DRAINAGE ANALYSIS

OPTIMUM RV

PLANNED UNIT DEVELOPMENT

MARION COUNTY, FLORIDA

Prepared for:

Optimum Dealership Group, LLC

Prepared by:

Kimley-Horn and Associates, Inc.

142992500
July 2024

1700 SE 17th Street, Suite 200
Ocala, Florida 34471
352 438 3000 TEL

Kimley»Horn

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THIS IS TO CERTIFY THAT THE ENCLOSED ENGINEERING CALCULATIONS WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

Jameson A. Frederick, P.E.
Florida Registration #81405
Registry #35106

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APPENDIX

INTRODUCTION

The proposed Optimum RV Planned Unit Development project (the "Project") is located in Marion County, Florida (Section 10, Township 16 South, Range 22 East) (See ***Map Figures*** in the ***Appendix***). The Project has a total area of ± 81.53 acres and will consist of future modifications and additions to the Optimum RV dealership with associated building, roadway, parking, utility, and stormwater conveyance improvements. The drainage system for this project will be designed to meet Southwest Florida Water Management District and Marion County design criteria. This preliminary summary and analysis are provided to support a rezoning application to Planned Unit Development. A full drainage analysis will be required at the time of development permitting.

DESIGN CRITERIA

The Project will be designed to be compliant with stormwater quantity and quality criteria set forth by the Marion County Land Development Code effective September 15, 2020, and the Southwest Florida Water Management District Environmental Resource Permit Applicant's Handbook, Volume II, effective June 1, 2018.

DESIGN METHODOLOGY

Existing Conditions

In existing conditions, the Project area consists of both undeveloped, rural land and an existing RV dealership with elevations that vary from 91 feet at the highest point to 44 feet at the lowest point. The Project area is separated into two areas by SE 73rd St. The northern portion of the Project area consists of one existing primary basin. The southern portion of the Project area consists of seven existing primary basins. Most of the basins within the total project area drain to existing low points or flow off-site. In the southern portion of the Project area, Basins E6956 and E6454 drain to existing, on-site low points. Basins E6821, E6446 and E6438, along the western property boundary and southwest corner, drain to existing, off-site low points. Basin E6820, which consists of most of the central and eastern area, flow to on-site drainage retention areas (DRA's) with some off-site flow to the US Hwy 441 right-of-way. In the northern portion of the Project area, Basin E6447 flows off-site to the US Hwy 441 right-of-way.

The existing basins can be seen in the **Existing Conditions Basin Map** in the **Appendix**.

Per FEMA FIRM Panel No. 12083C07D0D effective August 28, 2008, the project area lies in Zone X, an area determined to be outside the 0.2% annual chance floodplain as shown in **Figure 5** (see ***Map Figures*** in the **Appendix**). Per the USDA National Resources Conservation Service, the project area contains Kendrick Loamy Sand, 0 to 5 percent slopes and Arredondo San, 0 to 5 percent slopes (all Hydrologic Group A). The project's soil type information is shown in **Figure 4** (see ***Map Figures*** in the **Appendix**).

Proposed Conditions

In proposed conditions, the Project will include a stormwater management system designed to capture stormwater flow from the future building additions, building modifications, parking facilities, roadways, and landscaped areas. The Project area will have eight primary basins, Basin E6447.1, E6956, E6438, E6820, E6446, E6821 and E6454. The runoff generated from these basins will be conveyed to their existing or proposed DRA's. These DRA's will either hold the total stormwater runoff volume generated from the 100-year, 24-hour storm event or hold the post-development stormwater runoff volume with off-site discharge. The post-development off-site discharge rate and volume will be less than both the pre-development off-site discharge rate and volume.

The proposed basins can be seen in the **Proposed Conditions Basin Map** in the **Appendix**.

Optimum RV Service Center

Basin E6447.1

Basin E6447.1 (26.53 acres) consists of the entire northern portion of the Project area. Runoff generated from this basin will drain to proposed DRA's. On-site runoff will be captured from the buildings, parking area, and open space via inlets and a storm pipe system.

Optimum RV Sales Center

Basin E6820

Basin E6820 (69.93 acres) consists of most of the southern portion of the project area. Runoff generated from this basin will drain to existing and proposed DRA's. On-site runoff will be captured from the buildings, parking area, and open space via inlets and a storm pipe system.

Basin E6956

Basin E6956 (8.17 acres) consists of some of the southern portion of the project area. Runoff generated from this basin will drain to an existing low area on-site. No runoff will be from any proposed impervious area.

Basin E6438

Basin E6438 (20.76 acres) consists of some of the southern portion of the project area. Runoff generated from this basin will drain off-site. No runoff will be from any proposed impervious area.

Basin E6446

Basin E6446 (3.72 acres) consists of some of the southern portion of the project area. Runoff generated

from this basin will drain off-site. No runoff will be from any proposed impervious area.

Basin E6821

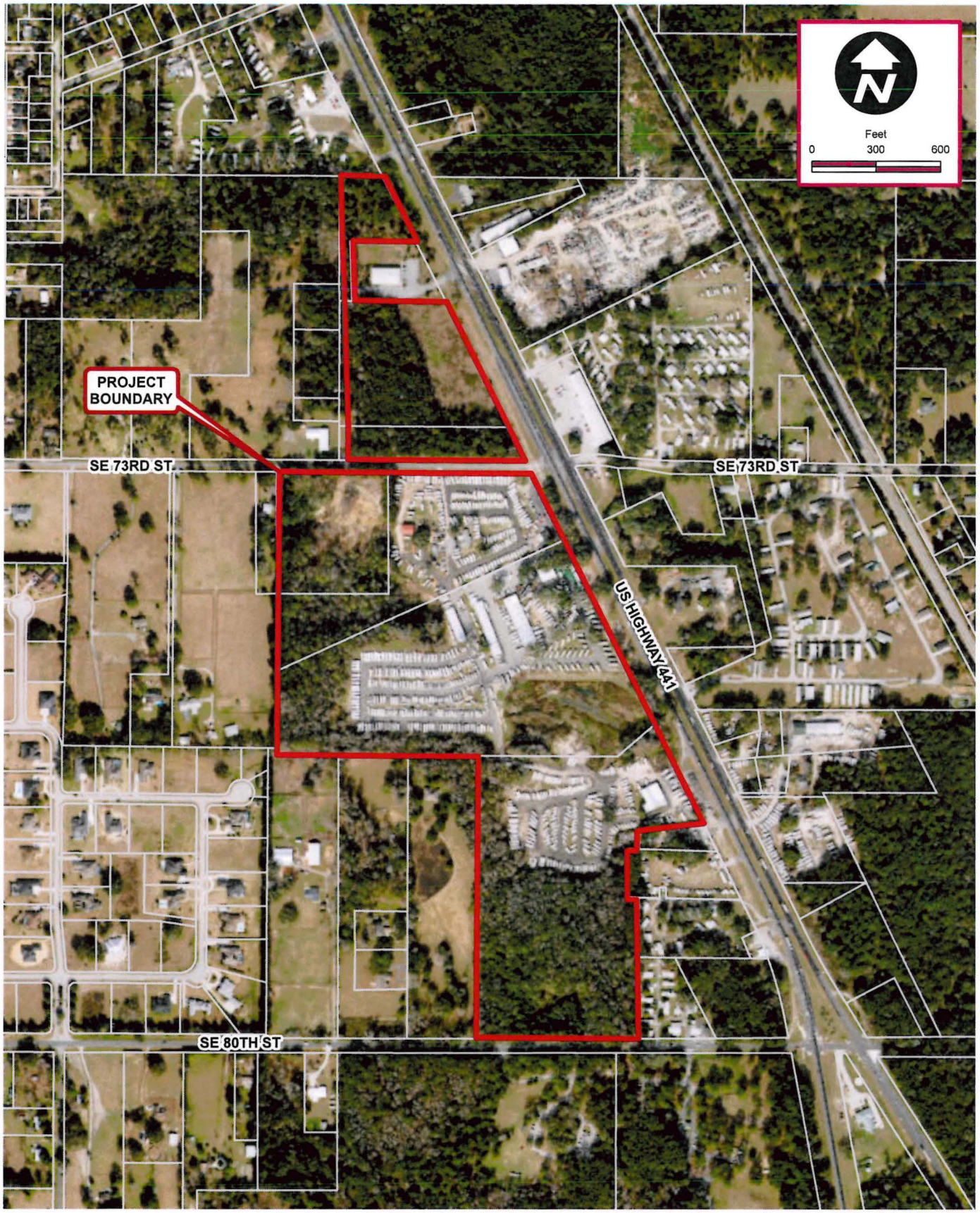
Basin E6821 (10.91 acres) consists of some of the southern portion of the project area. Runoff generated from this basin will drain off-site. No runoff will be from any proposed impervious area.

Basin E6454

Basin E6454 (7.18 acres) consists of some of the southern portion of the project area. Runoff generated from this basin will drain to an on-site low area. No runoff will be from any proposed impervious area.

APPENDICES

MAP FIGURES



AERIAL MAP

OPTIMUM RV PUD
MARION COUNTY, FLORIDA

Scale: As Noted	Project No.: 142992500	July 2024	Figure 1

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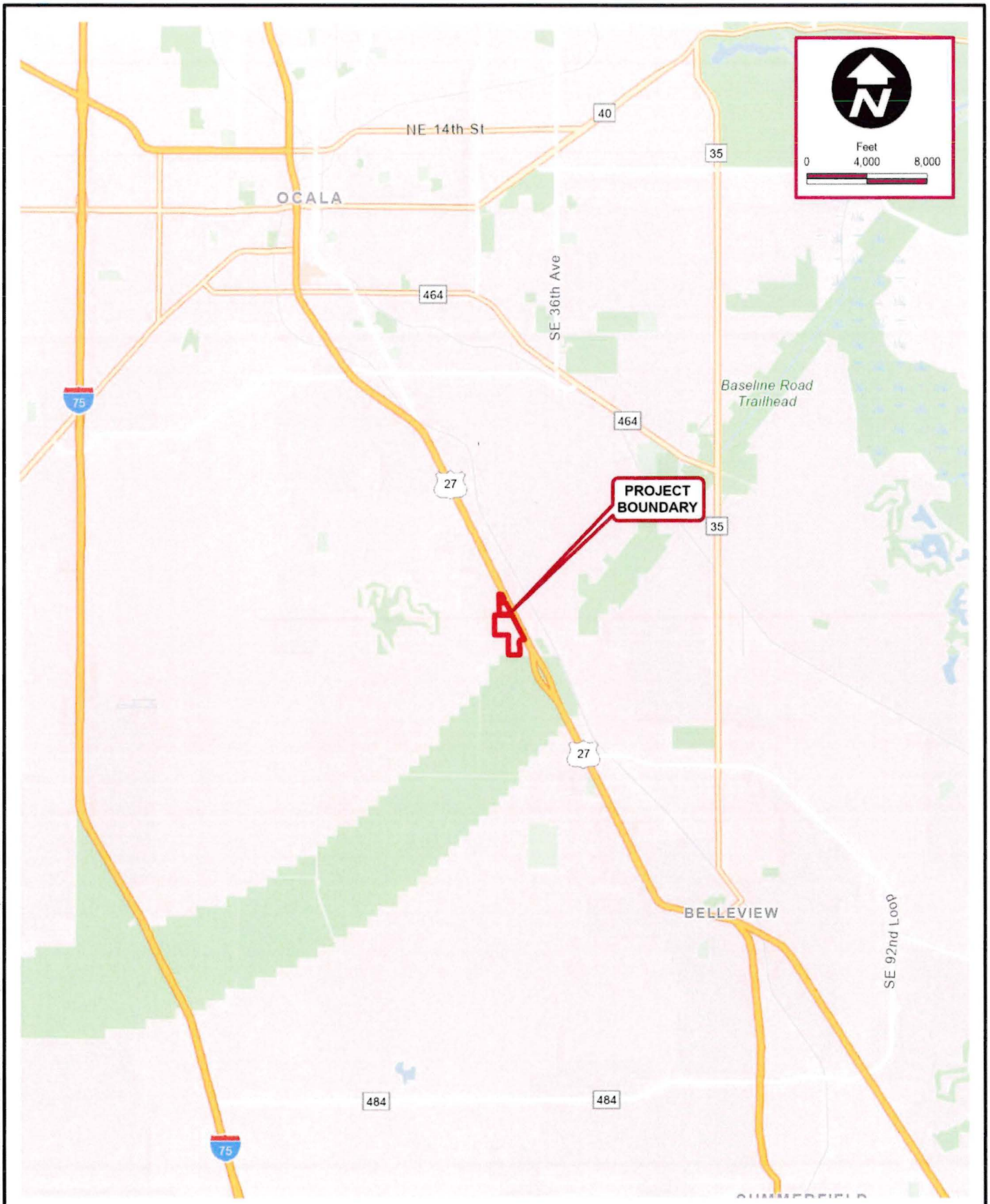

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LOCATION MAP

OPTIMUM RV PUD
MARION COUNTY, FLORIDA

Scale: As Noted	Project No.: 142992500	July 2024	Figure 2

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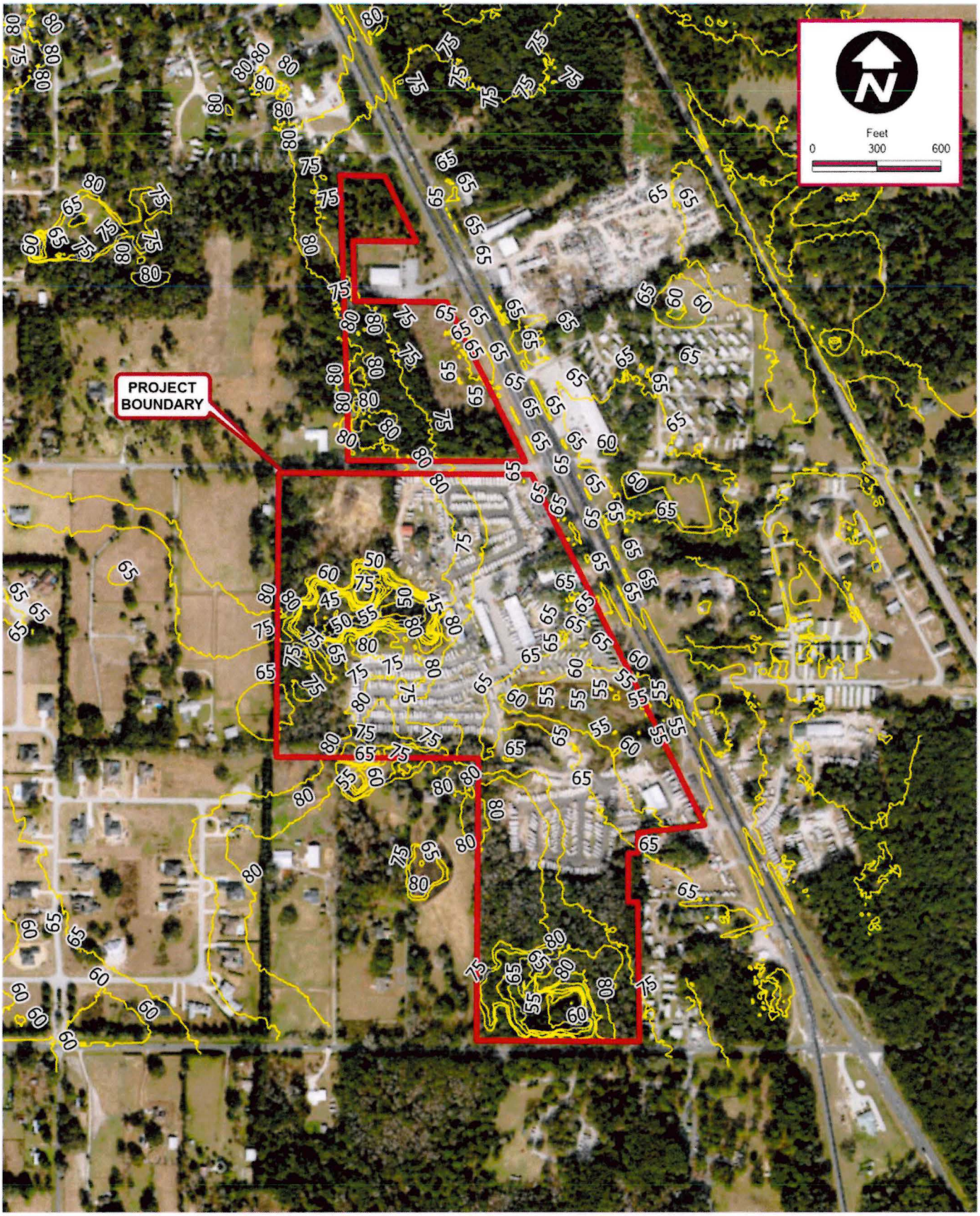

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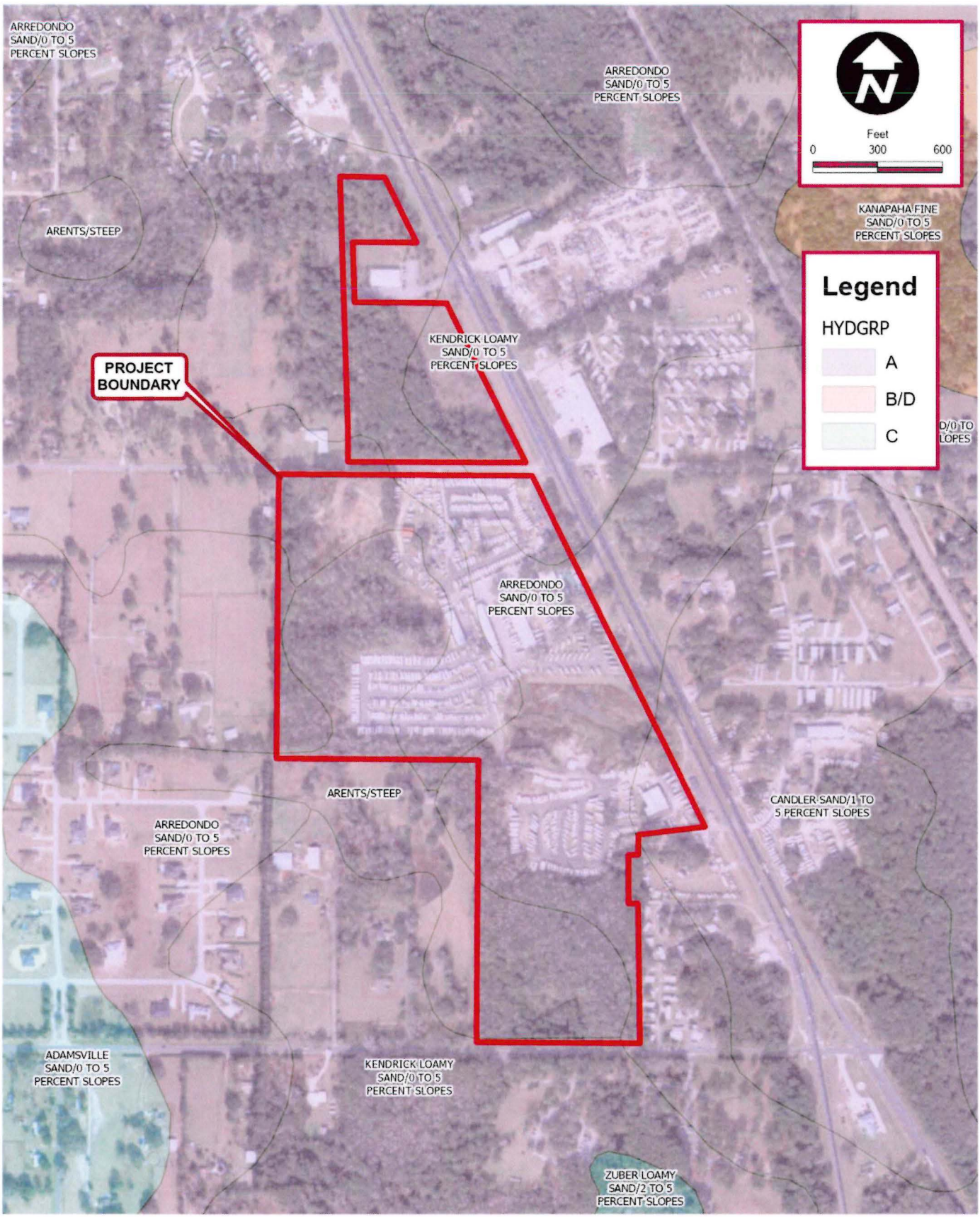
TOPOGRAPHIC MAP

OPTIMUM RV PUD
MARION COUNTY, FLORIDA

Scale: As Noted	Project No.: 142992500	July 2024	Figure 3



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SOILS MAP

OPTIMUM RV PUD
MARION COUNTY, FLORIDA

Scale: As Noted	Project No.: 142992500	July 2024	Figure 4

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FEMA MAP

OPTIMUM RV PUD
MARION COUNTY, FLORIDA

Scale: As Noted	Project No.: 142992500	July 2024	Figure 5

PRIMARY BASIN ANALYSIS

EXISTING CONDITIONS BASIN MAP

SHEET NUMBER EX-01

OPTIMUM RV
PREPARED FOR
OPTIMUM DEALERSHIP GROUP, LLC
MARION COUNTY FLORIDA

EXISTING CONDITIONS BASIN MAP

KHA PROJECT 142992500
DATE JULY 2024
SCALE AS SHOWN
DESIGNED BY KHA
DRAWN BY KHA
CHECKED BY JAF

LICENSED PROFESSIONAL
JAMESON A. FREDERICK, P.E.
FLORIDA LICENSE NUMBER 81405
DATE

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NO.	REVISIONS	DATE	BY

LEGEND
PROJECT BOUNDARY
EXISTING DRAINAGE BASIN
EXISTING CONTOURS

NORTH

GRAPHIC SCALE IN FEET
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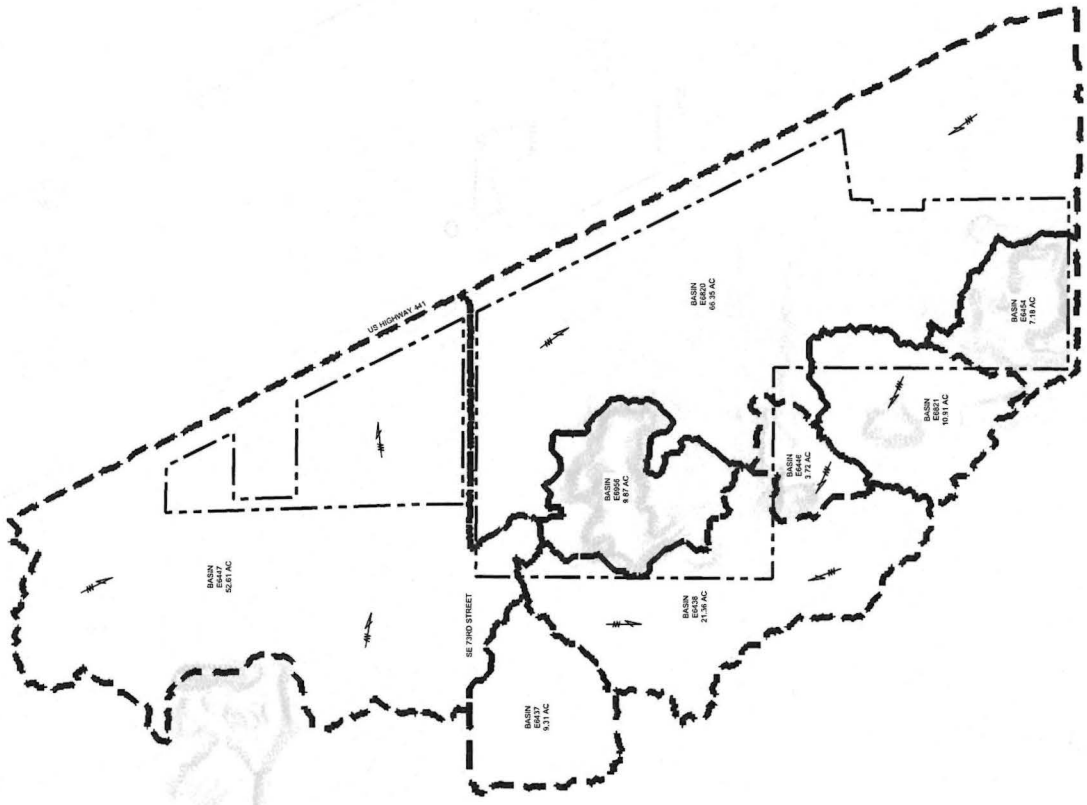

PROPOSED CONDITIONS BASIN MAP

SHEET NUMBER	EX-02
OPTIMUM RV PREPARED FOR OPTIMUM DEALERSHIP GROUP, LLC	MARION COUNTY FLORIDA
PROPOSED CONDITIONS BASIN MAP	
KHA PROJECT 142992500 DATE JULY 2024 SCALE AS SHOWN DESIGNED BY KHA DRAWN BY KHA CHECKED BY JAF	
JAMESON A. FREDERICK, P.E. FLORIDA LICENSE NUMBER 81405 DATE: ———	LICENSED PROFESSIONAL
Kimley»Horn © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 1700 SE 17TH STREET, SUITE 200, OCALA, FLORIDA, 34471 PHONE: 352-438-3000 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106	

NO.	REVISIONS	DATE	BY

LEGEND
- PROJECT BOUNDARY
- PROPOSED DRAINAGE BASIN
- EXISTING CONTOURS

NORTH

GRAPHIC SCALE IN FEET
0 125 250 500