

This instrument Prepared by:

*Angela B. Rauber*

*101 E. Kennedy Boulevard*

*Tampa, Florida 33602*

and Return To:

City of Ocala

Growth Management Department

201 SE 3<sup>rd</sup> Street, 2<sup>nd</sup> Floor

Ocala, Florida 34471

Attn: Karen Cupp, Development Coordinator

## **DEVELOPER'S AGREEMENT**

### **(Winding Oaks Residential Phase 2)**

**THIS DEVELOPER'S AGREEMENT** is made and entered into on the dates set forth below by and between the **CITY OF OCALA**, a Florida municipal corporation ("City") and **KL WINDING OAKS LLC.**, a Florida limited liability company (hereinafter "Developer"). City and Developer are collectively referred to herein as the "Parties."

#### **WITNESSETH:**

**WHEREAS**, Developer is the owner of the real property described on attached Exhibit A (the "Property"), which is located within the jurisdictional boundaries of the City; and

**WHEREAS**, Developer has previously filed an application for the approval of "**Winding Oaks Residential Phase 2** Subdivision (the "Subdivision"), which is located on SW 49<sup>th</sup> Avenue Road; and

**WHEREAS**, Developer has previously submitted to the City a conceptual plan and construction plans for the Subdivision, which depict the construction of the Improvements (as defined below) relating to the Subdivision. Copies of the construction plans shall be kept on record at the Growth Management Department of the City and are, by reference, made a part of this Agreement; and

**WHEREAS**, City's Planning and Zoning Commission has recommended approval of the conceptual plans for the Subdivision subject to the Parties entering into a Developer's Agreement in accordance with the applicable provisions of the City's Code of Ordinances; and

**WHEREAS**, the Parties wish to enter into this Developer's Agreement to set out the specific terms and conditions for approval of the Subdivision; and

**WHEREAS**, the Property described on Exhibit "A" constitutes all of the real property for the Subdivision; and

**NOW, THEREFORE**, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the

Parties do hereby agree as follows, which terms shall be binding upon the parties and their respective successors and assigns, as may be applicable:

1. **INCORPORATION OF RECITALS.** The Parties agree and confirm that the above recitals are true and correct and incorporate their terms and provisions herein for all purposes.
2. **DEFINITIONS.** The following definitions shall have the following meanings for the purpose of this Agreement:
  - 2.1 **“Agreement”** – shall refer to this Developer’s Agreement, as the same may be subsequently amended, modified, or supplemented pursuant to its terms and provisions.
  - 2.2 **“City”** – shall refer to the City of Ocala, a municipal corporation existing under the laws of the State of Florida.
  - 2.3 **“Code”** – shall refer to the City’s Code of Ordinances, as the same may be subsequently amended, modified, or supplemented.
  - 2.4 **“Common Elements”** – shall refer to those portions of the Subdivision that will be either owned by or maintained by a Community Development District or Homeowner’s Association as set forth in Section 7.
  - 2.5 **“Developer”** – shall refer to **KL WINDING OAKS LLC**, a Florida limited liability company.
  - 2.6 **“Development Regulations”** – shall refer to the Land Development Regulations of City. This definition will include any promulgated construction or design specifications of City.
  - 2.7 **“District”** – shall refer to the Southwest Florida Water Management District, a public entity created under the laws of the State of Florida.
  - 2.8 **“Equivalent Single-Family Residential Unit (ERU)”** – shall refer to each building designed for and occupied by one family (a single-family residence) served by the city through a single sewer service connection, or a five-eighths inch water meter, which shall constitute one equivalent single-family residential unit (i.e., one ERU). By definition, one ERU shall have the following characteristics: (1) Average sewage flow of 250 gallons per day. (2) Nineteen or less fixture units. (3) Average water consumption of 300 gallons per day.
  - 2.9 **“Homeowners’ Association”** – shall refer to the Florida not-for-profit Corporation which will be incorporated for the benefit of the owners of Lots in the Subdivision,

and which will become owner of the Private Improvements for the purposes of ownership and maintenance of the Private Improvements

- 2.10   **“Improvements”** – shall refer to those roadways, stormwater conveyance system improvements, stormwater retention areas, sanitary sewer mains, sanitary sewer lines, water mains, water lines, water meters, fire hydrants, traffic control devices, street lights, , sidewalks and grading and appurtenances which are depicted upon the Plans for the Subdivision which have been filed by the Developer with the City.
- 2.11   **“Lot”** – shall refer to an individual lot shown on the Plat of the Subdivision.
- 2.12   **“Plans”** – shall refer to the conceptual plan and construction plans for the Subdivision, which depict the construction of the Improvements. Copies of the Plans shall be kept on record at the offices of the Growth Management Department, and by reference are made a part of this Agreement.
- 2.13   **“Plat”** – shall refer to the Plat of the Subdivision, after it has been recorded in the Public Records of Marion County, Florida.
- 2.14   **“Property”** – shall refer to the real property located in Marion County, Florida described on attached Exhibit “A”.
- 2.15   **“Private Improvements”**- shall refer to the drainage retention areas and conveyance system outside of the dedicated public right of way and all common areas for landscaping and pedestrian access and appurtenances related thereto lying within the Subdivision.
- 2.16   **“Public Improvements”** – shall refer to the water system Improvements, sanitary sewer system Improvements, roadways, and stormwater Improvements within the dedicated right of way. Water system improvements will be Public Improvements with respect to the water mains, water lines, water meters, and fire hydrants. Water system improvements will be Public Improvements only to the point of metering. Sanitary sewer system Improvements will be Public Improvements with respect to the sanitary sewer mains and manholes, lift stations, and sanitary sewer lines and services within the dedicated right of way.
- 2.17   **“Subdivision”** – shall refer to the proposed residential Phase 2 Subdivision located within the Winding Oaks Planned Development.
- 2.18   **“Tract”** – shall refer to any individual parcel of property designated as a “*Tract*” on the Plat of the Subdivision.

- 3.    **APPROVAL**. The City hereby approves the Plans for the Subdivision.

4. **COVENANTS OF DEVELOPER.** In addition to the other covenants and agreements of Developer set forth specifically elsewhere in this Agreement, Developer covenants and agrees:

- 4.1 To construct at its own expense all Improvements for the Subdivision according to the Plans and according to the City's Development Regulations, within a period of two (2) years from the date of this Agreement, unless otherwise provided for herein, provided that additional time may be mutually agreed upon in the event of delays caused or due to Acts of God, strikes, or other circumstances not controlled by Developer.
- 4.2 To amend or modify the Plans as required to comply with future City standards and specifications for those Improvements which are not constructed within two (2) years of the date of this Agreement, should those standards and specifications change prior to the construction of such Improvements.
- 4.3 To provide to the City a current title opinion acceptable to the City which attests to Developer's ownership of the Property and its right to enter into this Agreement. Developer further agrees not to enter into any Agreement that would affect the validity of such title opinion until such time as this Agreement has been executed and recorded in the Public Records of Marion County, Florida.
- 4.4 To retain a professional engineer registered in the State of Florida to (i) provide the required certification of completion in "*As-Built*" drawings; and (ii) act on behalf of and represent the Developer in technical matters in all dealings with the City; and (iii) to complete the transfer of the Water, Sanitary Sewer Improvements, and Right-of-Way Improvements to the City for ownership and maintenance prior to District's and City's acceptance of the system.; and (iv) to complete the transfer of the Stormwater ponds and Stormwater Infrastructure not within the Rights-of-Way to the HOA for ownership and maintenance prior to District's and City's acceptance of the system
- 4.5 To provide a full set of reproducible "*As-Built*" plans for the Improvements, certified to City by Developer's engineer in detail to the extent required by the City Engineer, together with actual itemized construction and engineering cost summaries for the Improvements, such itemization to be certified by the Developer's engineer and submitted on a form approved by the City Engineer.
- 4.6 To obtain and abide by all terms of any and all permits which may be required by the State of Florida, Marion County, District or City with respect to the Subdivision and the construction of the Improvements, all at no cost to City.
- 4.7 To provide City with complete, legally effective, releases or waivers of lien, in form and amount acceptable to City, of any liens, rights, or claims arising out of this Agreement, and the labor and service performed and materials and equipment furnished thereunder.

- 4.8 To pay City, at the time of the recording of the Plat of the Subdivision, a solid waste system fee in the amount of \$20,405.00, representing a fee of \$265.00 per residential unit for impact upon the City's solid waste system, calculated at \$265.00 times (x) 77 lots.
- 4.9 To pay all applicable fees in accordance with the City Code.
- 4.10 To furnish or cause to be furnished to City by Developer's contractor proof of insurance, submitted to the City Engineer, confirming the existence of a liability insurance company insurance coverage to protect City within any dedicated rights-of-way or easements during the construction and maintenance period of this Agreement, which insurance shall satisfy all applicable City insurance standards.
- 4.11 To execute and deliver to City, at the request of City, a dedication, assignment or deed conveying to City ownership of all Public Improvements, and to maintain and repair all Public Improvements for a period of one (1) year after the completion of construction thereof and acceptance by the City.
- 4.12 To provide to City adequate assurance, in a form acceptable to City, in an amount equal to twenty percent (20%) of the actual costs of the Public Improvements, that Developer will comply with the maintenance obligations regarding the Public Improvements as required under the terms of this Agreement. Said assurance shall remain in effect for the duration of the one (1) year maintenance period described elsewhere in this Agreement. An eleven (11) month inspection will be conducted, prior to the release of the adequate assurance, of the Public Improvements and should all required corrections not be made prior to the expiration of the one (1) year maintenance period the City shall have the right to utilize the adequate assurance to make the necessary corrections to the Public Improvements.
- 4.13 To construct SW 71<sup>st</sup> Place Road from SW 49<sup>th</sup> Avenue Road to SW 54<sup>th</sup> Court Road, as described in Exhibit "B". Developer is required to install street lighting along SW 49<sup>th</sup> Avenue Road or SW 66<sup>th</sup> Street, Marion County maintained rights-of-way. In addition, Developer is required to install street lighting along SW 54<sup>th</sup> Court Rd. or SW 71<sup>st</sup> Pl. Rd, both roadways are City of Ocala maintained rights-of-way. Requirements are per City Ordinances 70-602 and 70-603.
- 4.14 To construct SW 54<sup>th</sup> Court Road from SW 60<sup>th</sup> Avenue to SW 66<sup>th</sup> Street, as described in Exhibit "B".
- 4.15 To install two (2) parallel 6-inch conduits along SW 49<sup>th</sup> Avenue Road from SW 66<sup>th</sup> Street to Parcel No. 35512-001-05, owned by Marion County Public Schools as part of the electric infrastructure to serve the Subdivision.
- 4.16 SECO Energy will be responsible for the electric infrastructure for Phase 2.

5. **COVENANTS OF CITY.** City covenants and agrees:

- 5.1 To accept and perpetually maintain the Public Improvements within the boundaries of the Subdivision upon the acceptance of the Improvements and after the completion of the one (1) year maintenance period.
- 5.2 That, if the provisions of Sections 7.1, 7.2 and 7.3 below are not applicable, upon completion of the Improvements, and upon approval of the Subdivision by the City, all of which must be in accordance with the provisions of this Agreement, it will permit connections to City's water and sewer systems with respect to the property within the Subdivision, including Lots and commercial parcels.
- 5.3 That, if the provisions of Sections 7.1, 7.2 and 7.3 below are applicable, it will issue building permits for the construction of residences on Lots located in the Subdivision, and will make all customary building inspections during the construction thereof, but City will be authorized to withhold the issuance of certificates of occupancy for building structures constructed on Lots until (i) all supporting improvements for the Lots have been constructed and approved by City; and (ii) the final Plat has been recorded for the each phase or sub-phase that is under development.
- 5.4 To provide potable water and sanitary sewer utility service for the Subdivision.
- 5.5 To provide electrical service as shown for Phase 2 for the Subdivision per Exhibit "C".
- 5.7 To accept a conveyance by dedication or deed of the segment of 71<sup>st</sup> Pl. Rd. between Phase 4 and the entrance road to the future Marion County Public School Site (Parcel No. 35512-001-05), as shown on Exhibit "E". The City shall be responsible for ownership and maintenance of this segment of 71<sup>st</sup> Pl. Rd.

6. **DOMESTIC AND WASTEWATER IMPROVEMENTS.** The Parties agree that domestic water and wastewater improvements will be constructed to serve the Subdivision as follows:

- 6.1 As more fully detailed in the Memorandum from Kimley-Horm and Associates, Inc. dated May 21, 2024 re: Winding Oaks – Residential Utility Demand Calculations attached hereto as Exhibit "D", the City will complete the following utility extensions to serve the Subdivision with sufficient capacity for the first 500-800 residential homes (currently under construction as of the effective date of this Agreement):
  - 6.1.1 Twelve-inch (12") diameter water main approximately 900 linear feet west along SW 66<sup>th</sup> Street to connect the SW 49<sup>th</sup> Avenue Road unconnected water main to the existing system within the Heath Brook PD project.
  - 6.1.2 Six-inch (6") diameter sanitary sewer force main approximately 900 linear feet west along SW 66<sup>th</sup> Street to connect the SW 49<sup>th</sup> Avenue Road unconnected force main to the existing force main along SW 61<sup>st</sup> Road and

the existing City lift station (No. 134), located in the Heath Brook PD project.

6.2 City will complete the following utility extensions to serve the remaining residential homes in the Winding Oaks PD:

6.2.1 City will extend the existing twelve-inch diameter force main and 12-inch diameter water main (the “SW 49<sup>th</sup> Avenue Road Street Utilities Extension”) approximately 4,800 linear feet north of SW 66<sup>th</sup> Street along the planned Marion County roadway extension of SW 49<sup>th</sup> Avenue Road (the “SW Avenue Road Extension”) in accordance with the completed design plans for the utility extensions, which are on file in the Offices of the City of Ocala as 21301 SW 49<sup>th</sup>/40<sup>th</sup> Avenue PH 1 Water and Sewer project. The force main extension will connect to the proposed sanitary sewer system and regional lift station being constructed with the Ridge at Heath Brook PD project.

6.2.2 City will design and construct the Winding Oaks PD regional lift station on Parcel No. 35512-001-06, already dedicated to the City.

6.3 The Parties agree that if Marion County has completed the SW 49<sup>th</sup> Avenue Road Extension, but City has not provided funding for the SW 49<sup>th</sup> Avenue Road Utilities Extension by the time at which Residential Phases 2, 3A, 3B, 4A, 4B, and their anticipated amenities are constructed (approximately 650 ERUs, then the Developer may provide funding for the SW 49<sup>th</sup> Avenue Road Utilities Extension. In exchange for any funds contributed by Developer to pay for the SW 49<sup>th</sup> Avenue Road Utilities Extension, City shall provide water and wastewater impact fee credits in an amount equal to Developer’s contribution. The specific terms and conditions shall be established in an Impact Fee Credit Agreement in substantially the same form as attached hereto as Exhibit “E”.

6.4 As more fully detailed in the Memorandum from Kimley-Horn and Associates, Inc. dated May 15, 2024 re: Winding Oaks Master Lift Station attached hereto as Exhibit “F”, the Parties agree that if the SW 49<sup>th</sup> Avenue Road Extension and SW 49<sup>th</sup> Avenue Road Utilities Extension is not complete by the time at which Residential Phase 2 and anticipated amenities are constructed (approximately 650 ERUs), then Developer may construct all Improvements necessary to extend the existing utility lines in the Heath Brook PD to accommodate building of all future Winding Oaks PD future phases (the “Heath Brook Utility Expansion”). In exchange for any funds or land contributed for the Heath Brook Utility Expansion, City shall provide water and wastewater impact fee credits in amount equal to Developer’s contribution.

7. **RECORDING PLAT.** City will allow the immediate recording of the Plat of the Subdivision, and the conveyance of Lots in the Subdivision (or portions thereof). If Developer complies with the following provisions of this Section. If Developer elects not to provide a Letter of Credit or other acceptable surety to City to guarantee the construction

of the Improvements for the Subdivision, the Plat will be recorded upon the completion of the construction of the Improvements in accordance with the Plans, and the acceptance thereof by City. If Developer elects to provide to City a Letter of Credit, or some other acceptable surety, the following provisions will apply:

- 7.1 **Cost Estimate.** Developer will submit to City, and City will review and approve, a “*Cost Estimate*” prepared by Developer’s Engineer. The Cost Estimate must be certified to City.
- 7.2 **Letter of Credit.** Upon Developer providing to City a Letter of Credit issued by a financial institution authorized to do business in the State of Florida in the amount of one hundred twenty percent (120%) of the approved Cost Estimate which guarantees to City the performance of Developer’s obligations under this Agreement, (which Letter of Credit must be in form and content acceptable to City and City’s attorney) City will complete the execution of the Plat of the Subdivision and allow the Plat to be recorded in the Public Records of Marion County, Florida.
- 7.3 **Sale of Lots or Tracts.** Upon the recording of the Plat for each phase of the Subdivision, Developer will be entitled to convey individual Lots or Tracts in the applicable phase of the Subdivision to third party purchasers. The purchasers of any Lots will be entitled to submit building plans, , procure building plan approvals, procure construction permits, and subject to paragraph 5.3 of this Agreement procure Certificates of Occupancy for improvements constructed on Lots in accordance with the normal approval procedures of City as established under the City Code. No purchaser of a Lot or Tract in the Subdivision will be obligated to complete the obligations of Developer to City under the terms of this Agreement in order to procure the issuance of a final Certificate of Occupancy by City for the purchaser’s improvements constructed on a Lot or Tract in the Subdivision but City shall not be required to issue such Certificate of Occupancy until the conditions in paragraph 5.3 of the Agreement have occurred.

8. **DEVELOPMENT STANDARDS.** Subdivision construction shall be in accordance with the approved Winding Oaks PD Plan and Standards Book, and as may be amended.
9. **STORMWATER DRAINAGE FACILITIES.** Installation and maintenance of the stormwater drainage facilities (including, without limitation, the improvements previously referred to as the stormwater conveyance system improvements and stormwater retention areas) located in the Subdivision shall be in accordance with the following provisions.
  - 9.1 **Construction Standards.** All stormwater drainage facilities, whether or not such facilities are to be dedicated to the public, will be constructed to the construction standards and Development Regulations of City, and the regulations of the District.

9.2 **Disclaimer of Responsibility.** City does not assume responsibility for surface stormwater runoff from individual Lots to adjacent Lots or adjacent properties, the responsibility of which shall be solely that of Developer.

10. **SIDEWALKS.** The plans for the Subdivision include an entrance roadway sidewalk providing pedestrian access from the Subdivision to **SW 49<sup>th</sup> Avenue Road**, and construction of an internal sidewalk system. In addition to those specifications shown on the Plans, the following provisions shall apply with respect to sidewalks to be installed in the Subdivision and along **SW 49<sup>th</sup> Avenue Road**:

10.1 Developer has completed installation of the sidewalk adjacent to **SW 49<sup>th</sup> Avenue Road**. Developer shall install the sidewalk connecting the **SW 71<sup>st</sup> Street and SW 49<sup>th</sup> Avenue Road** sidewalk to the internal sidewalk system of the Subdivision, at the time of the construction of the Improvements.

10.2 All sidewalks within the Subdivision located in common areas shall be constructed by Developer simultaneous with the construction of road Improvements. All sidewalks within the Subdivision located in front of single family residential lots will be constructed separately for each lot at the time of the construction of the single family structure on the lot.

11. **TRAFFIC CONTROL DEVICES.** All traffic control devices to be constructed by Developer shall be constructed in accordance with the construction standards of City.

12. **ELECTRICAL INFRASTRUCTURE AND SERVICES.** Electric utility infrastructure and service provisions shall follow the policies and procedures in accordance with the City Code of Ordinances, Sec. 70-541 thru Sec. 70-720.

13. **REPAIR OF DEFECTIVE IMPROVEMENTS:** With respect to any of the Improvements which are subject to a one (1) year period of maintenance by Developer, as set forth elsewhere in this Agreement, if during the maintenance period City provides notice to Developer that the Improvement needs repair or replacement, Developer will, at its sole expense, immediately initiate the repair and replacement of the defective Improvement, and pursue the completion of the repair or replacement with due diligence. Such repair or replacement must be completed prior to City assuming responsibility for permanent maintenance (as to any portion of the Improvements for which repair or replacement is underway at the expiration of the one (1) year maintenance period).

14. **BUILDING PERMITS – MODEL UNITS.** Subject to the terms of this Section, the City agrees to issue to Developer, upon submission by Developer to City of the required applications and supporting documentation and any applicable fees, building permits necessary for the construction of the buildings for the attached single family residences, where each unit within the building will be an individual Lot when the final plat of the Subdivision is recorded. With respect to the issuance of these permits Developer agrees as follows:

- 14.1 Developer acknowledges that City will not issue Certificates of Occupancy with respect to any residence constructed until the conditions in paragraph 5.3 of this Agreement have occurred.
- 14.2 The actions of City under this Agreement allowing the issuance of building permits to Developer for the construction of a model unit or model units does not in any fashion constitute the acceptance of the Improvements in the Subdivision by City as completed in accordance with the Plans, or the final Plat of the Subdivision. Developer must comply with the applicable City regulations and normal procedures in procuring final City acceptance and final City approval of the Plat for recording.
- 14.3 Developer agrees that Developer will not sell or convey any interest in that portion of the Property upon which any model unit is constructed pursuant to the terms of this Agreement prior to the final acceptance of the improvements by City (or provisions of a surety to City as set forth above) and the recording of the Plat of the Subdivision.
- 14.4 When Developer makes application to City for a building permit for this Agreement Developer must submit a sketch showing the lot upon which the residential unit will be constructed and the legal description of said lot. The parcel for which the building permit is issued must correspond to what will be a single lot when the Plat of the Subdivision is recorded.
- 14.5 The Developer hereby agrees to indemnify and hold City harmless from any and all losses, claims, damages, expenses, judgments, litigation expenses, attorneys' fees or other liabilities of any nature incurred by City as a result of this Agreement by City to issue building or development permits to the Developer as described in this Section. This grant of indemnity will expressly survive the termination of this Agreement and the acceptance and recording of the final Plat of the Subdivision.

15. **GENERAL PROVISIONS.** The following General Provisions shall apply to this Agreement:

- 15.1 **Notices.** Any notices required or permitted hereunder, and all demands and requests given or required to be given by any party hereto to another party, shall be in writing unless otherwise provided herein and shall be deemed given when received, if personally delivered or sent by telex, telegram, or if sent by Federal Express (which term shall be deemed to include within it any other nationally recognized reputable firm or overnight couriers) or if mailed, if such notice has been delivered to the United States Postal Service with postage prepaid and properly marked for certified or registered mail with a request for return receipt.
- 15.2 **Developer's Address.** If given to Developer any notice hereunder shall be addressed and given as follows:

KL Winding Oaks, LLC

Attn: [REDACTED]  
105 NE 1st Street  
Delray Beach, Florida 33444

**With Copy to:**

15.3 **City's Address.** If given to City:

City of Ocala  
Attn: City Manager  
110 SE Watula Avenue  
Ocala, Florida 34471

**With copy to**

City of Ocala  
City Engineer's Office  
1805 NE 30<sup>th</sup> Avenue, Building 600  
Ocala, FL 34470

Any party hereto may change the address or addresses to which notice is to be sent by giving written notice of such change to all other parties executing this Agreement, in the manner provided herein.

15.4 **Headings.** The headings contained within this Agreement are for identification purposes only, and shall not be construed to amend, modify, or alter the terms of the Agreement.

15.5 **Litigation.** With respect to any litigation arising out of this Agreement, or to resolve any claims or controversies arising out of or in connection with this Agreement, then the non-prevailing party will pay all reasonable costs incurred by the prevailing party, including reasonable attorneys' fees, suit costs and expenses, which attorneys' fees, suit costs and expenses shall include all such fees, costs and expenses incurred with respect to any trial level activities, bankruptcy proceedings, appellate proceedings, or post-judgment proceedings related thereto.

15.6 **Binding Effect.** The Parties represent to each other that each party fully understands the facts surrounding this Agreement and each is signing this Agreement fully and voluntarily, intending to be bound by it. This Agreement shall be binding upon and inure to the benefit of the parties hereto, their respective spouses, heirs, executors, administrators and assigns. There are no representations or warranties other than those set forth herein.

15.7 **Severability.** In the event any provision or Section of this Agreement is determined to be invalid or unenforceable, such determination shall not affect the enforceability or the validity of the remaining provisions of this Agreement.

15.8 **Survival of Representations and Warranties.** All representations and warranties contained herein are made in writing by the Parties in connection herewith shall survive the execution and delivery of this Agreement.

15.9 **Successors and Assigns.** All covenants and agreements in this Agreement made by or on behalf of any parties hereto shall bind and inure to the benefit of the respective successors and assigns of the parties hereto, whether so expressed or not.

15.10 **Applicable Law.** This Agreement is being delivered in the State of Florida, and shall be construed and enforced in accordance with the laws of the State of Florida. The venue for any legal proceeding arising out of this Agreement shall be Marion County, Florida.

15.11 **Counterparts.** This Agreement may be executed simultaneously in several counterparts, each of which shall be deemed an original, and it shall not be necessary in making proof of this Agreement to produce or account for more than one such counterpart.

15.12 **Gender.** As used in this Agreement, the masculine shall include the feminine and neuter, the singular shall include the plural, and the plural shall include the singular as the context may require.

15.13 **Facsimile Copy.** Any party may rely upon receipt of a signed facsimile or copy of this Amendment, signed by that party as though the same were an original.

15.14 **City Code.** No provision of this Agreement shall supersede or take precedence over any existing ordinances, regulations or codes of the City.

15.15 **Exercise of Rights.** All rights, power and remedies provided herein may be exercised only to the extent that the exercise thereof does not violate any law, and are intended to be limited to the extent necessary so that they will not render this Agreement invalid, illegal, or unenforceable under any applicable law.

15.16 **Entire Agreement.** This Agreement shall constitute the entire agreement of the Parties hereto; all prior agreements between the Parties, whether written or oral, are merged herein and shall be of no force or effect. This Agreement cannot be changed, modified or released orally, but only by an agreement in writing signed by the Parties against whom enforcement of said change, modification or discharge is sought.

16.. **DEFAULT.** In the event that Developer defaults under this Agreement by, without limitation, failing to construct Improvements or pay amounts as and when required hereunder:

16.1 City may pursue all remedies available at law and equity;

- 16.2 City may withhold issuance of building permits, certificates of occupancy or other City permits, approvals or development orders; and
- 16.3 If the default consists of the failure to pay money;
  - 16.3.1 City may declare any remaining payments due under this Agreement immediately due and payable by providing written notice of such acceleration to Developer, and Developer will then immediately pay the full amount owed; and
  - 16.3.2 Any unpaid amount shall accrue interest at the maximum rate allowed by law.

[Signature Page Follows]

IN WITNESS WHEREOF the parties hereto have executed this DEVELOPER'S AGREEMENT on the dates below.

**AS TO CITY:**

APPROVED AS TO FORM AND  
LEGALITY:

William E. Sexton,  
City Attorney

**CITY OF OCALA, A FLORIDA MUNICIPAL  
CORPORATION**

By: Kristen M. Dreyer  
President  
Ocala City Council  
Date:

**ATTEST:**

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Angel B. Jacobs, City Clerk

**STATE OF FLORIDA  
COUNTY OF MARION**

The foregoing instrument was acknowledged before me by means of        physical presence or        online notarization, this        day of       , 20      , by Kristen M. Dreyer, as President of Ocala City Council, on behalf of the City of Ocala, a Florida municipal corporation.

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Notary Public, State of Florida

Name: \_\_\_\_\_  
(Please print or type)

Commission Number:  
Commission Expires:

Notary: Check one of the following:

Personally known      OR      Produced Identification (if this box is checked, fill in blank below).

Type of Identification Produced: \_\_\_\_\_

Signed and delivered in our  
presence as witnesses:

**AS TO DEVELOPER:**  
**KL WINDING OAKS LLC**

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Print Name: \_\_\_\_\_

BY: \_\_\_\_\_

Print Name: \_\_\_\_\_

TITLE: Manager

**STATE OF FLORIDA**  
**COUNTY OF MARION**

The foregoing DEVELOPER'S AGREEMENT was acknowledged before me by means of  
\_\_\_\_ physical presence or \_\_\_\_ online notarization, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by  
\_\_\_\_\_, as \_\_\_\_\_.

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Notary Public, State of Florida

Name: \_\_\_\_\_  
(Please print or type)

Commission Number:  
Commission Expires:

Notary: Check one of the following:

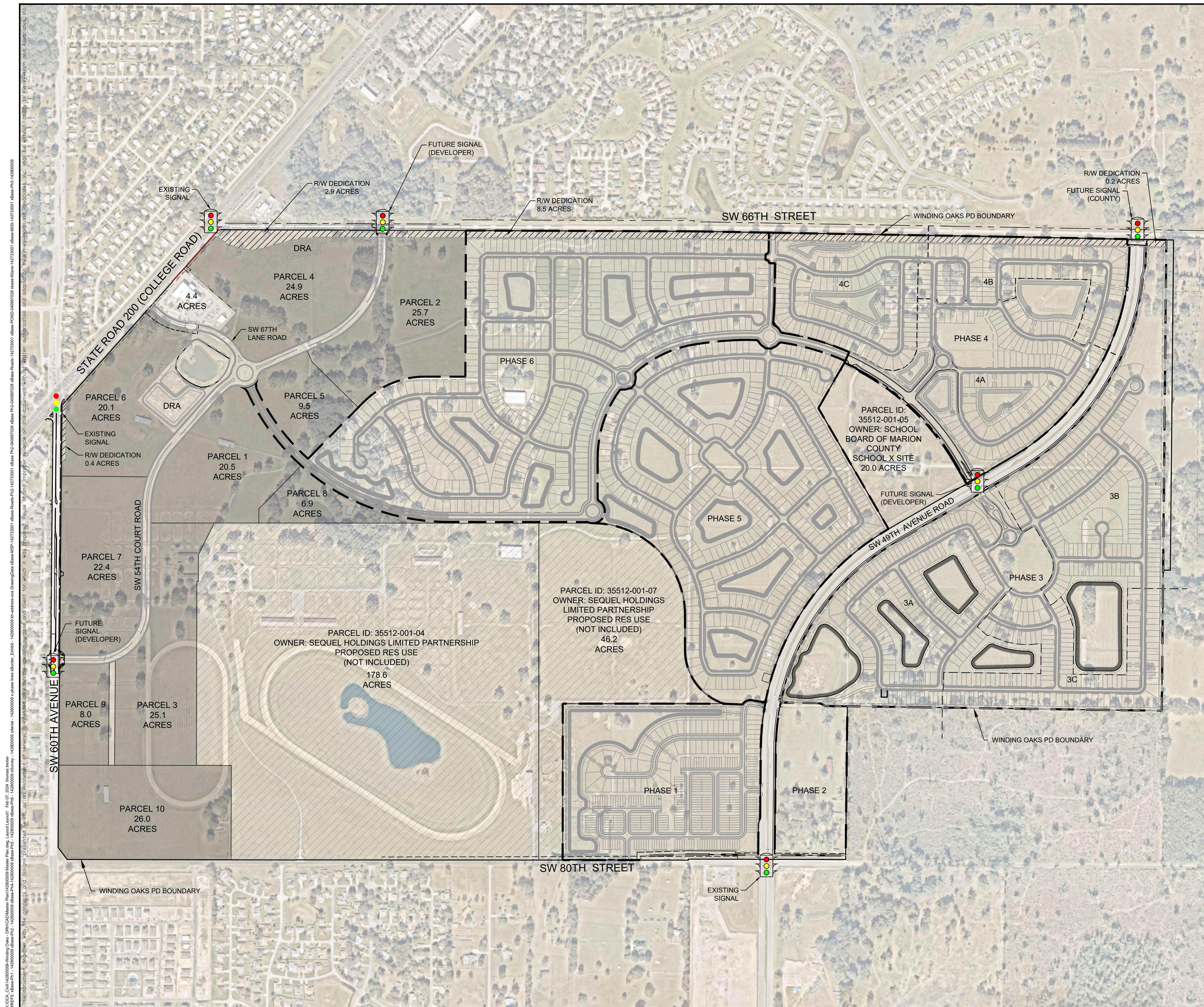
Personally known OR      Produced Identification (if this box is checked, fill in blank below)

Type of Identification Produced: \_\_\_\_\_

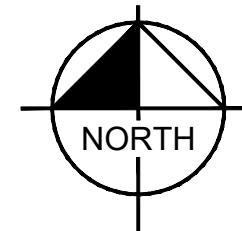
EXHIBIT A

A PORTION OF LAND LYING IN SECTION 10, TOWNSHIP 16 SOUTH, RANGE 21 EAST, MARION COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 9, TOWNSHIP 16 SOUTH, RANGE 21 EAST, MARION COUNTY, FLORIDA; THENCE ALONG THE SOUTH BOUNDARY OF THE SOUTHEAST 1/4 OF SAID SECTION 9 S.89°58'15"E., 2,643.55 FEET TO THE SOUTHEAST CORNER OF SAID SECTION 9; THENCE ALONG THE SOUTH BOUNDARY LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 10 S.89°14'12"E, 1313.57 FEET; THENCE N.00°36'16"E, 81.18' TO THE NORTHERLY RIGHT OF WAY LINE OF S.W. 80TH STREET (VARIES RIGHT OF WAY PER OFFICIAL RECORDS BOOK 6933, PAGE 1892 OF THE PUBLIC RECORDS OF MARION COUNTY, FLORIDA) AND THE POINT OF BEGINNING; THENCE ALONG SAID NORTH RIGHT OF WAY N.89°36'20"W., 592.57 FEET; THENCE DEPARTING SAID NORTH RIGHT OF WAY, ALONG THE EASTERLY RIGHT OF WAY OF S.W 49TH AVENUE ROAD (A 125 RIGHT OF WAY PER OFFICIAL RECORDS BOOK 6933, PAGE 1892 OF THE PUBLIC RECORDS OF MARION COUNTY, FLORIDA) THE FOLLOWING TWO (2) COURSES: (1) N.00°34'55"E, 889.37 FEET TO THE BEGINNING OF A NON-TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 2,018.00 FEET, A CENTRAL ANGLE OF 11°52'03", AND A CHORD BEARING AND DISTANCE OF N.06°29'39"E., 417.23 FEET; (2) THENCE NORTHERLY ALONG THE ARC OF SAID CURVE, A DISTANCE OF 417.98 FEET TO A POINT OF CUSP A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 25.00 FEET, A CENTRAL ANGLE OF 101°42'13", AND CHORD BEARING AND DISTANCE OF S.38°25'26"E., 38.78 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, A DISTANCE OF 44.38 FEET TO A POINT OF TANGENCY; THENCE S.86°16'33"E., 266.56 FEET TO A POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 125.00 FEET, A CENTRAL ANGLE OF 36°42'16", AND A CHORD BEARING AND DISTANCE OF S.70°55'25"E., 78.71 FEET; THENCE EASTERLY ALONG THE ARC OF SAID CURVE, DISTANCE OF 80.08 FEET TO A POINT OF TANGENCY; THENCE S.89°26'18"E., 185.13 FEET TO THE NORTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 10; THENCE ALONG THE EASTERLY BOUNDARY LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 10, S.00°38'06"W., 1,246.75 FEET TO THE POINT OF BEGINNING. SAID LANDS CONTAINING 17.11 ACRES, MORE OR LESS.



GRAPHIC SCALE IN FEET  
0 200 400 800



| SINGLE FAMILY RESIDENTIAL SUMMARY |                                   |
|-----------------------------------|-----------------------------------|
| PHASE 1                           | EXPRESS - 40' x 110' 21           |
|                                   | DRH - 50' x 110' 42               |
|                                   | TOWN HOMES FOR SALE 160           |
|                                   | TOWN HOMES FOR RENT 80            |
|                                   | <b>TOTAL</b> 303                  |
| PHASE 2                           | EXPRESS - 40' x 110' 77           |
|                                   | <b>TOTAL</b> 77                   |
| PHASE 3                           | FREEDOM VILLAS - 37.5' x 110' 114 |
|                                   | FREEDOM - 40' x 110' 206          |
|                                   | FREEDOM - 50' x 110' 183          |
|                                   | <b>TOTAL</b> 503                  |
| PHASE 4                           | EXPRESS - 40' x 110' 108          |
|                                   | EXPRESS - 50' x 110' 85           |
|                                   | DRH - 50' x 110' 67               |
|                                   | DRH - 60' x 115' 40               |
|                                   | <b>TOTAL</b> 320                  |
| PHASE 5                           | EXPRESS - 40' x 110' 107          |
|                                   | EXPRESS - 50' x 110' 150          |
|                                   | TRADITIONAL - 50' x 110' 98       |
|                                   | TRADITIONAL - 60' x 110' 38       |
|                                   | <b>TOTAL</b> 393                  |
| PHASE 6                           | EXPRESS - 50' x 110' 60           |
|                                   | TRADITIONAL - 50' x 110' 234      |
|                                   | TRADITIONAL - 60' x 110' 138      |
|                                   | <b>TOTAL</b> 432                  |
|                                   | <b>GRAND TOTAL</b> 2,028          |

| SUB-PHASE SUMMARY PHASE 3     |     |     |
|-------------------------------|-----|-----|
| PRODUCT/SUBPHASE              | 3A  | 3B  |
| FREEDOM VILLAS - 37.5' x 110' | 38  | 42  |
| FREEDOM - 40' x 110'          | 66  | 73  |
| FREEDOM - 50' x 110'          | 56  | 73  |
| <b>TOTAL</b>                  | 160 | 188 |
|                               | 155 |     |

| SUB-PHASE SUMMARY PHASE 4 |     |    |
|---------------------------|-----|----|
| PRODUCT/SUBPHASE          | 4A  | 4B |
| KHA PROJECT 142800009     | 39  | 39 |
| DATE DECEMBER 2023        | 30  |    |
| SCALE AS SHOWN            |     |    |
| DESIGNED BY KHA           |     |    |
| DRAWN BY                  |     |    |
| CHEKED BY                 |     |    |
| <b>TOTAL</b>              | 123 | 92 |
|                           | 105 |    |

## DEVELOPMENT MASTER PLAN

WINDING OAKS  
PREPARED FOR  
D.R. HORTON, INC  
FLORIDA  
CITY OF OCALA

SHEET NUMBER  
1 OF 1

| DATE     | BY          |
|----------|-------------|
| NOV 2023 | KINLEY-HORN |

**Kinley»Horn**  
© 2023 KINLEY-HORN AND ASSOCIATES, INC.  
1700 SE 7TH STREET, SUITE 200, OCALA, FLORIDA 34471  
PHONE: 352-428-8200  
WWW.KINLEY-HORN.COM REGISTRY NO. 35106

# SECO Energy Proposal: Winding Oaks Planned Development Redraws



## Winding Oaks Planned Development Boundary

## SECO Energy Redraw Proposal:



## OEU to SECO: Area 1 & 4



## SECO to OEU: Area 2 & 3

### **Current Utility Service Territory:**



SECO Energy (SECO)

Ocala Electric Utility (OEU)



## Parcel



Read



## Feet



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## MEMORANDUM

To: Mr. Brian Mihelich, D.R. Horton

From: Stewart L. Hill, P.E.; Kimley-Horn and Associates, Inc.

Date: May 21, 2024

RE: ***Winding Oaks – Residential Utility Demand Calculations***  
***Kimley-Horn Project Number 142800009***

## BACKGROUND

The Winding Oaks Planned Development (PD) project consists of approximately  $\pm 735.7$  acres of future commercial, office, and residential use development. The eastern portion of the project will consist of single-family residential development (the Project) totaling approximately  $\pm 2,028$  units. The PD is located within the City of Ocala's (City) utility service area. Utility serviceability letters have been provided by the City to D.R. Horton, Inc. stating the ability to accommodate the development with current treatment plant capacity in the City's water and wastewater systems. The following memo is intended to provide an update of the project utility demand calculations and proposed scenarios for transmission line connection/capacity.

Previous guidance for scenarios to serve the Winding Oaks PD project were provided in:

- “City of Ocala – West Ocala Hydraulic Evaluation” Technical Memorandum, Kimley-Horn and Associates, Inc., March 2019 (provided to the City of Ocala)
- “Winding Oaks Feasibility Analysis,” Kimley-Horn and Associates, Inc., February 2022 (internal due diligence document)
- “Winding Oaks Commercial Area Supplement Feasibility Analysis,” Kimley-Horn and Associates, Inc., March 2022 (internal due diligence document)

## EXISTING SYSTEM

In existing conditions, a 12-inch diameter force main and 12-inch diameter water main exists in the SW 49<sup>th</sup> Avenue Road right-of-way through the Project limits. These mains were constructed by the City of Ocala in 2020 and are currently “dry” (not connected to City facilities).

The City of Ocala intends to ultimately extend the 12-inch diameter force main and 12-inch diameter water main approximately 4,800 linear feet north of SW 66<sup>th</sup> Street along the planned Marion County roadway extension of SW 49<sup>th</sup> Avenue Road. The City has completed design plans for the utility extensions, but Marion County is currently in the design and right-of-way acquisition phase for that roadway segment. The force main extension will connect to the proposed sanitary sewer system and regional lift station being constructed with the Ridge at Heath Brook PD project.

In the interim, there are utility connections available within the existing Heath Brook neighborhood. The City is currently extending a 6-inch force main and 12-inch water main approximately 900 linear feet west along SW 66<sup>th</sup> Street to connect the SW 49<sup>th</sup> Avenue Road dry lines to the existing Heath Brook system. The

existing Heath Brook PD sanitary sewer system at this location consists of a 6-inch force main in the SW 61st Road right-of-way that extends from the end of the existing roadway, northwest to a City manhole (Preserve at Heath Brook Phase 1 manhole #37). Flows from the existing manhole then outfall into the existing City Lift Station #134 (LS 134).

In February 2022, Kimley-Horn and Associates, Inc. provided a feasibility analysis for the known scenarios at the time for potable water and sanitary sewer capacity to serve the single-family residential portion of the Winding Oaks PD project. In the analysis, Kimley-Horn identified four scenarios to serve the project. The purpose of this memorandum is to provide an update to Scenario 1 for the currently known conditions.

Summary from "Winding Oaks Feasibility Analysis" February 2022:

At this time, discussions with the City of Ocala regarding utility service are still ongoing and more discussion is needed. In discussions with D.R. Horton, Kimley-Horn has evaluated four possible scenarios for utility service to the Project. As discussions with the City evolve, these scenarios may need to be updated. Those scenarios are:

1. The Project or City extends first phase infrastructure connections to existing utility lines in Heath Brook. This should provide capacity for 500-800 +/- residential homes.
2. The City of Ocala extends utilities along the planned 49<sup>th</sup> Avenue extension, improves the downstream system, and improves the planned lift station at The Ridge at Heath Brook.
3. The Developer funds all of the improvements in Scenario 2.
4. The planned 49<sup>th</sup> Avenue extension does not happen, the Developer/City funds all improvements needed to the existing utility lines in Heath Brook to accommodate buildup of Winding Oaks.

Due to timing of the proposed Project schedule versus the right of way acquisition timeline, it is expected that Scenario 1 will be needed to provide the initial utility service to the Project, followed by one of the other three scenarios.

## SCENARIO 1 UPDATE

### Lift Station #134 Existing Influent Flow Calculations

In order to estimate the capacity in the current sanitary sewer system, the existing flows for Lift Station 134 were analyzed. The existing average daily influent flows were estimated using SCADA data for LS 134 provided by the City of Ocala for September-October 2023. The existing pumps in LS 134 have a design point of 780 gallons per minute (gpm) at 99 feet of total dynamic head (TDH) based on the 2019 Technical Memorandum, "City of Ocala – West Ocala Hydraulic System" developed by Kimley-Horn. The force main leaving LS 134 is 8-inches in diameter.

### Lift Station #134 Available Flow Calculations

To calculate the available flow to LS 134 in future conditions, the following parameters were used:

1. Average Daily Flow (ADF) into LS 134: 13,215 gallons per day (gpd) or 9.18 gpm

2. Average Daily Flow (ADF) from future Marion County Public School Elementary School X was estimated using the FDOH System Size Determinations. The school flows were based on the projected number of students and teachers and is expected to come online in August 2025.
3. The City's Level of Service of 250 gpd/ERU (equivalent single-family residential unit) was used to calculate the Average Daily Flow (ADF) from the residential uses.
4. A peaking factor of 4.0 was used to calculate peak hour factor (PHF) flow. The factor is based on City of Ocala standards.

## Base Analysis

Assuming the City's extension of the 6-inch diameter force main along SW 66<sup>th</sup> Street to the Heath Brook Neighborhood is complete, this is the base condition for Scenario 1. In the base condition, LS 134 will serve the existing Heath Brook sewer shed, proposed Elementary School X, and a certain number of homes from the Winding Oaks PD project. The analysis indicates the 6-inch diameter force main along SW 66<sup>th</sup> Street is the limiting factor for the base condition, limiting the flow from Winding Oaks and the school to 625 gpm during peak hour flow. This equates to 849 available ERUs for the Winding Oaks residential Project.

### Scenario 1A: Existing LS #134 and Upsize 6-inch Force Main

From the base condition, Scenario 1A upsizes the 6-inch diameter force main into LS 134 to a 12-inch diameter force main (a 12-inch diameter force main is what is required to serve the total residential project). Following this improvement, the LS 134 pumps are now the limiting factor. The pumps will limit the flow from Winding Oaks, the school, and the existing Heath Brook neighborhood to 780 gpm during peak hour flow. This equates to 1,019 available ERUs for the Winding Oaks residential Project.

### Scenario 1B: Existing LS #134 Upsized Pumps

From the Scenario 1A analysis, Scenario 1B then upsizes the LS 134 pumps to a flow rate that would equal or exceed the available flow capacity of the 8-inch diameter force main leaving LS 134. Now the existing 8-inch force main is the limiting factor after upsizing the pumps. The 8-inch force main will limit the flow from LS 134 to 1,000 gpm during peak hour flow. This equates to 1,336 available ERUs for the Winding Oaks residential Project.

### Scenario 1C: Existing 8-Inch Effluent Force Main from LS#134 Upsized to 12-Inch

From the Scenario 1B analysis, Scenario 1C upsizes the 8-inch effluent force main from LS 134 to a 12-inch force main. The 12-inch force main can accommodate up to 2,500 gpm at peak hour flow rate, providing the capacity for the LS 134 pumps to be upsized to the necessary flow rate needed for the entire Winding Oaks residential Project, proposed school, existing LS 134 sewer shed, plus additional flow from the Winding Oaks PD commercial area, as required. According to the 2022 "Winding Oaks Commercial Area Supplement Feasibility Analysis" provided by Kimley-Horn, any flows greater than 450 gpm peak hour flow rate from the commercial area must be sent to and accommodated by the Winding Oaks residential area sanitary sewer system. This additional flow would need to be accommodated by this scenario. According to the commercial feasibility analysis, this flow could be up to 520 additional gpm during the peak flow hour scenario flow to serve approximately 750 multi-family units from the commercial area.

**SUMMARY**

The purpose of this memorandum is to provide an analysis of options for Scenario 1 in the event that the City of Ocala's extension of utilities along the future SW 49<sup>th</sup> Avenue Road (Scenario 2) is delayed. This analysis is an addendum to the 2019 and 2022 analyses. Since 2019, the City of Ocala has made several improvements to the sanitary sewer system serving this area of the City. Prior to Scenario 1A being constructed, the developer and City of Ocala need to update the 2019 study to ensure the system downstream of Lift Station 134 has transmission capacity to serve the increased flows produced with the Scenario 1A, 1B, and 1C improvements.

SLH/TWT/slb

Attachments: Scenario 1 Calculations Summary

“City of Ocala – West Ocala Hydraulic Evaluation” Technical Memorandum, Kimley-Horn and Associates, Inc., March 2019

CC: File

K:\OCA\_Civil\142800009-Winding Oaks - DRH\engineering\Utilities\Utility Capacity Update\mbm240521slh\_Utility Demands.docx

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## ATTACHMENTS

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## Scenario 1 Calculations Summary

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## Existing Lift Station 134 Base Analysis

| Location          | Capacity (gpm) |
|-------------------|----------------|
| LS 134 Pumps      | 780            |
| 6-inch Force Main | 625            |
| 8-inch Force Main | 1000           |

| Wastewater Flow               | ADF (gpd)     | ADF (gpm)    | Peaking Factor | PHF (gpm)    |
|-------------------------------|---------------|--------------|----------------|--------------|
| Existing LS 134 Inflow        | 13,215        | 9.18         | 4.0            | 36.71        |
| Future Elementary School      | 12,790        | 8.88         | 4.0            | 35.53        |
| <b>Total</b>                  | <b>26,005</b> | <b>18.06</b> | <b>4.0</b>     | <b>72.24</b> |
| Capacity of 6-inch Force Main |               |              |                |              |
| Remaining Capacity            | 212,210       | 147.37       | 4.0            | 589.47       |
| <b>ERUs Available</b>         | <b>849</b>    |              |                |              |

## SCENARIO 1A: UPSIZE 6-INCH FORCE MAIN

| Location           | Capacity (gpm) |
|--------------------|----------------|
| LS 134 Pumps       | 780            |
| 12-inch Force Main | 2500           |
| 8-inch Force Main  | 1000           |

| Wastewater Flow          | ADF (gpd)     | ADF (gpm)    | Peaking Factor | PHF (gpm)    |
|--------------------------|---------------|--------------|----------------|--------------|
| Existing LS 134 Inflow   | 13,215        | 9.18         | 4.0            | 36.71        |
| Future Elementary School | 12,790        | 8.88         | 4.0            | 35.53        |
| <b>Total</b>             | <b>26,005</b> | <b>18.06</b> | <b>4.0</b>     | <b>72.24</b> |
| Capacity of LS 134       |               |              |                |              |
| Remaining Capacity       | 254,795       | 176.94       | 4.0            | 707.76       |
| <b>ERUs Available</b>    | <b>1,019</b>  |              |                |              |

## SCENARIO 1B: UPSIZE 6-INCH FORCE MAIN AND LS 134 PUMPS

| Location           | Capacity (gpm) |
|--------------------|----------------|
| LS 134 Pumps       | 2202           |
| 12-inch Force Main | 2500           |
| 8-inch Force Main  | 1000           |

| Wastewater Flow               | ADF (gpd)     | ADF (gpm)    | Peaking Factor | PHF (gpm)    |
|-------------------------------|---------------|--------------|----------------|--------------|
| Existing LS 134 Inflow        | 13,215        | 9.18         | 4.0            | 36.71        |
| Future Elementary School      | 12,790        | 8.88         | 4.0            | 35.53        |
| <b>Total</b>                  | <b>26,005</b> | <b>18.06</b> | <b>4.0</b>     | <b>72.24</b> |
| Capacity of 8-inch Force Main |               |              |                |              |
| Remaining Capacity            | 333,995       | 231.94       | 4.0            | 927.76       |
| <b>ERUs Available</b>         | <b>1,336</b>  |              |                |              |

## SCENARIO 1C: UPSIZE 6-INCH FORCE MAIN, LS 134 PUMPS, AND 8-INCH FORCE MAIN

| Location           | Capacity (gpm) |
|--------------------|----------------|
| LS 134 Pumps       | 2202           |
| 12-inch Force Main | 2500           |
| 12-inch Force Main | 2500           |

| Wastewater Flow          | ADF (gpd)     | ADF (gpm)    | Peaking Factor | PHF (gpm)    |
|--------------------------|---------------|--------------|----------------|--------------|
| Existing LS 134 Inflow   | 13,215        | 9.18         | 4.0            | 36.71        |
| Future Elementary School | 12,790        | 8.88         | 4.0            | 35.53        |
| <b>Total</b>             | <b>26,005</b> | <b>18.06</b> | <b>4.0</b>     | <b>72.24</b> |
| Capacity of LS 134       |               |              |                |              |
| Remaining Capacity       | 766,550       | 532.33       | 4.0            | 2129.31      |
| <b>ERUs Available</b>    | <b>3,066</b>  |              |                |              |

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“City of Ocala – West Ocala Hydraulic  
Evaluation” Technical Memorandum  
March 2019

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## TECHNICAL MEMORANDUM

To: Sean Lanier, P.E., City Engineer Director, City of Ocala

From: Alan Garri, P.E., Kimley-Horn and Associates, Inc.

Date: March 25, 2019

**RE: *City of Ocala- West Ocala Hydraulic Evaluation***

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## BACKGROUND

The City of Ocala's (City) current overall utility service area encompasses 78 square miles within central Marion County and is anticipating future growth due to the Winding Oaks planned development. In response to the anticipated future wastewater flows, the City requested Kimley-Horn and Associates, Inc (Kimley-Horn) to evaluate the available capacity of the City's existing wastewater infrastructure to accept the planned wastewater flows from Winding Oaks.

The Winding Oaks planned development is within the Ocala City limits and consists of approximately 943 acres located near the southeast corner of the intersection of Southwest State Road 200 and Southwest 66<sup>th</sup> Street. The new development is planned to consist of mixed use commercial buildings, medical and office buildings, assisted living facilities, school(s), multi-family residential neighborhoods, and single family residential neighborhoods. See **Figure 1** for an aerial map of the Winding Oaks planned development.

## ANALYSIS

The City requested consulting services from Kimley-Horn to evaluate the capacity of lift station 134 in anticipation of the Winding Oaks planned development. Lift station 134 was evaluated over a 15-year planning period, in which the flows were assumed to increase linearly until full buildout. The analysis also utilized the City's existing InfoSewer steady state hydraulic model when considering improvements for downstream impacts up to Lift Station 91.

### Assumptions

The following assumptions were made during the capacity evaluation of the City's sanitary sewer system:

1. The City's level of service (LOS) for wastewater flows of 275 gpd per EDU
2. Linear growth over a 15-year planning period
3. Medical and Office floor area ratio (FAR) = 0.25
4. 2,000 students per school
5. 2.5 EDU per acre for single family residential areas

6. 2.5 people per EDU
7. 14 EDU per acre for multi-family residential areas
8. 45 beds per acre for assisted living facilities

## Flow Estimation

To evaluate the potential impacts to the existing capacity of lift station 134, the average daily flows (ADF) and peak hour flows (PHF) from the Winding Oaks development were estimated. Estimated flows were calculated by multiplying the City's LOS or industry standard flowrates (F.A.C. 64E-6-008) by the total estimated units. Once the ADFs were calculated, the PHF was determined by using the 10 State Standards peaking factor, **Equation 1**. The population used in determining the PHF was calculated by dividing the Total ADF (GPD) by the Cities LOS of 275 gpd/EDU, and then multiplying by 2.5 people per EDU. **Table 1** provides a summary of the calculated flows.

$$\text{Equation 1: } \text{PHF} = \text{ADF} * \frac{18 + \sqrt{P}(\text{population in thousands})}{4 + \sqrt{P}(\text{population in thousands})}$$

**Table 1: Winding Oaks Estimated Wastewater Flows**

| Land Use  | Parcel # | Parcel Area (acres) | Unit          | Unit/Acre | Total Units | Flowrate (GPD) | Wastewater ADF (GPD) |
|---|----------|---------------------|---------------|-----------|-------------|----------------|----------------------|
| Multi-Family Residential                              | 1        | 34                  | EDU           | 14        | 479         | 275            | 131,670              |
|   | 2        | 18                  | EDU           | 14        | 251         | 275            | 68,915               |
|   | 3        | 30                  | EDU           | 14        | 426         | 275            | 117,040              |
| Single Family Residential                             | 1        | 145                 | EDU           | 2.5       | 362         | 275            | 99,481               |
|   | 2        | 142                 | EDU           | 2.5       | 356         | 275            | 97,900               |
|   | 3        | 87                  | EDU           | 2.5       | 218         | 275            | 60,019               |
|   | 4        | 99                  | EDU           | 2.5       | 248         | 275            | 68,131               |
|   | 5        | 90                  | EDU           | 2.5       | 225         | 275            | 61,806               |
|   | 6        | 104                 | EDU           | 2.5       | 259         | 275            | 71,156               |
| Medical/Office  | 1        | 29                  | Building Sqft | 10,890    | 310,365     | 0.15           | 46,555               |
| School  | 1        | 18                  | Students      | 111       | 2,000       | 19             | 38,000               |
| Assisted Living                                       | 1        | 11                  | Bed           | 45        | 509         | 150            | 76,275               |
|   | 2        | 10                  | Bed           | 45        | 450         | 150            | 67,500               |
| <b>Total ADF (GPD):</b>                               |          |                     |               |           |             |                | <b>1,004,449</b>     |
| <b>Total ADF (GPM):</b>                               |          |                     |               |           |             |                | <b>698</b>           |
| <b>Total EDU's:</b>                                   |          |                     |               |           |             |                | <b>3,653</b>         |
| <b>PF:</b>  |          |                     |               |           |             |                | <b>2.99</b>          |
| <b>Total PHF (GPM) Rounded up to Nearest 100 GPM:</b> |          |                     |               |           |             |                | <b>2,100</b>         |

The wastewater flow resulting from the mixed use commercial area, as shown in **Figure 1**, was addressed in the first phase of the development and is under construction. The mixed use commercial area consists of a car dealership (Jaguar) and additional commercial users. These flows are currently being conveyed by the existing lift station 97 and are not included in the Winding Oaks projected flows to lift station 134.

## Capacity Evaluation Summary

The general location and force main alignment of the proposed lift station that will pump the Winding Oaks development wastewater flows is unknown, as this is in the initial planning stages of development. To evaluate the potential impacts, the location and elevations of the lift station along with alignment of the force main were assumed using NAVD 88 vertical datum. **Figure 1** provides a map showing the assumed location of the lift station and force main alignment. **Table 2** provides the assumed elevations.

| <b>Table 2: Winding Oaks Proposed Lift Station<br/>Assumed Model Inputs</b> |                      |
|---|----------------------|
| <b>Model Attribute</b>  | <b>Assumed Value</b> |
| Wet Well Diameter (ft.)   | 10.0                 |
| Ground Elevation (ft)   | 70.0                 |
| Wet Well Top Elevation (ft)   | 70.5                 |
| Influent Invert Elevation (ft)  | 60.0                 |
| Pump On Elevation (ft)  | 56.5                 |
| Pump Off Elevation (ft)   | 53.5                 |
| Wet Well Invert Elevation (ft)  | 50.0                 |

The assumed lift station attributes were input into the City's model to evaluate different alternative improvements that would be needed. Three alternatives were considered which are described as follows:

- Alternative 1: Considers pumping the wastewater flows to lift station 134.
- Alternative 2: Considers using lift station 134 to repump the projected Winding Oaks wastewater flows, however it changes the discharge location of lift station 134 to a manifold connection to the force main system that accepts flows from lift stations 97, 80, 151, and 123.
- Alternative 3: Considers a new force main from lift station 134 that will be manifolded into the 18-inch diameter force main at SW 40th St and SW 49th Ave. This alternative also considers connecting lift stations 97, 151, 123, and 127 to a new force main to reduce the contributing flows to lift station 91.

## Alternative 1

Alternative 1 considers pumping the wastewater flows to lift station 134. The existing pumps in lift station 134 have a design point of 780 gpm at 99 feet total dynamic head (TDH). To evaluate the capacity of lift station 134, the City's most recent wastewater master plan projected flow data was used. However, the basin in the most recent master plan only included the existing lift station 134 service area. The flow projections in the master plan for lift station 134 are summarized in **Table 3**.

| <b>Table 3: Lift Station 134 Projected Wastewater Flows</b> |                         |                          |                          |
|---|-------------------------|--------------------------|--------------------------|
| <b>Existing PHF (GPM)</b>                                   | <b>5-Year PHF (GPM)</b> | <b>10-Year PHF (GPM)</b> | <b>20-Year PHF (GPM)</b> |
| 32  | 282                     | 564                      | 661                      |

Assuming a linear growth rate over the 15-year planning period for the Winding Oaks development to reach full buildout (estimated at a PHF of 140 gpm per year), lift station 134's estimated PHF at the 5-year planning period will be 982 gpm. This exceeds the current 780 gpm PHF design capacity of lift station 134. In order for lift station 134 to meet the buildout flows from Winding Oaks and the 20-year projected PHF, the lift station will need to be upgraded to achieve a PHF of 2,761 gpm. With this increase in pumping capacity at lift station 134, the following downstream impacts were identified:

- Lift station 134's force main is currently an 8-inch diameter pipe. With the flowrate increased to 2,761 gpm, the force main will need to be a minimum of 16-inches in diameter to maintain velocities below 8.0 feet per second (fps).
- The existing discharge location of lift station 134 is to an existing 12-inch diameter gravity sewer. The gravity sewer diameter will need to be increased to a minimum of 24-inches (assuming a Manning's roughness value of 0.013, slope of 0.08 %, and d/D = 1). The existing 12-inch diameter gravity sewer then conveys flows to lift station 80.
- Lift station 80 has a current design capacity of 910 gpm at 31 ft TDH. The lift station has 423 gpm of remaining available capacity at the 20-year projected PHF, as determined from the flow projections of the most recent master plan. Lift station 80 would need to have the pumping capacity of 3,261 gpm and would require the construction of a new lift station.
- Lift station 80 is part of a manifolded force main system that includes flows from lift stations 97, 151, and 123. These stations will also be impacted by an increase in flows being discharged into the force main from the proposed increase in pumping capacity at lift station 80. As a result, pump improvements will be necessary at the other lift stations that manifold into the force main system.
- The existing force main downstream of lift station 80 is 12-inches in diameter. Increasing the flows in the force main to the projected PHF will exceed the maximum allowable velocity of 8.0

fps. Upgrade of the force main to convey the design PHF will require increasing the force main diameter to a minimum of 18-inches.

- The flows from the manifolded force main system downstream of lift station 80 currently discharge into the existing 12-inch diameter gravity sewer that conveys the wastewater flows to lift station 91. The existing 12-inch gravity sewer is not able to convey the projected PHF and will either need to be increased in size or the force main will need to be extended to discharge directly to lift station 91.
- Finally, the wastewater flows are pumped by lift station 91 to WWRF 3. The most recent wastewater capacity evaluation indicates that lift station 91 will exceed capacity within the 10-year planning period. Improvements to lift station 91 will also need to consider potential impacts to the lift station 17 pumping conditions, as it discharges into the same force main as lift station 91.

**Figure 2** provides a map showing the Alternative 1 proposed improvements.

## Alternative 2

Alternative 2 considers using lift station 134 to repump the projected Winding Oaks wastewater flows, however it changes the discharge location of lift station 134 to a manifold connection to the force main system that accepts flows from lift stations 97, 80, 151, and 123. This scenario was considered to reduce the need for gravity sewer improvements and to eliminate the need for constructing a new lift station 80. This alternative identified the following improvements:

- Construct a new lift station 134
- Replacement of the existing 8-inch discharge force main of lift station 134 with a 16-inch diameter force main (minimum), and connection of the new force main into the existing manifold system that receives flow from lift stations 97, 80, 151, and 123. The assumed tie in location is shown in **Figure 3**.
- Increase the force main from 8-inches to a minimum of 18-inches from the proposed tie in location of lift station 134 to lift station 91.
- Install new pumps at lift stations 97, 151, 123, and 80.
- Increase lift station 91 capacity and further evaluate potential impacts to lift station 17.

**Figure 3** provides a map showing the Alternative 2 proposed improvements.

## Alternative 3

Alternative 3 considers a new force main from lift station 134 that will be manifolded into the 18-inch diameter force main at SW 40<sup>th</sup> St and SW 49<sup>th</sup> Ave. This alternative also considers connecting lift

stations 97, 151, 123, and 127 to a new force main to reduce the contributing flows to lift station 91. This scenario identified the following improvements:

- Construct a new lift station 134
- Construct a new 16-inch diameter force main from lift station 134 that increases to 18-inches in diameter at the first manifold point, where lift stations 97, 151, and 123 connect.
- Installation of new pumps at lift station 97, 151, 123, and 127

Model results from this alternative indicates that existing pumps in lift station 91 will be unable to pump during PHF conditions and that lift station 17 will have a limited pumping capacity of 1,925 gpm. Improvements should be considered at both lift stations per the most recent master plan. Any improvements made to either lift station 91 or 17 will impact the pump design points shown in **Figure 4**.

The City could also consider using lift station 127 to repump the flows from lift stations 134, 97, 151, and 123 if the pressures began exceeding recommended operating pressures. This would require the construction of a new lift station to be able to accept the additional wastewater flows. Under the current modeled conditions of alternative 4, the highest pressures within the force main were calculated to be 164 ft and it was considered more economical to manifold the lift station into the proposed 18-inch diameter force main.

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*Attachment A – Figures 1 through 4*

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# CITY OF OCALA WINDING OAKS CAPACITY EVALUATION

## PARCEL LAND USE

PS LIFT STATION

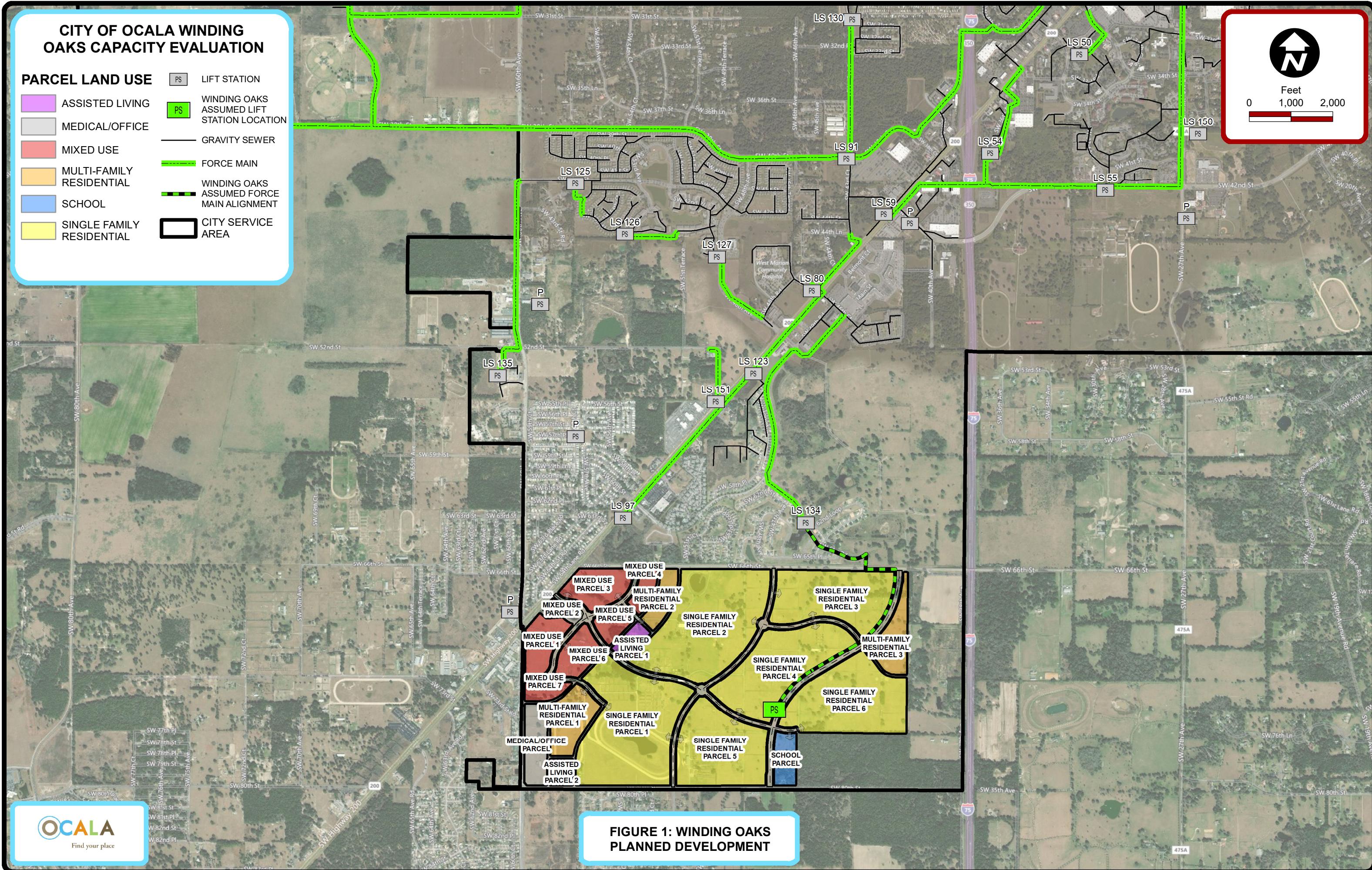
PS WINDING OAKS ASSUMED LIFT STATION LOCATION

— GRAVITY SEWER

---- FORCE MAIN

— WINDING OAKS ASSUMED FORCE MAIN ALIGNMENT

— CITY SERVICE AREA



## CITY OF OCALA WINDING OAKS CAPACITY EVALUATION

### PARCEL LAND USE

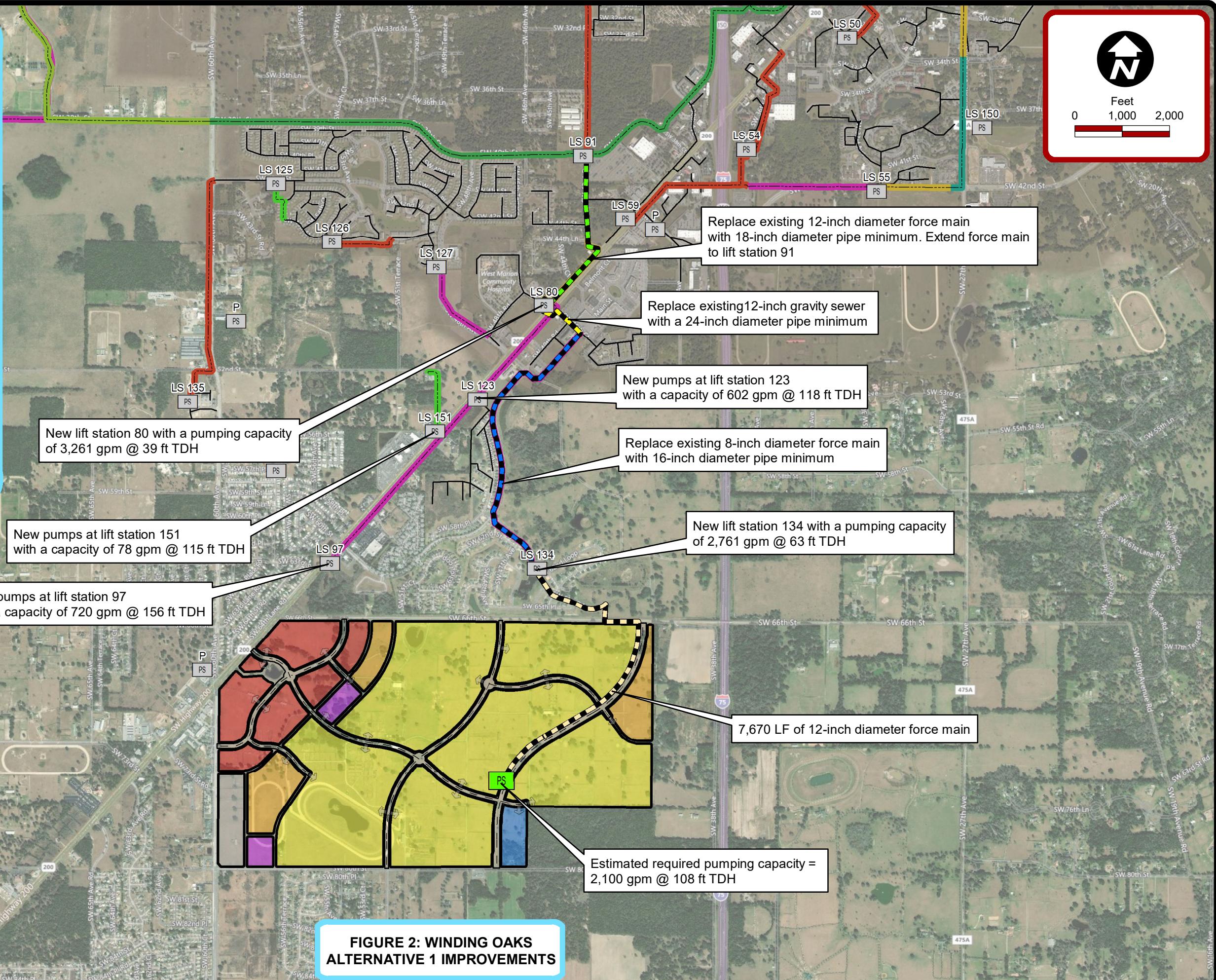
### FORCE MAIN PIPE DIAMETERS

- ASSISTED LIVING
- MEDICAL/OFFICE
- MIXED USE
- MULTI-FAMILY RESIDENTIAL
- SCHOOL
- SINGLE FAMILY RESIDENTIAL
- LIFT STATION
- WINDING OAKS ASSUMED LIFT STATION LOCATION

### PROPOSED FORCE MAIN IMPROVEMENTS

### PROPOSED GRAVITY SEWER IMPROVEMENTS

24-INCH



## CITY OF OCALA WINDING OAKS CAPACITY EVALUATION

### PARCEL LAND USE

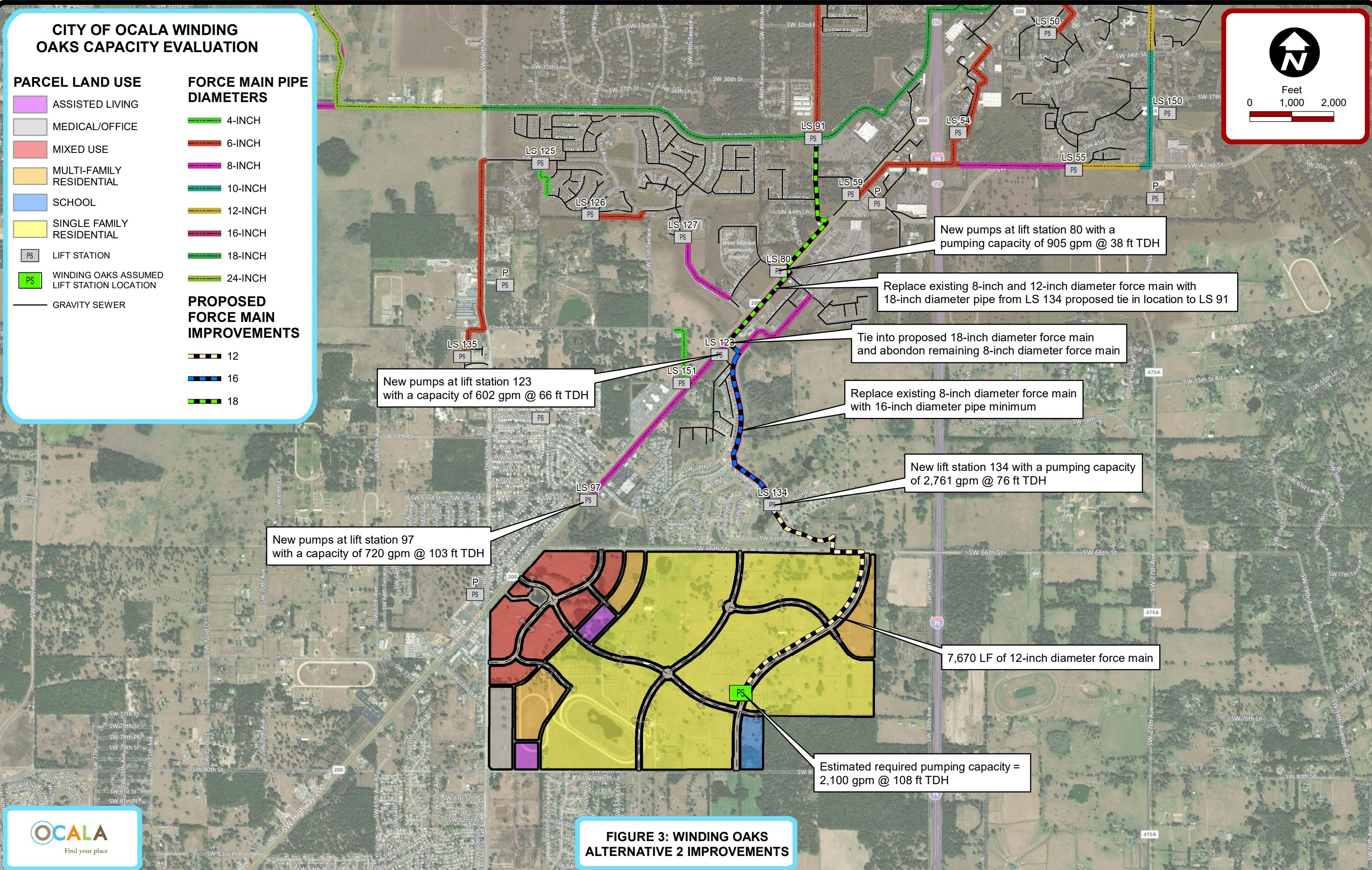
- ASSISTED LIVING
- MEDICAL/OFFICE
- MIXED USE
- MULTI-FAMILY RESIDENTIAL
- SCHOOL
- SINGLE FAMILY RESIDENTIAL
- LIFT STATION
- WINDING OAKS ASSUMED LIFT STATION LOCATION

### FORCE MAIN PIPE DIAMETERS

- 4-INCH
- 6-INCH
- 8-INCH
- 10-INCH
- 12-INCH
- 16-INCH
- 18-INCH
- 24-INCH

### PROPOSED FORCE MAIN IMPROVEMENTS

- 12
- 16
- 18



## CITY OF OCALA WINDING OAKS CAPACITY EVALUATION

### PARCEL LAND USE

|  |
|--|
| ASSISTED LIVING                            |
| MEDICAL/OFFICE                             |
| MIXED USE                                  |
| MULTI-FAMILY RESIDENTIAL                   |
| SCHOOL                                     |
| SINGLE FAMILY RESIDENTIAL                  |
| LIFT STATION                               |
| WINDING OAKS ASSUMED LIFT STATION LOCATION |
| GRAVITY SEWER                              |

### FORCE MAIN PIPE DIAMETERS

|         |
|---------|
| 4-INCH  |
| 6-INCH  |
| 8-INCH  |
| 10-INCH |
| 12-INCH |
| 16-INCH |
| 18-INCH |
| 24-INCH |

### PROPOSED FORCE MAIN IMPROVEMENTS

|         |
|---------|
| 12-INCH |
| 16-INCH |
| 18-INCH |

