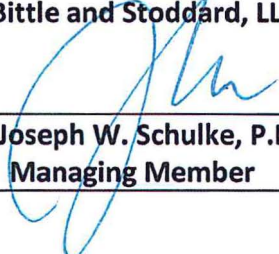


WORK ORDER NUMBER**3****North County Re-Use Water Main (A-1-A and CR 510)**

This Work Order Number 3 is entered into as of this ____ day of _____, 2018, pursuant to that certain Continuing Contract Agreement for Professional Services, dated April 17, 2018, (referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Schulke, Bittle and Stoddard, LLC ("Consultant").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit 1 (Scope of Work), attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the fee schedule set forth in Exhibit 2 (Fee Schedule), attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit 3 (Time Schedule), attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.4 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT:**Schulke, Bittle and Stoddard, LLC****BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY****By:**

Joseph W. Schulke, P.E.**By:**_____
Bob Solari, Chairman**Title:**_____
Managing Member**BCC Approved Date:** _____**Attest: Jeffrey R. Smith, Clerk of Court and
Comptroller****By:**_____
Deputy Clerk**Approved:**_____
Jason E. Brown, County Administrator**Approved as to form and legal sufficiency:**_____
Dylan T. Reingold, County Attorney

Exhibit 1
(Scope of Work)
WORK ORDER NO. 3

Project Description

The project includes preparation of a report determining the feasibility to provide irrigation quality re-claimed water (Re-Use Water) for the North Indian River County barrier island vicinity, including the feasibility to run new re-use water mains south on SR A-1-A, from CR 510 to Old Winter Beach Road, and the report will provide preliminary recommendations on the size and location of the re-use water transmission main and distribution mains in SR A-1-A, and size of storage tanks and pumping station(s) to be located in Sea Oaks WWTP site.

Scope of Services

The subject Re-Use system infrastructure is generally located within approximately 2.4 miles (12,720 lf) of A-1-A, from Cr510 to Old Winter Beach Road.

The system is more particularly described as follows:

- A new utility connection for a new re-use water transmission main will be made to an existing 16" PVC Re-Use transmission main at the intersection of CR510 and SR A-1-A. *This existing 16" re-use transmission main comes from the mainland, crosses the Indian River Lagoon, along the north side of CR510 to SR A-1-A. This main transmits re-use water from the Central and West Regional WWTP to several communities south of CR510, via an existing 8" re-use transmission main. This 8" main extends south on A-1-A from and is fed by the existing 16" main. This main provides limited volumes of re-claimed water to several communities between CR510 and Sea Oaks WWTP.*
- A new larger diameter re-use transmission main will replace the existing 8" transmission main along A-1-A. It will connect to the existing 16" transmission main at Cr510 and SR A-1-A, and will run south 4415 lf from CR510 to the inactive North County (Sea Oaks) WWTP located within the Sea Oaks community. **The size, location and type of material and installation methods of this transmission main will be considered, determined and recommended as part of this study.**
- Storage Tanks and a pump station are proposed to be sited at the Sea Oaks WWTP, to store re-use water that is delivered from the new larger diameter re-use transmission main. The pump station will pump from the storage tanks into a new re-use main distribution network which will distribute re-use water to the north and south of Sea Oaks WWTP. The distribution network will consist of:
 1. Running north: the existing 8" re-use transmission main that was re-placed will be converted to a distribution main. This main is approximately 4415 lf along SR A-1-A, from Sea Oaks to Cr510.
 2. Running south: a new re-use distribution main will be installed from Sea Oaks and will run south along SR A-1-A, approximately 8305 lf to Old Winter Beach Road. **The size and general location of the storage tanks and pumps; and the size, location and type of material and installation methods for the new distribution main will be considered, determined and recommended as part of this study.**

- Along the length of the new re-use distribution mains, stub-outs with valves will be located at strategic locations for the future connection and distribution of re-use water to irrigation systems to several communities including, but not limited to:

1. North of Sea Oaks

- Disney Resort(east and west)
- North Shore Club S/D
- Coral stone
- Bermuda Club
- Sea Oaks

2. South of Sea Oaks

- Grand Harbor Beach Club
- The Island Club
- Bay Tree Condominium
- Marbrisa
- Sea Colony (east and west)
- Indian Trails
- Avalon
- Ocean Pearl (east and west)
- VB Estates (undeveloped parcel)
- Palm Island Plantation
- Carlton VB
- River Club
- John's Island

- The list of developments above may be added to or deleted from depending on circumstances that may arise during the evaluation.

Schulke, Bittle & Stoddard, L.L.C. will provide engineering services in several Tasks, as outline below. The engineer must obtain written authorization from IRCDUS staff prior to proceeding with each subsequent task of the work.

Task 1: Survey and Base plan preparation

1. Request locates from all utility providers.
2. Route survey of SR A-1-A from Cr510 to Old Winter Beach Road. Route survey will be prepared by a registered land surveyor and will include the location of the "locates" from utility providers, topography, location of any above ground utilities and other infrastructure.
3. Physical location of existing utility infrastructure in SR A-1-A ROW. This will be accomplished by "pot holing" the ROW -**Excavation of a trench** perpendicular to the paved road within the grassed areas between the EOP and the ROW line for field verification of actual locations of existing underground utilities and structures ("pot holing"). For fee estimating purposes, thirty-four (34) "pot holed" locations are assumed. SBS will retain a licensed utility contractor for this work.
4. Obtain, review and import or translate (re-draw) into a drawing any utility and infrastructure as-builts and/ or construction drawing(s) SBS can attain from IRCDUS, IRC PW, FDOT and other sources.

5. Prepare an Engineering base plan (CAD drawing) of existing conditions along the route of A-1-A, incorporating the information and drawings obtained or created via steps 1-4 above.

Task 2: Preliminary Engineering – Re-use main route:

1. **Evaluation of Base map and determination of best route** for the new re-use transmission main and distribution main network.
2. Obtain **geotechnical data – soil borings** along the route of the main, and at select locations where improvements may be proposed.
3. Prepare preliminary **construction plans** of the route of the main(s). Plans will depict the new re-use transmission main, distribution main(s), and stubbed-out service locations, from CR510 to Old Winter Beach Road.
4. Prepare preliminary construction **cost estimate** for the placement of the mains along the route, from CR510 to Old Winter Beach Road. The estimate will include costs based on an assumption that the Transmission main is 16" dia. to Sea Oaks WWTP, and the distribution main is 12" from Sea Oaks WWTP to Old Winter Beach Road, and 2" to 6" dia. stub-outs with valves at potential re-use customer service locations (12" stub-out at JI).
5. Prepare **preliminary report of findings** – the objective is to determine if the construction of a large diameter re-use transmission main is possible and feasible along the SR A-1-A ROW.

Task 3: Preliminary Engineering – Hydraulic Model/ system recommendations/ Final report

1. **Evaluation of the service area**, prepare an estimate of current and future re-use water (irrigation) needs. Prepare **hydraulic analysis/model of the IRCBUS re-use water system** proposed to service this area to determine and make recommendations for the system components, including the re-use main size(s), pump station(s) and storage tank(s), and other system infrastructure.
2. Prepare **revised preliminary construction plans** of the route of the mains, edited based on results of the modeling efforts.
3. Prepare **revised construction cost estimate** – edit estimate based on results of the modeling efforts and adding costs for storage tank and pump station at Sea Oaks WWTP.
4. Prepare the **Final Report discussing the feasibility** to run new Re-Use Water Mains south on SR A-1-A, from CR 510 to Old Winter Beach Road, and provide preliminary recommendations on the size and location of the re-use water transmission main and distribution mains in SR A-1-A and providing size of storage tanks and pumping station(s) located in Sea Oaks WWTP site.

See Exhibit "A" for location map and conceptual plan.

In connection with this project, Indian River County will provide the Engineer with a copy of any pertinent preliminary data or reports, all available drawings in electronic AutoCad format; all surveys, maps, record drawings and design drawings and other documentation in the possession of or reasonably available to the County that are pertinent to the project.

In order to execute this project in the most cost-effective manner with the most aggressive schedule, Schulke, Bittle & Stoddard, L.L.C. is using the following sub-consultants:

- **Houston, Schulke, Bittle & Stoddard, Inc. DBA Meridian Land Surveyors** - for the route and boundary survey(s).
- **KSM Engineering & Testing, Inc.** for soil boring / Geotechnical Evaluation.
- **Josan Construction** – to pot hole existing utilities

Services not included in this scope of work are:

- Any services associated with assisting Indian River County in review and evaluation of patent related disputes, issues, or claims including preparing to serve or serving as a consultant or witness for Indian River County in litigation, arbitration, public or private hearings, or other legal administrative proceedings involving patent related disputes, issues or claims.
- Any services in connection with the project not otherwise provided for in this scope of work.
- Final engineering design/permitting; final construction plans.

EXHIBIT '2'
FEE SCHEDULE
WORK ORDER NO. 3

Method and Amount of Compensation

Schulke, Bittle & Stoddard, L.L.C. proposes to provide the outlined Scope of Work (see Exhibit '1', attached and pre-ceding this exhibit) for compensation by IRC, the amounts listed below:

<u>Task 1: Survey and Base Plan Preparation</u>		<u>\$60,800.00</u>
-	Utility locates and Prepare route survey of SR A-1-A	\$ 8,500.00
-	Excavation / "pot holing" existing utilities, backfill, re-grade and grass disturbed areas. (if required). (assume 34 locations, by a licensed utility contractor)	\$40,800.00 *est.
-	Survey of "pot holed" utilities	\$ 4,000.00
-	Base Plan preparation	\$ 7,500.00
<u>Task 2: Preliminary Engineering – Re-use main route:</u>		<u>\$16,000.00</u>
-	Base Plan evaluation	\$ 2,000.00
-	Geotechnical data – soil borings (1 per 500 ft+- along route).	\$ 4,000.00
-	Preliminary Construction plan and cost estimate (of re-use mains)	\$ 7,500.00
-	Preliminary Report of Findings	\$ 2,500.00
<u>Task 3: Preliminary Engineering – Hydraulic Model/ system recommendations/ Final report</u>		<u>\$24,000.00</u>
-	Evaluation of service area, and hydraulic analysis/model of the IRCDUS re-use water system proposed to service this area	\$ 14,000.00
-	Revise/ update preliminary construction plans and cost estimate	\$ 4,000.00
-	Prepare Final Report – attend BCC and other public meetings (as required)	\$ 6,000.00
<u>Reimbursable Expenses:</u>		<u>\$ 2,000.00 est.</u>
-	Reimbursement for payment of direct costs, including Reproduction, copies, prints, mail, Fed-Ex, etc. (See next page for actual costs)	
TOTAL:		\$102,800.00

*est. = estimated amount. Actual cost will vary depending on quantity provided. Price based on cost of utility crew at \$1200 per day, and one trench excavation, survey and restoration per day

EXHIBIT '2'
FEE SCHEDULE
WORK ORDER NO. 3

Printing and Reproduction, Mail and delivery

The County shall make direct payment to our office for the cost of printing project plan sheets required for utility coordination and for copies of reports, drawings, specifications, and other pertinent items required by federal, state and local agencies from whom approval of the project must be obtained, material suppliers, and other interested parties, but may charge only for the actual cost of providing such copies based on the following tabulation:

8 1/2" x 11"	\$ 0.12/sheet	24 X 36 prints	\$ 2.00/ea
11" x 17"	\$ 0.50/sheet	CD	\$ 4.00/each

The county shall make direct payment to our office for the actual cost of mail, Fed-Ex, or similar costs for delivery of plans and documents to jurisdictional agencies, contractors, etc.

Application Fees

Not Applicable

EXHIBIT '3'
TIME SCHEDULE
WORK ORDER NO. 3

Time of Performance

The estimated time frame for completion of services from the approval of this Work Order is as follows:

Task 1 – Survey and Base Plan Preparation:

Utility locates, route survey, excavation/"pot holing", backfill, regrade and grass disturbed areas, survey of utilities, base plan preparation	4½ Months
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Task 2 – Preliminary Engineering – Re-Use Main Route:

Base plan evaluation, soil borings, preliminary construction plan, cost estimate, preliminary report of findings	1½ Months
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Task 3 – Preliminary Engineering – Hydraulic Model / System Recommendation / Final Report:

Evaluation of service area, hydraulic analysis/model of IRCDUS re-use water system, revise/update preliminary construction plans and cost estimate, prepare final report, attend BCC and other public meetings (as required)	2½ Months
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ATTACHMENT 'A' TO EXHIBIT 1
LOCATION MAP AND CONCEPTUAL PLAN
A-1-A RE-USE MAIN
I.R.C. UTILITIES DEPARTMENT

SCHULKE, BITTLE & STODDARD, L.L.C.
CIVIL & STRUCTURAL ENGINEERING · LAND PLANNING · ENVIRONMENTAL PERMITTING
CERTIFICATION OF AUTHORIZATION NO.: 00006668
1717 INDIAN RIVER BLVD., SUITE 201 VERO BEACH, FLORIDA 32960
TEL 772 / 770-9622 FAX 772 / 770-9496 EMAIL info@sbsengineers.com

16" AND 12" RE-USE WATER
MAIN ROUTE
(C.R. 510 TO OLD WINTER BEACH RD.)

ATTACHMENT A
1
OF 8



ATTACHMENT 'A' TO EXHIBIT 1
LOCATION MAP AND CONCEPTUAL PLAN
A-1-A RE-USE MAIN
I.R.C. UTILITIES DEPARTMENT

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16" AND 12" RE-USE WATER
MAIN ROUTE
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ATTACHMENT A
2
OF 8



ATTACHMENT 'A' TO EXHIBIT 1
LOCATION MAP AND CONCEPTUAL PLAN
A-1-A RE-USE MAIN
I.R.C. UTILITIES DEPARTMENT

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16" AND 12" RE-USE WATER
MAIN ROUTE
(C.R. 510 TO OLD WINTER BEACH RD.)

ATTACHMENT A
3
OF 8



NORTH

GRAPHIC SCALE

0 200



(IN FEET)

1 inch = 200 ft.

MATCHLINE 7
SEE SHEET 8

MATCHLINE 3
SEE SHEET 3

MATCHLINE 7
SEE SHEET 8

MATCHLINE 4
SEE SHEET 5

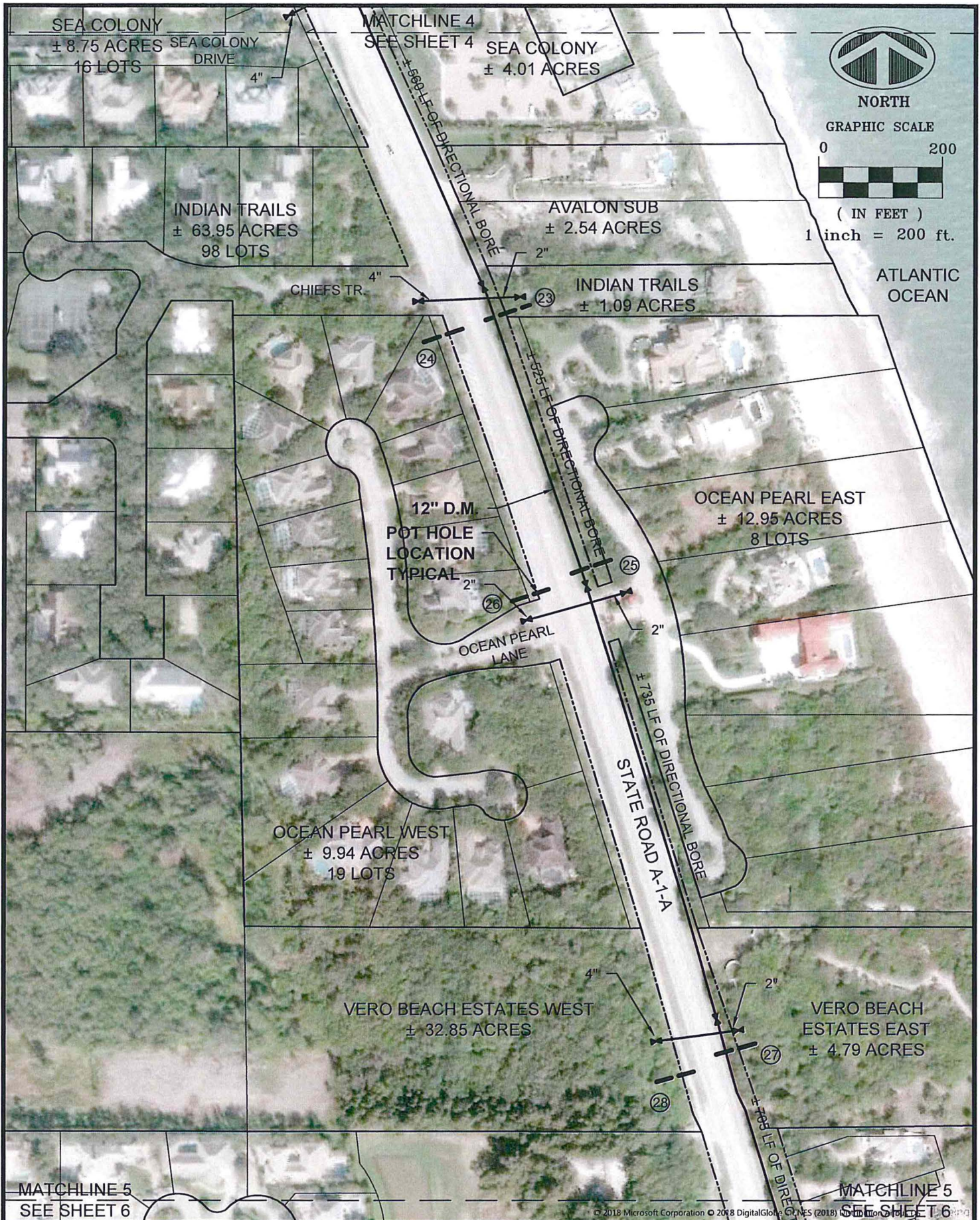
MATCHLINE 4
SEE SHEET 5

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ATTACHMENT A
4
OF 8



MATCHLINE 5
SEE SHEET 6

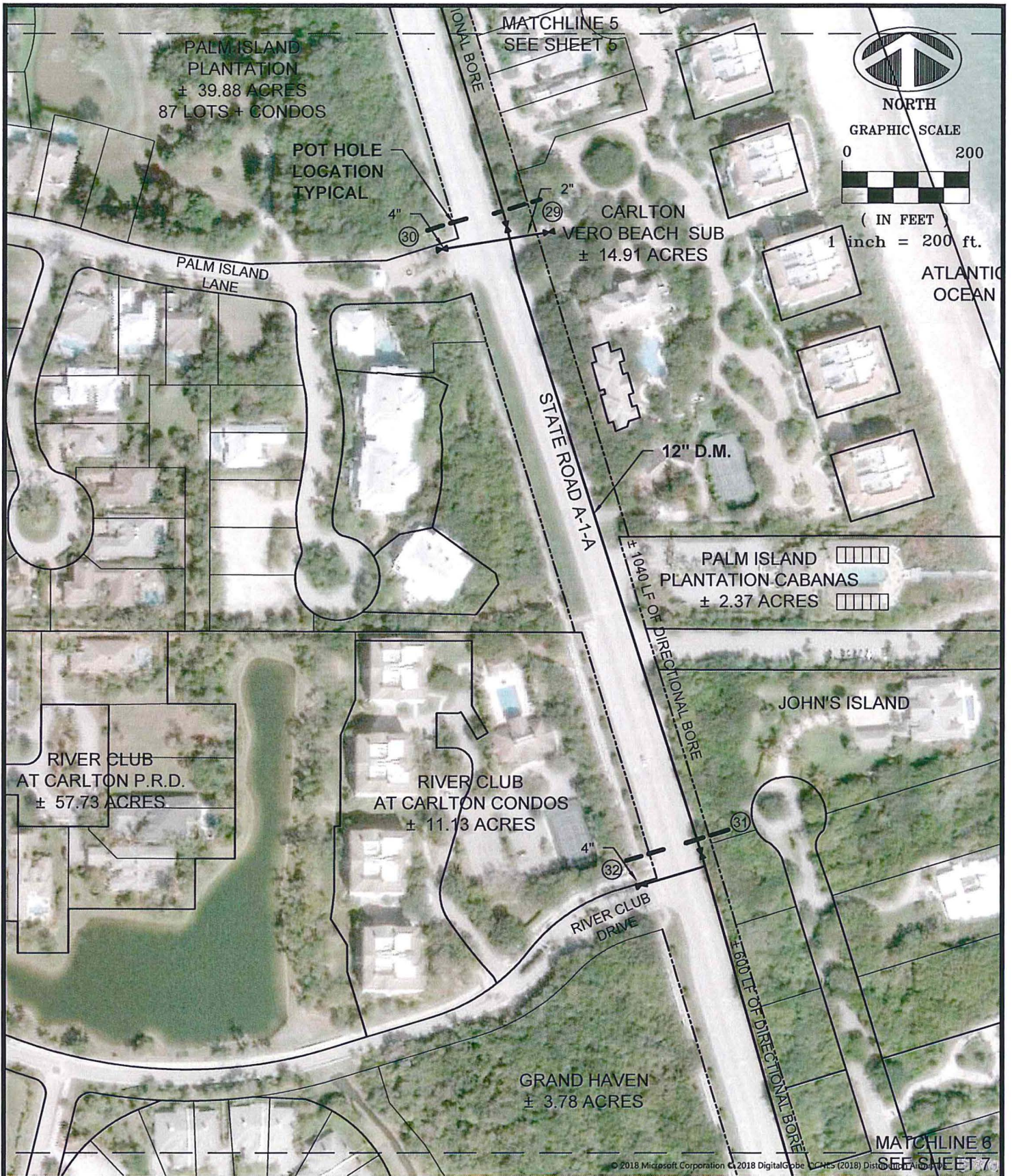
MATCHLINE 5
SEE SHEET 6

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ATTACHMENT A
5
OF 8





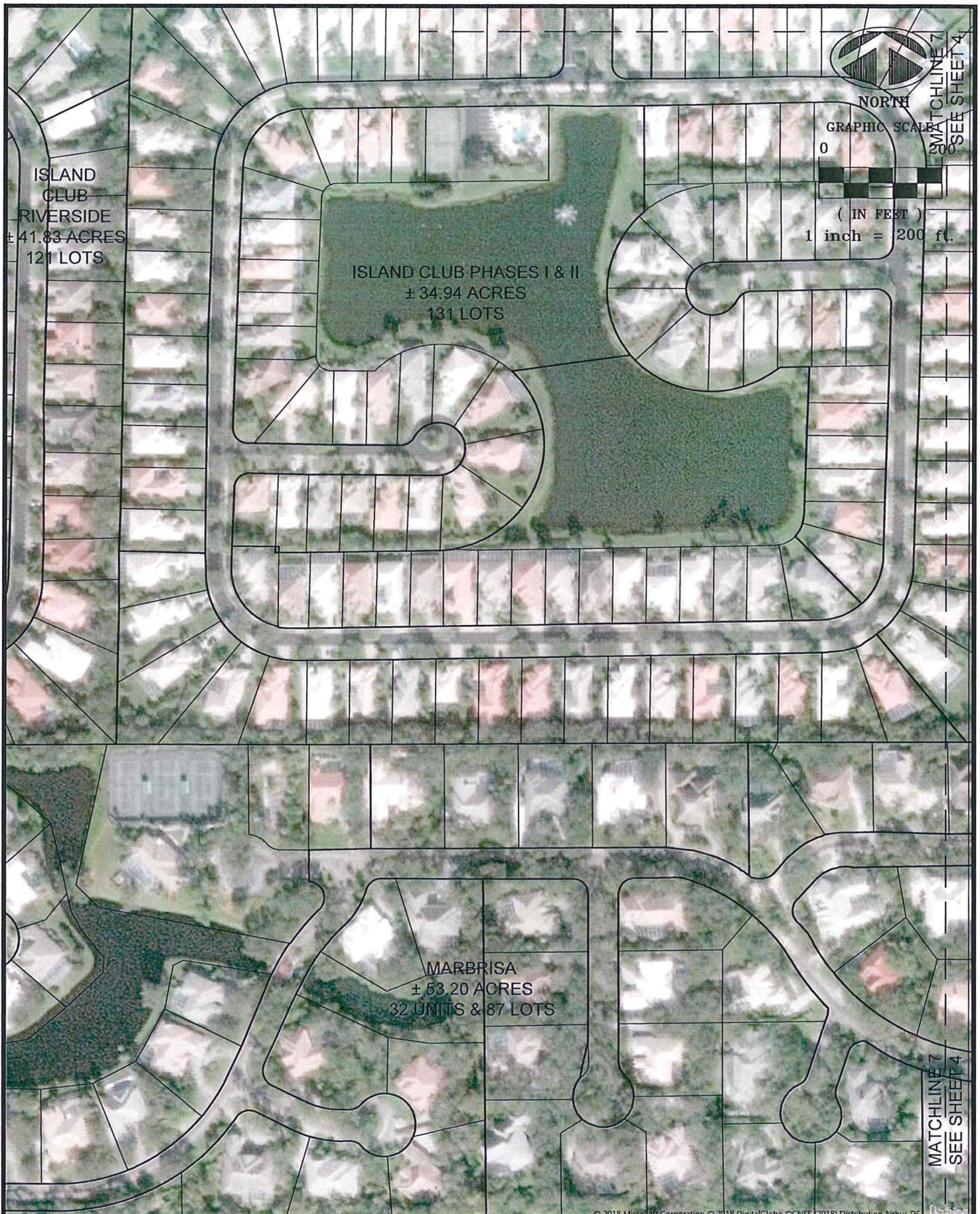
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MAIN ROUTE
(C.R. 510 TO OLD WINTER BEACH RD.)

ATTACHMENT A
7
OF 8



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OF 8