

Shadow Impact Study

425 Culdaff Road, Ottawa, Ontario

January 31, 2025



Shadow Analysis – As-of-Right

As per the City of Ottawa's Terms of Reference for Shadow Analysis, a detailed Shadow Analysis is required as part of the Site Plan Control application.

The subject lands, municipally known as 425 Culdaff Road in the City of Ottawa, are bordered by Culdaff Road to the west, vacant lands zoned IP to the north, vacant lands zoned GM to the east, and Derreen Avenue to the south.

Computer simulations were conducted to assess the shadow patterns surrounding the site as influenced by the proposed development. This section evaluates the shadow impacts of the as-of-right development potential during the Spring/Fall Equinox, as well as the Winter and Summer Solstices, at multiple times throughout each day.

Test Dates and Times:

Equinox: September 21, 8am – 6pm (EDT)
Summer Solstice: June 21, 8am – 8pm (EDT)
Winter Solstice: December 21, 9am – 3pm (EST)

Geographic Coordinates:

Latitude 75° 55' 56" S
Longitude 45° 17' 19" E

The following pages present shadow projections on an hourly basis for each of the three tested dates.

The model illustrates the shadowing impacts of the proposed development based on the existing GM zoning applicable to the site. As shown, the majority of shadows are cast toward the vacant Generals Mixed-Use and Business Park Industrial zoned lands to the north and southeast. These impacts occur during certain seasons for brief periods shortly after sunrise and just before sunset.

The low-rise residential zone to the southwest and south maintains consistent direct sunlight exposure throughout the year.

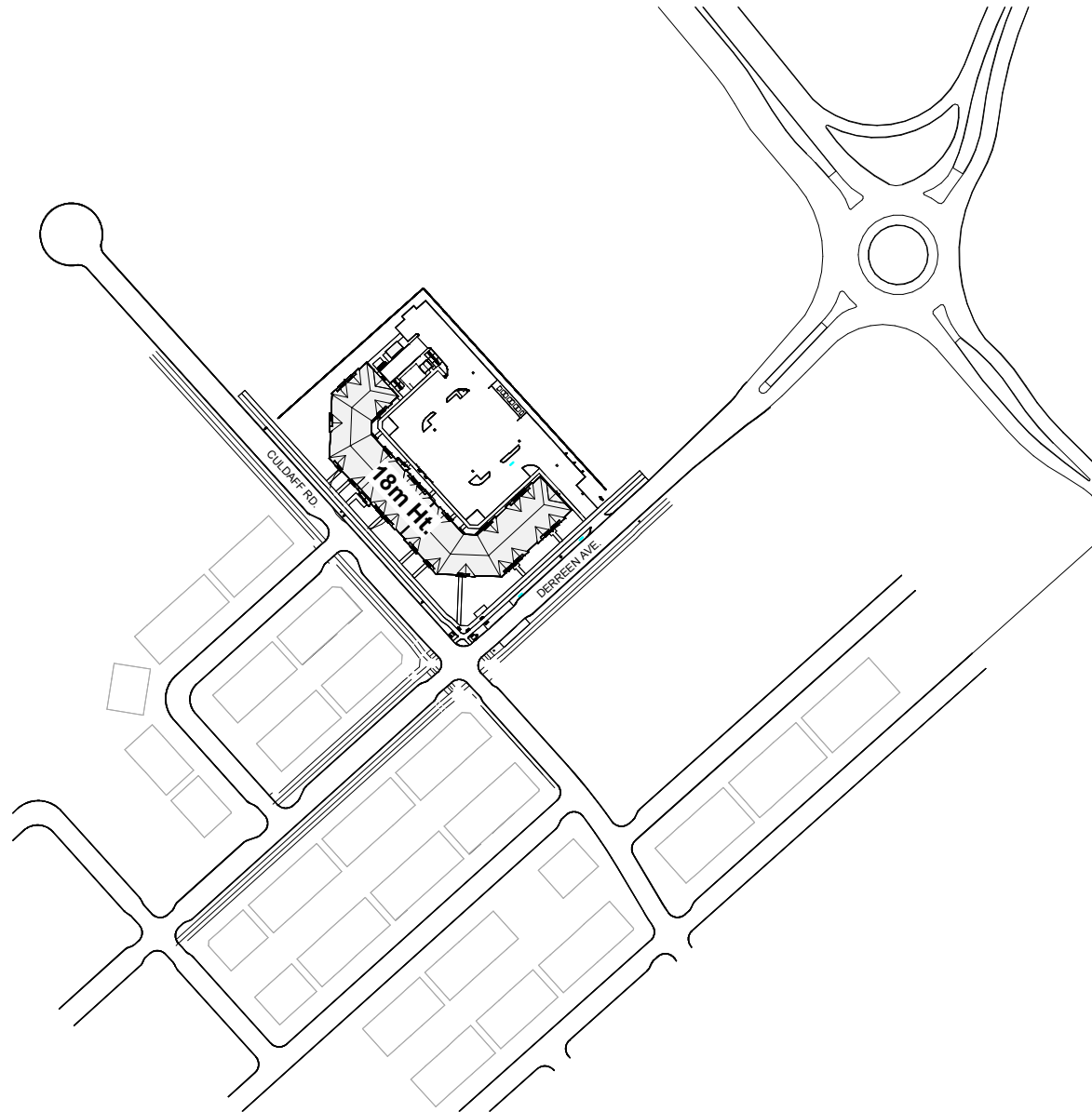
The proposed development results in acceptable levels of shadow on the site and surrounding land uses, and acceptable solar access has been maintained for the public realm and adjacent properties.



Rendering, Southwest Perspective



Christopher Gibson, MCP, MCIP, RPP
Development Manager
Broadstreet Properties Ltd.



SCALE: 1:3000

JAN 31, 2025

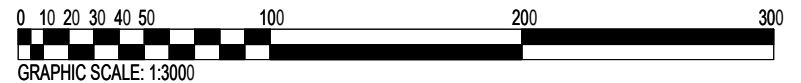
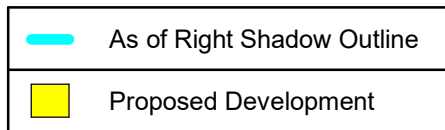
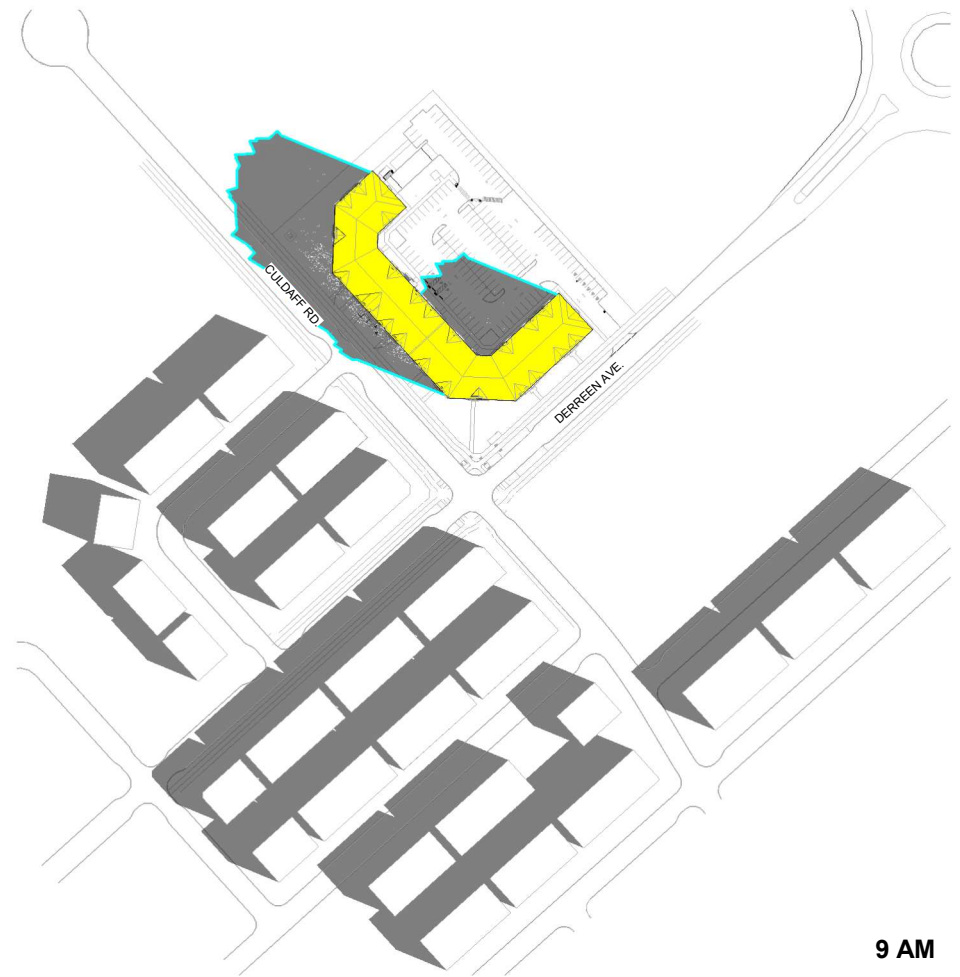
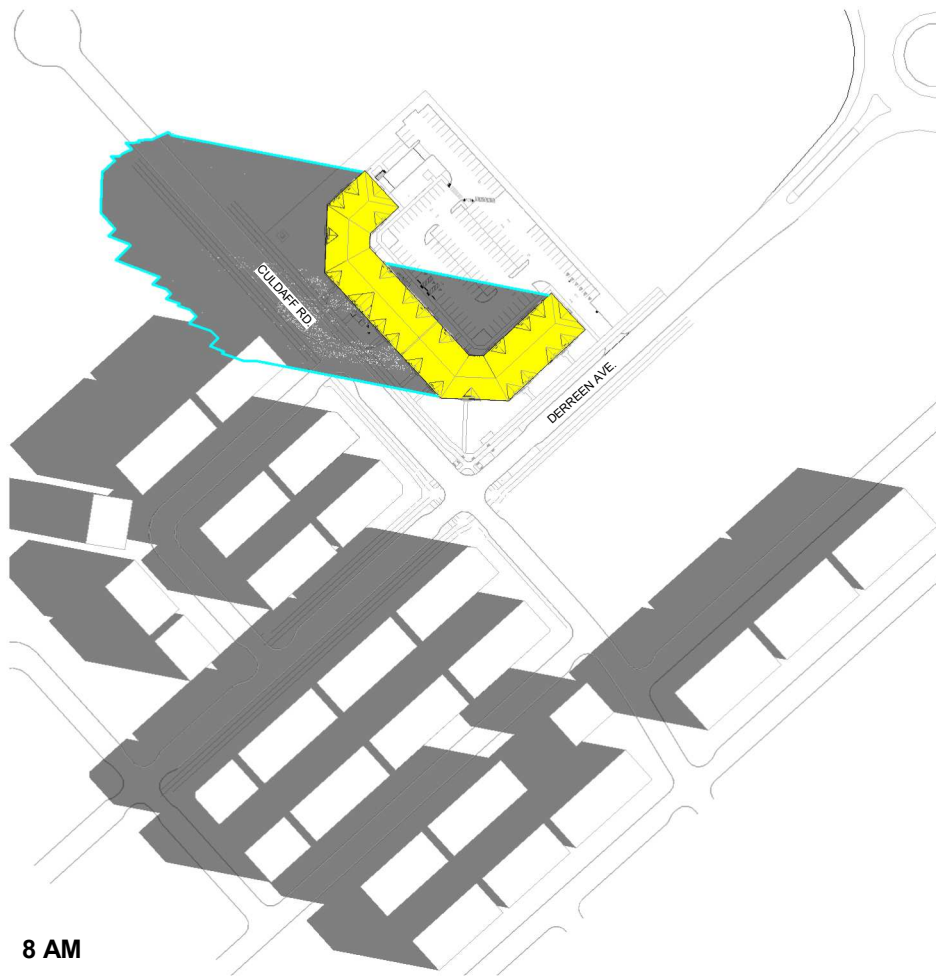
CG

425 CULDAFF RD - TOP VIEW SHADOW STUDY

AERIAL VIEW



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

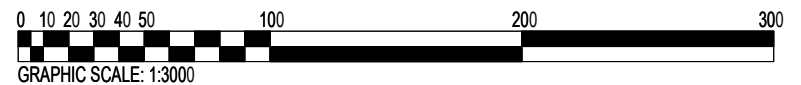
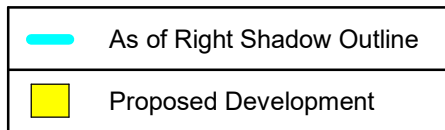
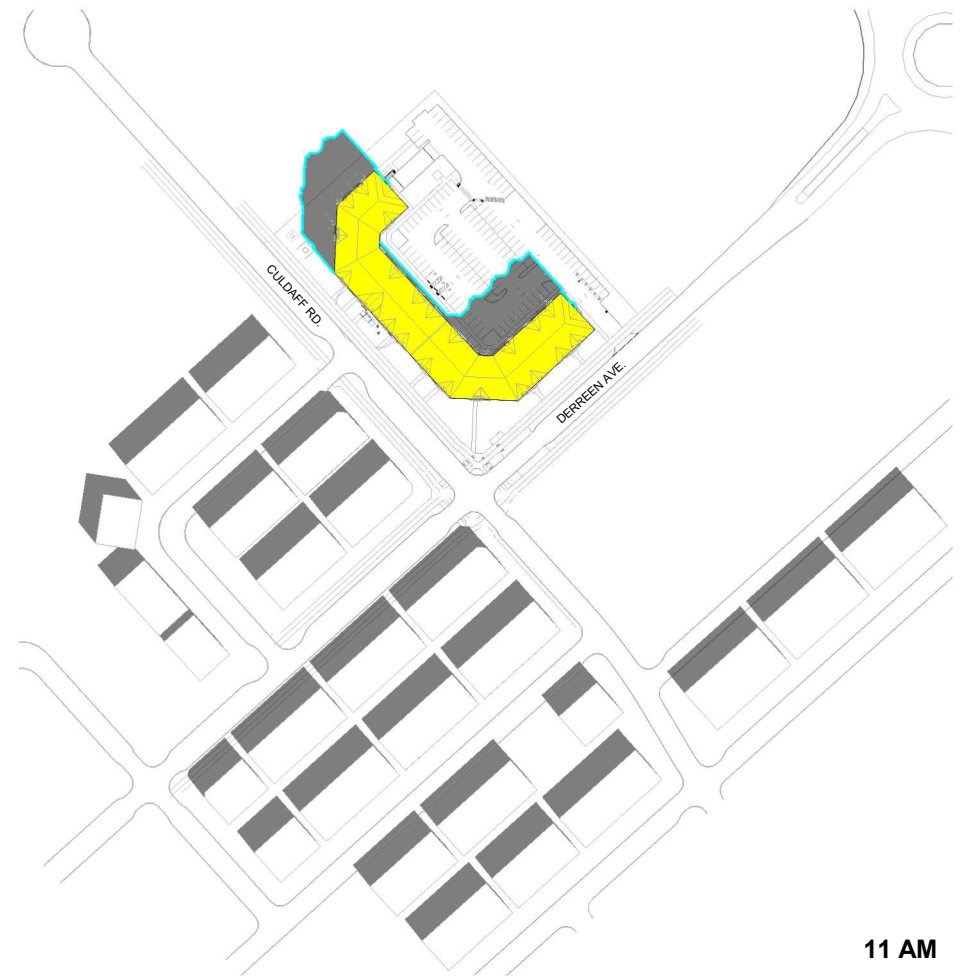
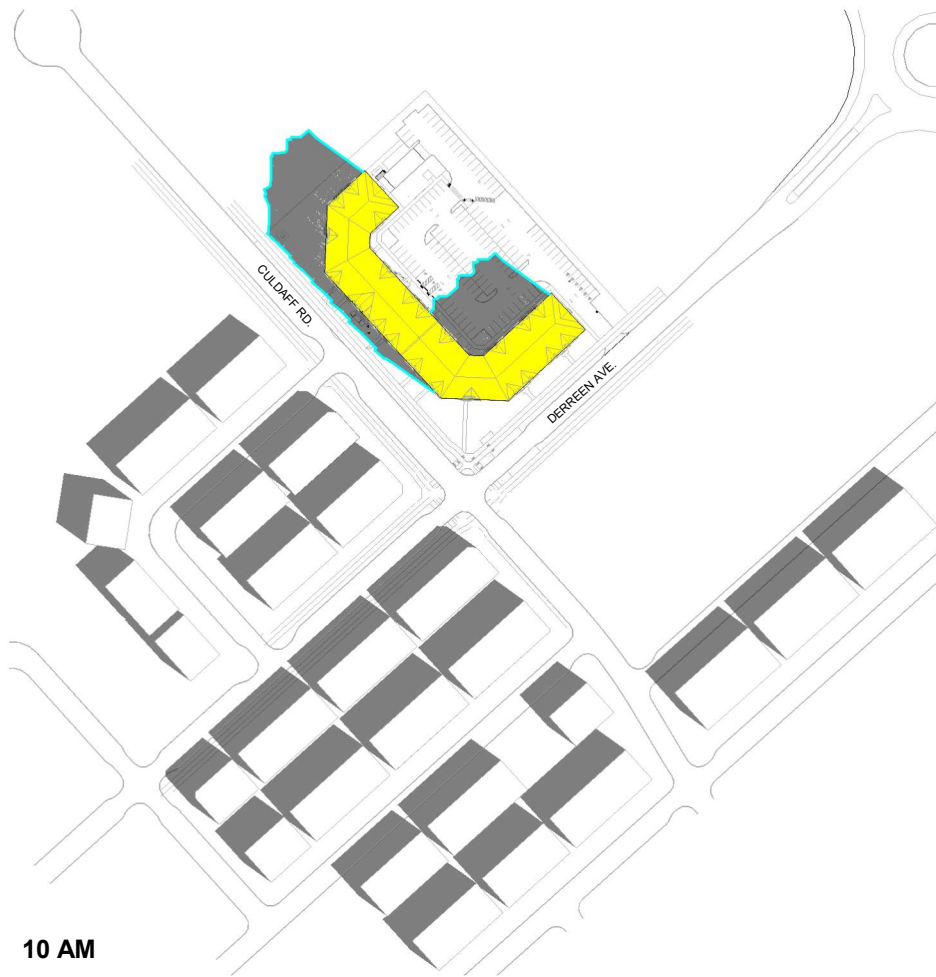
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = SEPT 21 - 8 AM / 9 AM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

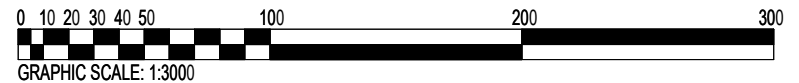
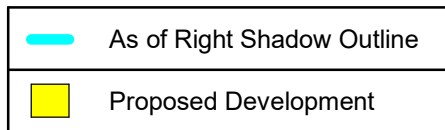
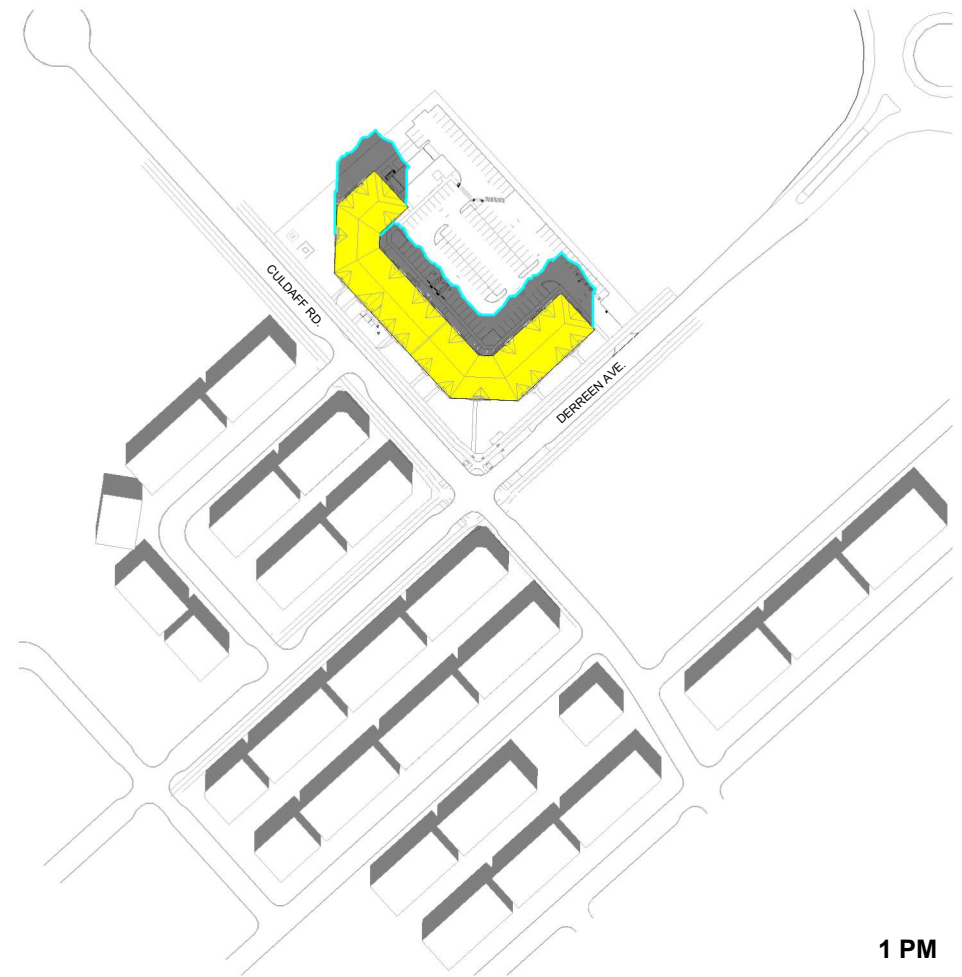
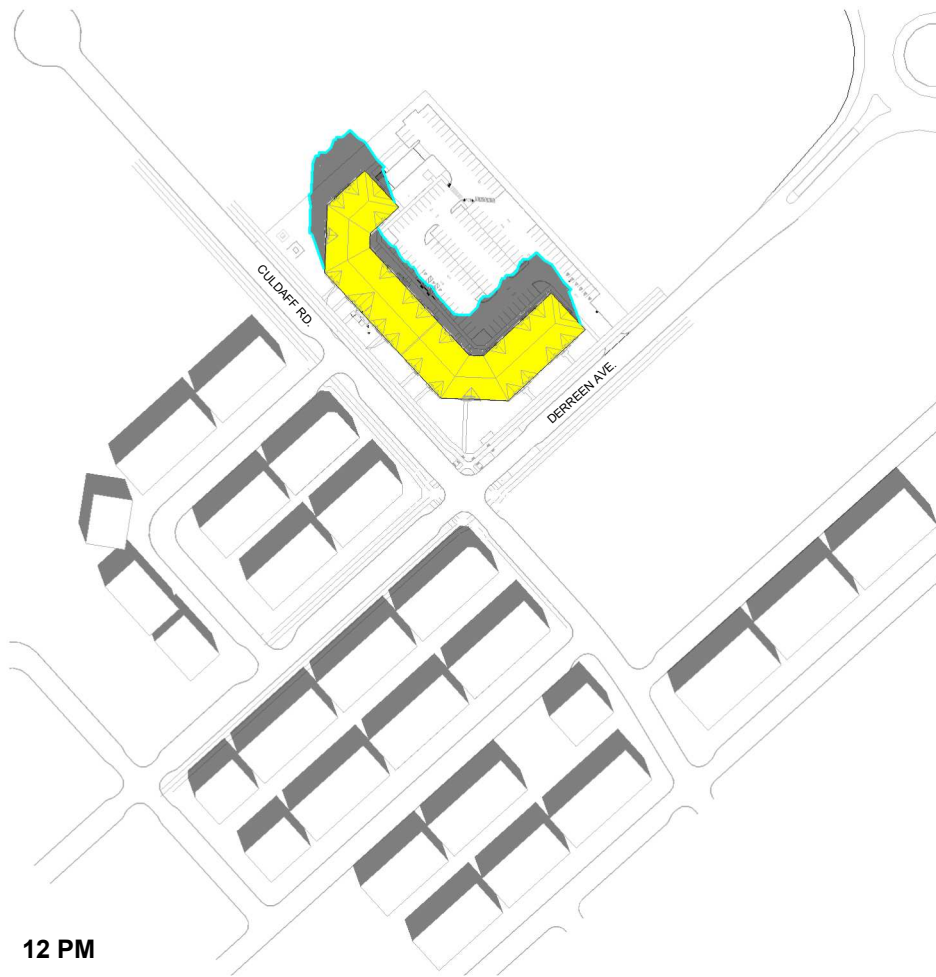
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = SEPT 21 - 10 AM / 11 AM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

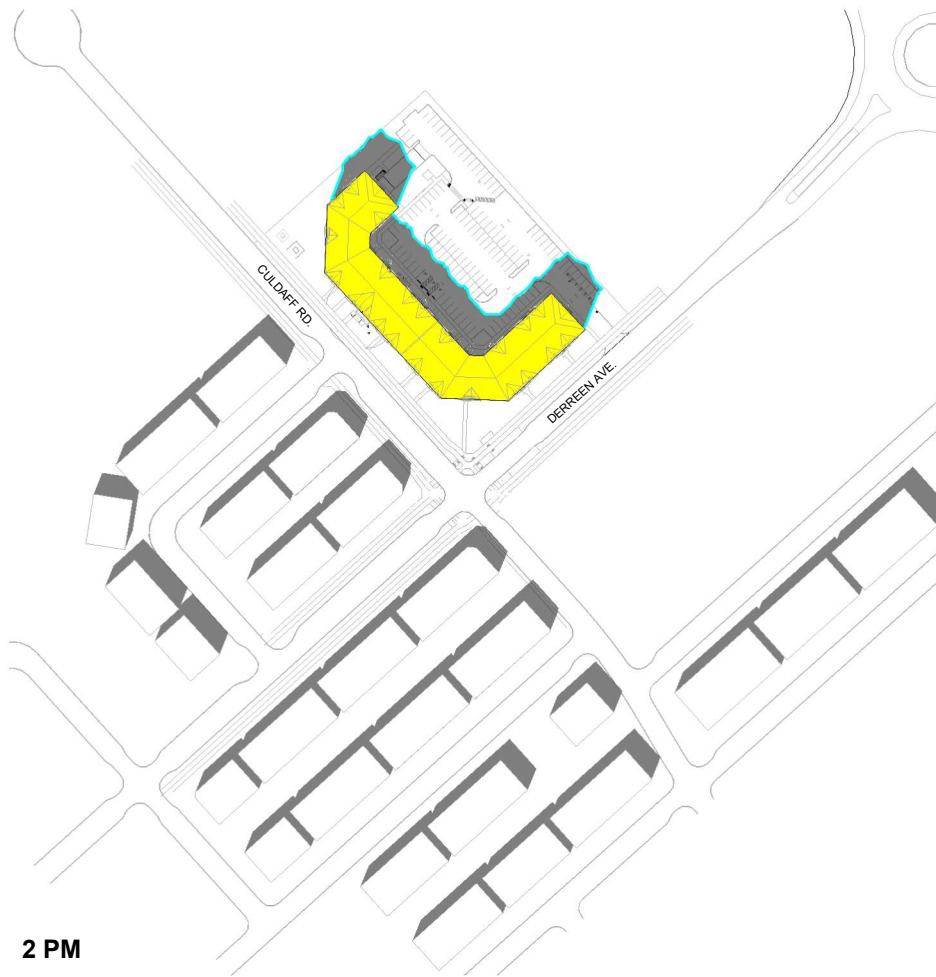
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

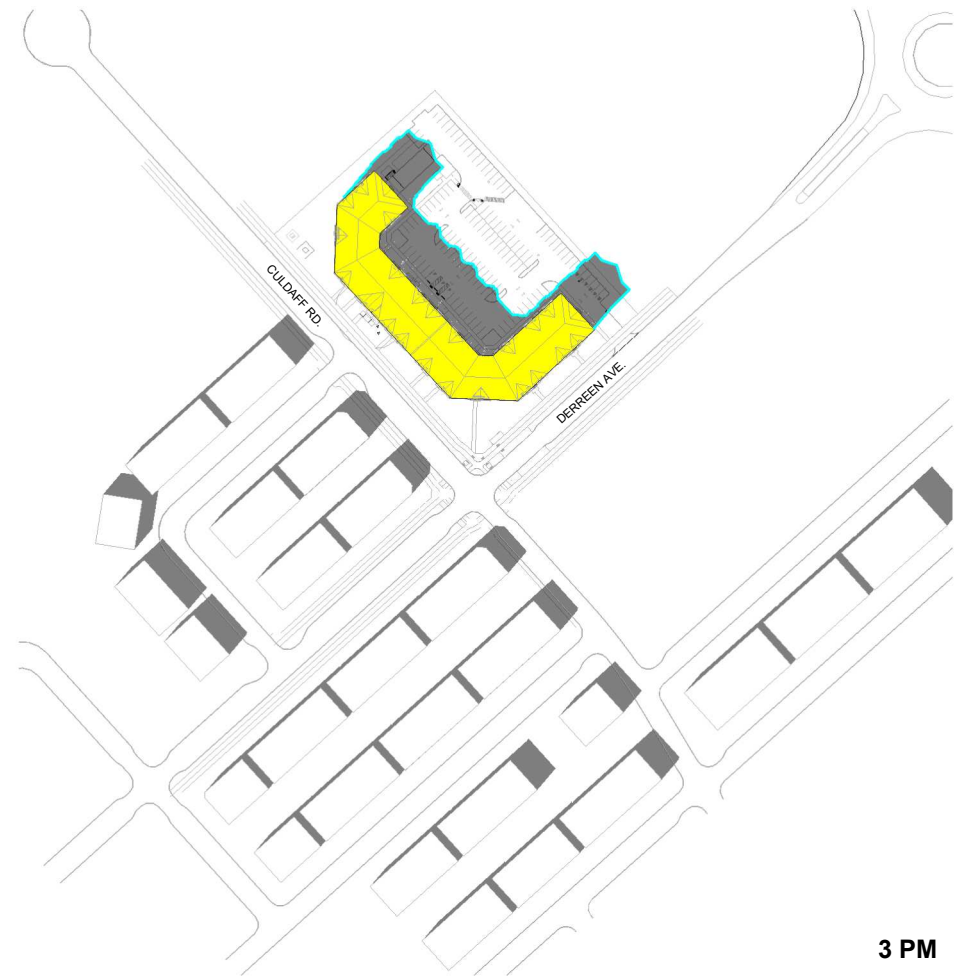
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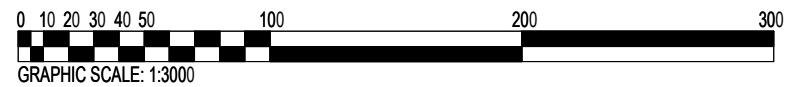
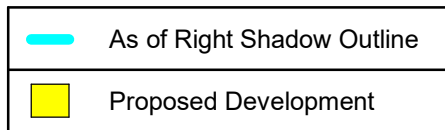
PROJECT NORTH



2 PM



3 PM



SCALE: 1:3000

JAN 31, 2025

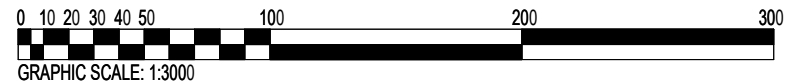
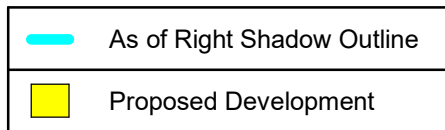
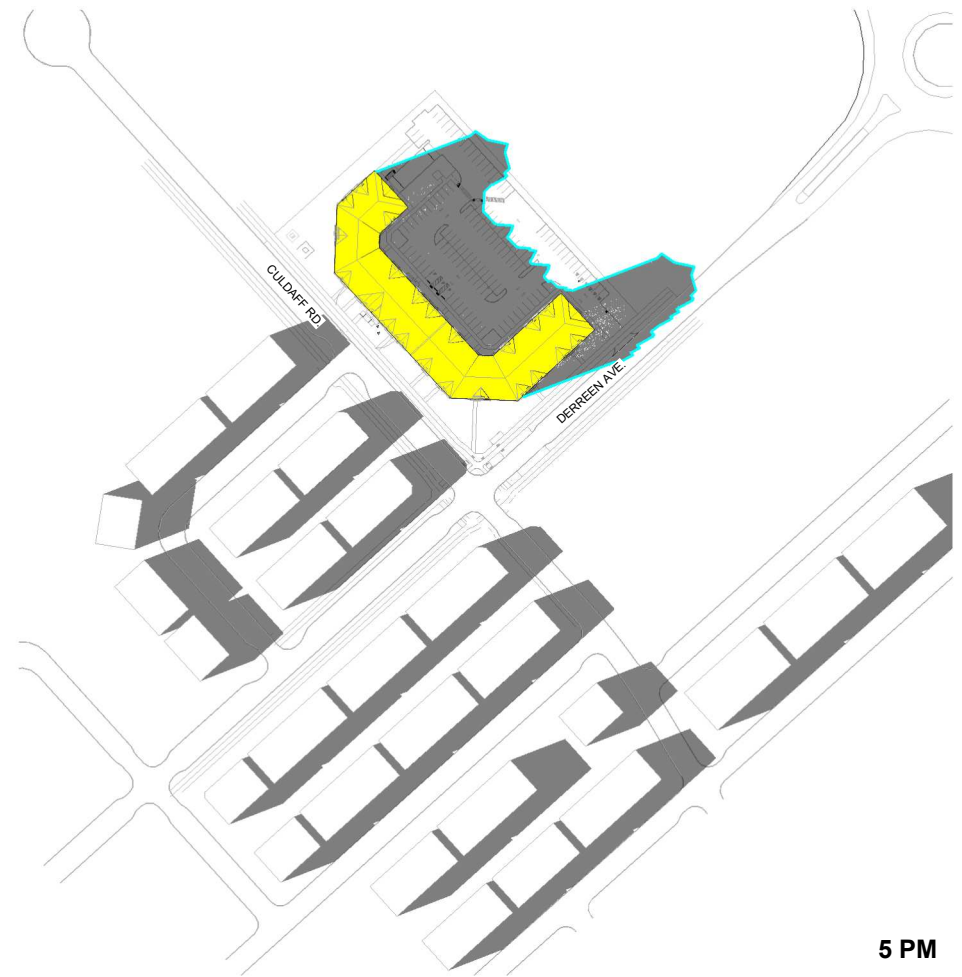
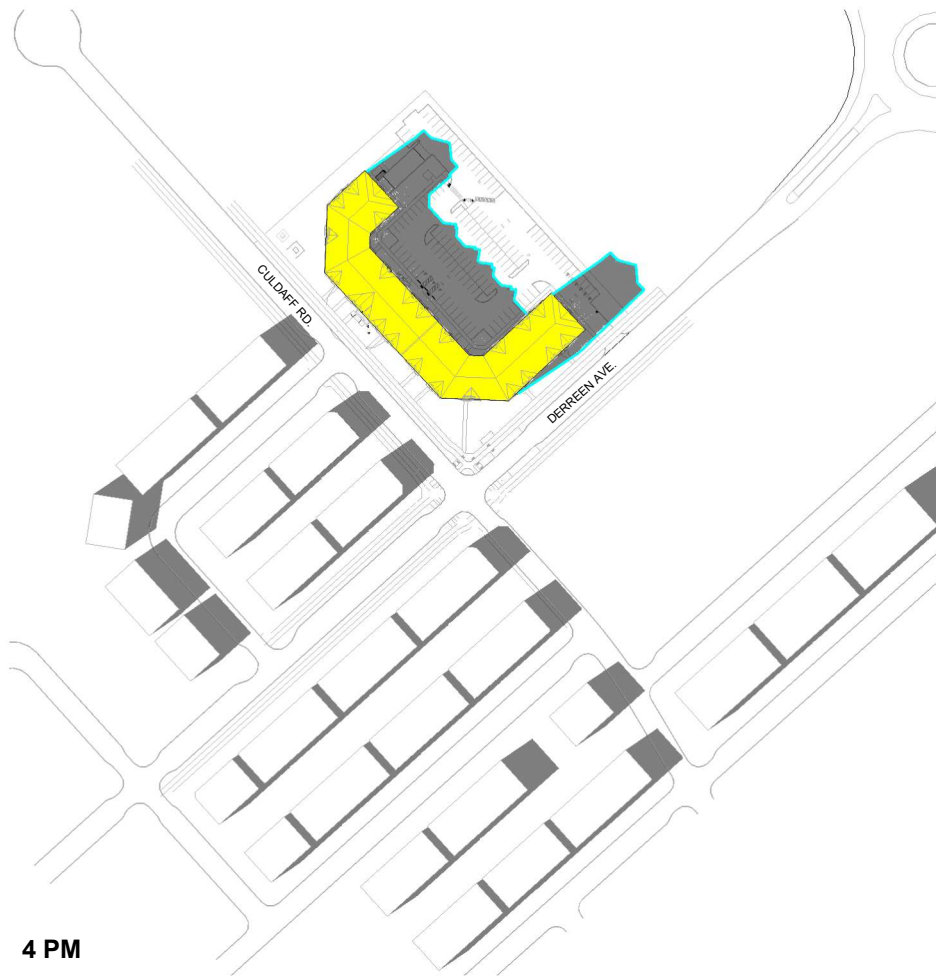
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = SEPT 21 - 2 PM / 3 PM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

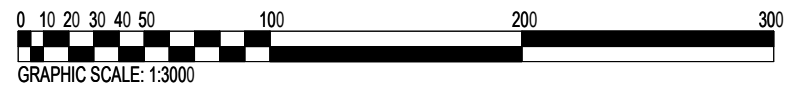
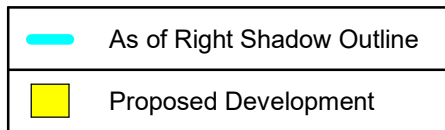
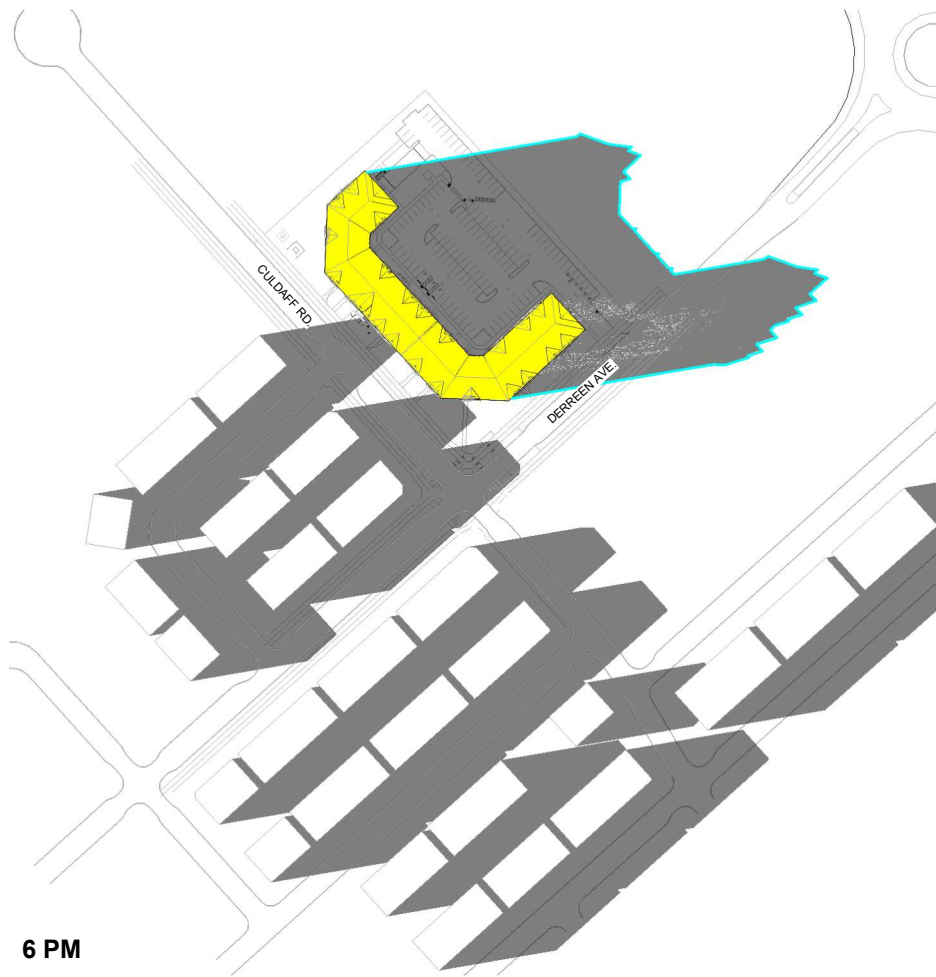
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = SEPT 21 - 4 PM / 5 PM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

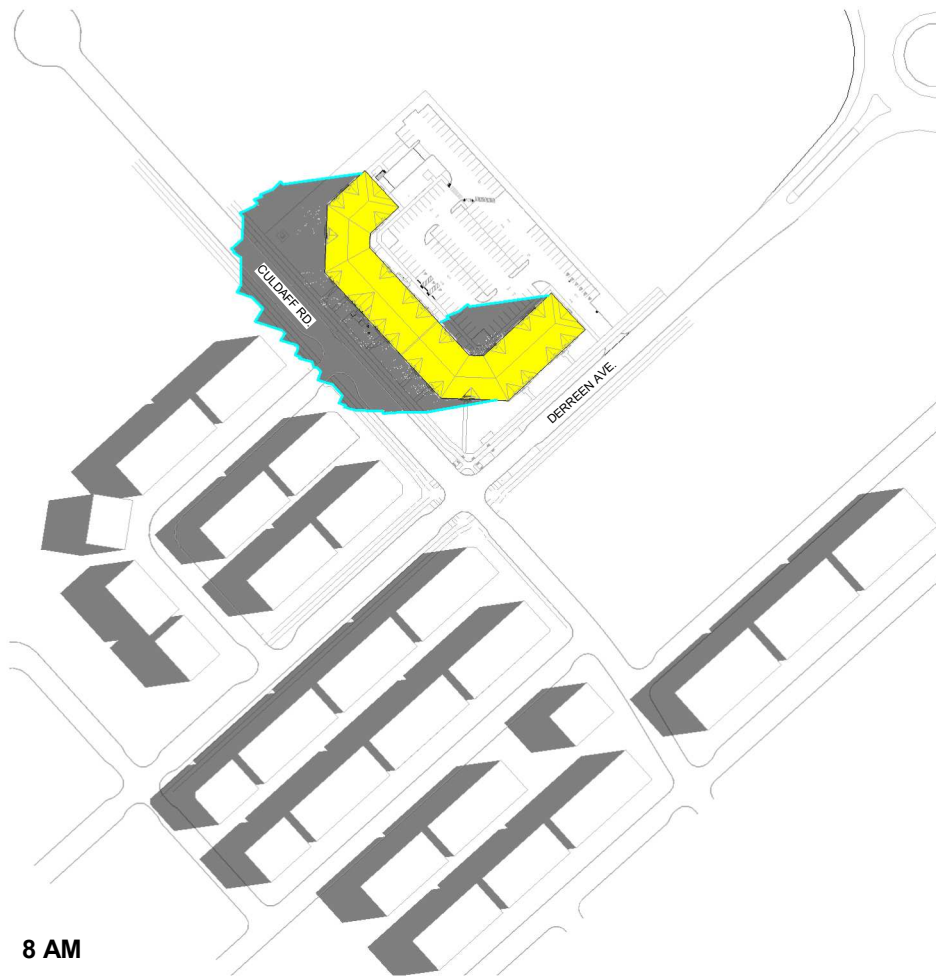
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

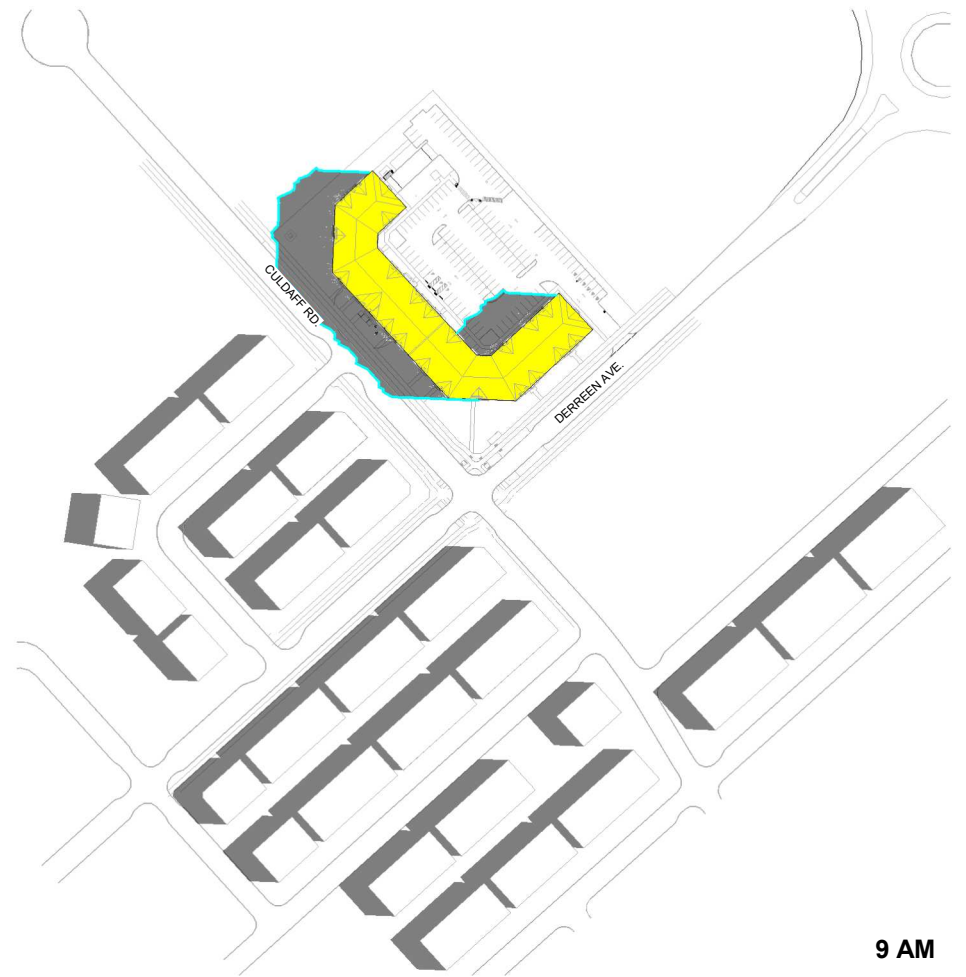
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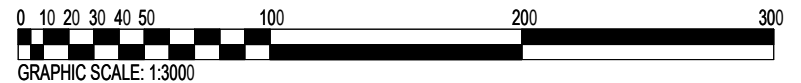
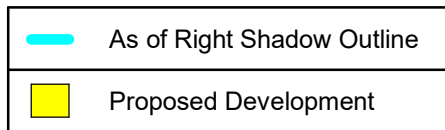
PROJECT NORTH



8 AM



9 AM



SCALE: 1:3000

JAN 31, 2025

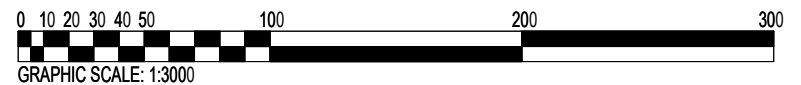
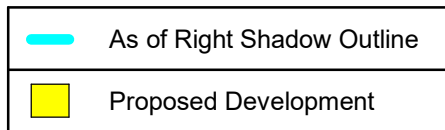
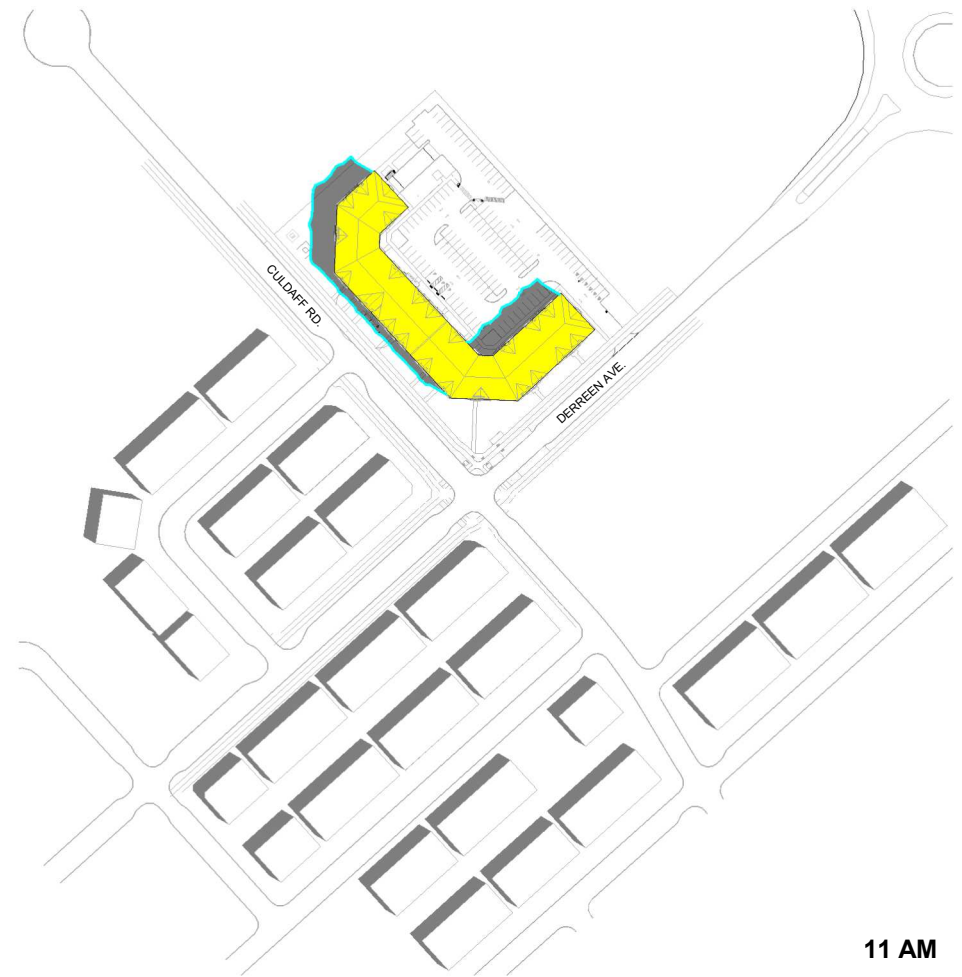
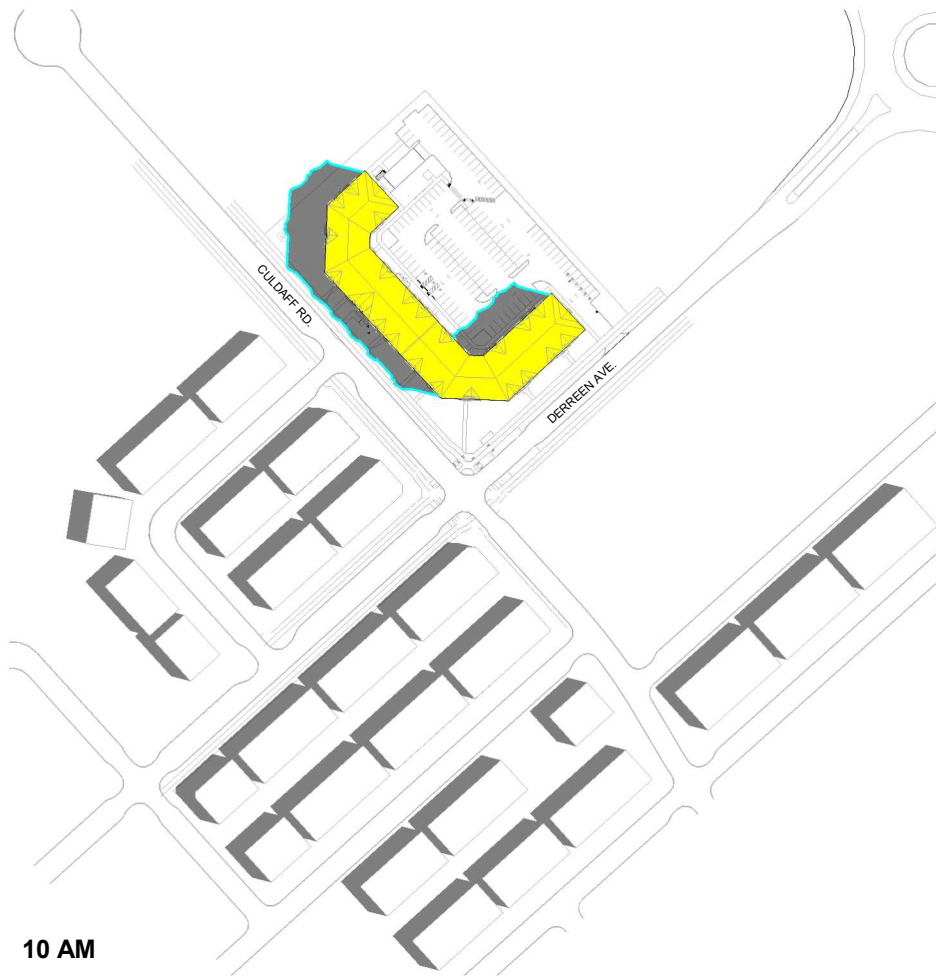
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = JUNE 21 - 8 AM / 9 AM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

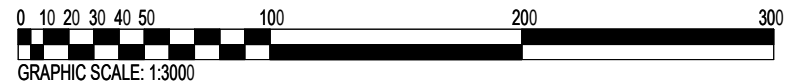
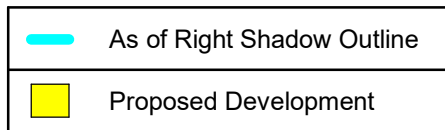
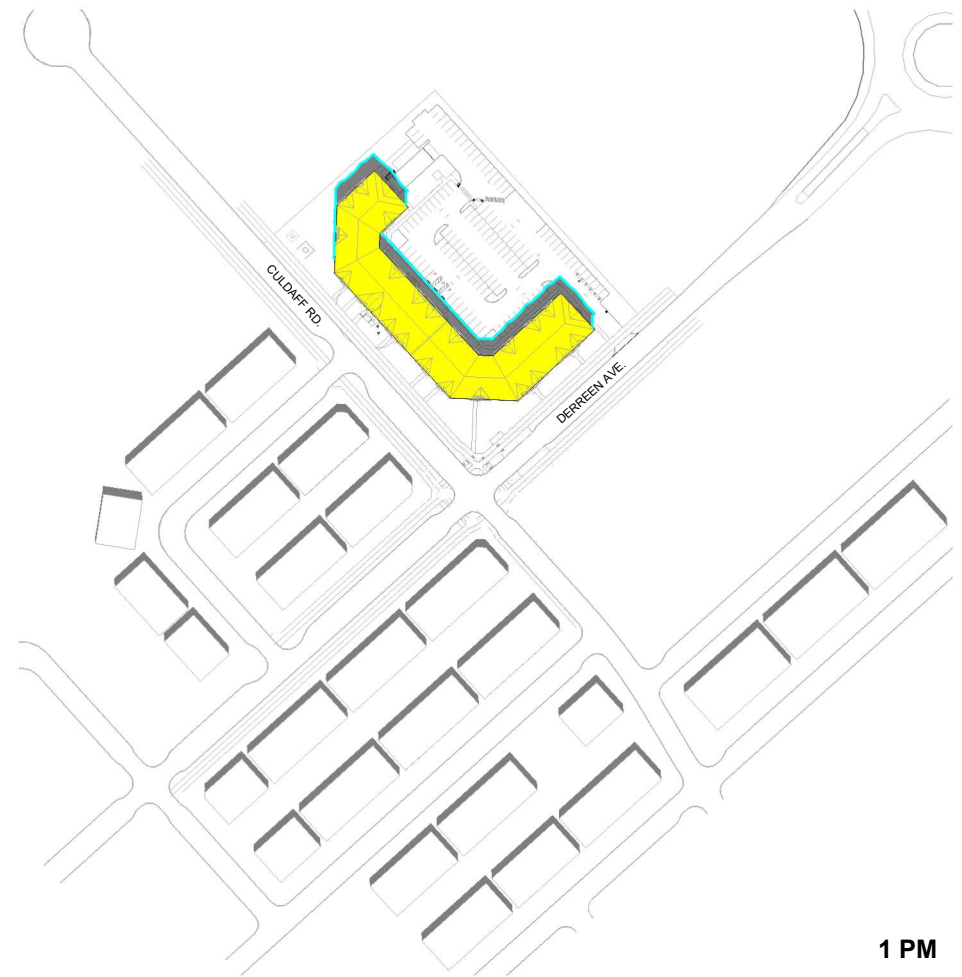
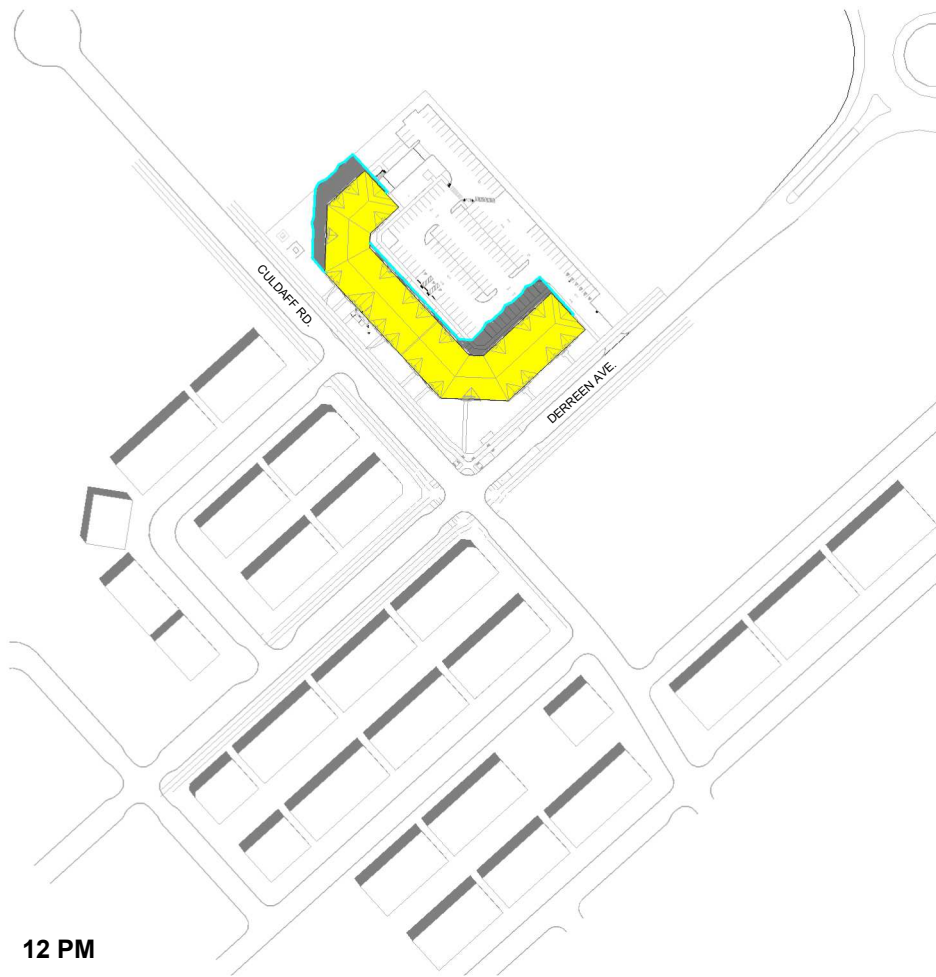
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = JUNE 21 - 10 AM / 11 AM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

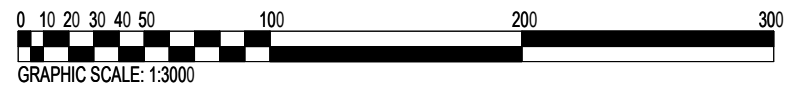
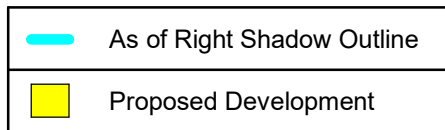
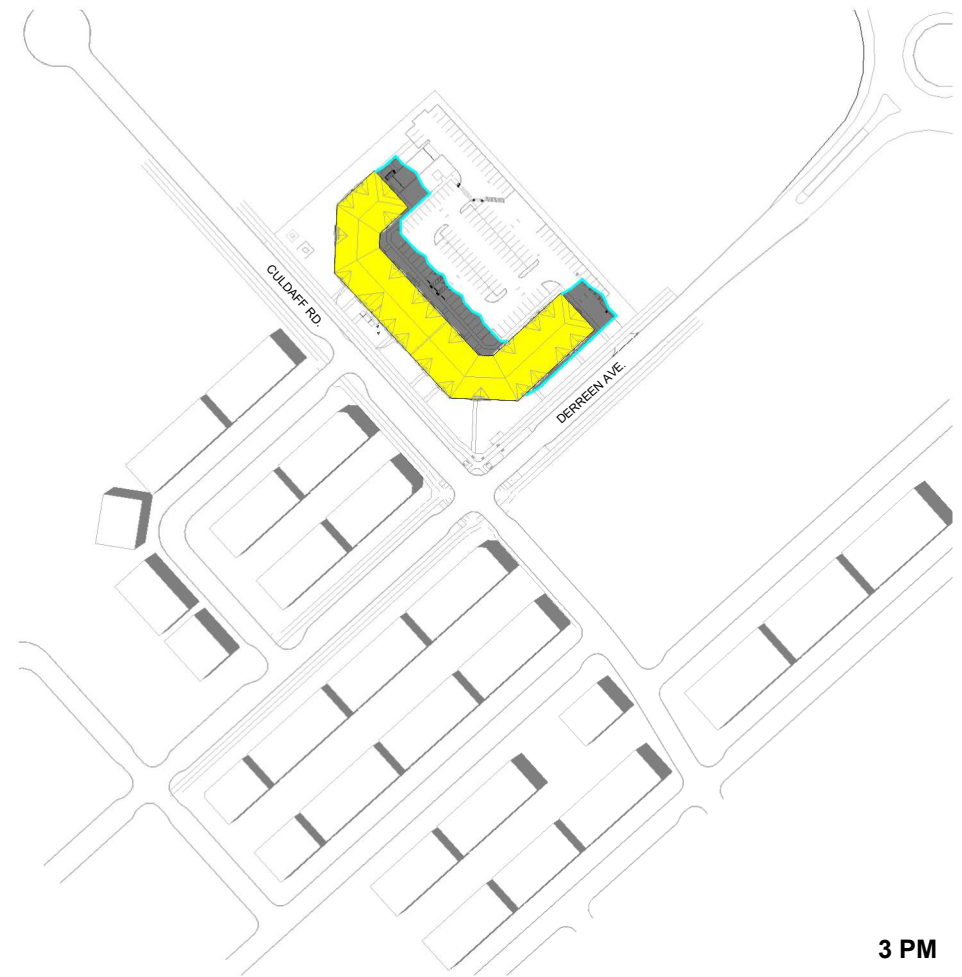
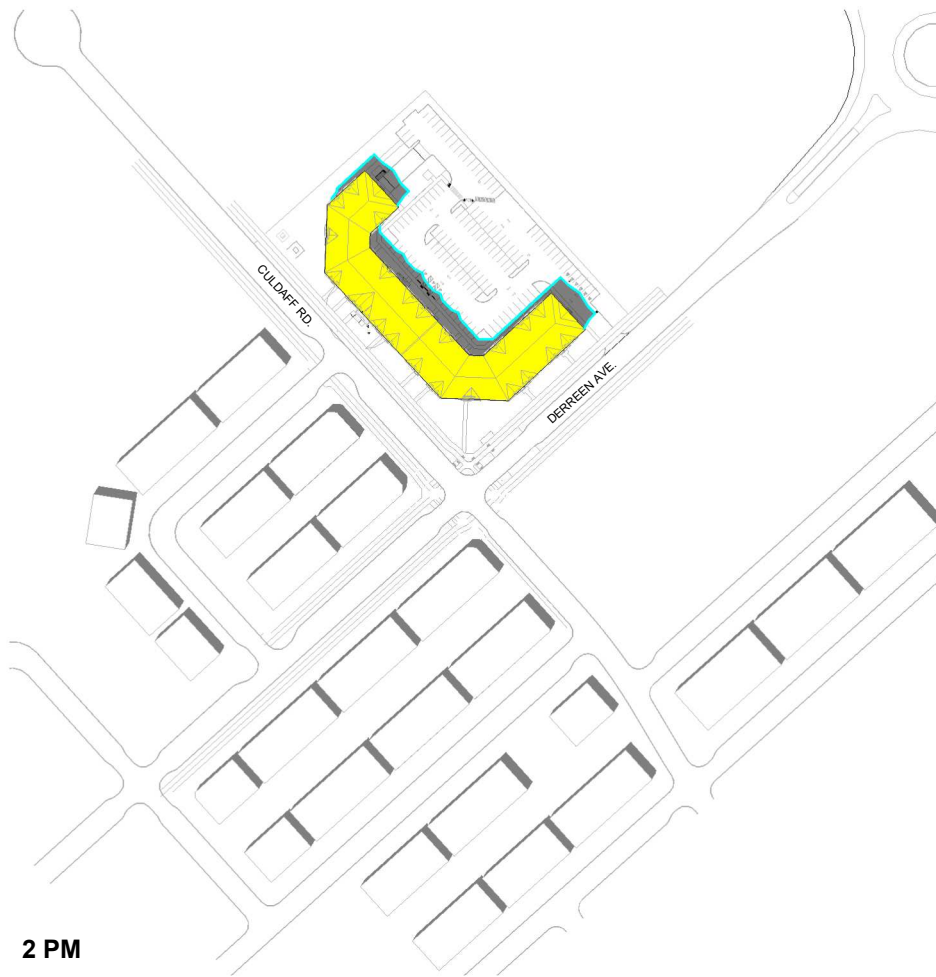
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = JUNE 21 - 12 PM / 1 PM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

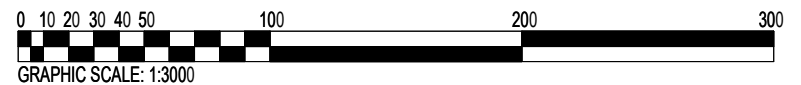
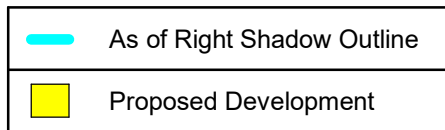
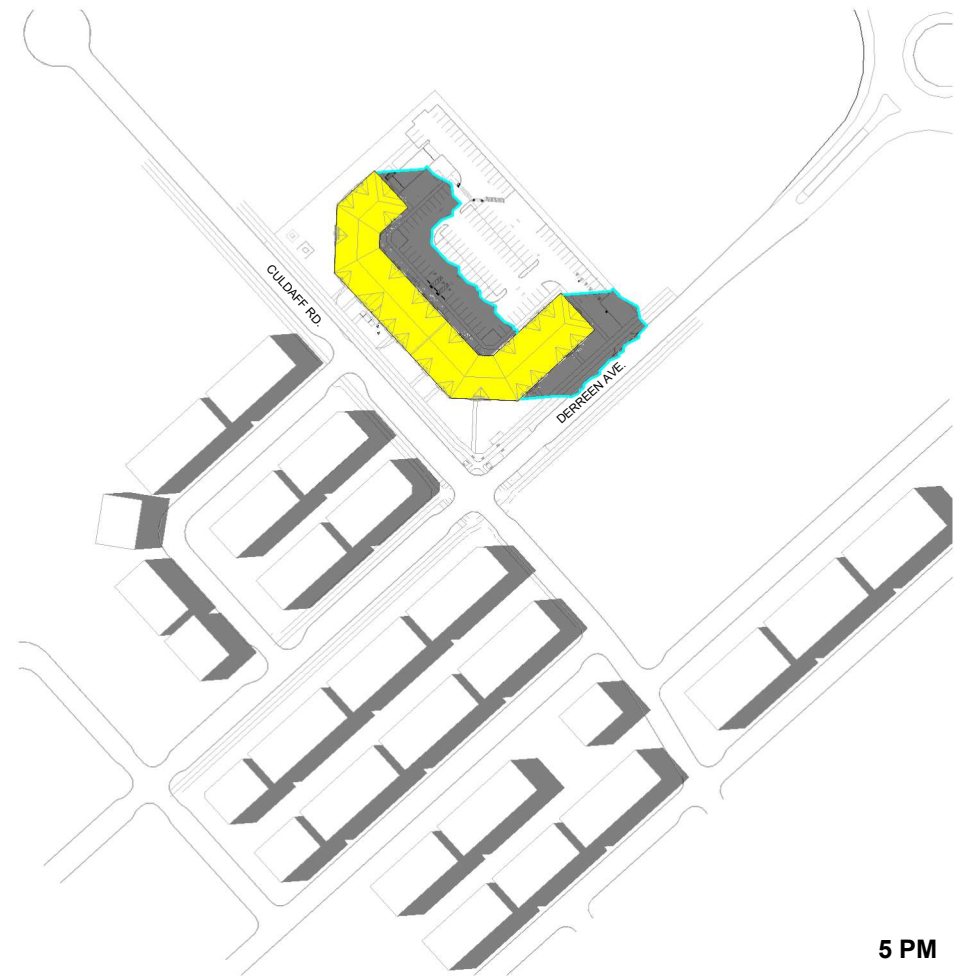
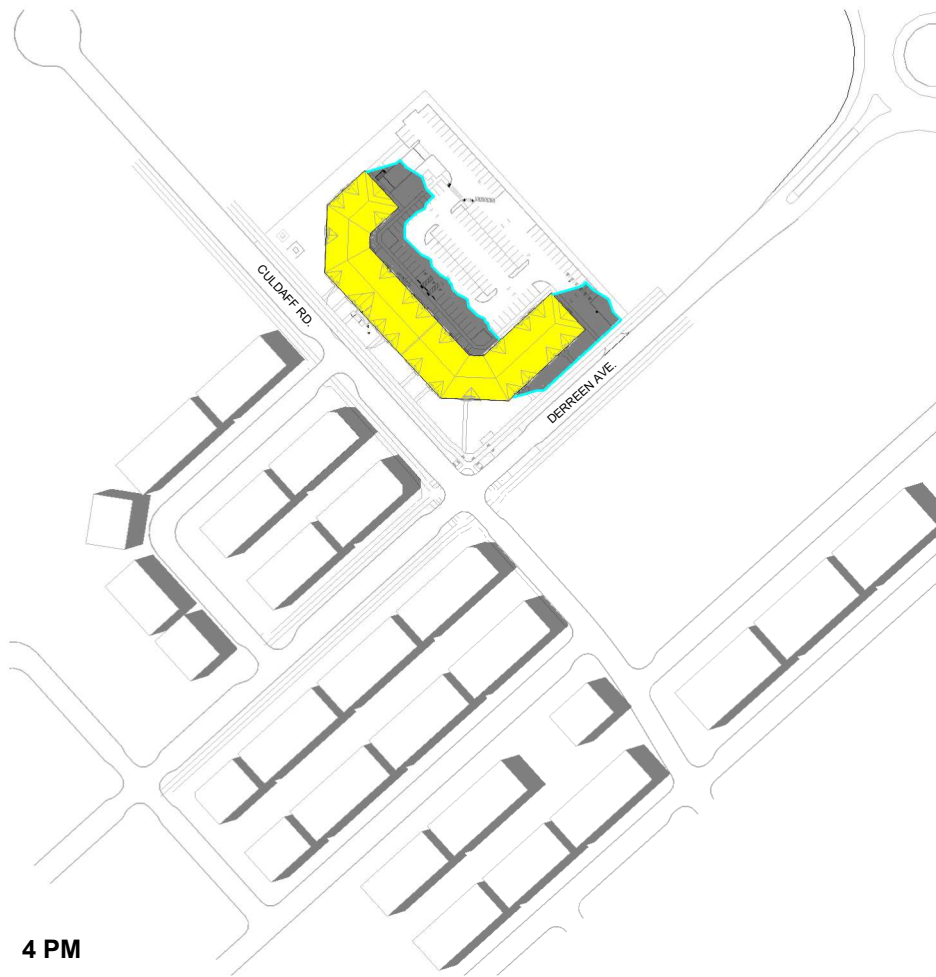
CG

425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = JUNE 21 - 2 PM / 3 PM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

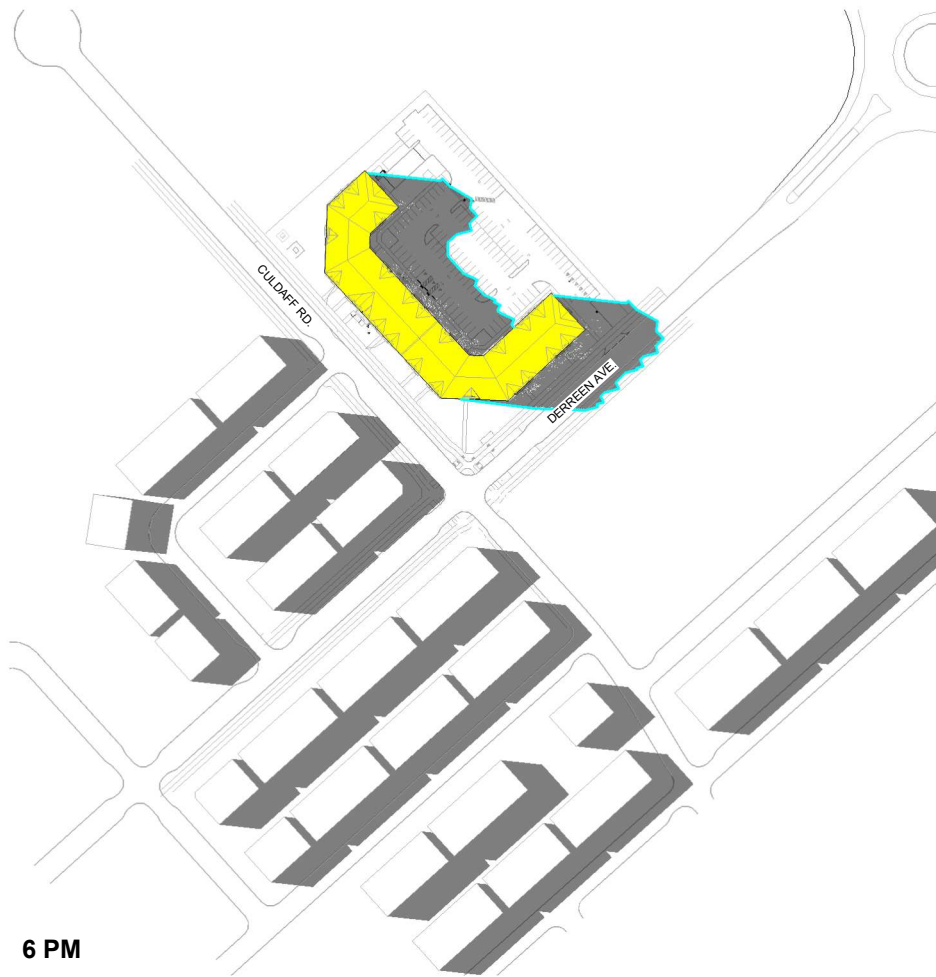
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

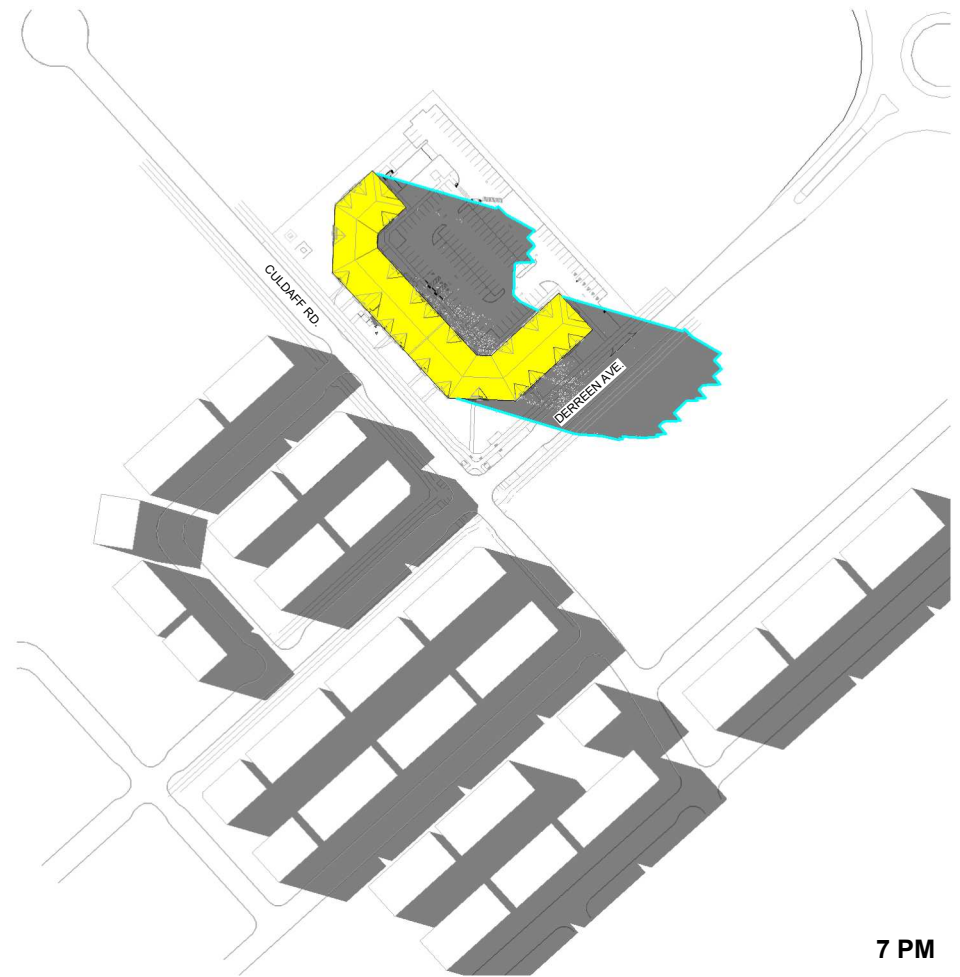
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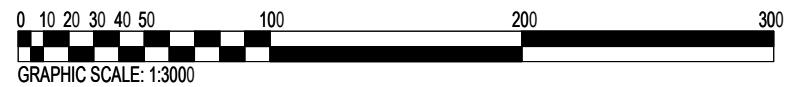
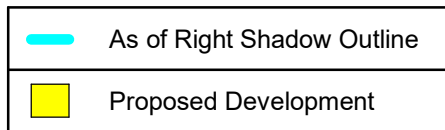
PROJECT NORTH



6 PM



7 PM



SCALE: 1:3000

JAN 31, 2025

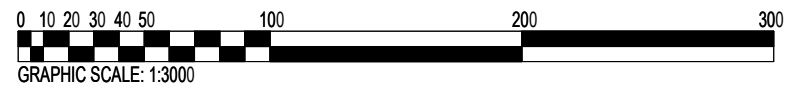
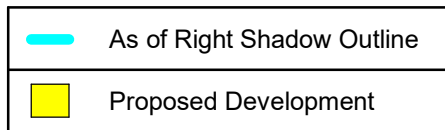
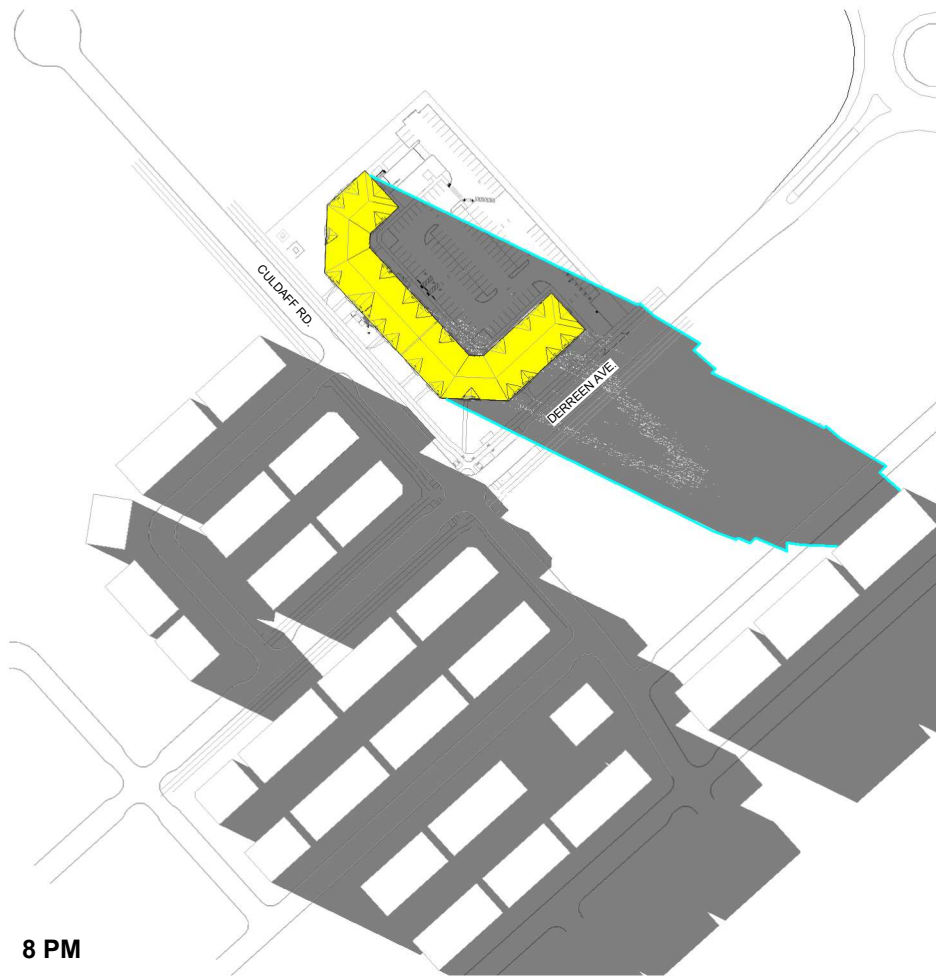
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = JUNE 21 - 6 PM / 7 PM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

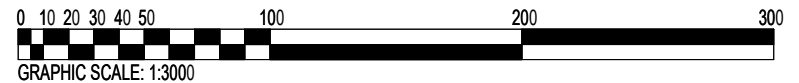
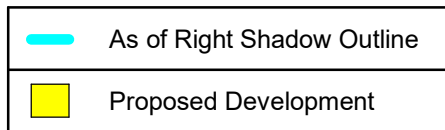
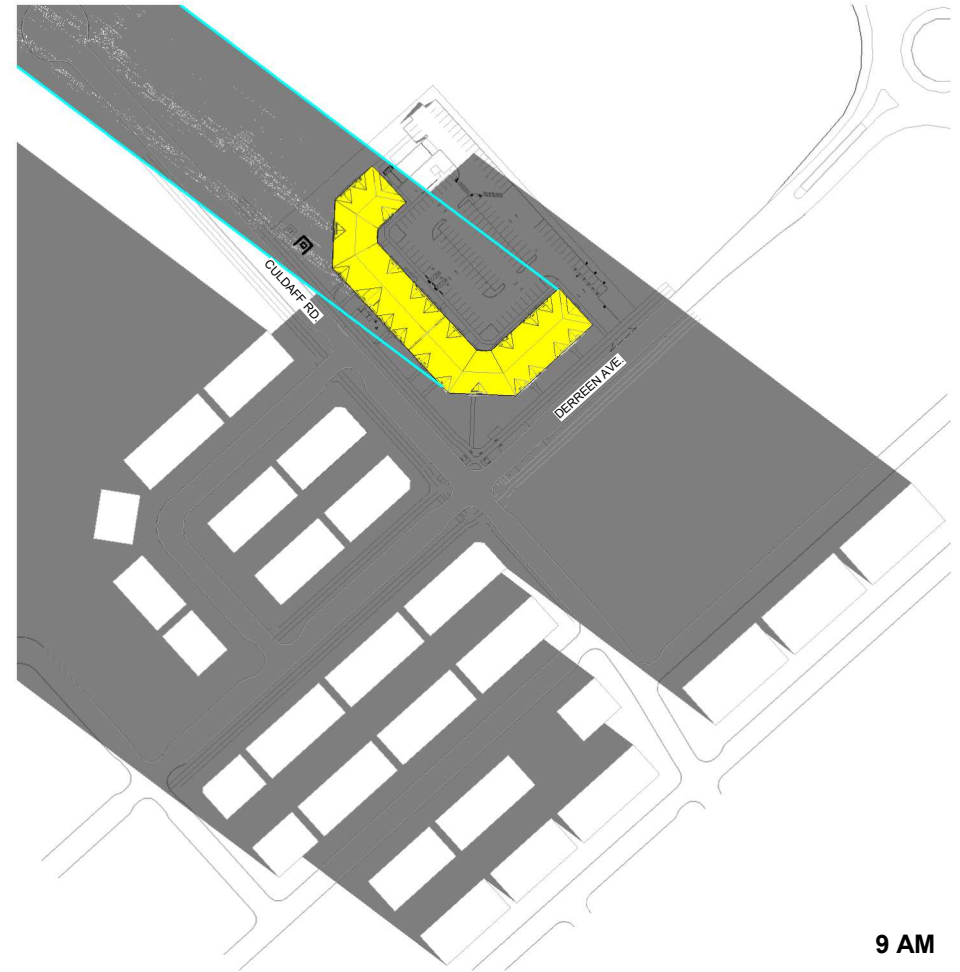
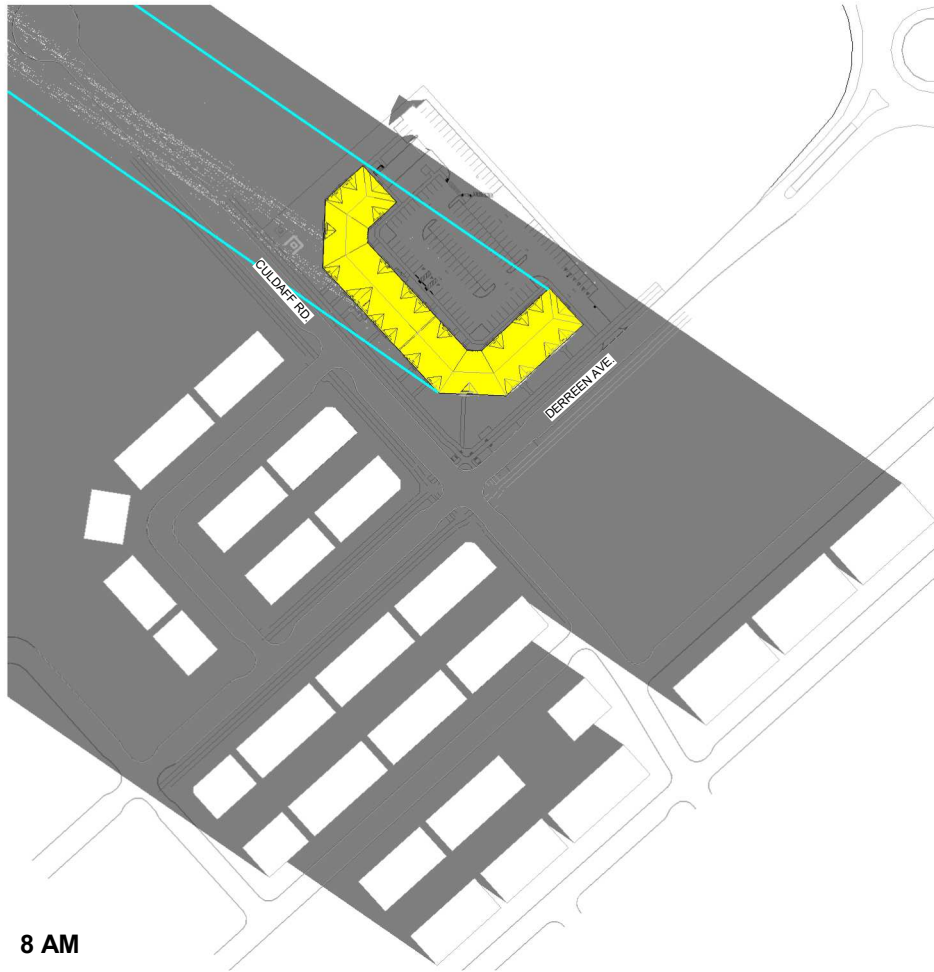
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = JUNE 21 - 8 PM EDT



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

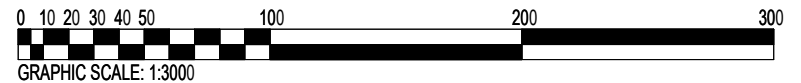
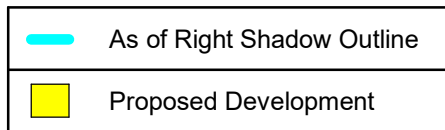
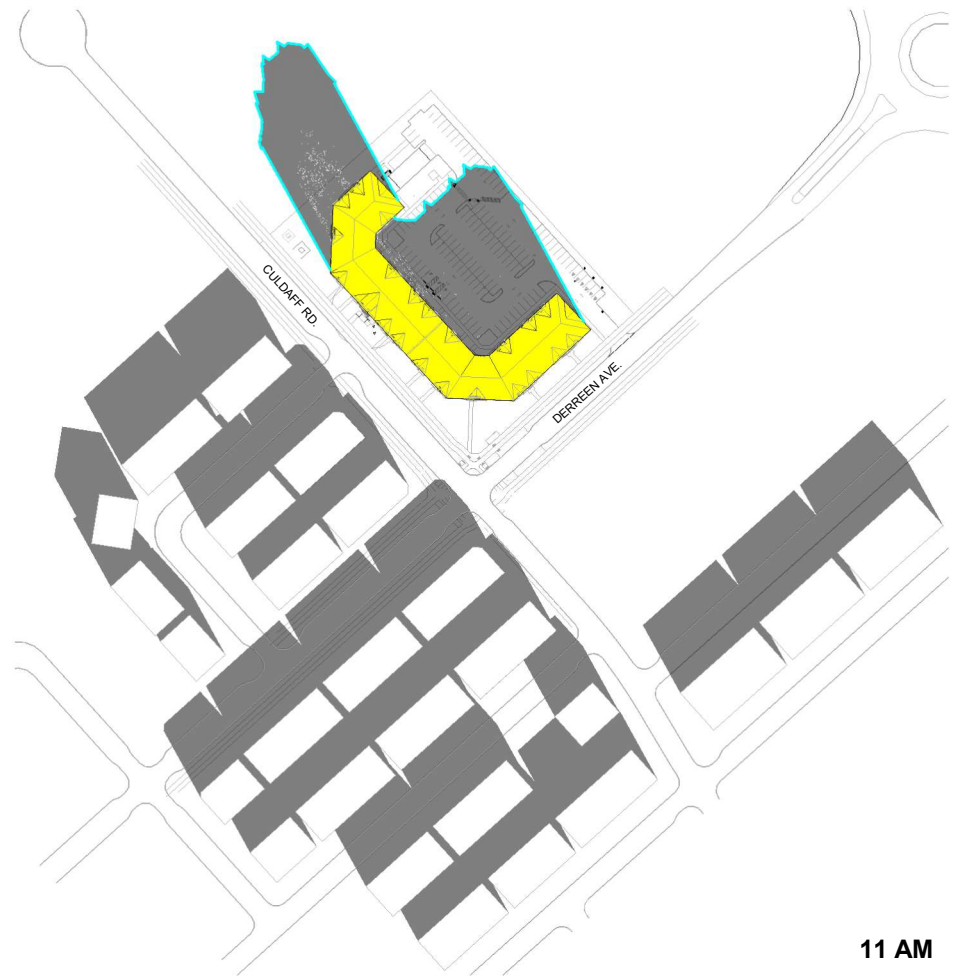
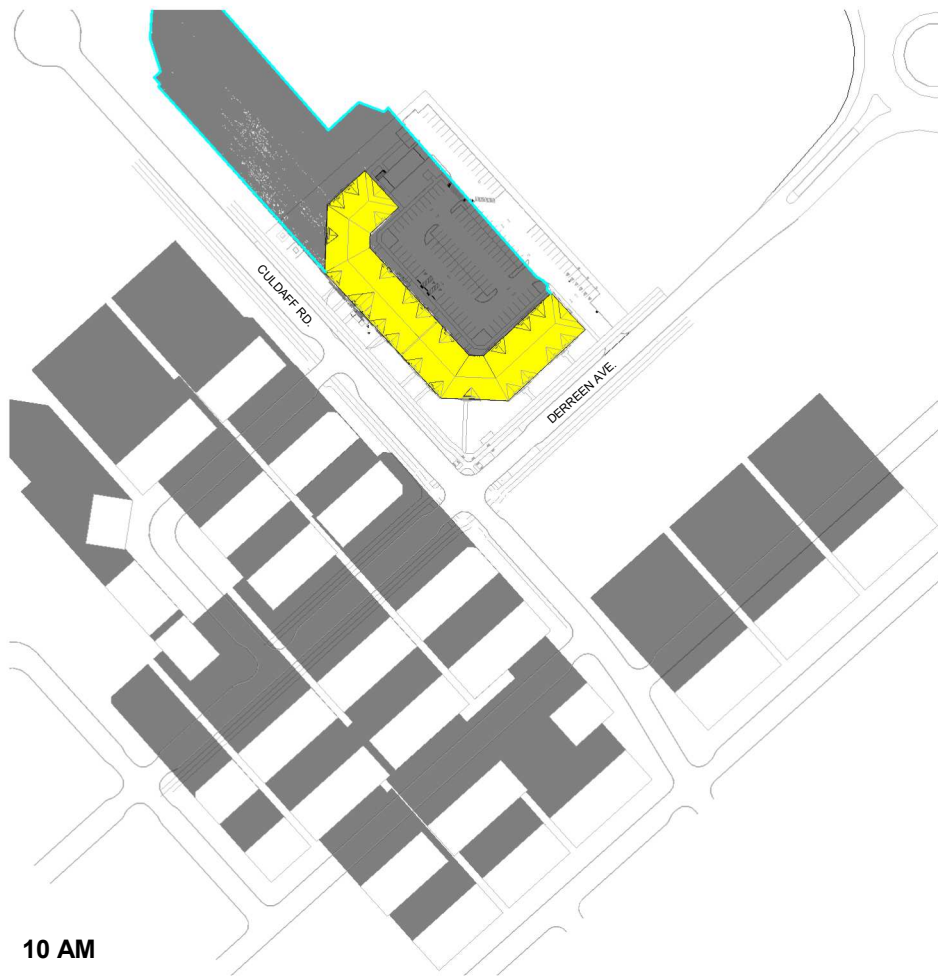
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = DEC 21 - 8 AM / 9 AM EST



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

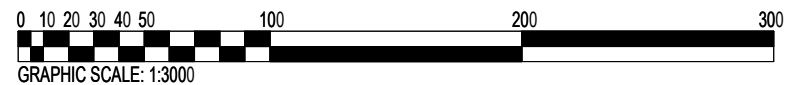
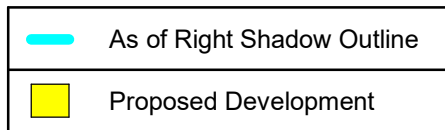
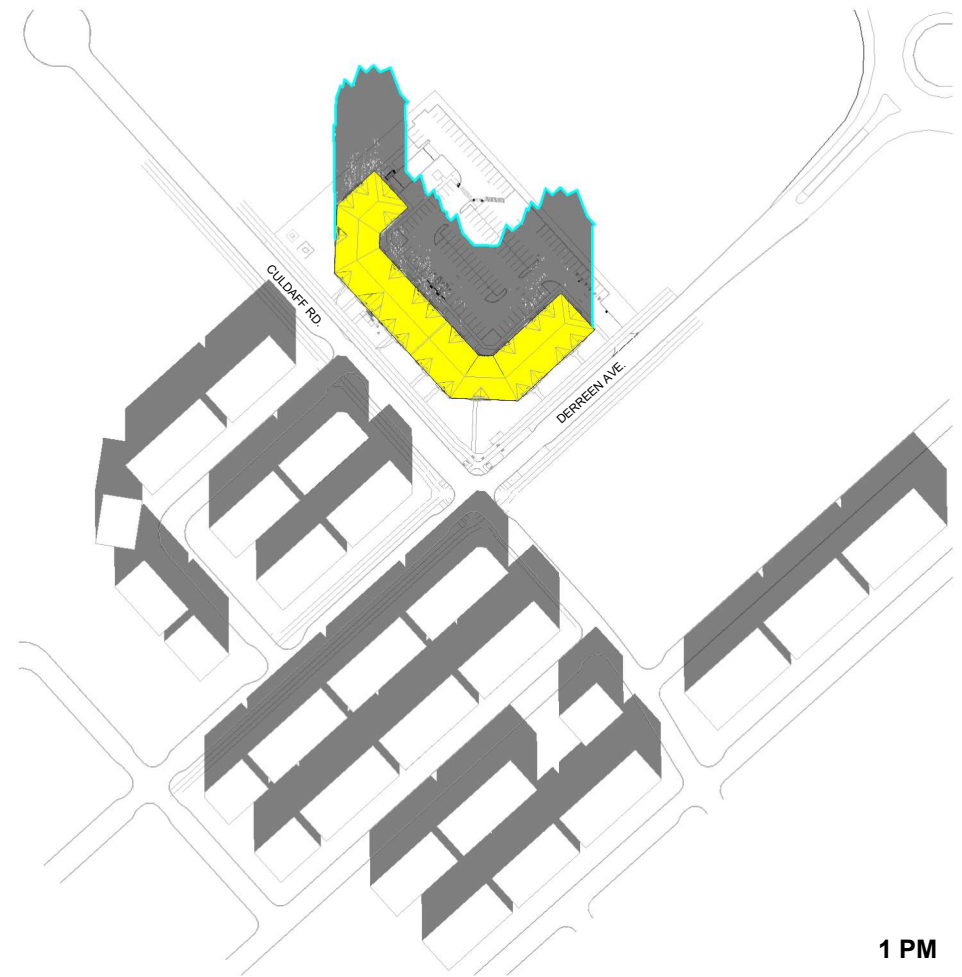
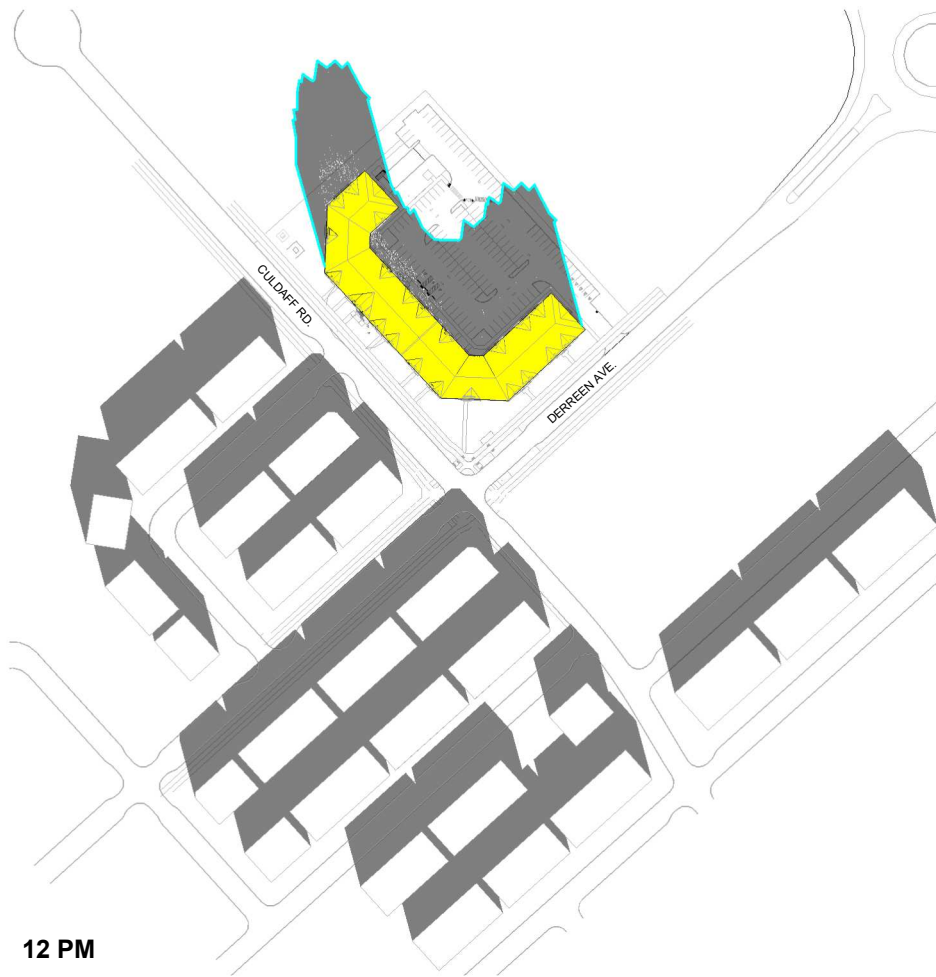
CG

425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = DEC 21 - 10 AM / 11 AM EST



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

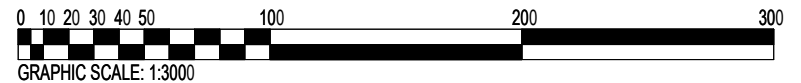
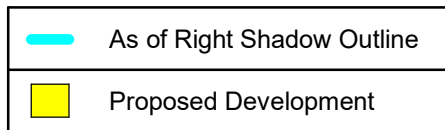
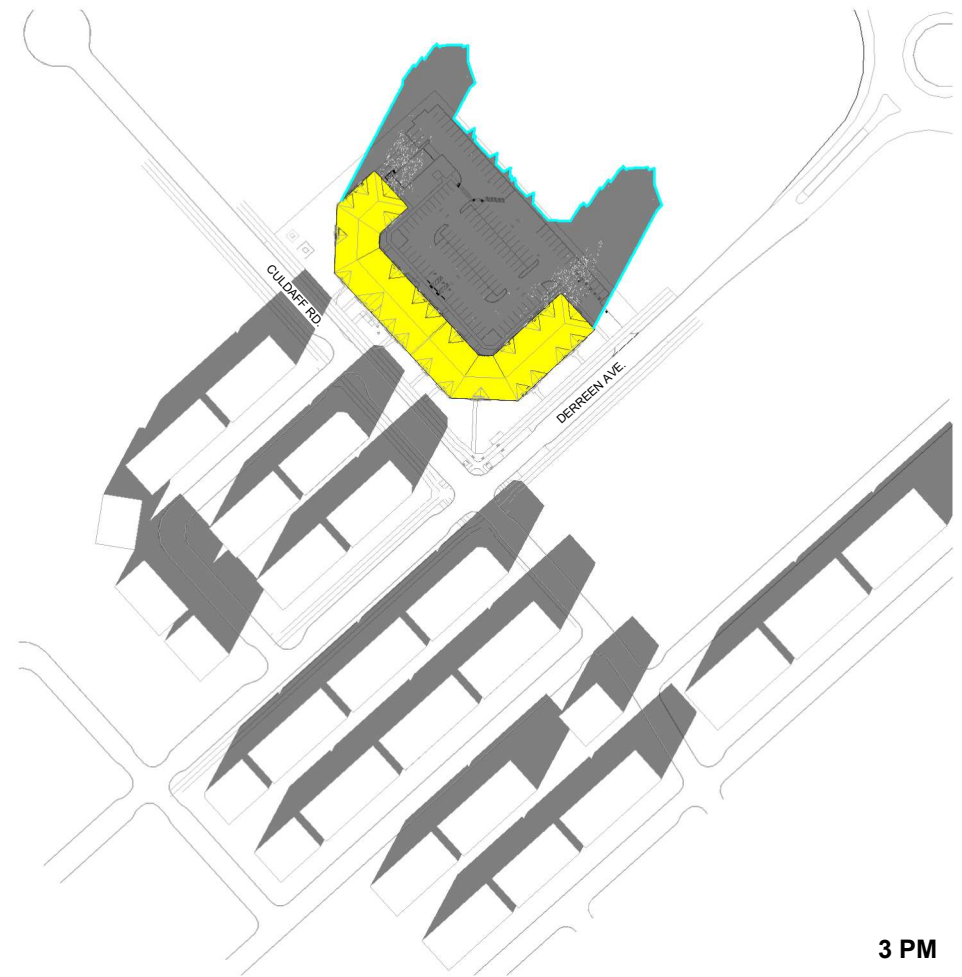
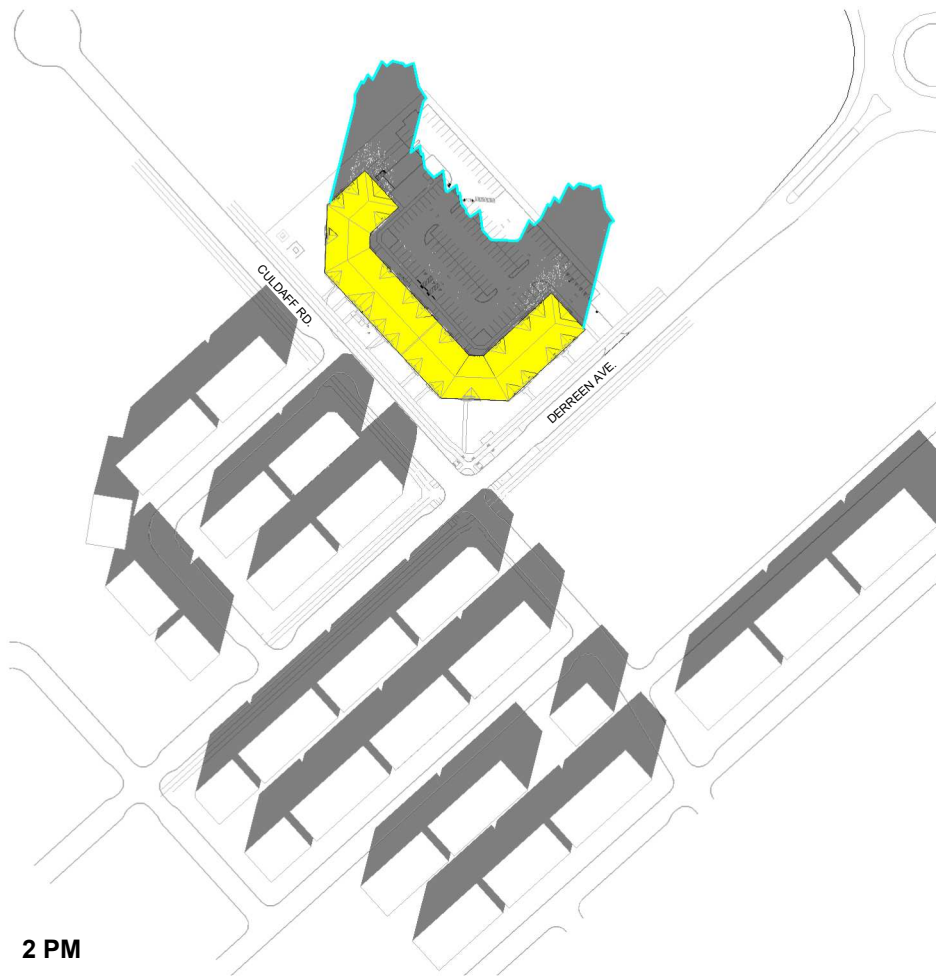
CG

425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = DEC 21 - 12 PM / 1 PM EST



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

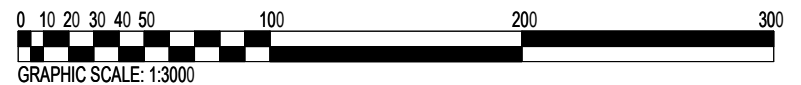
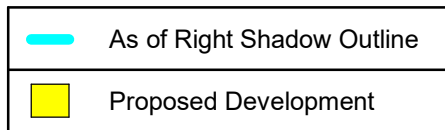
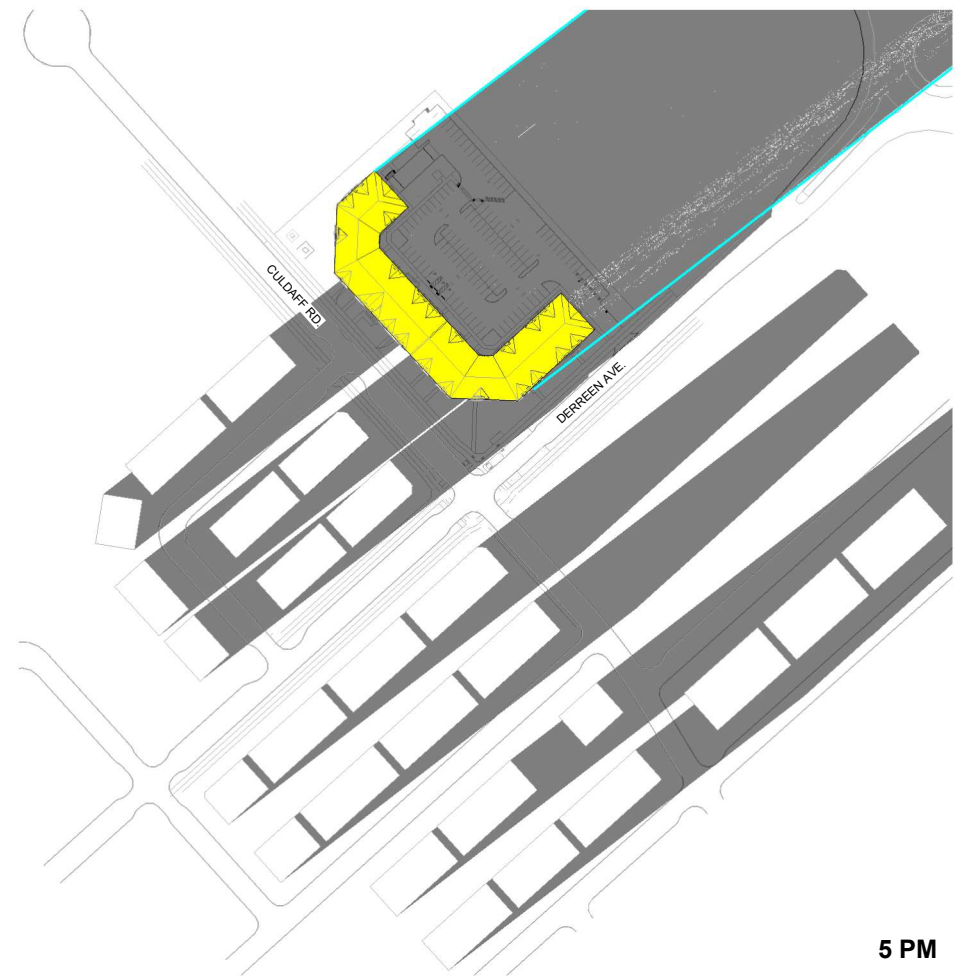
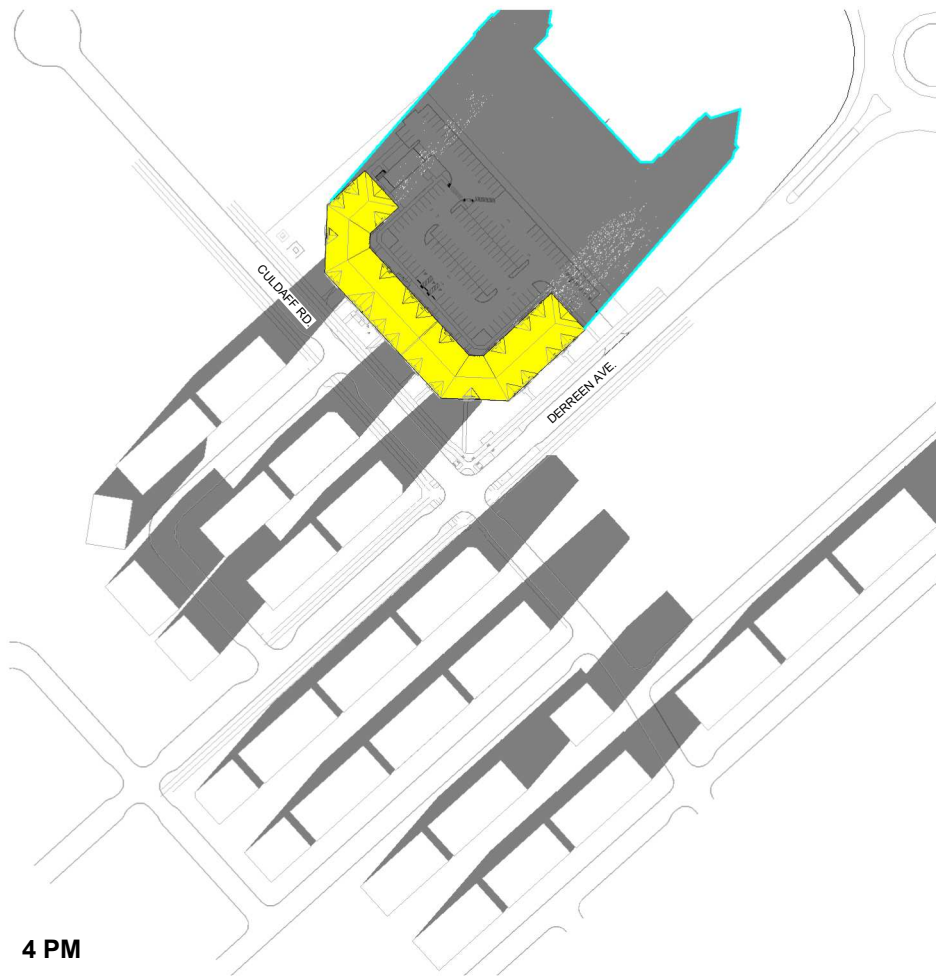
CG

425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = DEC 21 - 2 PM / 3 PM EST



PROJECT NORTH



SCALE: 1:3000

JAN 31, 2025

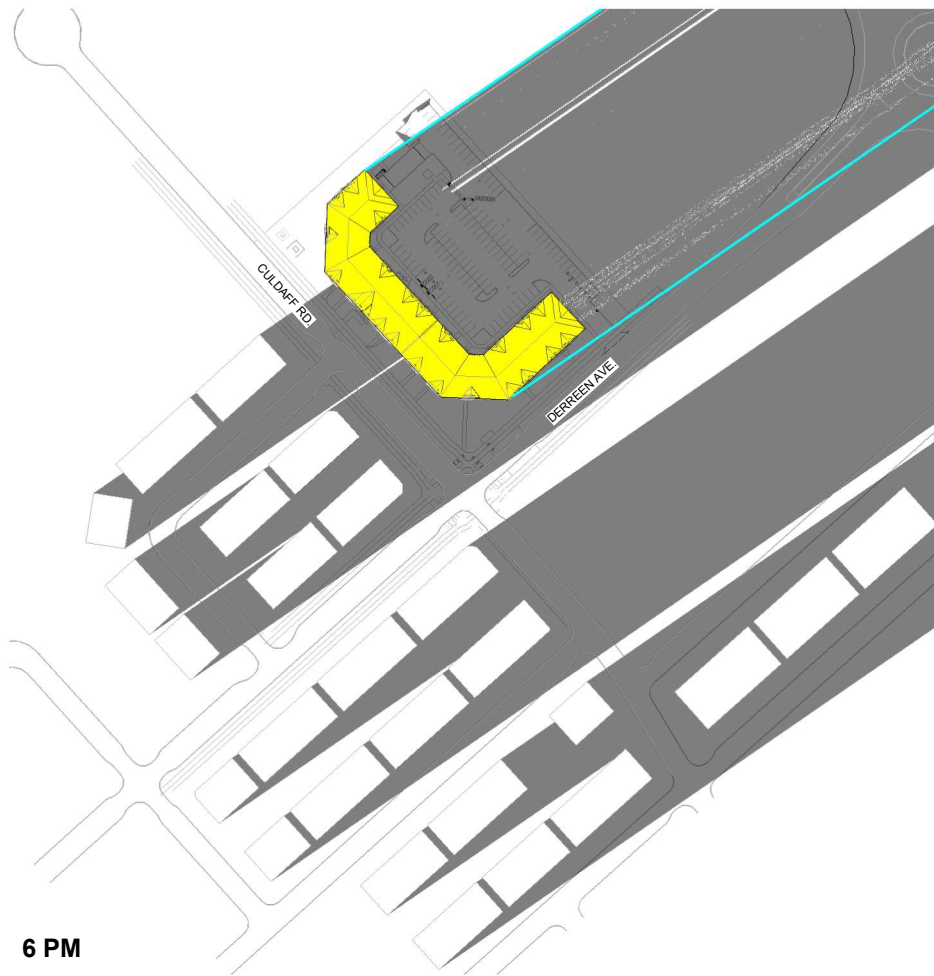
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425 CULDAFF RD - TOP VIEW SHADOW STUDY

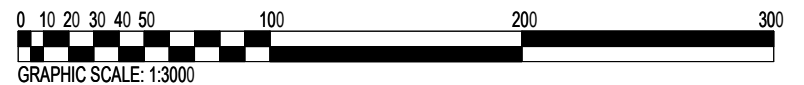
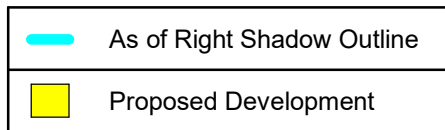
FIGURE_TEST TIME = DEC 21 - 4 PM / 5 PM EST



PROJECT NORTH



6 PM



SCALE: 1:3000

JAN 31, 2025

CG

425 CULDAFF RD - TOP VIEW SHADOW STUDY

FIGURE_TEST TIME = DEC 21 - 6 PM EST



PROJECT NORTH