

Regular [ ]

**Department:** Water Utilities Department

5/12/14  
Date

Date \_\_\_\_\_

## II. FISCAL IMPACT ANALYSIS

**A. Five Year Summary of Fiscal Impact:**

Fiscal Years	2014	2015	2016	2017	2018
Capital Expenditures	<u>\$163,048.</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
External Revenues	<u>\$0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Program Income (County)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
In-Kind Match County	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
CCRT Funds	<u>0</u>				
NET FISCAL IMPACT	<u>\$163,048.</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
# ADDITIONAL FTE POSITIONS (Cumulative)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

**Budget Account No.:** Fund 4011 Dept 721 Unit W008 Object 6543

Is Item Included in Current Budget?      Yes   X        No       

Reporting Category N/A

**B. Recommended Sources of Funds/Summary of Fiscal Impact:**

One (1) time expenditure from user fees, connection fees, and balance brought forward.

C. Department Fiscal Review: Delia Morat

### III. REVIEW COMMENTS

**A. OFMB Fiscal and/or Contract Development and Control Comments:**

OFMB

*Dr. J. Jacobson* 517114  
Contract Development and Control  
5-7-14 *B. W. Keckler*

**B. Legal Sufficiency:**

Legal Sufficiency:

*[Signature]* 5/9/14

Assistant County Attorney

**C. Other Department Review:**

Department Director

This summary is not to be used as a basis for payment.

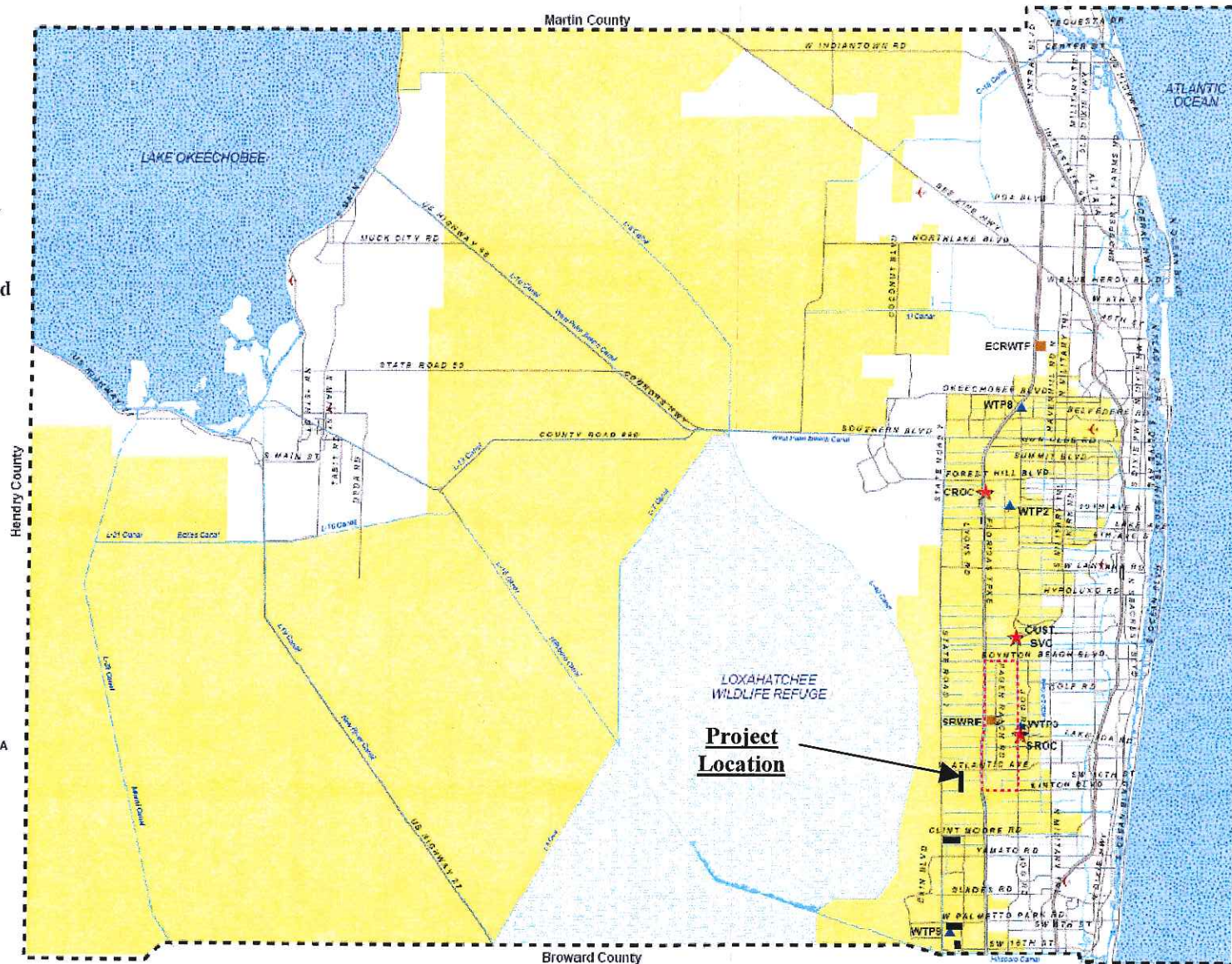




Palm Beach County  
Water Utilities  
Department  
Service Area (SA) and  
Major Facilities

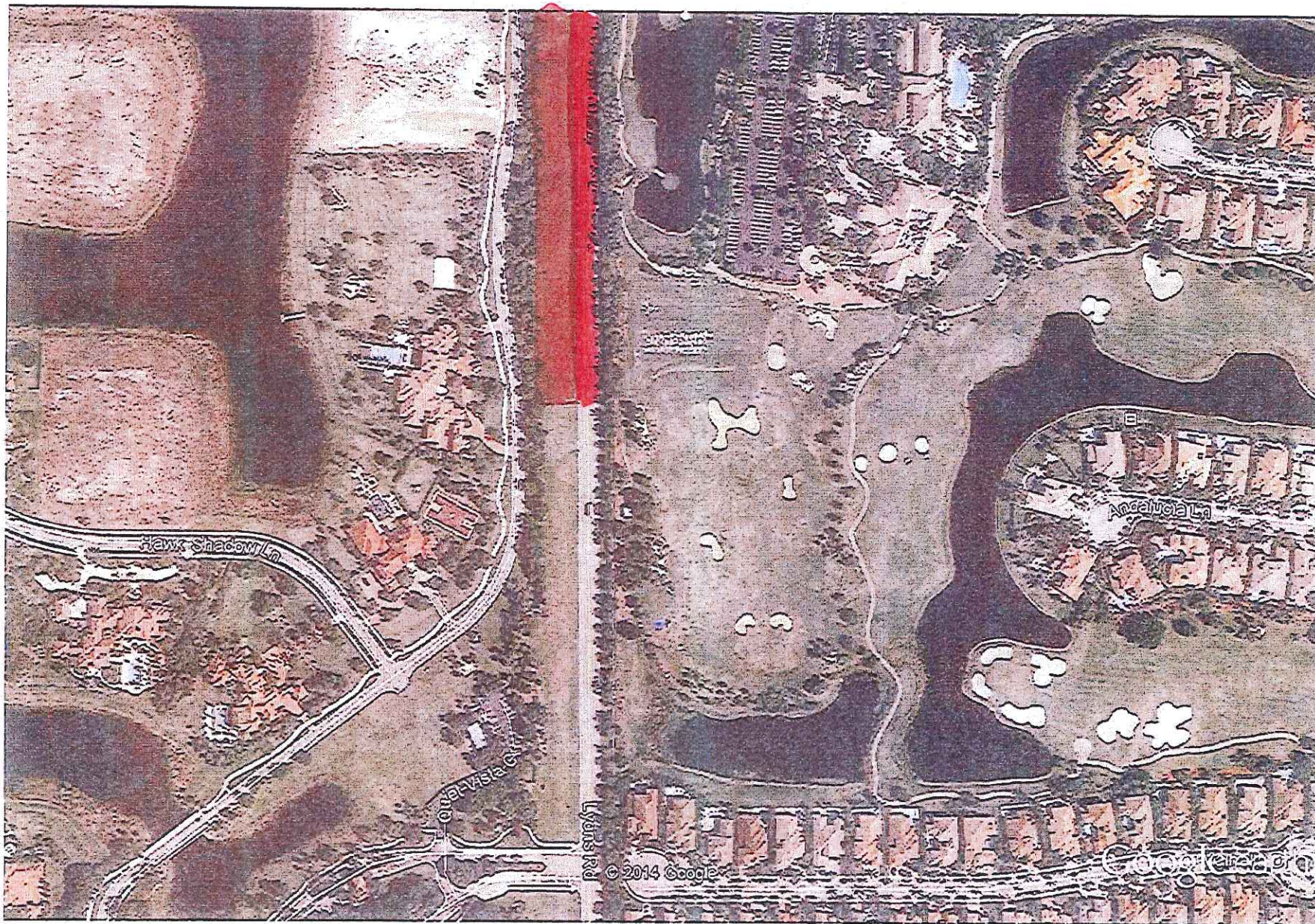
Legend

- P.B.C.W.U.D. SA
- MANDATORY RECLAIMED SA
- COUNTY LIMITS
- Administration
- Water Reclamation Plant
- Water Treatment Plant
- Wetlands



**Project Name WUD 14-056: Lyons Road 16" Reclaimed Water Main Extension From Hyder P.U.D. to W. Atlantic Ave.**





Google earth

feet  
meters

1000

500

 - PROJECT LIMITS

1/5





Google earth

feet  
meters

1000

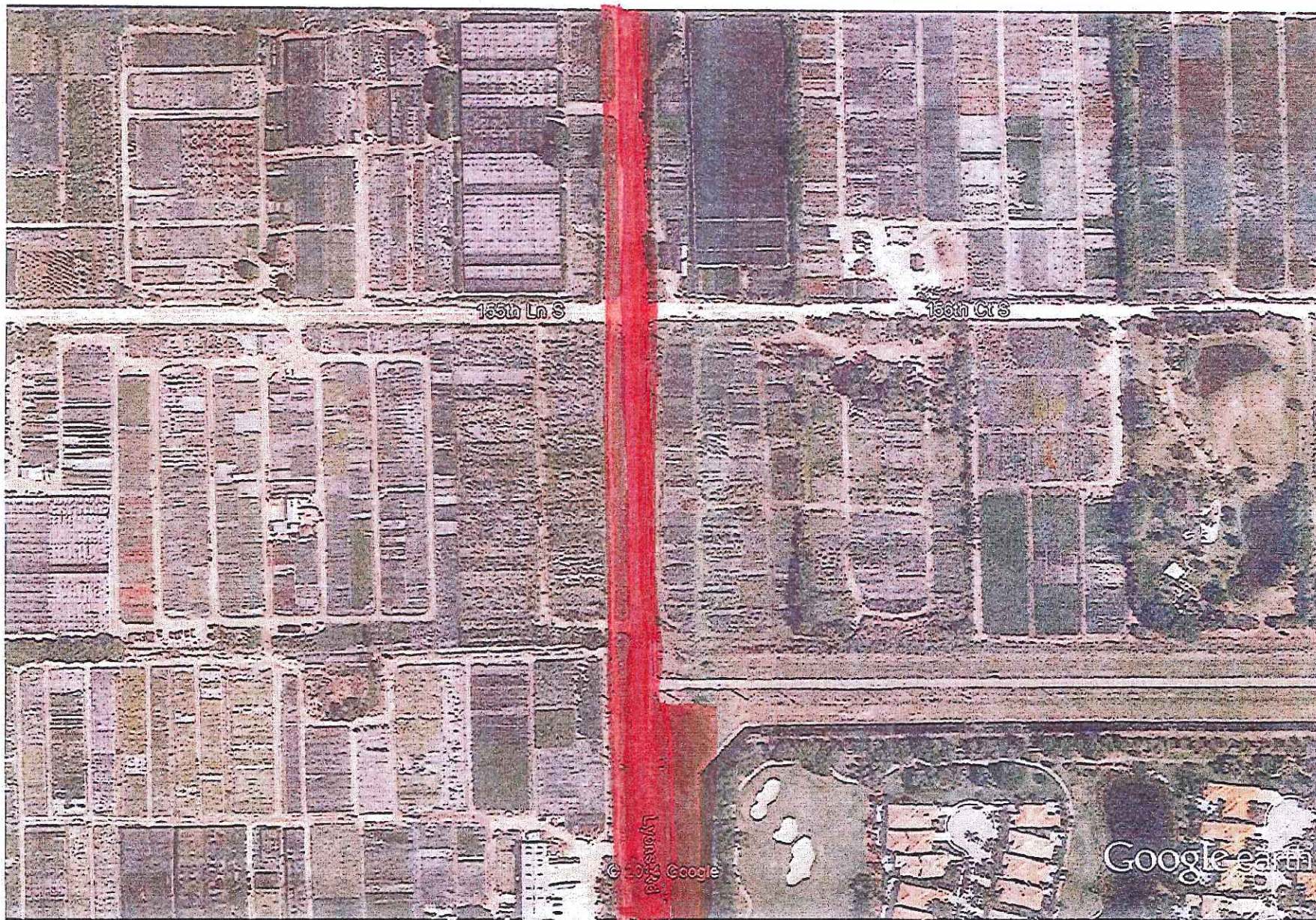
500



— PROJECT LIMITS

2/5





Google earth

feet  
meters

1000

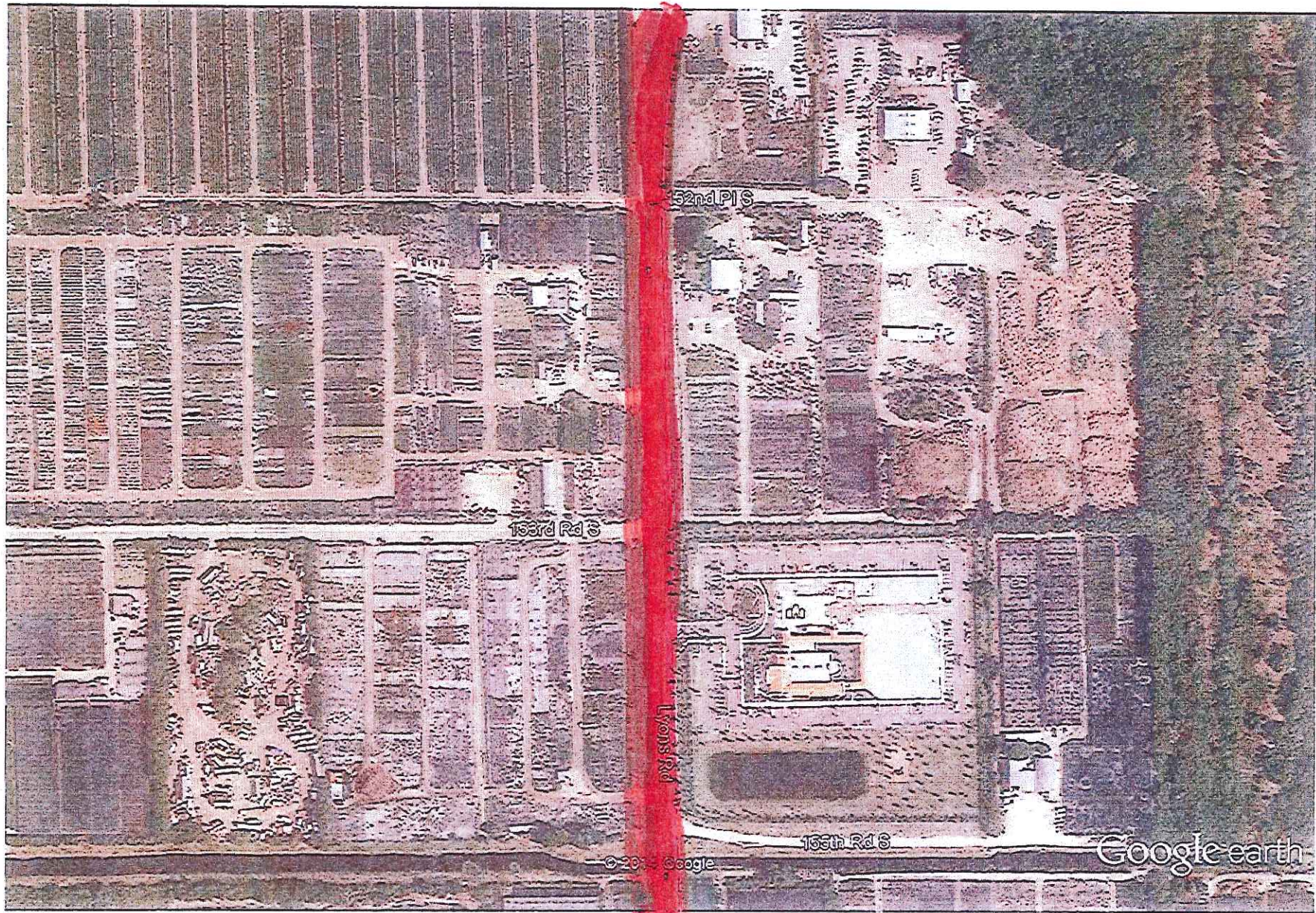
500

— PROJECT LIMITS

3/5







Google earth

feet  
meters

1000

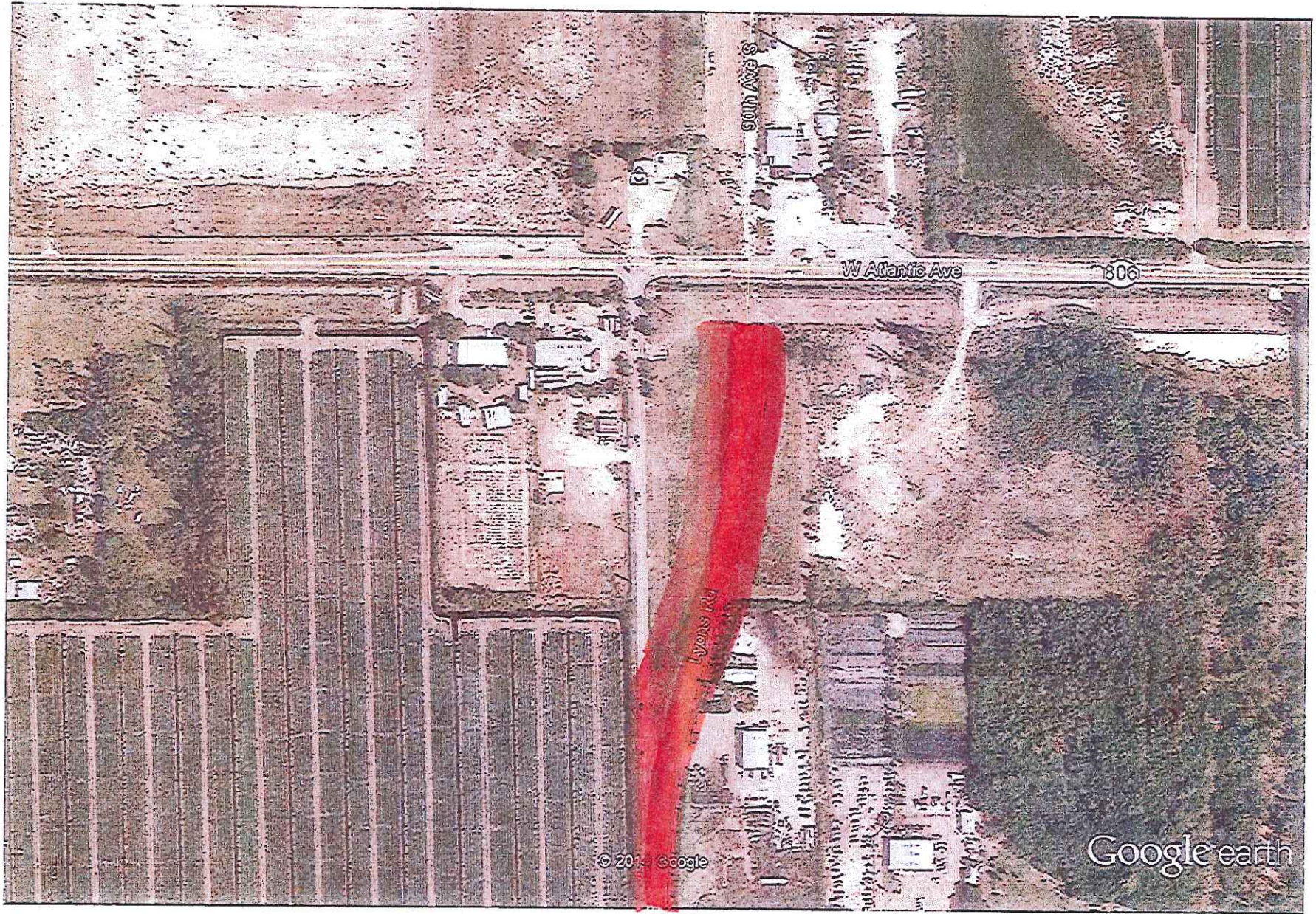
500



 - PROJECT LIMITS

4/5





Google earth

feet  
meters

1000

500

 - PROJECT LIMITS

5/5



**CONSULTANT SERVICES AUTHORIZATION NO. 11**

Project No. WUD 14-056

Budget Line Item No. 4011-721-W008-6543

Project Title: Lyons Road 16" Reclaimed Water Main Extension from Hyder P.U.D. to W. Atlantic Avenue

District No.: 5

**THIS AUTHORIZATION # 11** to the Contract for Consulting/Professional Services dated 05/03/2011 with an effective date of 06/03/2011 (Resolution/Document R2011-0634), by and between Palm Beach County and the Consultant identified herein, is for the Consultant Services described in Item 3 of this Authorization. The Contract provides for 87% SBE participation overall. This Consultant Services Authorization includes 68.03% overall participation. The cumulative SBE participation, including this authorization is 73.80% overall. Additional authorization will be utilized to meet or exceed the stated overall participation goal.

1. CONSULTANT: A.D.A. Engineering, Inc. (ADA)

2. ADDRESS: 1800 Old Okeechobee Road, Suite 202  
West Palm Beach, FL 33409

3. Description of Services to be provided by the Consultant:

**ADA will provide consulting services for topographic survey (including base maps), subsurface utility investigation, design and permitting for approximately 8,000 linear feet of 16" D.I.P. Reclaimed Water main from Hyder P.U.D. north to W. Atlantic Avenue.**

**See ATTACHMENT A.**

4. Services completed by the Consultant to date (Summary and Status of Authorizations):

**See ATTACHMENT E.**

5. Consultant shall begin work promptly on the requested services.

6. The compensation to be paid to the Consultant for providing the requested services shall be:

- A. Computation of time charges plus expenses, not to exceed N/A
- B. Fixed price of \$163,048.45.

7. This Authorization may be terminated by the County without cause or prior notice. In the event of termination not the fault of the Consultant, the Consultant shall be compensated for all services performed through the date of termination, together with reimbursable expenses (if applicable) then due.

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**PROJECT NO. WUD 14-056 AUTHORIZATION NO. 11**  
**Budget Line Item No. 4011-721-W008-6543**

8. As described in Section 7.5 of the CONTRACT, SBE participation is included in Attachment D under this Authorization. The attached Schedule 1 defines the SBE applied to this Authorization and Schedule 2 establishes the SBE contribution from each subconsultant (Letter of Intent to perform as an SBE).
9. EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, conditions and obligations of the Contract dated 05/03/2011 with an effective date of 06/03/2011 remain in full force and effect.

IN WITNESS WHEREOF, this Authorization is accepted, subject to the terms, conditions and obligations of the aforementioned Contract.

**PALM BEACH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA**

Sharon R. Bock, Clerk & Comptroller,  
Palm Beach County

Palm Beach County,  
Board of County Commissioners

ATTEST:

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_  
Priscilla A. Taylor, Mayor

Typed Name: \_\_\_\_\_  
Deputy Clerk

\_\_\_\_\_ Date

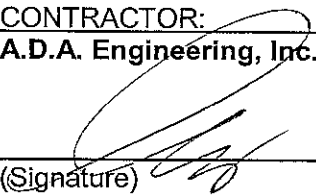
Approved as to Form and Legal  
Sufficiency

Signed: \_\_\_\_\_

Typed Name: \_\_\_\_\_  
County Attorney

CONTRACTOR:  
A.D.A. Engineering, Inc.

ATTEST:  
  
Witness

  
(Signature)

ALBERT BREGUZZI, V.P.  
(Name and Title)

Alex Vazquez, PE/Vice President  
(Name and Title)

(CORPORATE SEAL)

4/8/2014  
Date



## LIST OF ATTACHMENTS

**PROJECT NO. WUD 14-056 AUTHORIZATION NO. 11**  
**Budget Line Item No. 4011-721-W008-6543**

ATTACHMENT - A	Scope of Work
ATTACHMENT - B	Budget Summary
ATTACHMENT - C	Project Schedule
ATTACHMENT - D	SBE Schedule 1
ATTACHMENT - E	Authorization Status Report - Summary and Status of Authorizations
ATTACHMENT - F	Authorization Status Report – Summary of SBE/MWBE Tracking
ATTACHMENT - G	Location Map

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## **ATTACHMENT A**

### **CONSULTANT SERVICES AUTHORIZATION NO. 11**

#### **PALM BEACH COUNTY WATER UTILITIES DEPARTMENT ENGINEERING/PROFESSIONAL SERVICES**

#### **SCOPE OF WORK FOR**

#### **LYONS ROAD 16" RECLAIMED WATER MAIN EXTENSION FROM HYDER P.U.D. TO W. ATLANTIC AVENUE**

### **INTRODUCTION**

Palm Beach County (COUNTY) entered into an agreement entitled Contract for Engineering/ Professional Services - Palm Beach County Utilities Department Project No. WUD 11-005 (CONTRACT) with A.D.A. Engineering, Inc. (CONSULTANT) to provide engineering services for various general activities on (Reference Document R2011-0634). This Consultant Service Authorization will be performed under that CONTRACT.

This Consultant Services Authorization encompasses providing professional engineering design services for reclaimed water main (RCWM) installation on the west side of Lyons Road south of Atlantic Blvd.

### **BACKGROUND**

This project includes installing approximately 8,000 linear feet of 16" ductile iron pipe (D.I.P.) reclaimed watermain (RCWM) with all fittings and appurtenances on Lyons Road from Hyder P.U.D. north to W. Atlantic Avenue (See Attachment G).

### **SCOPE OF SERVICES**

CONSULTANT shall perform the engineering Scope of Services as described herein.

**Palm Beach County Water Utilities Department (PBCWUD) will provide the CONSULTANT the following information and/or be responsible for the following items:**

1. Assist CONSULTANT in obtaining as-built drawings for existing 20" D.I.P. RCWM at the intersection of Atlantic Ave. and Lyons Road.
  2. Provide relevant information of nearby completed design project(s) in a digital format with a hardcopy set, as available.
  3. Provide consolidated review comments of the 30%, 60% and 90% design drawing submittals within two (2) weeks of receipt from CONSULTANT.
  4. Prepare construction contract documents and technical specification.
  5. Perform all the necessary plan reproductions.
  6. Perform construction management and inspection services.
  7. Provide all construction and final certification services required for the project.
  8. Pay for applicable permitting fees.
-



**The CONSULTANT will be responsible for the following items:**

**Task 1 – Data Collection:**

**1.1.1 General Services for Survey Phase:**

The CONSULTANT will retain the services of Cardno TBE to furnish a Survey topographical with horizontal baseline and vertical control in plan view to provide a basis for the proposed layout and design in state-plane coordinate system. The surveys shall be provided in a digital format. The following is the scope for Cardno TBE:

1. Cardno TBE will perform a topographic survey from 1,000' north of the north edge of pavement of Quiet Vista Circle to 100' south of the south edge of pavement of Atlantic Avenue (SR806), within the existing right of way of Lyons Road, except at the northern end of the project where Lyons Road "Y's", at which point the westerly termination of the topographic survey will extend to one measurement past the toe of slope (approximately 60' west of the west edge of pavement).
2. Cross sections will be taken at approximately 100' intervals, except along the southerly 1,300' where cross sections will be taken at approximately 200' intervals.
3. The survey will include the location of two headwalls along the west r/w line along with their associated pipe invert and size as well as the existing side street cross drains located along the west side of the project.
4. Horizontal datum will be NAD 83/latest adjustment and the vertical datum will be based upon NAVD 88.
5. A title search for right of way and easement documents will be performed within the entire Lyons Road R/W corridor.
6. Right of Way will be established based upon existing plat information and the information received through the right of way and easement search. A baseline of survey will be created meeting the design team's needs.

**1.1.2 Utility Location (Optional):**

If required, Cardno TBE can perform the Utility Locate (test-hole) Set Up (Designation).

1. Cardno TBE will set up each test hole by use of electromagnetic induction or GPR (ground penetrating radar) methods. This will prevent "empty" test holes caused by performing locates on marks provided by the Florida One Call System.
2. Cardno TBE will provide up to 10 utility locates as directed by the design engineer. At each of these sites, depth of cover will be obtained along with the approximate size and type of utility found.

Utility locate information will include northing, easting, elevation, depth of cover along with size and type of utility found.



**Subsurface Utility Engineering Conditions and Understandings**

The utility markings are for design purposes only. The Florida One Call must be notified forty-eight (48) hours in advance of any excavation.

Accuracy of Geophysical Mapping methods, although highly reliable, is subject to outside interference. Some examples are: depth, soil conditions, material conductivity, and other geological anomalies that may distort electromagnetic and GPR frequencies.

Cardno TBE will make every effort possible utilizing state of the art technology to designate underground utilities; however there are no guarantees that all underground utilities/structures will be detected.

**Assumptions:**

Pavement restoration under this scope and fee estimate includes "Cold Pavement Patch" only. If additional restoration requirements are necessary an additional fee proposal to cover the additional expense will be provided.

If additional maintenance of traffic is required beyond standard Survey MOT capabilities, then an additional fee proposal to cover the additional expense will be provided.

**Task 2 - Water Service Line and Water Main Design:**

The CONSULTANT will prepare and furnish plan and profile for the reclaimed watermain at 1" = 20' scale on 24" x 36" drawing size. Conflicts will be clearly called out on the plans with associated top of pipe, pipe material, elevations and clearances. Based on the scale and the typical number of details required for this type of project, the full set of plans is assumed to be 26 sheets with the sheet descriptions as follows:

Sheet 1:	Cover Sheet
Sheet 2:	Legend and Abbreviations
Sheet 3:	Key Map
Sheet 4:	Survey Control Plans
Sheet 5:	Master Water Plan
Sheets 6-21:	Plan and Profile View for Proposed Reclaimed Watermain
Sheet 22:	Pavement and Landscape Restoration Details
Sheets 23-26:	Latest Standard WUD Details (Valve, Thrust Block, Signage, Etc)

The CONSULTANT shall provide five (5) submittals during the design process. The first submittal will be a Basemap showing sheet delineations, as-built information and all collected survey data. The following interim design submittals will include pipeline layout and details in the format of 30%, 60% and 90% design drawings. The CONSULTANT will complete 100% design drawings after receipt of 90% review comments. The CONSULTANT will also prepare opinion of probable construction cost at the 100% submittal.

The CONSULTANT shall submit two (2) sets of black line drawings at each interim stage of completion for review and comment from PBCWUD and five (5) sets of signed and sealed black line drawings at 100% submittal. The CONSULTANT will submit the CAD files and other electronic data via CD along with the 100% submittal.



### **Task 3 - Permitting:**

At the outset of the Design Phase, the CONSULTANT shall consult with the appropriate permitting agencies to determine potential permitting requirements. Agencies anticipated to have jurisdiction of the project include: Palm Beach County Land Development and Lake Worth Drainage District (LWDD).

Permit applications shall be completed by the CONSULTANT as required by the above agencies. Associated permit fees will be paid by the PBCWUD.

In addition to preparing the permit applications for appropriate regulatory agencies, CONSULTANT shall assist the PBCWUD in consultations with the appropriate authorities. Consultant services shall include the following:

1. Attend one (1) pre-application meeting with the staff of each regulatory agency (2 meetings total).
2. Attend one (1) meeting with each of the regulatory agencies during review of the final permit applications as required (2 meetings total).
3. Respond to request(s) for additional information from each regulatory agency.
4. Provide County with one (1) set of approved plans from permitting agencies as may be applicable.
5. Prepare permit applications.

### **Assumptions:**

In addition to the work items discussed above, the following assumptions were made in establishing the scope of work for this Consultant Services Authorization and associated fee:

1. PBCWUD latest construction standards will be incorporated into the reclaimed water main system design.
2. The design is based on the federal, state and local codes and standards in effect at the beginning of the project. Revisions required for compliance with any subsequent changes to those regulations is considered an "Additional Services" item.
3. Bid and award services will not be performed as part of this project.
4. Construction management and inspection services will not be performed as part of this project.
5. PBC Health Department permitting will not be required for reclaimed watermain construction.

### **COMPENSATION**

COUNTY agrees to pay CONSULTANT a fix fee of **\$163,048.45** for the Scope of Services provided for in this Consultant Services Authorization in accordance with Section 5 of the CONTRACT. A breakdown of the fee is shown in Attachment A.

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## BUDGET SUMMARY

4/8/2014

[illegible]



ATTACHMENT - C

PROJECT SCHEDULE

SCHEDULE

The completion dates for this work will be as follows (starting from CONSULTANT'S receipt of Notice-to-Proceed).

<u>Engineering Services</u>	<u>Completion Date From Notice to Proceed</u>
Base Map Submittal	4 Weeks
30% Design	4 Weeks
60% Design	4 Weeks
90% Design	4 Weeks
100% Design	2 Weeks
Permitting	2 Weeks
	Total 140 Calendar Days



ATTACHMENT D

SCHEDULE #1

LIST OF PROPOSED SBE-M/WBE PRIME/SUBCONTRACTORS

PROJECT NAME: Lyons Road 16" Reclaimed Water Main Extension From Hyder P.U.D. to W. Atlantic Avenue PROJECT NUMBER: WJD 14-056

PROJECT OF PRIME BIDDER: A.D.A. Engineering, Inc. ADDRESS: 1800 Old Okeechobee, Suite 202, West Palm Beach, FL 33409

CONTACT PERSON: Alex Vazquez, PE PHONE NO.: 561-615-8880, Ext 201 FAX NO.: 561-615-8858

BID OPENING DATE: N/A DEPARTMENT: Water Utilities

Name, Address and Telephone Number of Minority Contractor	PLEASE IDENTIFY ALL APPLICABLE CATEGORIES (Check one or both Categories)		Dollar Amount				
	Minority Business	Small Business	Black	Hispanic	Woman	Caucasian	Other (Please Specify)
A.D.A. Engineering, Inc. 1800 Old Okeechobee Rd, Suite 202 West Palm Beach, FL 33409 (561) 615-8880	<input checked="" type="checkbox"/>	<input type="checkbox"/>	\$ -	\$ 110,932.82	\$ -	\$ -	\$ -
	<input type="checkbox"/>	<input type="checkbox"/>	\$ -	\$ -	\$ -	\$ -	\$ -
	<input type="checkbox"/>	<input type="checkbox"/>	\$ -	\$ -	\$ -	\$ -	\$ -
	<input type="checkbox"/>	<input type="checkbox"/>	\$ -	\$ -	\$ -	\$ -	\$ -
	<input type="checkbox"/>	<input type="checkbox"/>	\$ -	\$ -	\$ -	\$ -	\$ -
PRIME CONTRACTOR TO COMPLETE:	TOTAL		\$ -	\$ 110,932.82	\$ -	\$ -	\$ -

BID PRICE: \$163,048.45 Total Value of SBE Participation \$110,932.82

NOTE: 1. The amount listed on this form for a Subcontractor must be supported by price or percentage included on Schedule 2 or a proposal from each Subcontractor listed in order to be counted toward goal attainment.

2. Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both an SBE and M/WBE, please indicate the dollar amount under the appropriate category.

3. M/WBE information is being collected for tracking purposes only.

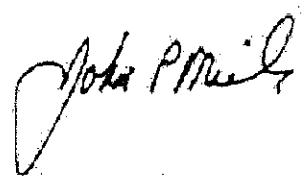




State of Florida  
*Minority, Women &  
Service-Disabled Veteran*  
Business Certification

A.D.A. Engineering, Inc.

Is certified under the provisions of  
287 and 295.187, Florida Statutes for a period from:

 04/24/2012 to 04/24/2014

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John P. Miles, Secretary

Florida Department of Management Services  
Office of Supplier Diversity



**AUTHORIZATION STATUS REPORT**  
**GENERAL UTILITY, ARCHITECTURAL AND VALUE ENGINEERING SERVICES**

[illegible]

**ATTACHMENT - F**

**AUTHORIZATION STATUS REPORT  
GENERAL UTILITY, ARCHITECTURAL AND VALUE ENGINEERING SERVICES**

**SUMMARY OF  
SMALL BUSINESS TRACKING SYSTEM**

<b>Total</b>	
<b>Current Proposal</b>	
Value of Authorization No. 11:	\$163,048.45
Value of SBE Letters of Intent	\$110,932.82
Actual Package	68.03%
<b>Signed Authorizations</b>	
Total Value of Authorizations	\$604,915.22
Total Value of SBE Signed Subcontracts	\$455,849.10
Actual Percentage	75.35%
<b>Signed Authorizations Plus Current Proposal</b>	
Total Value of Authorizations	\$767,963.67
Total Value of Subcontracts & Letters of Intent	\$566,781.92
Actual Percentage	73.80%
<b>GOAL</b>	<b>87.00%</b>

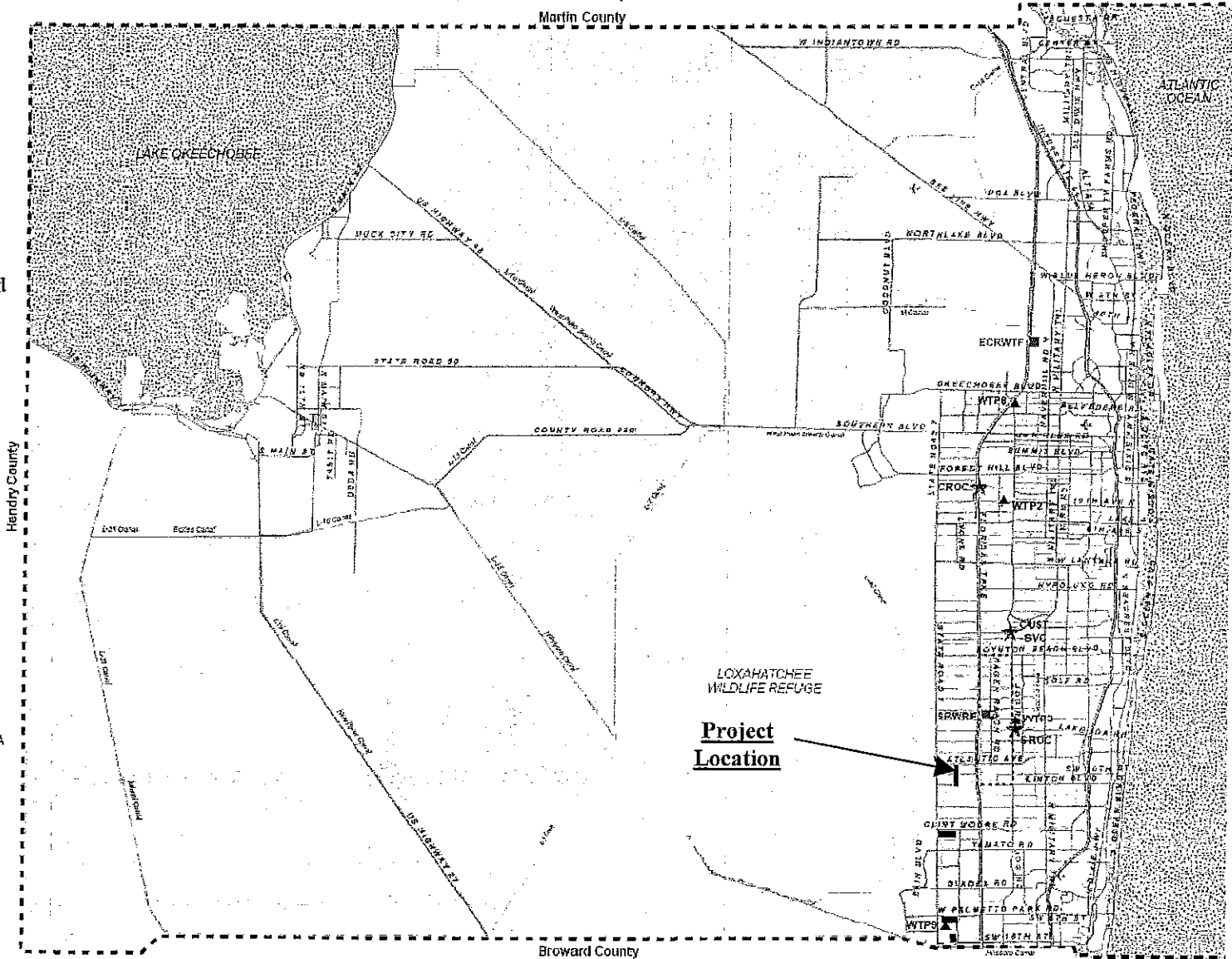


ATTACHMENT G



Palm Beach County  
Water Utilities  
Department  
Service Area (SA) and  
Major Facilities

- Legend
- P.B.C.W.U.D. SA
  - MANDATORY RECLAIMED SA
  - COUNTY LIMITS
  - Administration
  - Water Reclamation Plant
  - Water Treatment Plant
  - Wetlands



Project Name WUD 14-056: Lyons Road 16" Reclaimed Water Main Extension From Hyder P.U.D. to W. Atlantic Ave.

April 4, 2014



Mr. Alex Vazquez, PE  
Vice President  
A.D.A. Engineering, Inc.  
8550 NW 33 Street, Suite 101  
Doral, Florida 33122

Cardno TBE

3427 NW 55th Street  
Ft. Lauderdale FL 33309  
USA  
Phone 954.938.9389  
Fax 954.938.6909  
Email tbe@CardnoTBE.com

[www.CardnoTBE.com](http://www.CardnoTBE.com)

Re: Topographic Survey – Lyons Road from south side of SR806, south for approximately 1.5 miles.

Mr. Vazquez:

Cardno TBE appreciates the opportunity to provide surveying support services on this very important project.

**Topographic Survey:**

Cardno TBE will perform a topographic survey from 1,000' north of the north edge of pavement of Quiet Vista Circle to 100' south of the south edge of pavement of Atlantic Avenue (SR806), within the existing right of way of Lyons Road, except at the northern end of the project where Lyons Road "Y's", at which point the westerly termination of the topographic survey will extend to one measurement past the toe of slope (approximately 60' west of the west edge of pavement). See the attached sketch for project limits.

Cross sections will be taken at approximately 100' intervals.

The survey will include the location of four headwalls, accessible drainage structures and culverts along with their associated inverts and pipe sizes.

Horizontal datum will be NAD 83/latest adjustment and the vertical datum will be based upon NAVD 88.

A title search for right of way and easement documents will be performed within the Lyons Road R/W corridor.

Right of Way will be established based upon existing plat information and the information received through the right of way and easement search. A baseline of survey will be created meeting the design team's needs.

Australia • Belgium • Indonesia • Kenya • New Zealand • Papua New Guinea  
United Arab Emirates • United Kingdom • United States • Operations in 60 countries



Deliverable:

The topographic survey, existing right of way (based upon r/w and easement research) and baseline of survey will be provided in an AutoCAD base map file for subsequent reference and use by the design engineer. This estimate does not include boarded sheets files or signed and sealed hard copies.

**Lump Sum Fee Topographic Survey:**

Office Support/Field Effort					
	Rate per Hour	Multiplier	Loaded Rate	Est. Hours	Est. Fees
Project Manager	\$59.39	3.0	178.17	16.00	\$ 2,850.72
Senior Surveyor and Mapper	\$43.20	3.0	129.60	32.00	\$ 4,147.20
Surveyor and Mapper	\$37.60	3.0	112.80	0.00	\$ -
SUE Manager	\$34.66	3.0	103.98	0.00	\$ -
Survey Technician	\$28.85	3.0	86.55	61.00	\$ 5,279.55
Utility Locator	\$26.74	3.0	80.22	0.00	\$ -
Engineering Technician	\$21.00	3.0	63.00	0.00	\$ -
Survey Party Chief	\$21.97	3.0	65.91	144.00	\$ 9,491.04
Instrument Man	\$15.00	3.0	45.00	144.00	\$ 6,480.00
Rod Man	\$12.25	3.0	36.75	144.00	\$ 5,292.00
Administrative Assistant	\$24.02	3.0	72.06	2.00	\$ 144.12
Survey Truck	\$26.00	1.0	26.00	144.00	\$ 3,744.00
Designating Truck	\$22.00	1.0	22.00	0.00	\$ -
Locating Truck	\$53.00	1.0	53.00	0.00	\$ -
Sub Total					\$ 37,428.63
MOT Expense=					\$ -
Lump Sum Fee -Topographic Survey					\$ 37,428.63

**Lump Sum Fee Title Search (right of way and easements):**                      **\$9,500.00**

### **Optional Services:**

If required, Cardno TBE will provide utility locates utilizing the following procedures:

#### **Utility Locate (test hole) Set Up (Designation):**

Cardno TBE will set up each test hole by use of electromagnetic induction or GPR (ground penetrating radar) methods. This will prevent "empty" test holes caused by performing locates on marks provided by the Florida One Call System.

#### **Utility Locating (test hole):**

Cardno TBE will provide up to 10 utility locates as directed by the design engineer. At each of these sites, depth of cover will be obtained along with the approximate size and type of utility found.

Utility locate information will include northing, easting, elevation, depth of cover along with size and type of utility found.

#### **Survey Support:**

Cardno TBE will utilize existing project control to stake each potential conflict site. After the utility locates have been completed, each test hole will be mapped from existing project control, processed and placed in the original topographic AutoCAD file.

#### **Deliverable:**

AutoCAD file depicting the horizontal location of each test hole completed. In addition to the 2D cadd file, a test hole summary report in excel format will be provided indicating the northing, easting, elevation, depth of cover, size and type of utility found.

This estimate does not include boarded sheets files or signed and sealed hard copies.

### **Subsurface Utility Engineering Conditions and Understandings**



The utility markings are for design purposes only. The Florida One Call must be notified forty-eight (48) hours in advance of any excavation.

Accuracy of Geophysical Mapping methods, although highly reliable, is subject to outside interference. Some examples are: depth, soil conditions, material conductivity, and other geological anomalies that may distort electromagnetic and GPR frequencies.

Cardno TBE will make every effort possible utilizing state of the art technology to designate underground utilities; however there are no guarantees that all underground utilities/structures will be detected.

Assumptions:

Pavement restoration under this scope and fee estimate includes "Cold Pavement Patch" only. If additional restoration requirements are necessary an additional fee proposal to cover the additional expense will be provided.

If additional maintenance of traffic is required beyond standard Survey MOT capabilities, then an additional fee proposal to cover the additional expense will be provided.

Permits are not included in this estimate.

Utility Locate Estimate:

Office Support/Field Effort					
	Rate per Hour	Multiplier	Loaded Rate	Est. Hours	Est. Fees
Project Manager	\$59.39	3.0	178.17	2.00	\$ 356.34
Senior Surveyor and Mapper	\$43.20	3.0	129.60	2.00	\$ 259.20
Surveyor and Mapper	\$37.60	3.0	112.80	0.00	\$ -
SUE Manager	\$34.66	3.0	103.98	0.00	\$ -
Survey Technician	\$28.85	3.0	86.55	6.00	\$ 519.30
Utility Locator	\$26.74	3.0	80.22	12.00	\$ 962.64
Engineering Technician	\$21.00	3.0	63.00	12.00	\$ 756.00
Survey Party Chief	\$21.97	3.0	65.91	6.00	\$ 395.46
Instrument Man	\$15.00	3.0	45.00	18.00	\$ 810.00
Rod Man	\$12.25	3.0	36.75	0.00	\$ -
Administrative Assistant	\$24.02	3.0	72.06	1.00	\$ 72.06
Survey Truck	\$26.00	1.0	26.00	6.00	\$ 156.00

Designating Truck	\$22.00	1.0	22.00	12.00	\$ 264.00
Locating Truck	\$53.00	1.0	53.00	12.00	\$ 636.00
<b>Sub Total</b>					<b>\$ 5,187.00</b>

MOT Expense=

\$ -

Estimated Fee (10 Test Holes)


\$ 5,187.00

- Cost Per Test Hole \$518.70/minimum 6 per request.

Cardno TBE is looking forward to working with A.D.A and Palm Beach County Water Utilities Department on this very important project.

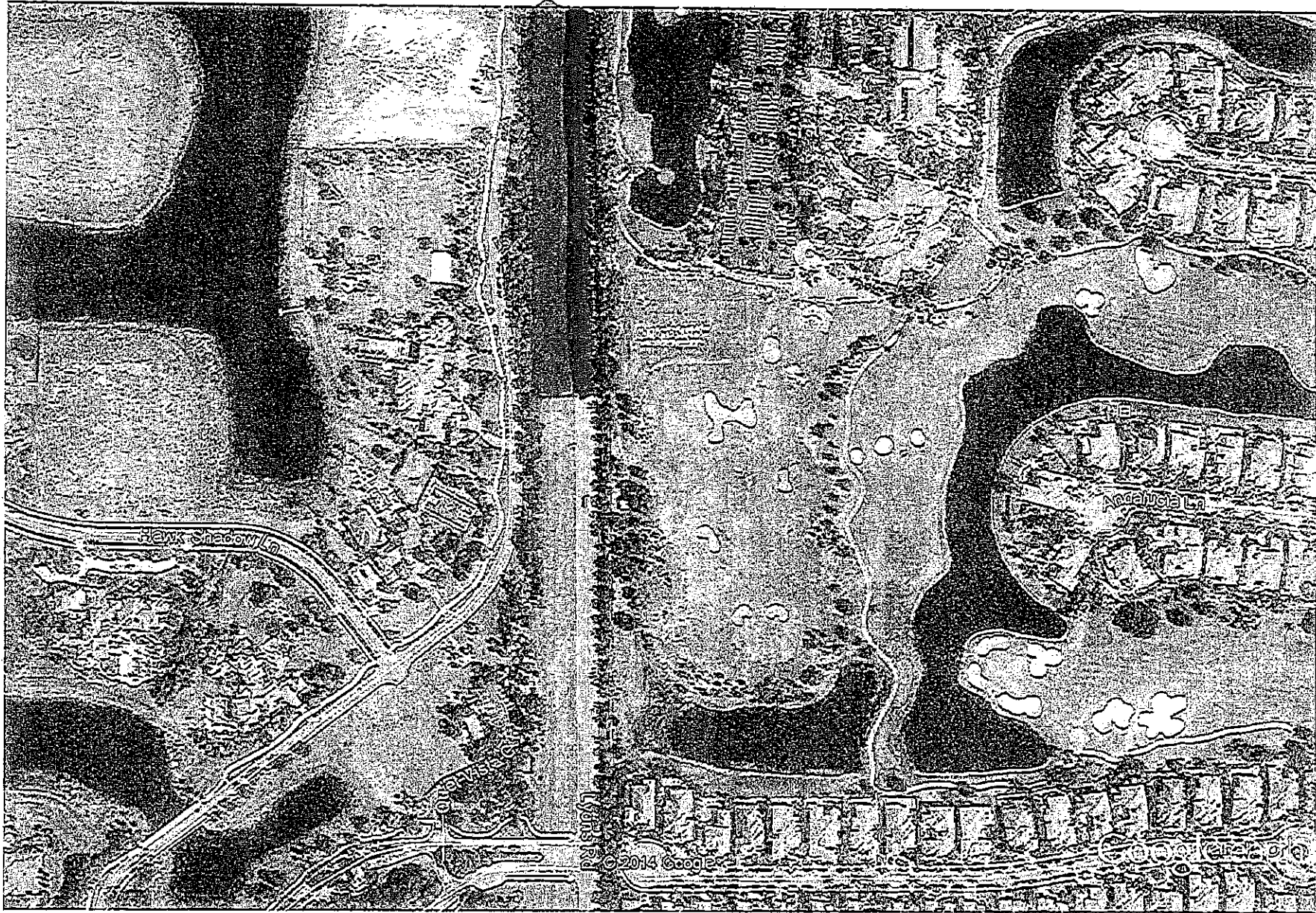
If you have any questions, please give me a call at 954-938-9389.

Sincerely,



Mark R. Sowers  
Director  
For Cardno TBE  
Direct Line 954-938-9389 ext. 207






Google earth

feet  
meters

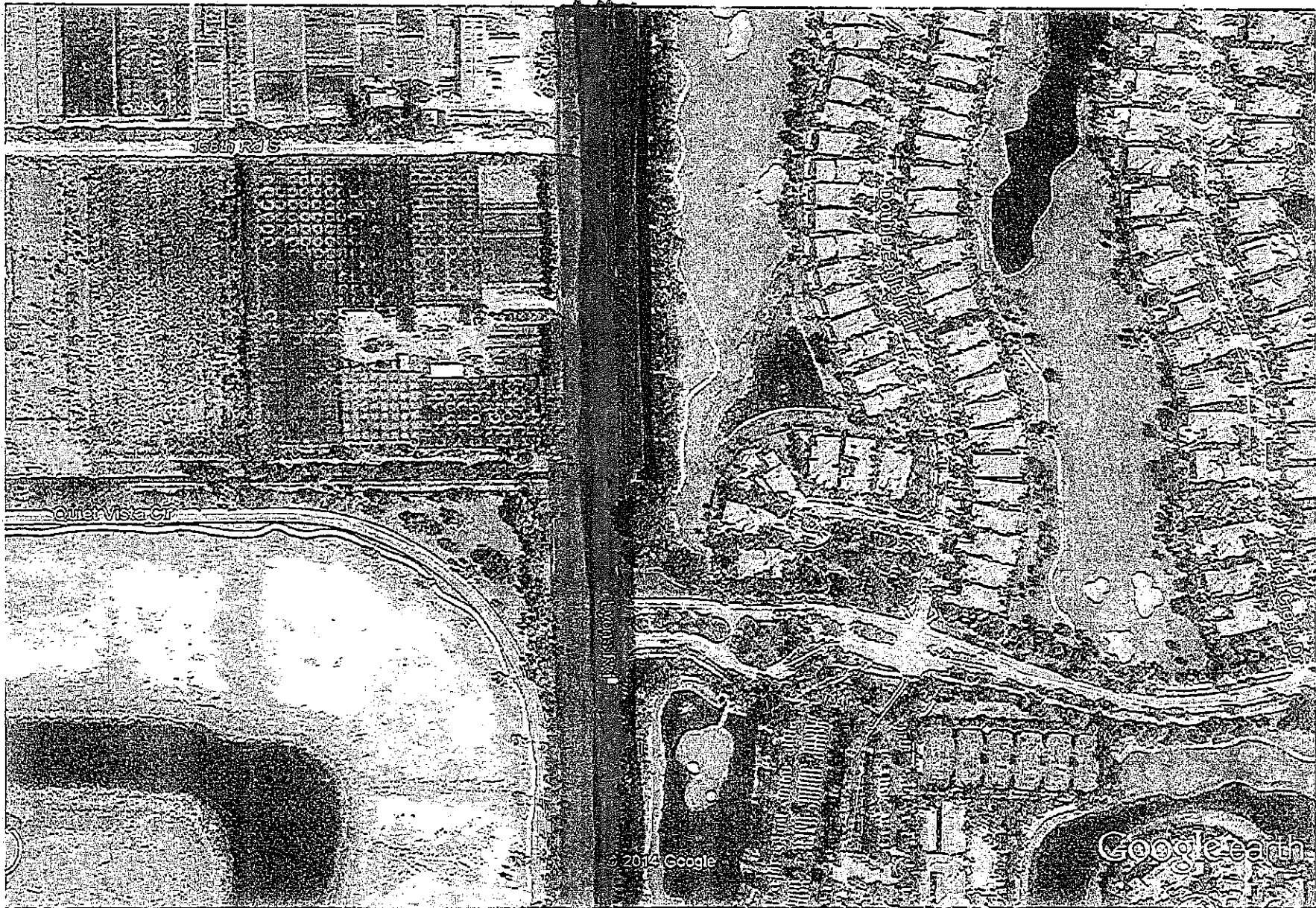
1000

500



 - PROJECT LIMITS

1/5



Google earth

feet  
meters

1000

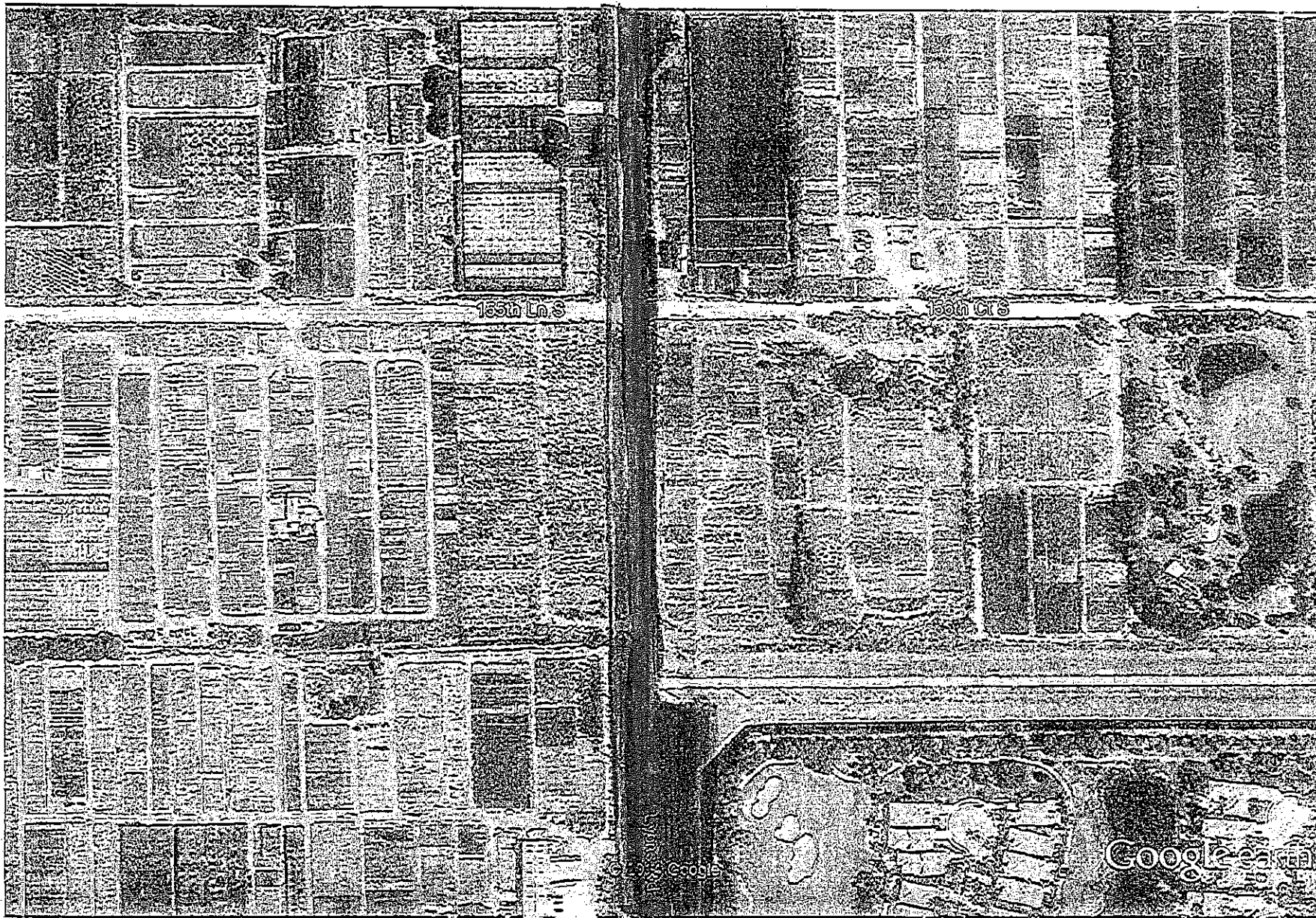
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— PROJECT LIMITS

2/5






Google earth

feet  
meters

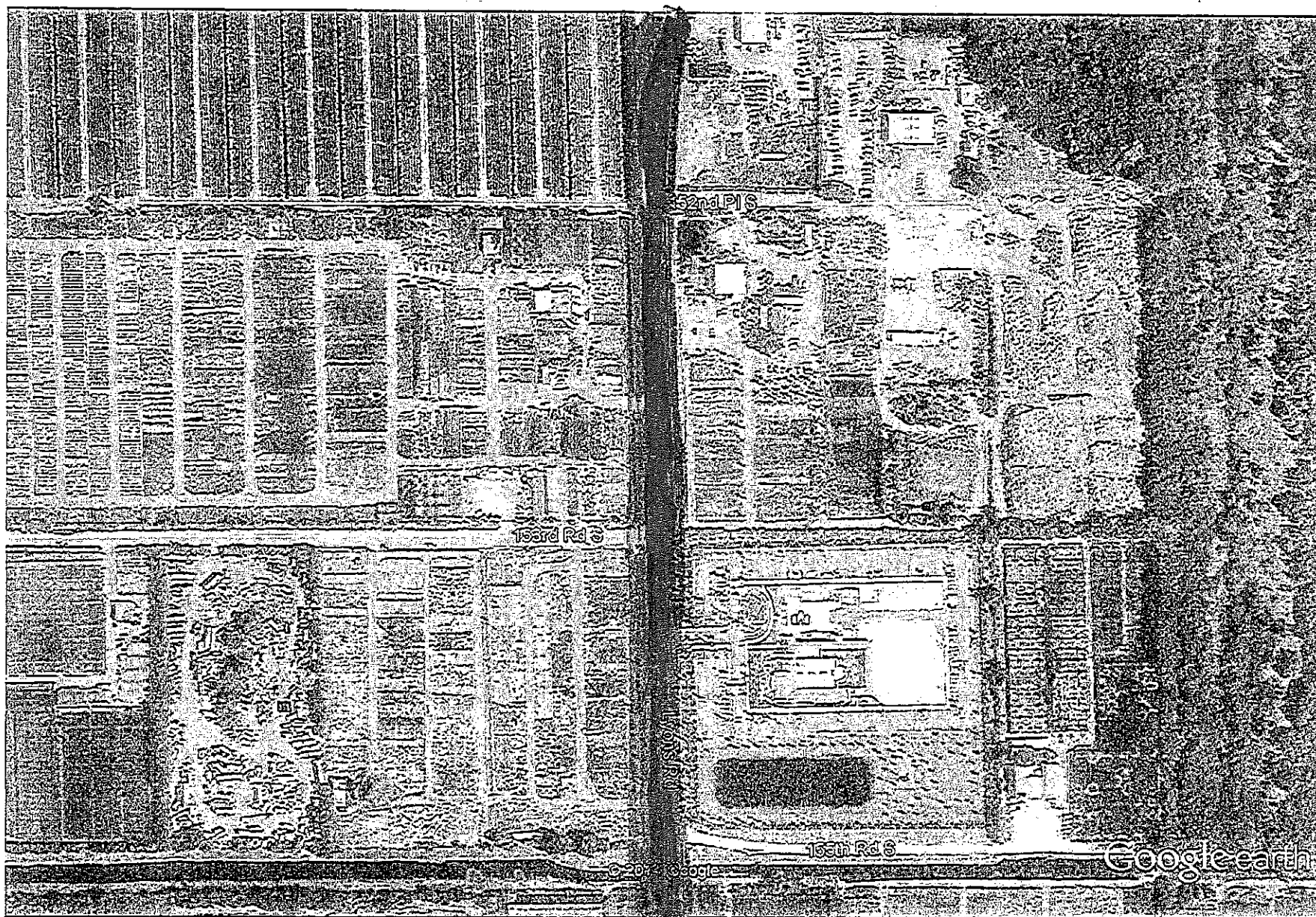
1000

500

 - PROJECT LIMITS

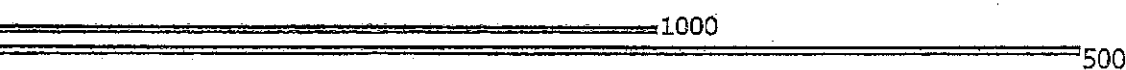
3/5






Google earth

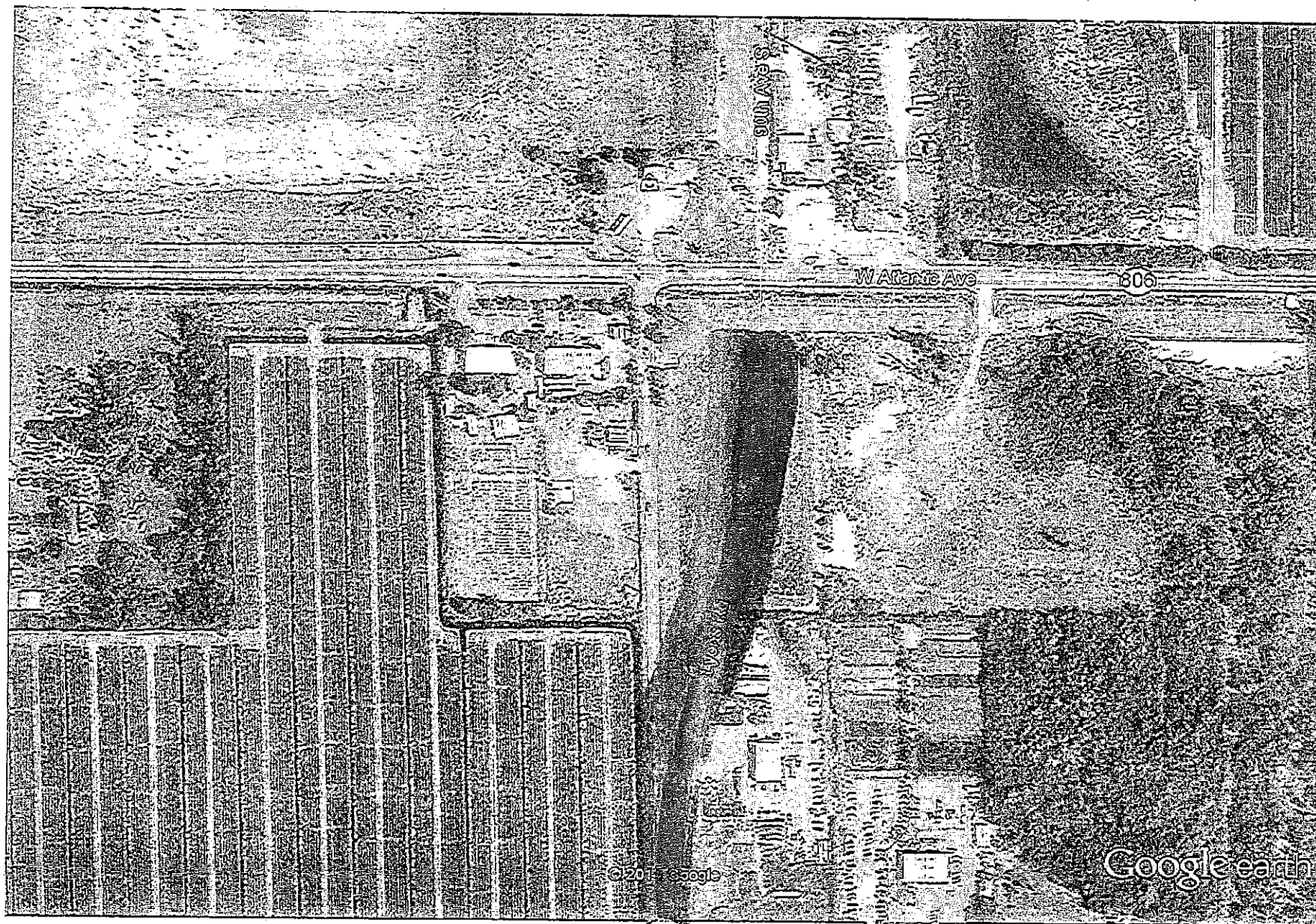
feet  
meters



 — PROJECT LIMITS

4/5






Google earth

feet  
meters

1000

500

 - PROJECT LIMITS



5/5