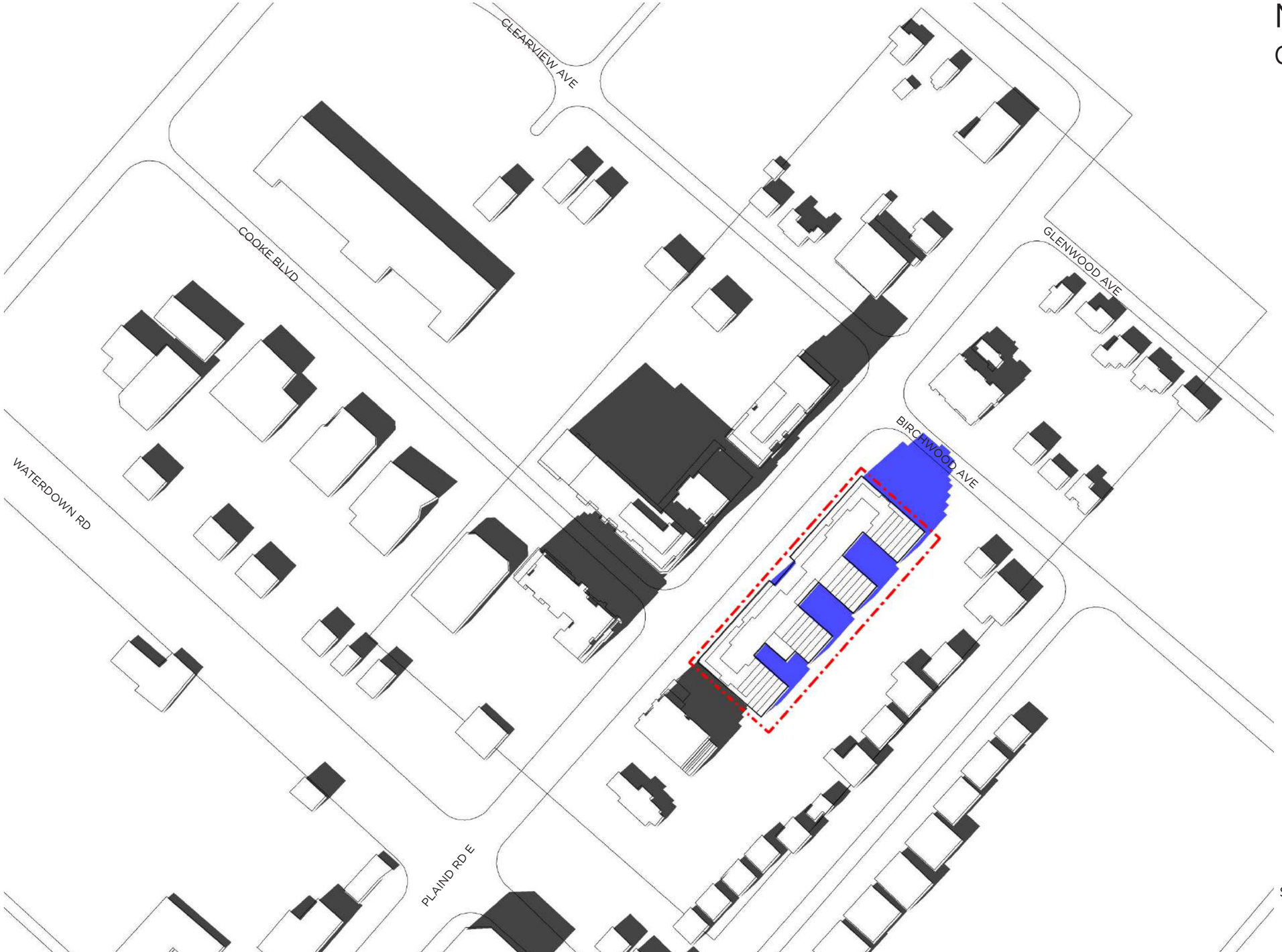
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
04:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

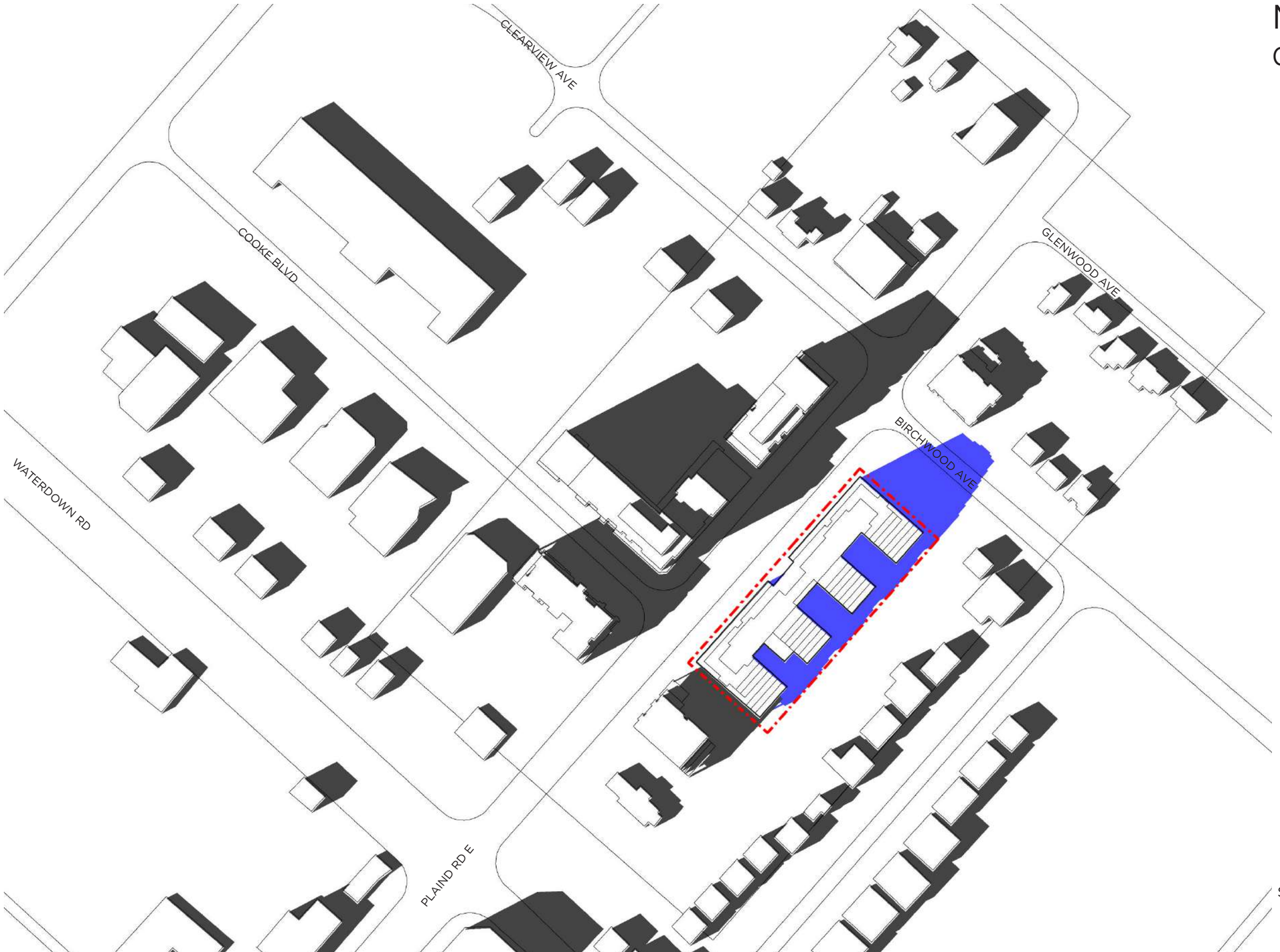
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
05:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

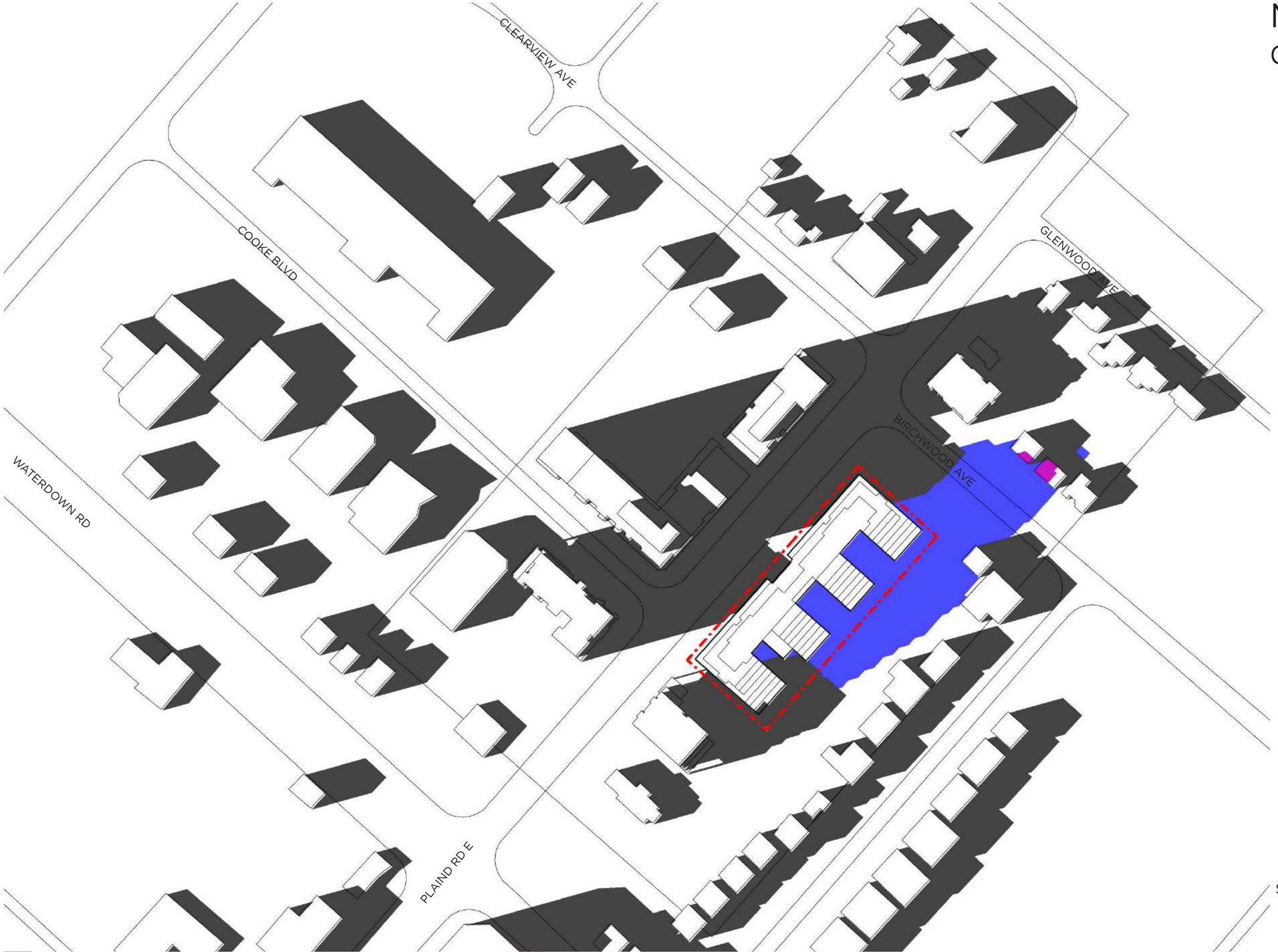
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

MARCH 21
06:00 PM



50 m 100 m

SCALE = 1:2,000

N

NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

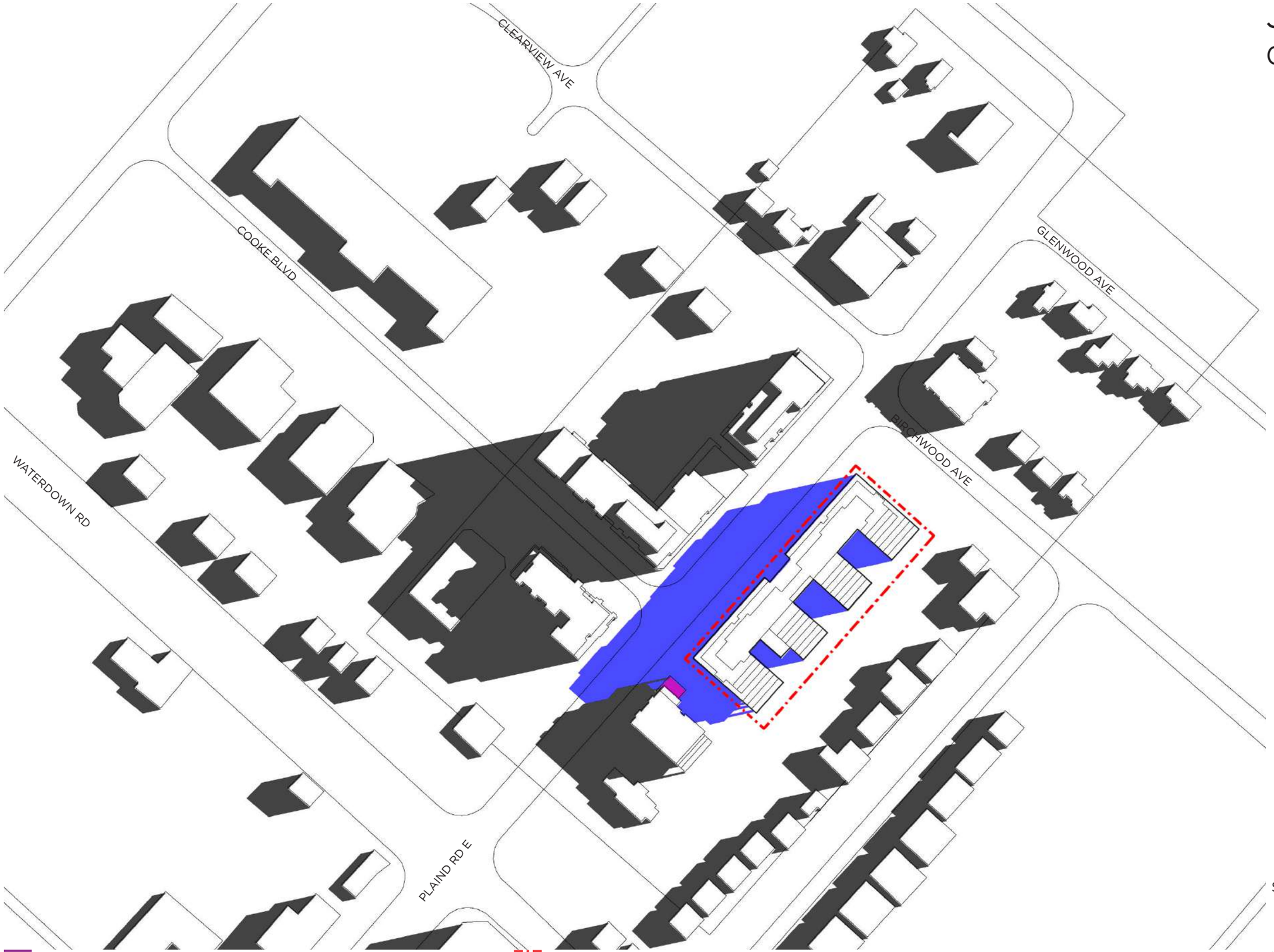
SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
08:00 AM



50 m 100 m

SCALE = 1:2,000

N

NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

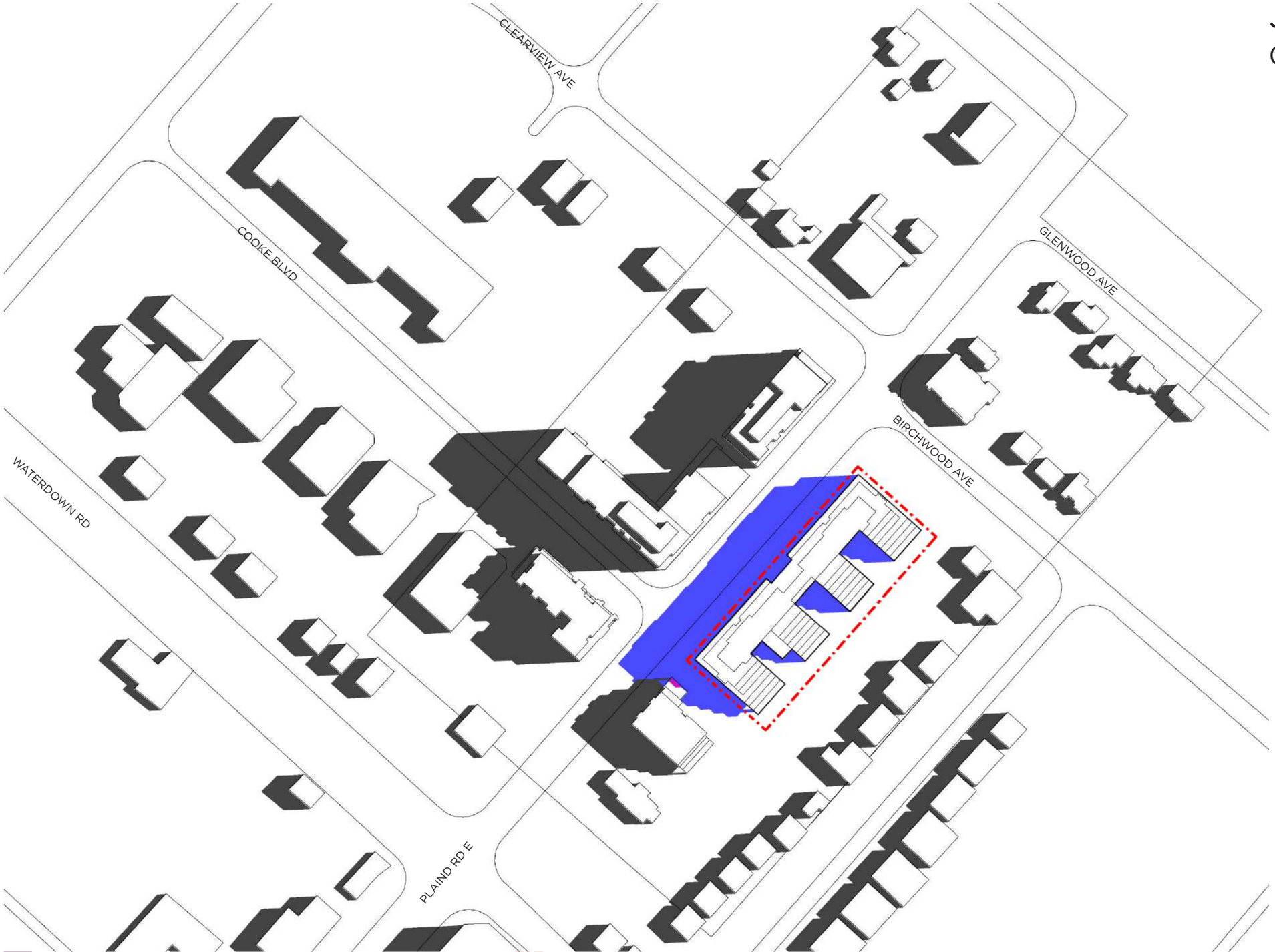
SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
09:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

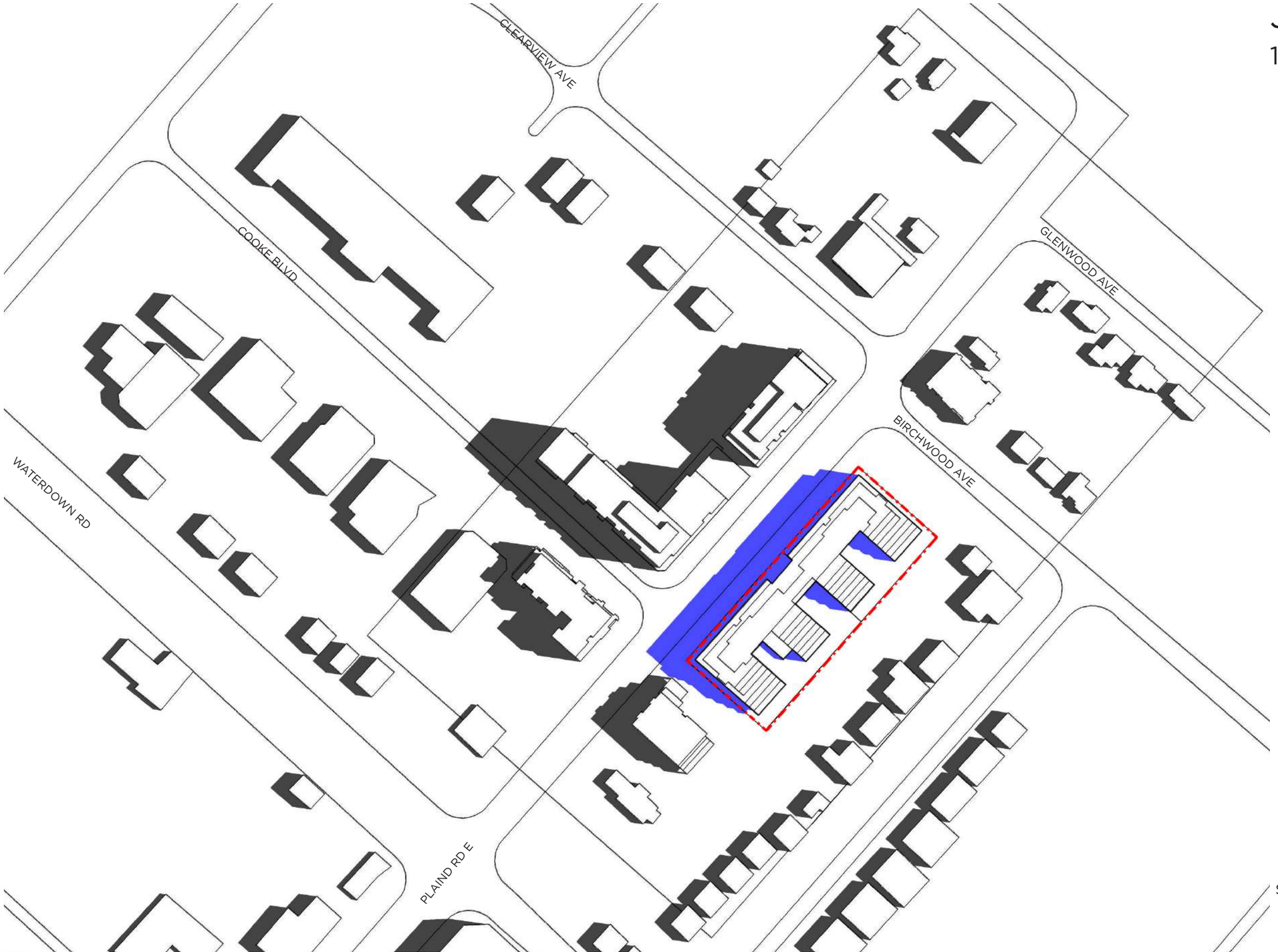
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
10:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
11:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
12:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
01:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

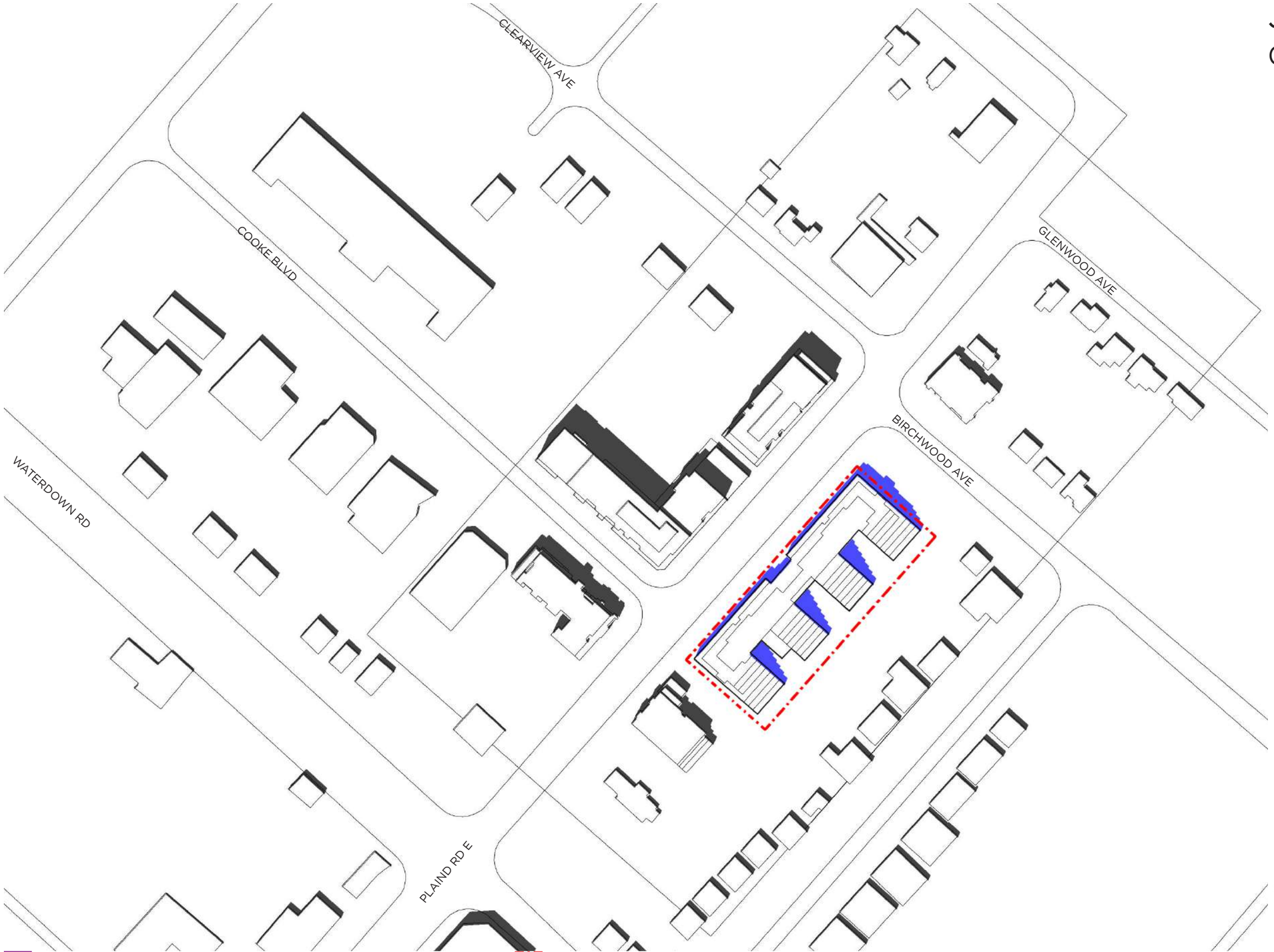
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RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
02:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

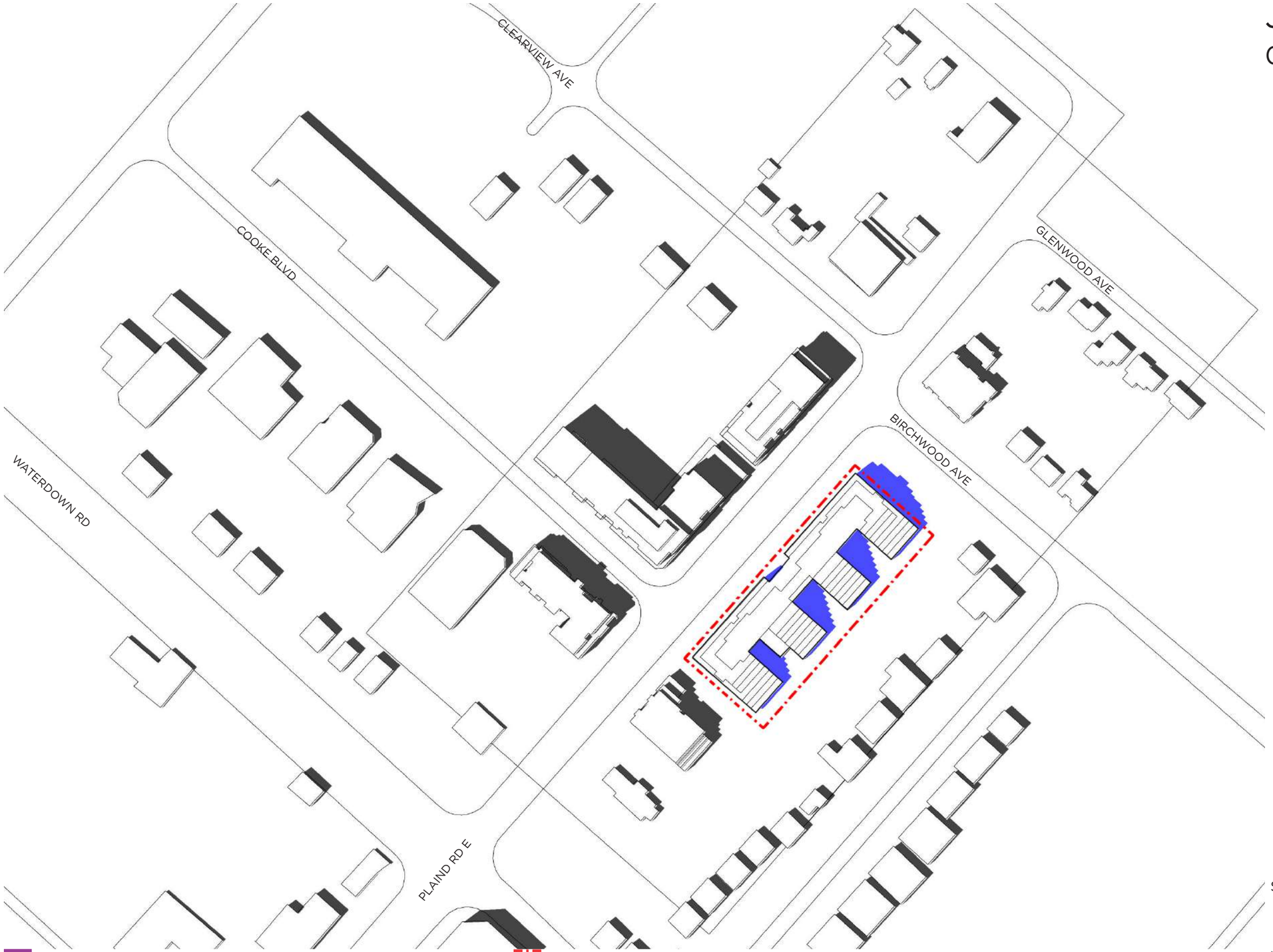
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RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
03:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

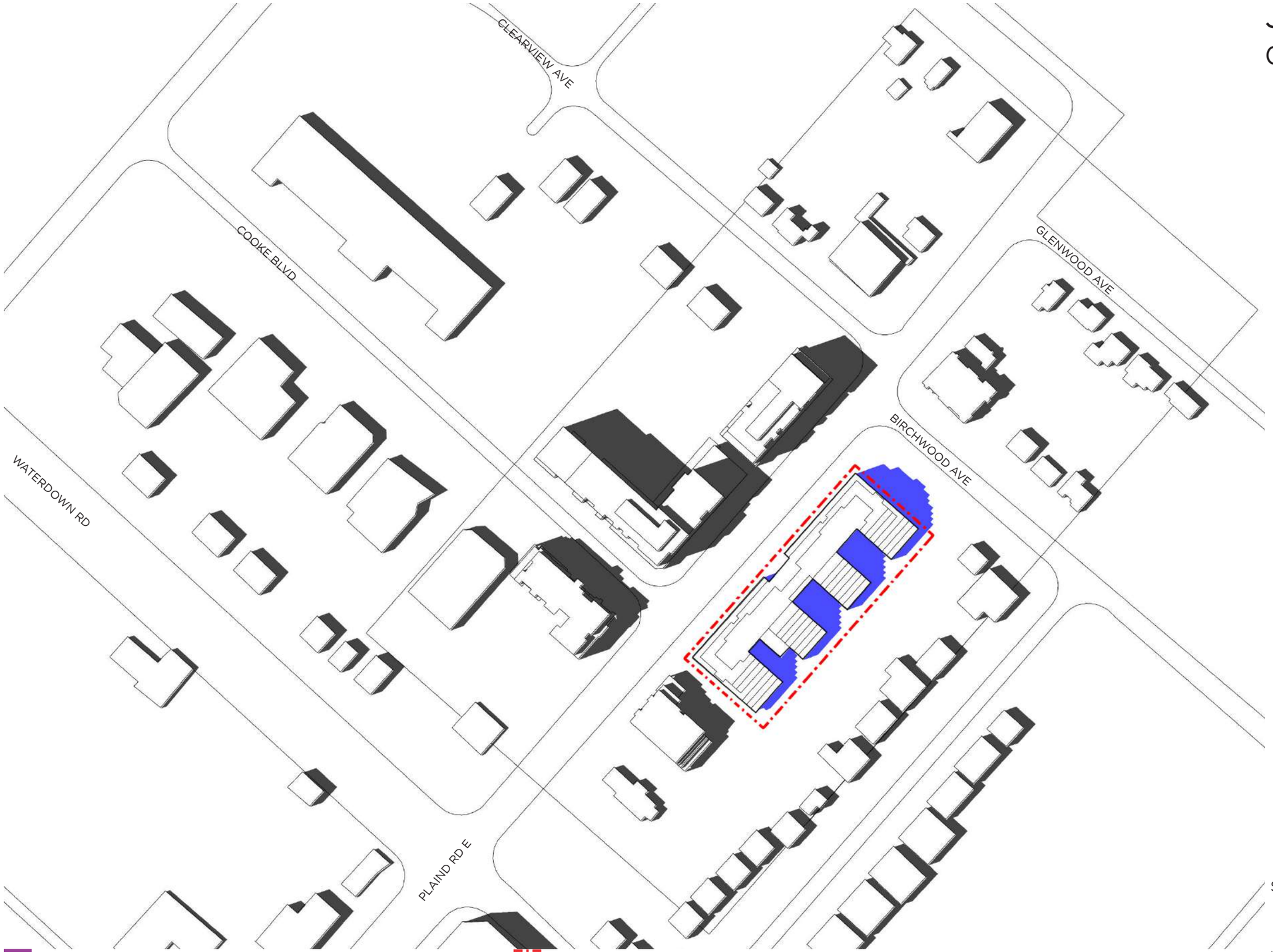
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RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
04:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

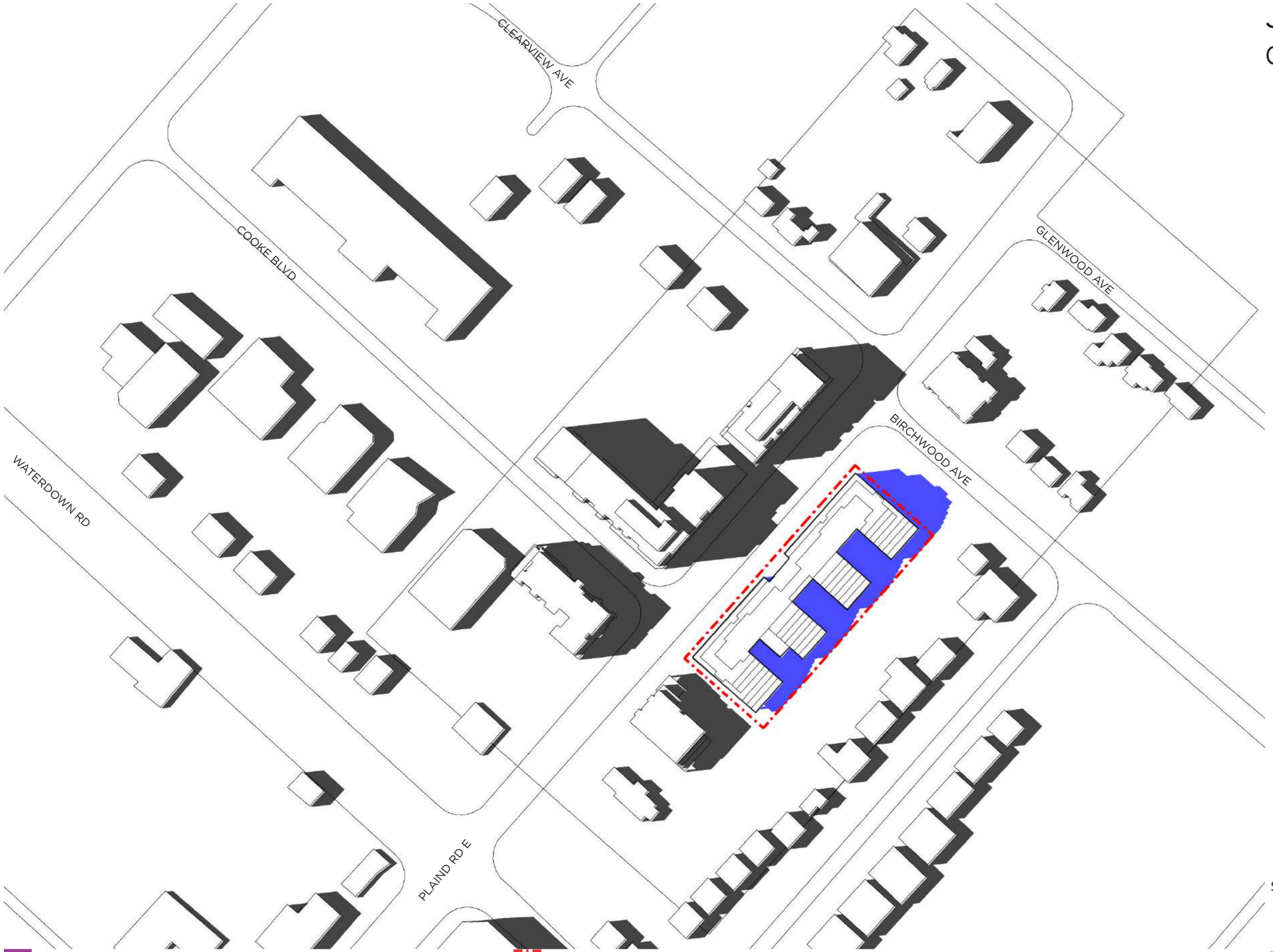
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RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
05:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

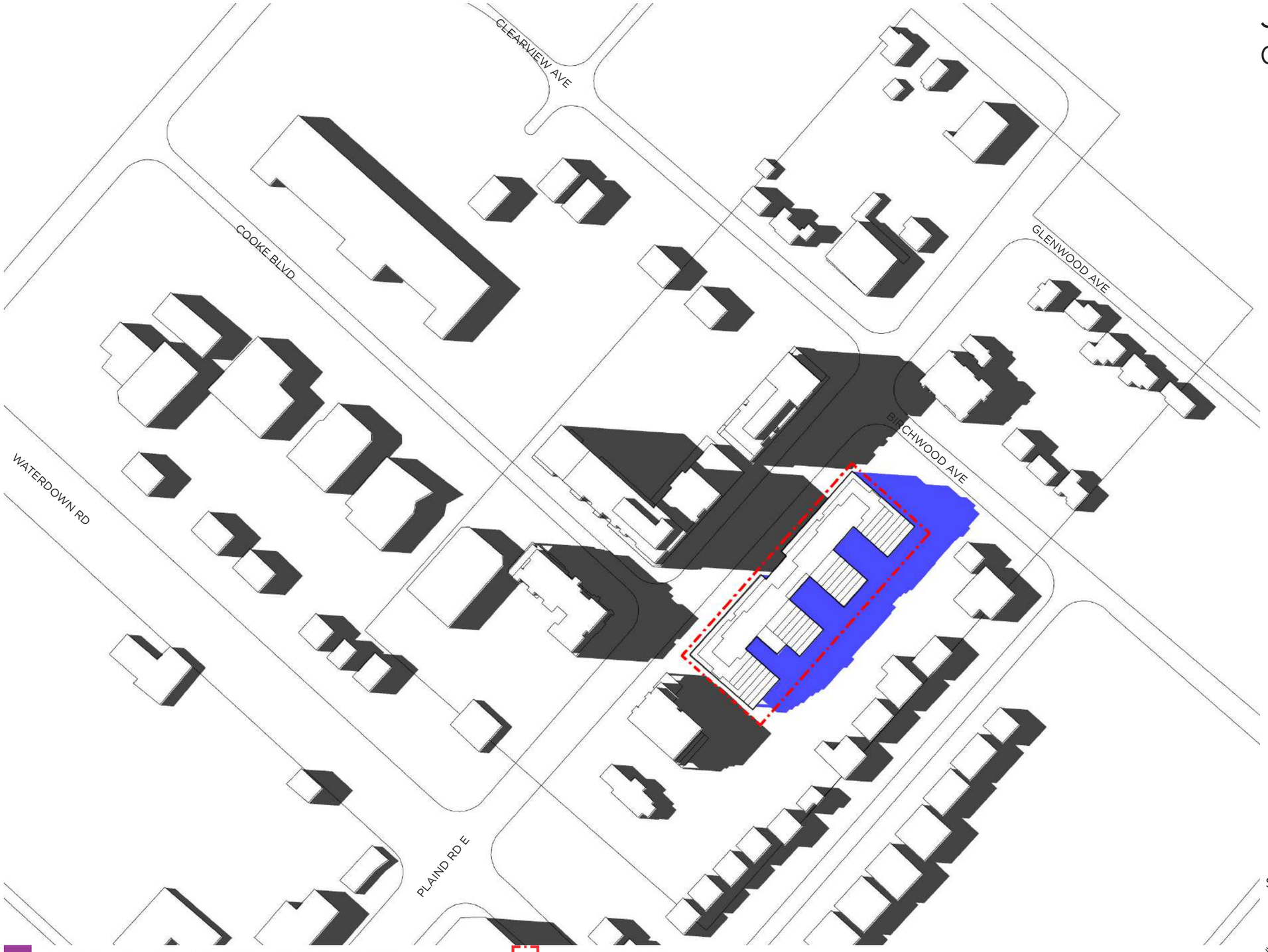
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RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
06:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

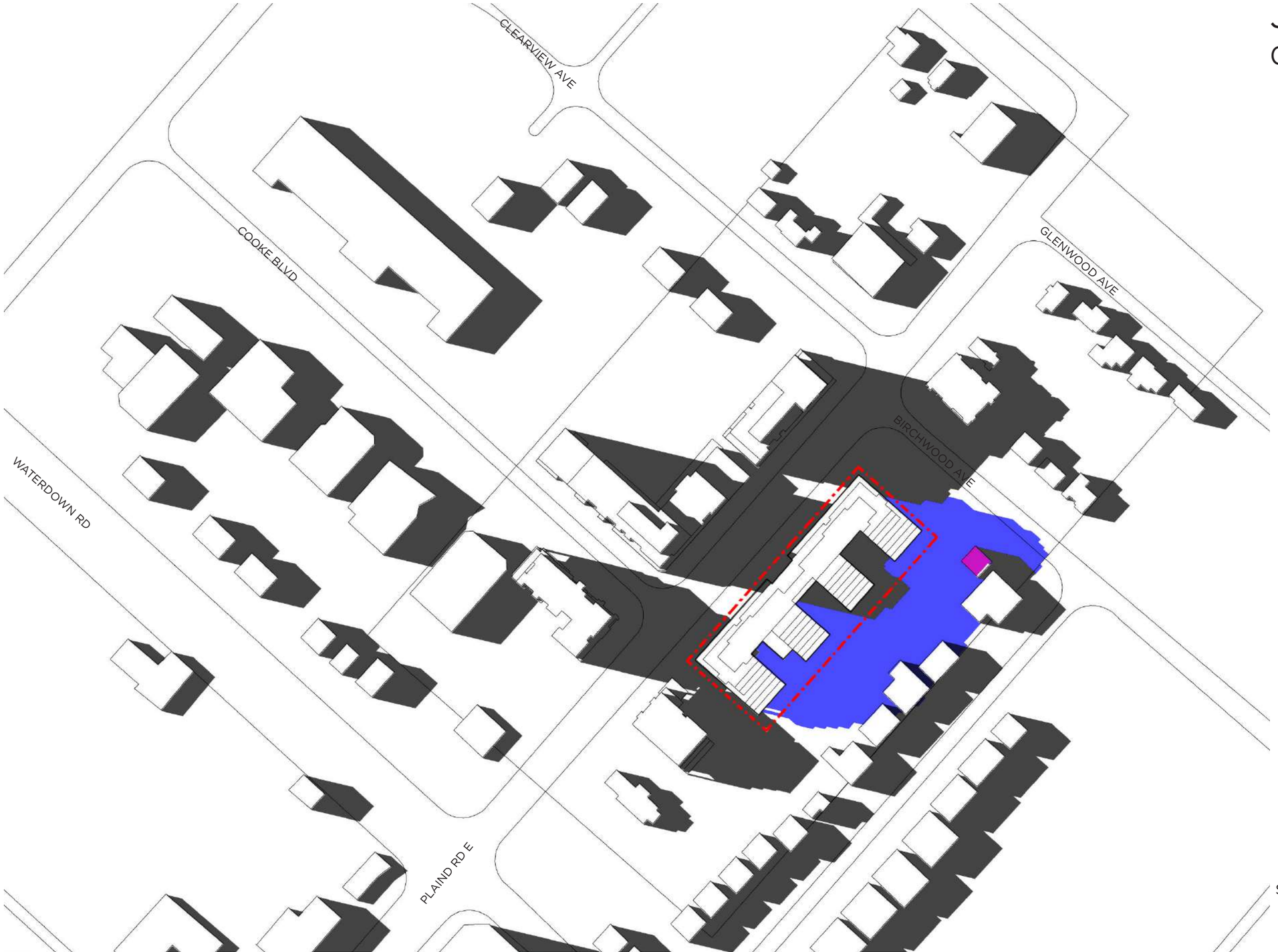
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

JUNE 21
07:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
09:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
10:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
11:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
12:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

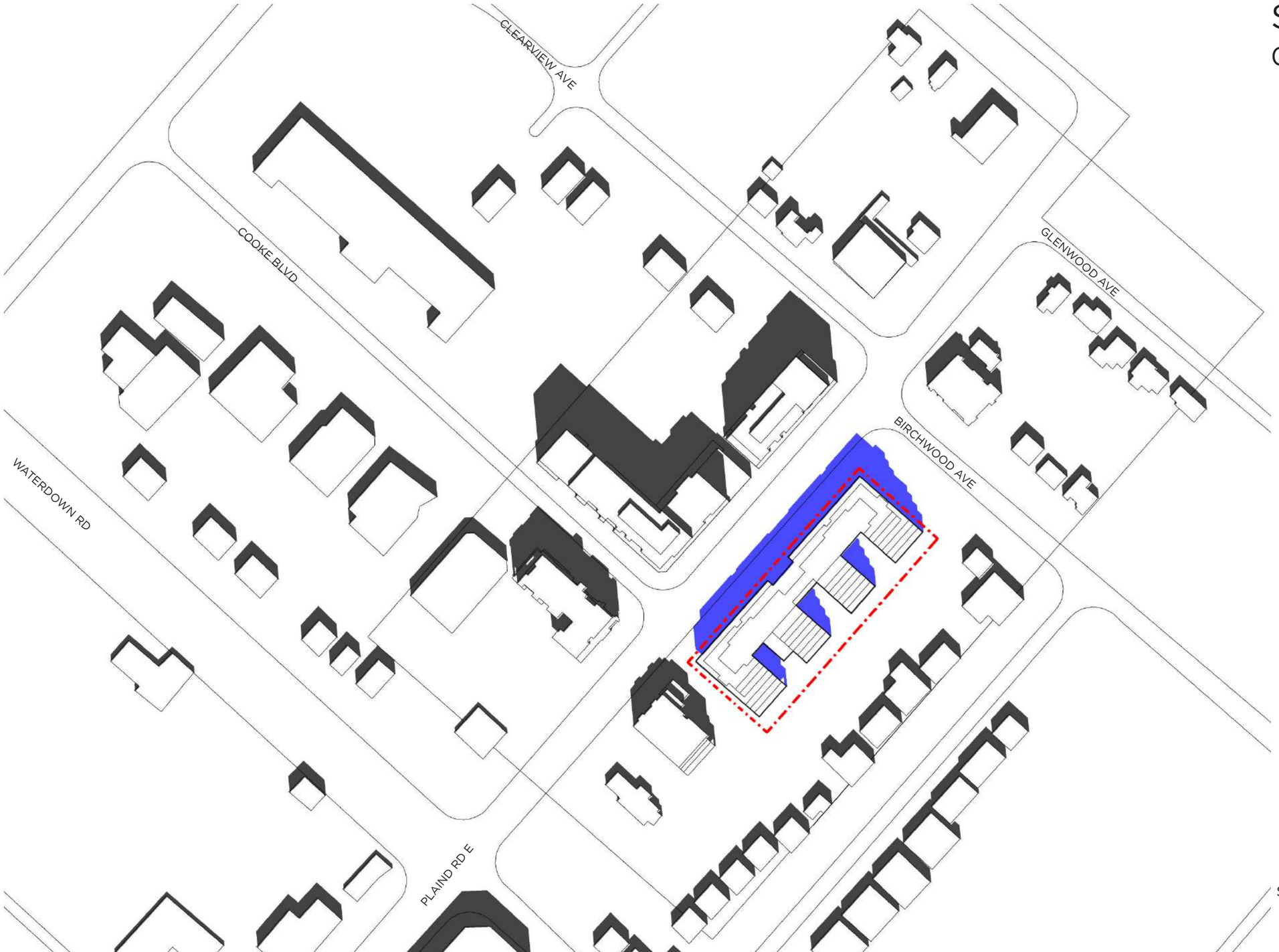
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
01:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
02:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

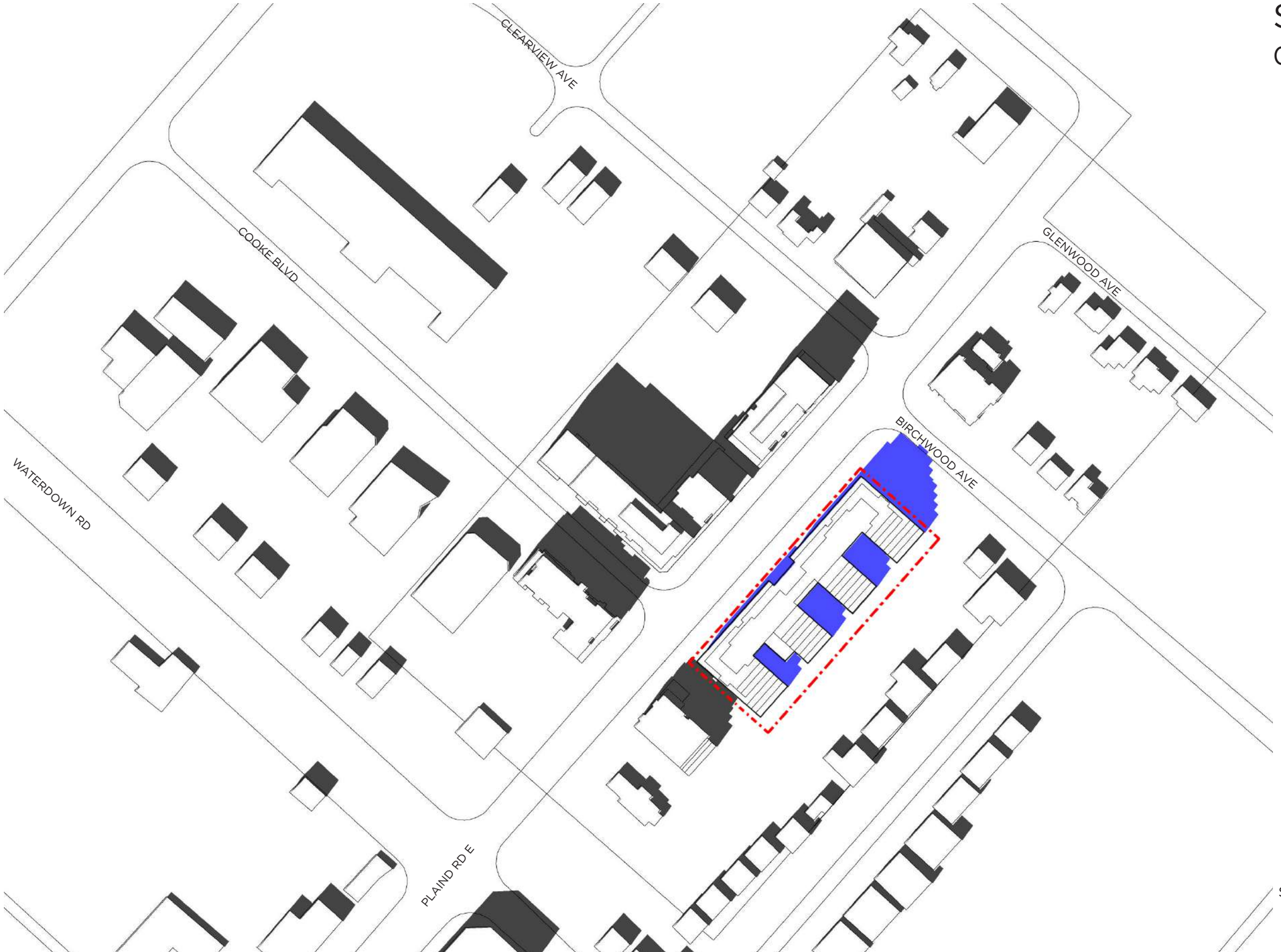
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
03:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

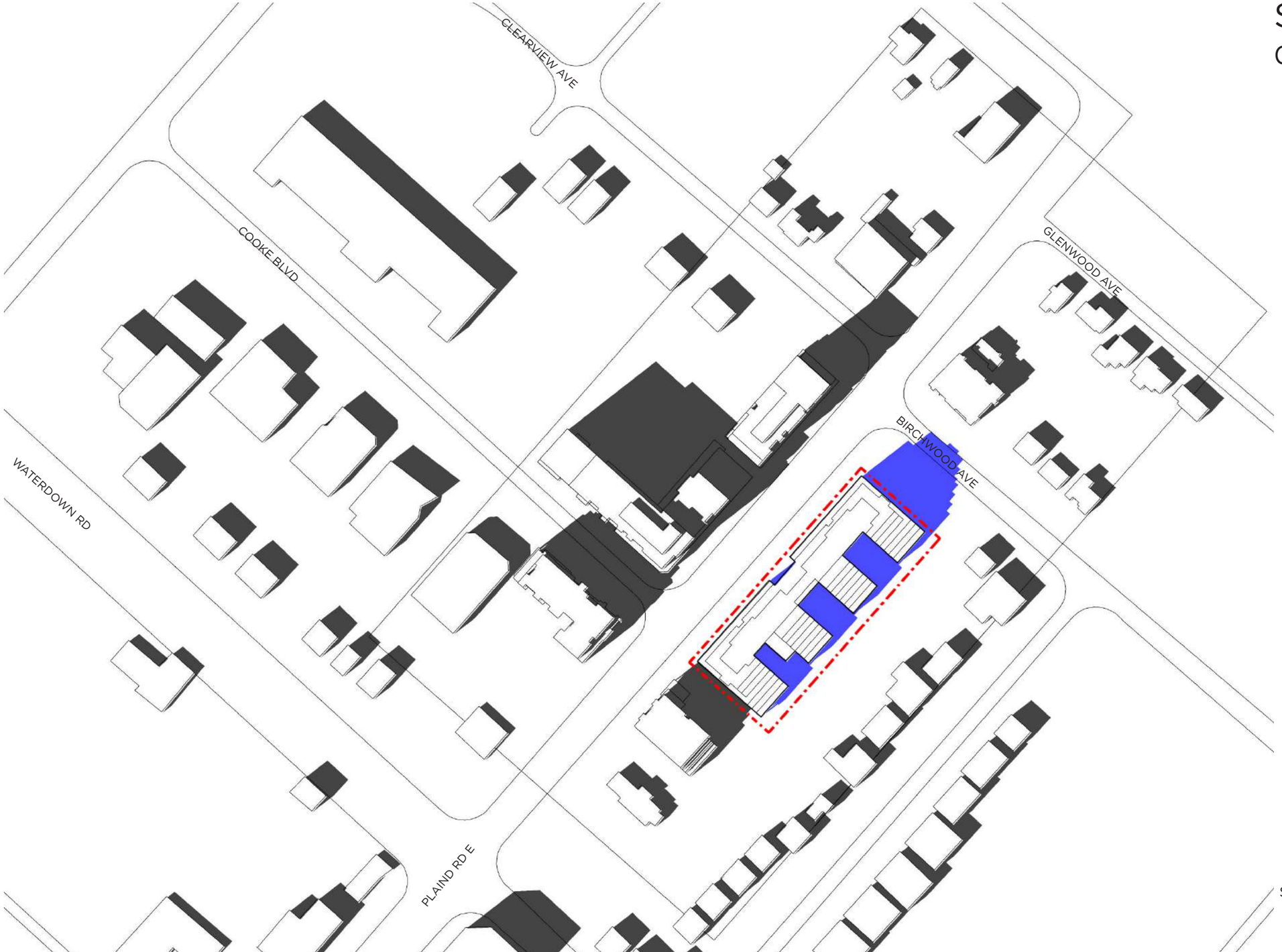
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
04:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

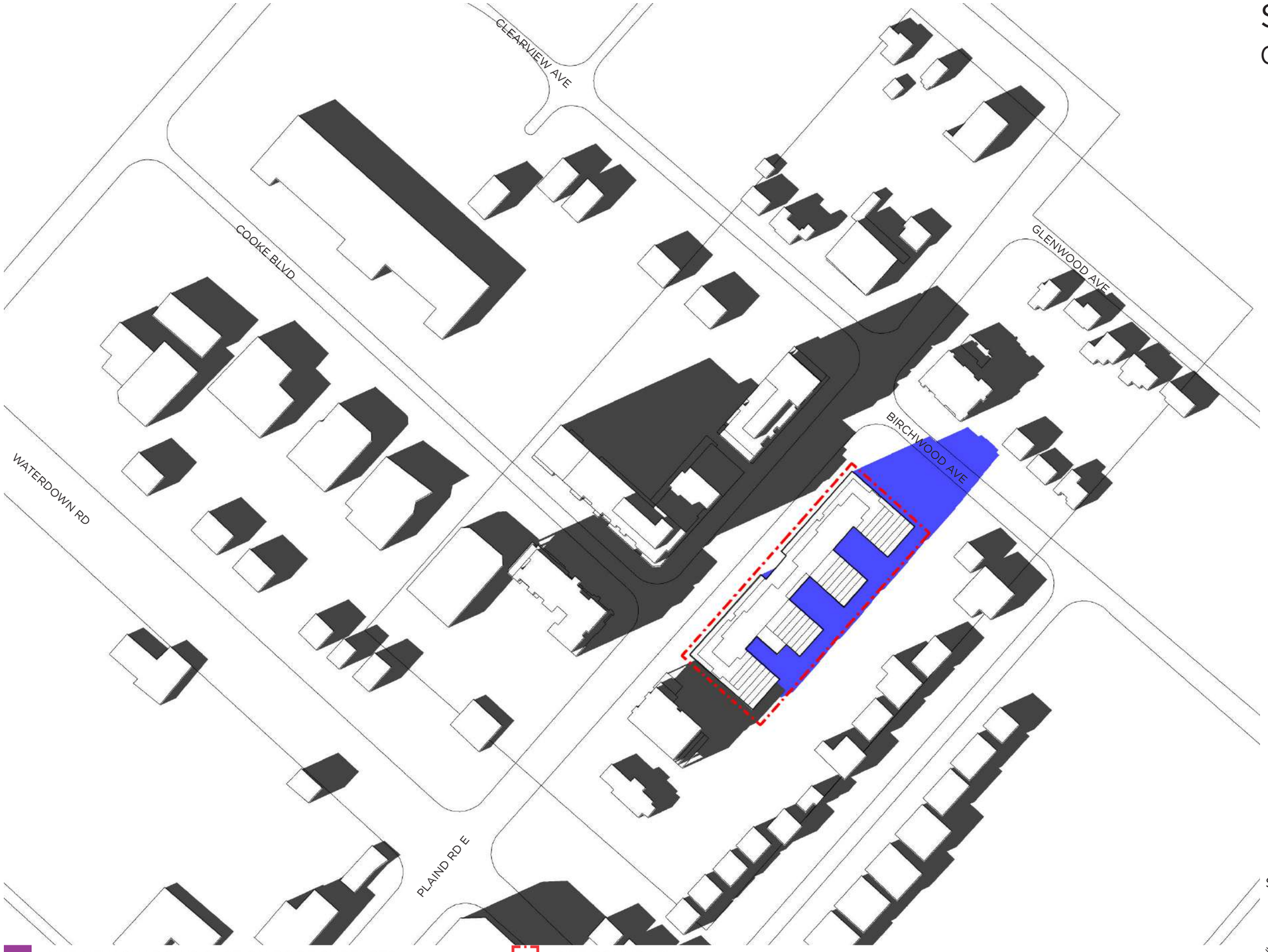
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RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
05:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

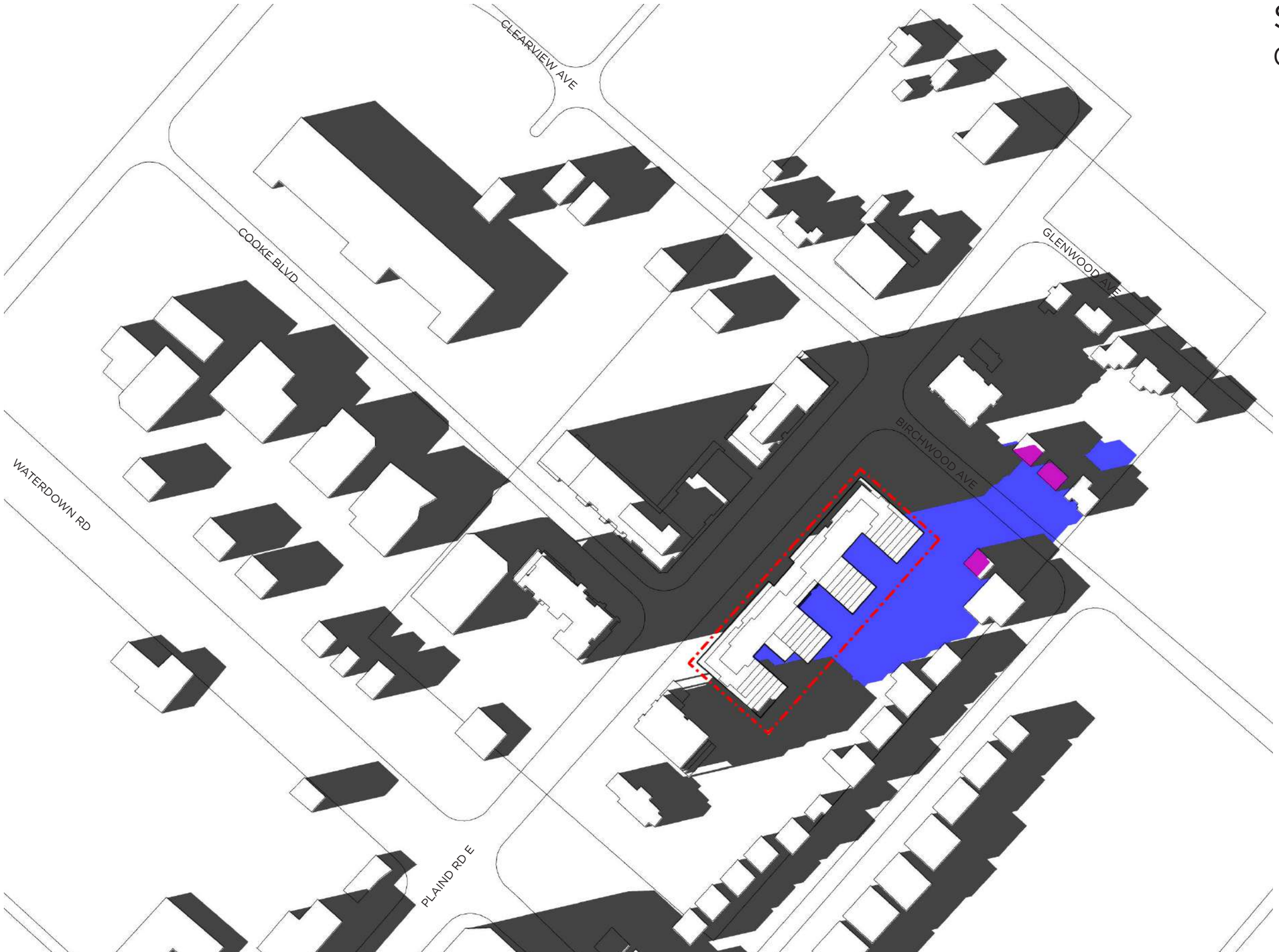
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SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SEPTEMBER 21
06:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

DECEMBER 21
11:00 AM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

DECEMBER 21
12:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

DECEMBER 21
01:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

DECEMBER 21

02:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

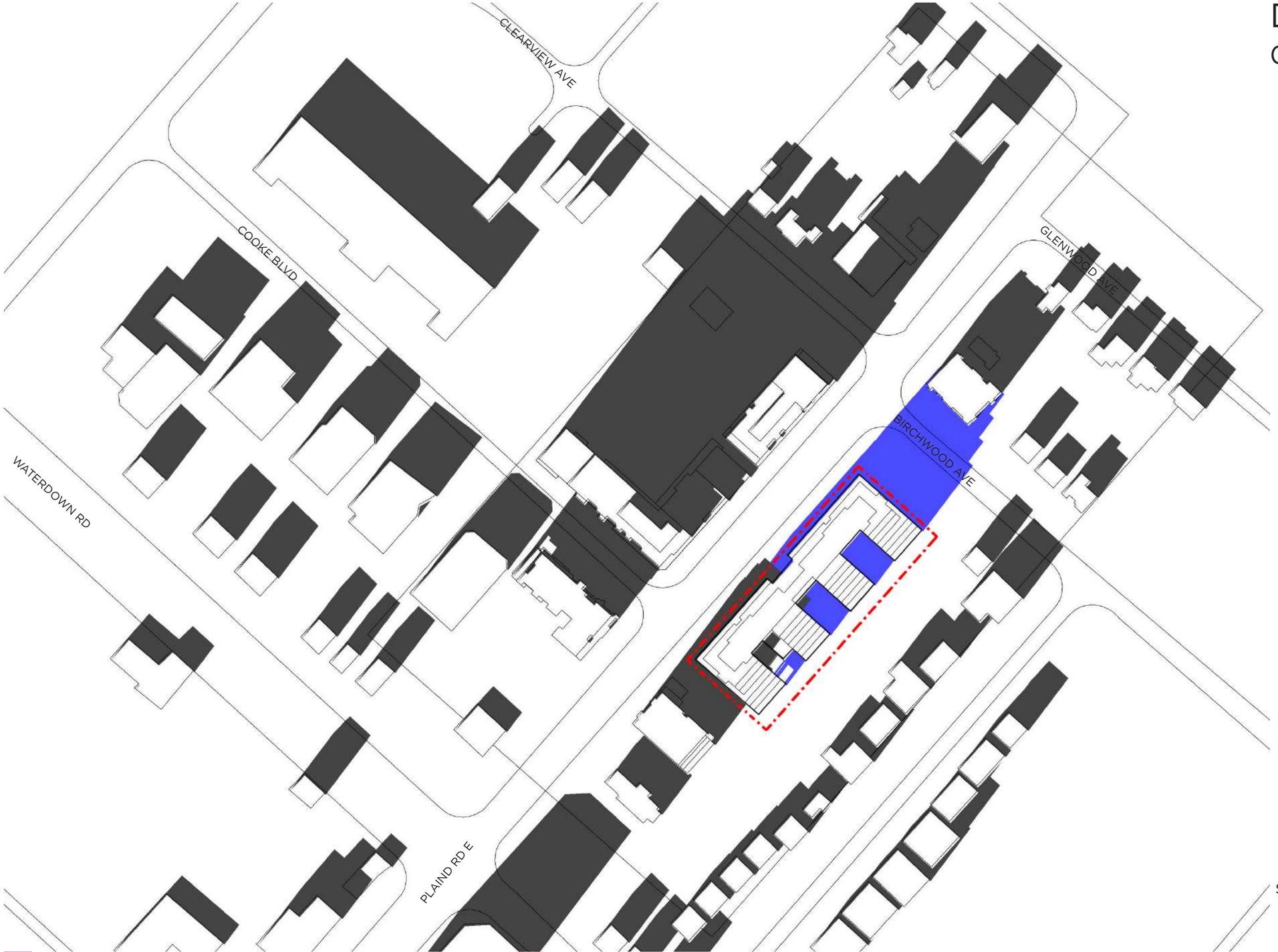
SHADOW STUDY

18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

DECEMBER 21

03:00 PM



NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

50 m 100 m

SCALE = 1:2,000

N

RAW

SHADOW STUDY

18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SUN ACCESS FACTOR CALCULATIONS

PRIVATE OUTDOOR AMENITY AREA - RESIDENTIAL REAR YARD

1. Total area of adjacent residential amenity (A_T) = 4087 m^2

2. Areas exposed to sunshine at each hourly test time ($AS_{(test)}$).

09:00 ($AS_{(test-09:00)}$) = 1429 m^2

10:00 ($AS_{(test-10:00)}$) = 2382 m^2

11:00 ($AS_{(test-11:00)}$) = 3129 m^2

12:00 ($AS_{(test-12:00)}$) = 3325 m^2

13:00 ($AS_{(test-13:00)}$) = 3507 m^2

14:00 ($AS_{(test-14:00)}$) = 3640 m^2

15:00 ($AS_{(test-15:00)}$) = 3860 m^2

16:00 ($AS_{(test-16:00)}$) = 3922 m^2

17:00 ($AS_{(test-17:00)}$) = 3946 m^2

18:00 ($AS_{(test-18:00)}$) = 1305 m^2

Number of test times = 10

3. The averages for the nine one-hour intervals ($AS_{(interval)}$):

09:00-10:00 ($AS_{(interval-09:00-10:00)}$) = (1429 m^2 + 2382 m^2) ÷ 2 = 1905.5 m^2

10:00-11:00 ($AS_{(interval-10:00-11:00)}$) = (2382 m^2 + 3129 m^2) ÷ 2 = 2755.5 m^2

11:00-12:00 ($AS_{(interval-11:00-12:00)}$) = (3129 m^2 + 3325 m^2) ÷ 2 = 3227 m^2

12:00-13:00 ($AS_{(interval-12:00-13:00)}$) = (3325 m^2 + 3507 m^2) ÷ 2 = 3416 m^2

13:00-14:00 ($AS_{(interval-13:00-14:00)}$) = (3507 m^2 + 3640 m^2) ÷ 2 = 3573.5 m^2

14:00-15:00 ($AS_{(interval-14:00-15:00)}$) = (3640 m^2 + 3860 m^2) ÷ 2 = 3750 m^2

15:00-16:00 ($AS_{(interval-15:00-16:00)}$) = (3860 m^2 + 3922 m^2) ÷ 2 = 3891 m^2

16:00-17:00 ($AS_{(interval-16:00-17:00)}$) = (3922 m^2 + 3946 m^2) ÷ 2 = 3934 m^2

17:00-18:00 ($AS_{(interval-11:00-12:00)}$) = (3946 m^2 + 1305 m^2) ÷ 2 = 2625.5 m^2

Number of test intervals = 9

Sum of ($AS_{(interval)}$) = 29,078 m^2

4. The overall average area in sunshine ($AS_{(average)}$) = [sum of ($AS_{(interval)}$)] ÷ [# of intervals]

= 29,078 m^2 ÷ 9

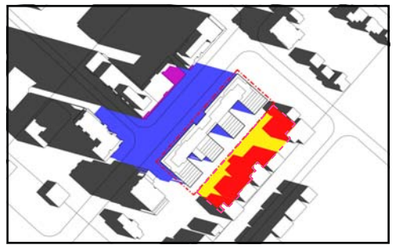
= 3230.88 m^2

5. SAF = ($AS_{(average)}$) ÷ A_T

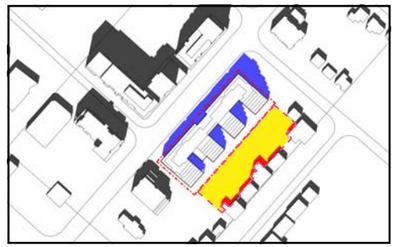
= 3230.88 m^2 ÷ 4087 m^2

=0.79 m^2

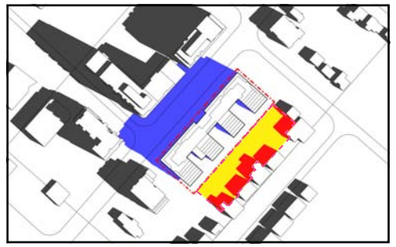
MARCH 21



09:00 AM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 1429 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 2658 m^2



02:00 PM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 3640 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 447 m^2



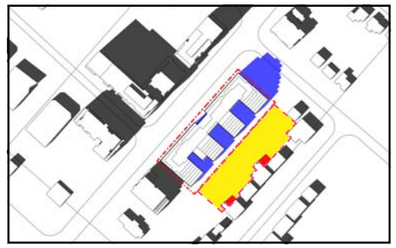
10:00 AM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 2382 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 1705 m^2



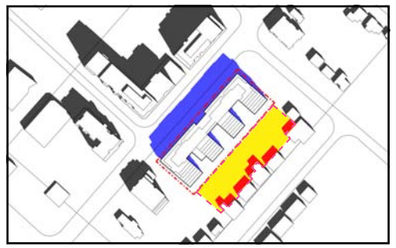
03:00 PM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 3860 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 227 m^2



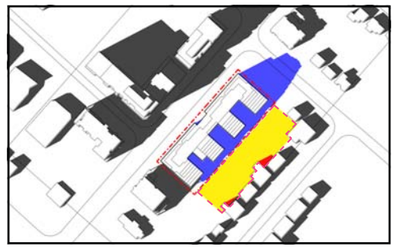
11:00 AM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 3129 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 958 m^2



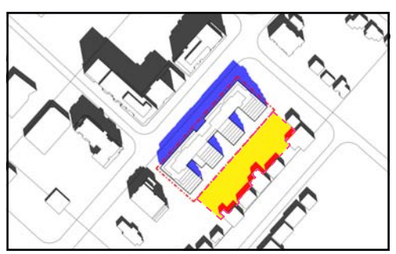
04:00 PM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 3922 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 165 m^2



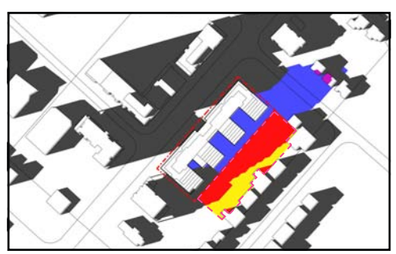
12:00 PM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 3325 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 762 m^2



05:00 PM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 3946 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 141 m^2



01:00 PM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 3507 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 580 m^2



06:00 PM
ADJACENT RESIDENTIAL AMENITY SPACE
TOTAL AREA: 4087 m^2
AREA EXPOSED TO SUNSHINE
($AS_{(test)}$): 1305 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 2782 m^2

NET NEW SHADOWS CAST ON ROOF SURFACES

NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

SITE BOUNDARY

PRIVATE OUTDOOR AMENITY AREA

RAW

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021

SUN ACCESS FACTOR CALCULATIONS

PUBLIC REALM AND SIDEWALKS

1. Total area of opposite boulevard (A_T) = 2016 m^2

2. Areas exposed to sunshine at each hourly test time ($AS_{(test)}$).

09:00 ($AS_{(test-09:00)}$) = 727 m^2

10:00 ($AS_{(test-10:00)}$) = 906 m^2

11:00 ($AS_{(test-11:00)}$) = 1484 m^2

12:00 ($AS_{(test-12:00)}$) = 2016 m^2

13:00 ($AS_{(test-13:00)}$) = 2016 m^2

Number of test times = 10

14:00 ($AS_{(test-14:00)}$) = 2016 m^2

15:00 ($AS_{(test-15:00)}$) = 2016 m^2

16:00 ($AS_{(test-16:00)}$) = 1647 m^2

17:00 ($AS_{(test-17:00)}$) = 713 m^2

18:00 ($AS_{(test-18:00)}$) = 313 m^2

3. The averages for the nine one-hour intervals ($AS_{(interval)}$):

09:00-10:00 ($AS_{(interval-09:00-10:00)}$) = (727 m^2 + 906 m^2) ÷ 2 = 816.5 m^2

10:00-11:00 ($AS_{(interval-10:00-11:00)}$) = (906 m^2 + 1484 m^2) ÷ 2 = 1195 m^2

11:00-12:00 ($AS_{(interval-11:00-12:00)}$) = (1484 m^2 + 2016 m^2) ÷ 2 = 1750 m^2

12:00-13:00 ($AS_{(interval-12:00-13:00)}$) = (324 m^2 + 344 m^2) ÷ 2 = 334 m^2

13:00-14:00 ($AS_{(interval-13:00-14:00)}$) = (2016 m^2 + 2016 m^2) ÷ 2 = 2016 m^2

14:00-15:00 ($AS_{(interval-14:00-15:00)}$) = (2016 m^2 + 2016 m^2) ÷ 2 = 2016 m^2

15:00-16:00 ($AS_{(interval-15:00-16:00)}$) = (2016 m^2 + 1647 m^2) ÷ 2 = 1831.5 m^2

16:00-17:00 ($AS_{(interval-16:00-17:00)}$) = (1647 m^2 + 713 m^2) ÷ 2 = 1180 m^2

17:00-18:00 ($AS_{(interval-11:00-12:00)}$) = (713 m^2 + 313 m^2) ÷ 2 = 513 m^2

Number of test intervals = 9

Sum of ($AS_{(interval)}$) = 11, 652 m^2

4. The overall average area in sunshine ($AS_{(average)}$) = [sum of ($AS_{(interval)}$)] ÷ [# of intervals]

= 11, 652 m^2 ÷ 9

=1294.6 m^2

5. SAF = ($AS_{(average)}$) ÷ A_T

= 1294.6 m^2 ÷ 2016m^2

=0.64 m^2

NET NEW SHADOWS CAST ON ROOF SURFACES

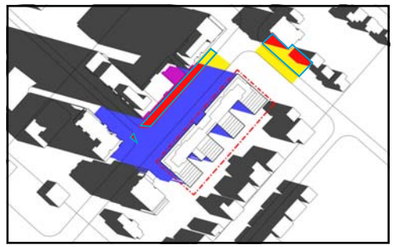
NET NEW SHADOWS CAST ON GROUND SURFACES

SHADOWS CAST BY EXISTING BUILDINGS ON ALL SURFACES

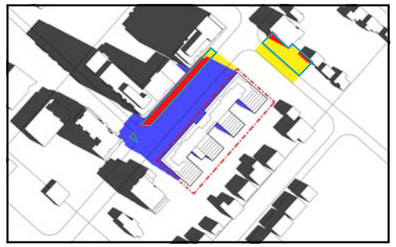
SITE BOUNDARY

OPPOSITE BOULEVARD AREA

MARCH 21



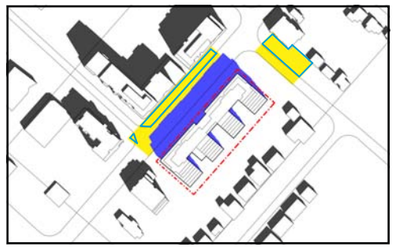
09:00 AM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 727 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 1289 m^2



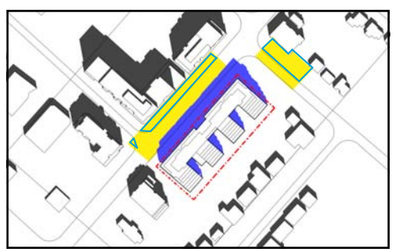
10:00 AM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 906 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 1110 m^2



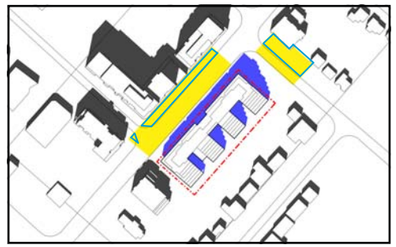
11:00 AM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 1484 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 532 m^2



12:00 PM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 2016 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 0 m^2



01:00 PM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 2016 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 0 m^2



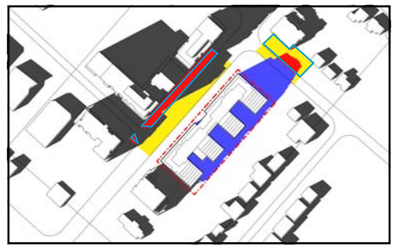
02:00 PM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 2016 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 0 m^2



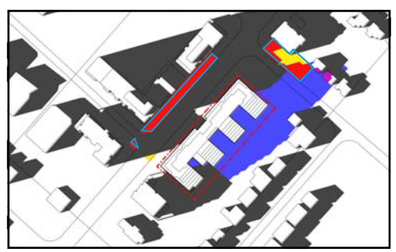
03:00 PM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 2016 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 0 m^2



04:00 PM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 1647 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 369 m^2



05:00 PM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 713 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 1303 m^2



06:00 PM
TOTAL OPPOSITE BOUELVARD AREA: 2016 m^2
AREA EXPOSED TO SUNSHINE ($AS_{(test)}$): 313 m^2
AREA IN SHADOW (INCLUDING EXISTING AND PROPOSED SHADOWS): 1703 m^2

SHADOW STUDY
18035 - 40-70 PLAINS ROAD

JANUARY 21, 2021