

**CITY OF NAPLES
PURCHASING DIVISION
CITY HALL, 735 8TH STREET SOUTH
NAPLES, FLORIDA 34102
PH: 239-213-7100 FX: 239-213-7105**

ADDENDUM NUMBER 1

NOTIFICATION DATE:	BID TITLE:	BID NUMBER:	BID OPENING DATE & TIME:
05/01/14	Royal Harbor Water System Improvements Project	14-039	05/06/14 2:00PM

**THE FOLLOWING INFORMATION IS HEREBY INCORPORATED INTO,
AND MADE AN OFFICIAL PART OF THE ABOVE REFERENCED BID.**

The following clarifications are issued as an addendum identifying the following changes for the referenced solicitation:

Below are responses to written submitted question.

1) Are new water services required for the cul-de-sac roads in the alternate?

ANSWER: Yes. See changes to Section 00300 – Bid Form below.

2) The contract time is a little tight, could it be extended?

ANSWER: Yes, the contract time has been revised to 240 days to substantial and 270 days to final. See changes to Section 01010 – Summary of Project below.

3) What is required in the AC Pipe Handling?

ANSWER: This project requires asbestos cement piping to be cut and removed. All cutting and removing of asbestos pipe must be performed by workers who are OSHA Class II Pipe certified as Asbestos Workers with onsite supervision by a Florida Certified Asbestos Supervisor . Within 15 days of the execution of the Contract, the awarded Contractor must provide to the City proof that that the Contractor has multiple employees who are OSHA Class II Pipe certified as Asbestos Workers and one employee who is Florida Certified Asbestos.

4) Can grouting of existing water main pay item be changed to a LF item.

ANSWER: Yes. See changes to Section 00300 – Bid Form and Section 01025 – Measurement and Payment below.

IMPORTANT MESSAGE

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID COVER SHEET.

5) Can driveways be broken out of the pipe installation pay item?

ANSWER: Yes. See changes to Section 00300 – Bid Form and Section 01025 – Measurement and Payment below.

6) Is there an Engineer's Estimate for this project?

ANSWER: Yes, engineers estimate is \$2,300,000.

7) What are the Liquidated Damages? Refers to contract of which contract is not included in documents.

ANSWER: Liquidated damages shall be in the amount of \$1,148 per day.

8) Page 00300-2, Item #4 refers to the "Specifications for the City of Winter Garden" and not the City of Naples.

ANSWER: See changes to Section 00300 – Bid Form below.

9) Page 00300-4, Item #5 refers to "Documents attached and made a condition of this Bid" – several forms are missing from package:

(a) Public Entities Crime Statement

(b) Questionnaire and Subcontractor Listing (Sections 00301 and 00301A)

ANSWER: (a) - No form is available; please reference Section 24 of the General Condition. (b) - Does form does not apply to this bid.

10) Polyethylene Film / Sheeting Substitution Request for NuAge Films.

ANSWER: We do not see a need to add another product as acceptable under vapor barriers as there are four products currently listed in the specifications. If the product request substitution meets the specification, they will not be rejected during shop drawing review.

BELOW ARE CHANGES TO SPECIFICATIONS:

Table of Contents:

Contractor shall DELETE Table of Contents in its entirety and REPLACE with the attached Table of Contents.

Section 00300 – Bid Form:

Contractor shall DELETE Section 00300 – Bid Form in its entirety and REPLACE with the attached Section 00300 – Bid Form.

Section 01010 – Summary of Project:

Contractor shall DELETE Paragraph 1.02.B.1 in its entirety and REPLACE with the following Paragraph:

"1.02.B.1 All work included in the Contract Documents will be substantially completed within two hundred and forty (240) days and finally complete two hundred and seventy (270) days after the date when Contract Times commence to run.

The City will not allow work on multiple streets, unless work on each street is performed with separate crews. If multiple crews are used, work is only allowed

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on two streets at a time. For the purpose of this requirement there are four streets in this project; Sandpiper Street (including Sheephead Drive), Snook Drive, Tarpon Drive, & Kingfish Drive. Once work has begun on a street, the Contractor cannot begin on another street until the work on the original street is complete including testing and complete restoration.”

Section 01025 – Measurement and Payment:

Contractor shall DELETE Section 01025 – Measurement and Payment in its entirety and REPLACE with the attached Section 01025 – Measurement and Payment.

Section 02510 – Pipeline Removal and Grout Abandonment:

Contractor shall INSERT Section 02510 – Pipeline Removal and Grout Abandonment in its entirety.

Appendix A – Geotechnical Report

Contractor shall INSERT Appendix A in its entirety.

Appendix B – FDEP Water Permit

Contractor shall INSERT Appendix B in its entirety.

Appendix C – FLUCFCS Map

Contractor shall INSERT Appendix C in its entirety.

Note: All addenda shall be acknowledged in the Bid submittal, therefore please sign the bottom of this page and return with the Bid submittal as well as initialing the returned bid Cover Sheet.

Exhibit A - SPECIFICATIONS

Exhibit B – Pre-Bid Attendees List

Submitting Vendor Signature: _____

IMPORTANT MESSAGE

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID COVER SHEET.

EXHIBIT A

**CITY OF NAPLES
ROYAL HARBOR WATER SYSTEM IMPROVEMENTS
PHASE 1**

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**CITY OF NAPLES
ROYAL HARBOR WATER SYSTEM IMPROVEMENTS
PHASE 1**

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NOT USED

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15050	Utility Piping, Fittings, Valves, and Accessories

DIVISION 16 - ELECTRICAL
NOT USED

APPENDIX A – Geotechnical Report
APPENDIX B – FDEP Water Permit
APPENDIX C – FLUCFCS Map

SECTION 00300

BID FORM

SUBMITTED: _____
Date

PROJECT IDENTIFICATION: **CITY OF NAPLES
ROYAL HARBOR WATER SYSTEM
IMPROVEMENTS – PHASE I**

NAME OF BIDDER: _____

BUSINESS ADDRESS: _____

Phone No.: _____ Fax No.: _____

E-Mail Address: _____

CONTRACTOR'S FLORIDA LICENSE NO.: _____

THIS BID IS SUBMITTED TO: City of Naples, Florida (hereinafter called Owner) acting through its City Commission.

1. The undersigned Bidder offers and agrees to enter into an Agreement with Owner in the form included in the Bidding Documents, to complete all work for the Contract Price and within the Contract Time, all in accordance with the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Bidding Documents, including without limitation those dealing with the Owner's time for accepting for Bid and the disposition of Bid Bond.
3. In submitting this Bid, Bidder makes all representations required by the Instructions to Bidders and further warrants and represents that:

(a) Bidder has examined copies of all the Bidding Documents and of the following addenda:

No. _____	Dated _____;	No. _____	Dated _____
No. _____	Dated _____;	No. _____	Dated _____
No. _____	Dated _____;	No. _____	Dated _____
No. _____	Dated _____;	No. _____	Dated _____

(Receipt of all which is hereby acknowledged) and also copies of the Advertisement for Bids and the Instructions to Bidders.

(b) Bidder has examined the site and locality where the Work is to be performed and the legal requirements (Federal, State and local laws, ordinances, rules and regulations) and conditions affecting cost, degree of difficulty, progress or performance of the Work and has made such independent investigations as Bidder deems necessary.

- (c) This Bid is genuine and not made in the interest or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over Owner.
- (d) Bidder hereby agrees if this Bid is accepted, to commence work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete all work of the Project within the Contract Time stipulated in the Agreement (Section 00500). Bidder further agrees to pay as liquidated damages the amount stated in the Agreement for each consecutive calendar day completion of the work is delayed.
4. Bidder submits the following unit prices to perform all the Work as required by the Drawings and Specifications for the City of Naples. Bid shall be awarded based on Total Base Bid. Estimated quantities may exceed items listed. Payment based on installed quantities.
5. All Bid Items shall include all materials, equipment, labor, permit fees, taxes, tests, miscellaneous costs of all types, overhead, and profit for the item to be complete, in place, and ready for operation in the manner contemplated by the Contract Documents.

BID SUMMARY

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
PHASE I IMPROVEMENTS					
1	Mobilization/Demobilization	1	LS	\$	\$
2	General Requirements, Bonds and Insurance	1	LS	\$	\$
3	Indemnification	1	LS	\$ 100.00	\$ 100.00
4	Maintenance of Traffic	1	LS	\$	\$
5	Locate Utilities in Advance of Construction	1	LS	\$	\$
6	Survey Layout and As-Builts	1	LS	\$	\$
7	Furnish and Install 8-inch PVC water main and fittings	12,500	LF	\$	\$
8	Furnish and Install 4-inch PVC water main and fittings	1,050	LF	\$	\$
9	Furnish and Install 4-inch PVC force main and fittings	950	LF	\$	\$
10	Directional Drill 10-inch HPDE water main	710	LF	\$	\$
11	Furnish and Install 12-inch PVC storm drain, fittings and storm drain structures	1	LS	\$	\$
12	8-inch Gate Valve and Appurtenances	15	EA	\$	\$
13	4-inch Gate Valve and Appurtenances	6	EA		
14	Air Release Valve and Appurtenances	4	EA	\$	\$
15	Blow-off Assembly	7	EA	\$	\$
16	Fire Hydrant Assembly	28	EA	\$	\$
17	Service Connection (Long)	135	EA	\$	\$
18	Service Connection (Short)	145	EA	\$	\$
19	Remove/Replace Existing Driveway	185	EA	\$	\$

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
20	Grout and Abandon Existing Pipe	12,200	LF	\$	\$
21	Remove and Dispose Existing Pipe	1,350	LF	\$	\$
22	Lift Station Pump Out Assembly	1	LS	\$	\$
23	Core Manhole and Install Rubber Boot Connection	1	EA	\$	\$
TOTAL BASE BID					
_____				\$	_____
(In Words)					(In Figures)

ADDITIVE ALTERNATIVE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
A	Installation of 4" Piping and Fittings on Bluefin Court*	1	LS	\$	\$
B	Installation of 4" Piping and Fittings on Cobia Court*	1	LS	\$	\$
C	Installation of 4" Piping and Fittings on Wahoo Court*	1	LS	\$	\$
D	Installation of 4" Piping and Fittings on Tuna Court*	1	LS	\$	\$
E	Installation of 4" Piping and Fittings on Shad Court*	1	LS	\$	\$
F	Installation of 4" Piping and Fittings on Trout Court*	1	LS	\$	\$
TOTAL ALTERNATIVE BID					
_____				\$	_____
(In Words)					(In Figures)

*Additive Alternatives A through F consist of the additional price for installation of 4" PVC water main, fittings, valves, appurtenances, water services, driveway replacements, grout and abandonment of existing water main, removal of existing water main, etc. as shown on the Drawings and as necessary to complete the installation per the Contract Documents. The Unit price for the lump sum item shall include the additional cost for all labor, materials, and equipment necessary to install the additional water main, including, fittings, valves, sitework, asphalt replacement, driveway replacement, services, and all other items necessary to complete the installation.

If the contract is to be awarded, it will be awarded on the basis of the most responsive, responsible, lowest "Total Bid." Additive alternatives may be considered in conjunction with the Total Base Bid in determining the lowest responsive bidder and Total Bid. The Owner reserves the right to accept any or all additive alternates in its sole discretion to determine the lowest Total Bid prior to award of the contract.

All Bid items shall include all materials, equipment, labor, permit fees, taxes, tests, miscellaneous costs of all types, overhead, and profit for the item to be complete, in place, and ready for operation in the manner contemplated by the Contract Documents.

Unit Prices have been computed in accordance with the General Conditions. Bidder acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

5. The following documents are attached to and made a condition of this Bid:

- (a) **Bid Bond/Bid Security.**
- (b) **Public Entities Crime Statement.**
- (c) **Questionnaire and Subcontractor Listing (Sections 00301 and 00301-A).**
- (d) **Evidence of Bidder's Certification and License to perform the work.**
- (e) **References.**

6. The terms used in this Bid, which are defined in Article 1 of the General Conditions shall have the meanings assigned to them in the General Conditions as amended by the Supplementary Conditions.

7. **COMPLIANCE WITH FLORIDA TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA)**

Bidder hereby acknowledges that all costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) are included in the various items of the proposal and in the Total Bid Price. For informational purposes only, the Bidder is required to further identify these costs, to be summarized below:

	Trench Safety Measure Description	Units of Measure (LF, SY)	Unit (Quantity)	Unit Cost	Extended Cost
A	_____	_____	_____	\$ _____	\$ _____
B	_____	_____	_____	\$ _____	\$ _____
C	_____	_____	_____	\$ _____	\$ _____
D	_____	_____	_____	\$ _____	\$ _____
				TOTAL:	\$ _____

THIS IS NOT A PAY ITEM. The purpose of this form is to disclose information on the costs associated with trench safety measures and to insure that the Bidder has considered these costs and included them in the Bid Price. Contractor will not receive additional payment if actual quantities differ from those estimated above or if the Contractor uses a safety measure different than those listed.

Failure to complete the above may result in the Bid being declared non-responsive.

The Utility Work shall be performed by a General Contractor or Underground Contractor Licensed in the State of Florida. Contract shall not be awarded unless proof of valid license(s) is provided.

NAME OF BIDDER: _____

If Bidder is: (ALL SIGNATORIES MUST HAVE THEIR NAME PRINTED OR TYPED
BELOW THEIR SIGNATURE)

SOLE PROPRIETORSHIP

_____(SEAL)
(Individual's Signature)

_____(SEAL)
(Individual's Name)

Doing Business as: _____

Business Address: _____

Phone No.: _____

Fax No.: _____

E-Mail Address: _____

Florida Licence No.: _____

A PARTNERSHIP

_____(SEAL)
(Partnership Name)

_____(SEAL)
(General Partner's Signature)

_____(SEAL)
(General Partner's Name)

Business Address: _____

Phone No.: _____

Fax No.: _____

E-Mail Address: _____

Florida License No.: _____

NAME OF BIDDER: _____

A CORPORATION

(Corporation Name)

(State of Incorporation)

By _____
(Name of Person Authorized to Sign)

(Title)

(Authorized Signature)

(Corporate Seal)

Attest _____
(Secretary)

Business Address: _____

Phone No.: _____

Fax No.: _____

E-Mail Address: _____

Corporation President:: _____

Florida License No.: _____

NAME OF BIDDER: _____

A JOINT VENTURE

By _____ (SEAL)

(Name)

(Address)

By _____ (SEAL)

(Name)

(Address)

Business Address: _____

Phone No.: _____

Fax No.: _____

E-Mail Address: _____

Florida License No.: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above).

8. List the following in connection with the Surety which is providing the Bid Bond.

Surety's Name: _____

Surety's Address: _____

Name and address of Surety's resident agent for service of process in Florida:

SCHEDULE OF MANUFACTURERS/SUPPLIERS

The Contract Documents are based upon the equipment or products available from the manufacturers/suppliers denoted as "A", "B", etc. However, the Bidder must indicate in his Bid which Base Bid manufacturer/supplier he intends to use for each item of equipment listed by circling one (1) of the listed manufacturers/suppliers. Should the Bidder fail to circle a named supplier, he hereby agrees to provide the item listed as "A". After receipt of bids, the Bidder may not substitute for any manufacturer or supplier circled.

If the Bidder desires to propose one (1) or more substitution or "or equal" manufacturers/suppliers, he may write in the name of such substitution or "or equal" in the spaces provided on the pages following the lists, but he must, nevertheless, also circle one of the listed manufacturers/suppliers. All substitutions or "or equal" items must be identified at the time of Bid (see Paragraph 6.05 of the General Conditions as amended by the Supplementary Conditions). Substitutions or "or equal" items will **not** be considered when determining the Apparent Low Bidder. Substitutions or "or equal" items will **not** be evaluated or considered until after the "Effective Date" of the Agreement. The Bidder shall base his Bid on providing one of the listed manufacturers and shall assume for bidding purposes that all substitutions or "or equal" items will not be accepted.

If the proposed substitution or "or equal" manufacturer/supplier is determined "not equivalent" by the Engineer, the Bidder must use the circled manufacturer/supplier. If the Bidder fails to indicate which listed manufacturer/supplier he intends to use or if a substitution or "or equal" is rejected, he must use the supplier listed as "A". Also, if the Bidder circles more than one listed manufacturer/supplier, he must use the first manufacturer/supplier circled (unless a substitution or "or equal" is approved).

Each proposed substitution or "or equal" will be evaluated in accordance with Paragraph 6.05 of the General Conditions following the Effective Date of the Agreement.

In addition to the reimbursement required under Paragraph 6.05 of the General Conditions, the Contractor shall also reimburse the Owner for any engineering costs directly attributable to the change in manufacturers/suppliers, caused by the acceptance of proposed substitutions or "or equal" items, such as; additional field trips for the Engineer, additional redesign costs, and additional review costs, etc. Other costs directly attributable to the change in manufacturers/suppliers caused by the acceptance of proposed substitutions or "or equal" items such as increased electrical requirements, larger buildings, modifications to structures, additional pumps, piping or tankage, etc., shall be borne by the Contractor and not by the Owner. Bidder further agrees that the use of substitute equipment offered will not affect the completion date.

The Owner may request, and the Bidder shall supply any additional information on proposed substitutes or "or equal" items prior to Notice of Award.

SCHEDULE OF BASE BID MANUFACTURERS/SUPPLIERS

Item No.	Equipment Item or Material	Specification Section No.	Base Bid Manufacturer/Supplier
1.	PVC Pipe	15050	A. JM Eagle B. National Pipe and Plastics
2.	Gate Valve	15050	A. Mueller B. Kennedy C. American Flow
3.	Valve Boxes	15050	A. Tyler/Union B. Star
4.	Restrained Fittings	15050	A. EBBA B. JCM C. Romac D. Star
5.	Air Release Valves	15050	A. Int. Valve Vento Matic B. A.R.I.
6.	HDPE Pipe	02531	A. Performance Pipe B. LP Driscoplex 4000 C. CSR Polypipe
7.	Storm Pipe	15050	A. Contech Construction Products Inc., A-2000

SUBSTITUTIONS AND "OR EQUAL"

The undersigned as Bidder agrees that substitutions, or "or equal" items will not be considered until after the "Effective Date of the Agreement" and will be evaluated in accordance with Paragraph 6.05, of the General Conditions as amended by the Supplementary Conditions. If Bidder intends to propose substitutions or "or equal" items after the "Effective Date of the Agreement", it is agreed that these items will be listed on the Substitution List that must be included with the Bid (form provided herein). Only the proposed substitutions or "or equal" items listed on the Substitution List and submitted at the time of Bid will be evaluated by the Engineer in accordance with the General Conditions.

SUBSTITUTION LIST OF
MANUFACTURERS/SUPPLIERS

Bidder proposes the following substitutions and "or equal" items of alternate manufacturers/suppliers for the equipment of material categories so identified:

	<u>Equipment Item Material</u>	<u>Drawing No.</u>	<u>Spec. Section</u>	<u>Substitute/"or equal" Manufacturer/Supplier (List One Only)</u>	<u>Proposed Price Deduct</u>
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1- GENERAL

1.01 DESCRIPTION

- A. This section describes the method used to determine quantities of Work performed or materials supplied for which a price is given in the Bid. It establishes the basis upon which payment will be made for Payment Items.
- B. Subject to the provisions in General Conditions, all Work and payment for the Work is represented by Payment Items and associated unit prices.

1.02 PAYMENT

- A. Subject to all other contract requirements, the Contractor shall be paid for "as-built" quantities of Work for which a price is given in the bid.
- B. Quantities on the Bid Form are for comparison in competitive bidding only and do not constitute the basis for payment or measurement of quantities.
- C. Quantities on the Bid Form are estimated and may be increased or decreased without limit.
- D. No separate payment will be made for one Payment Item as Work incidentally required to complete the Work of another.
- E. Payment for Work performed shall be made in accordance with the unit prices in the Bid. Retainage shall apply to all Contractor payments prior to final acceptance.

1.03 MEASUREMENT FOR PAYMENT

- A. Payment Limit Lines:
 - 1. Where payment limit lines are shown on the Contract Drawings, measurements of a Payment Item quantity will be made up to, but not beyond such lines.
 - 2. Where the actual Work of a Payment Item falls short of the payment limit line, measurement will be made to the line of the actual Work.

3. No payment will be made for quantities outside of payment limit lines unless authorized in writing by the Owner.

B. Methods of Measurement:

1. Measurements of lengths, widths, slope angles, and depths or elevations shall be made to determine "as-built" quantities of lengths, areas and volumes pertinent to Payment Items.
 - a. Unless otherwise specified, all lengths shall be horizontal distances.
 - b. Slope angles and elevations shall be measured using land surveying equipment.
2. Graphic representations of measured quantities shall be drafted to scale using the Drawings where convenient and appropriate. Additional drawings shall be drafted if required.
 - a. Irregular shapes representing areas and volumes shall be measured using a compensating polar planimeter or a computer digitizer.
 - b. Regular shapes shall be scaled.
3. Use of Drawings:
 - a. Unless otherwise agreed upon between the Contractor and Owner, the Drawings shall be used as the basis to establish existing grades and other existing topographic features.

C. Payment limits where Payment Lines are not shown on the Drawings:

1. Pipe Length: Measurement of pipe shall be made along the top of pipe, excluding fittings, valves and manholes, in place, taken as the laying length.
2. Except as specified otherwise, measurements of Payment Item quantities of weights, lengths, areas and volumes shall be made:
 - a. On "as-built" and in-place completed Work, during construction or at the time of Substantial Completion.
 - b. If no other feasible and practical methods of measurements are available, by delivery slips delivered to the Engineer.

3. Adjustments shall be made to eliminate overlaps in area and volume measurements.

1.04 PAYMENT ITEMS

- A. Separate payment will be made for the Unit Price and Lump Sum items listed on the Bid Form. Related work not specifically listed or identified below in 1.04 B and C, but evidently necessary for satisfactory completion of the Item shall be considered to be included.
- B. No separate payment will be made for the following Work, and its cost shall be included in the Bid Price of the Payment Item to which it is associated:
 1. Trench excavation, sheeting, shoring and bracing.
 2. De-watering, erosion and sedimentation control, and turbidity screening.
 3. Fill, backfill and grading.
 4. Removal, replacement and restoration of driveways, mailboxes, sod, seed, and plantings.
 5. Removal, replacement and restoration of culverts and storm sewer pipe crossings of driveways and roads.
 6. Cleanup.
 7. Testing, including all materials and equipment.
 8. Maintenance of utility service.
 9. Appurtenant work.
 10. Removal and replacement of fencing and other structures.
 11. Record Drawings.
 12. Field Office.
 13. Saw cutting.
 14. Coordination with other contractors.
 15. Layout of the work.
 16. Notifications to property owners of construction schedule and service interruptions.
 17. Coordination of activities and work hours with Airport Operations.
- C. Measurement and Payment Items as listed in the Bid Schedule:

- 1. Mobilization/Demobilization (Bid Item No. 1)**

Preparatory Work and operations in mobilizing for beginning work on the Project and demobilizing for ending work on the Project. The establishment of field offices, buildings, safety equipment, first aid supplies, sanitary and other facilities, as required by these Specifications, State and local laws and any other preconstruction expense necessary for the state of the Work; the cost of field engineering, including permits and fees, construction schedules, pre-construction video and photographs,

project signs, shop drawings, temporary facilities, lay down storage area, construction aids, erosion control, work associated with Contractor support during Owner/Engineer testing, reviews and inspection, re-inspection and any rework resulting from same, cleaning, project records documents, operating and maintenance data. The Contractor shall submit invoices substantiating the cost of mobilization with each pay request. Fifteen percent (15%) of the cost for mobilization and demobilization will be withheld until substantial completion acceptance.

2. General Requirements (Bid Item No. 2)

- a. Measurement for various items covered under General Requirements, Bonds, and Insurance will not be made for payment, and all items shall be included in the lump sum price.
- b. Payment for General Requirements, Bonds, and Insurance shall include all Insurance requirements costs, the costs of all bonds, and all administrative costs associated with acquiring and maintaining the necessary coverage as described in the Contract Documents. This item will be paid upon each payment request made by the Contractor. The Contractor shall attach with the payment request invoices to substantiate that appropriate insurance and bonds have been obtained by the Contractor.

3. Indemnification (Bid Item No. 3)

In consideration of the Contractor's indemnity agreement as set out in the Contract Documents, the Owner specifically agrees to give the Contractor a minimum of \$100.00 and other good and valuable consideration, receipt of which is acknowledged upon signing of the Agreement.

4. Maintenance of Traffic (Bid Item No. 4)

- a. Measurement of various items for Maintenance of Traffic will not be made for payment, and all items shall be included in the lump sum price
- b. Payment for Maintenance of Traffic will be made at the Contract lump sum price for the item, which price and payment shall be full compensation for permitting, construction, and maintenance of any necessary detour facilities; the providing of necessary facilities for access to residences, businesses, etc., along the project; the furnishing, installing and maintaining of traffic control, barricades, railings, message boards (VMS), warning lights, and other safety devices during construction, the control of dust, providing the

services of uniformed off-duty police officers, and other special requirements for the safe and expeditious movements of traffic as called for in the Specifications and shown on the Drawings.

5. Locate Utilities in Advance of Construction (Bid Item No. 5)

- a. Measurement of various items to Locate Utilities in Advance of Construction will not be made for payment and all items shall be included in the lump sum price.
- b. Payment for Locating Utilities in Advance of Construction Contractor will be made at the contract lump sum price for the item, which price and payment shall be full compensation for all labor, materials, and equipment necessary to physically locate all utilities in the immediate area using non-destructive digging equipment, 3D Ground Penetrating Radar (GPR) supplies and personnel experienced in the use of subsurface utility engineering (SUE) to determine precise horizontal and vertical positions of utilities. The Contractor shall perform utility locates at least 21 calendar days in advance of construction in order to request clarification if required from the Engineer. The Engineer will have 7 calendar days to respond. This construction scheduling will allow all necessary decisions to be made prior to the contractor's crews reaching the work area and having a delay claim and/or a crew mobilization/demobilization claim.

The work includes equipment to paint/mark the approximate position of the underground utility, vacuum excavation equipment that includes air tools (water jet, air lance) to break up the surface and soil. The vacuum excavation equipment involves removing the disturbed soil and temporarily storing it. The exposed underground utility is examined and pertinent data such as size, type, material, and depth is gathered. A marker such as an iron rod and cap or nail and disk are placed next to the test hole and the depth measurement is taken to this point. The stored soil is then returned to the excavated test hole and the surface is returned to its original state; asphalt patch is tamped into the hole when applicable. Markings such as paint and/or lathe and ribbon are left near the hole for future identification. Assume all lines to be located are active lines and service must be maintained at all times possible.

6. Survey Layout and As-Builts (Bid Item No. 6)

- a. The lump sum payment shall cover all costs to layout all aspects of the proposed improvements. Costs for partial and final clearance submittal requirements. It also includes an overall as-built survey of the completed improvements including electronic files in AutoCAD.

7. Polyvinyl Chloride (PVC) Potable Water and Force Main and Fittings (Restrained Joint and Push-on Pipe) (Bid Item Nos. 7 through 9):

- a. Measurement for pipe, except as otherwise specified, will be based on the laying length of the pipe in linear feet actually placed as measured along the centerline of the completed pipe, including length of fittings and specials measured along the centerlines, but excluding directional drill, between the limits shown on the Drawings and restraint of pipe as required by contract documents.
- b. Payment for pipe will be made at the Contract unit price per linear foot for the size and type installed, which price and payment shall be full compensation for piping, fittings, installation in locations indicated on the Construction Drawings, all pipe fittings, clearing, grubbing, excavation, tree trimming, site restoration, sidewalk removal and replacement, asphalt removal and replacement, curb and gutter removal and replacement not included under driveway restorations, dewatering, sod removal and replacement, pipe bedding, backfill and compaction, pressure testing, flushing/filling of main, joint restraints, bacteriological testing and sampling assemblies, silt fencing, pipe identification tape, insulated conducting wire, pipe supports, connections to existing water main including restraint of existing pipe on both sides of the tie in, support of existing main, keeping existing main in service, line stop, and other appurtenances, hiring of power company to hold and support power poles if needed, hiring of power company to relocate power pole as required, vegetation removal and replacement, removal and replacement of fences, removal and replacement of roadways disturbed during construction to meet pre-construction condition or better, site restoration, including landscape and/or sodding as necessary, and all equipment and all other work necessary to complete the installation as specified. All cost to clean, repair new or existing piping and appurtenances will be included under the payment for linear feet of pipe.

8. Directional Drill 10-inch HDPE Piping and Fittings (Bid Item No. 10):

- a. Measurement for Directional Drill pipe and fittings, except as otherwise specified, will be based on the laying length of the pipe in linear feet actually placed as measured along the centerline of the completed pipe, including the length of fittings and valves between the limits shown on the Drawings.
- b. Payment for Directional Drill pipe and fittings will be at the Contract unit price per linear foot for the size and type installed, which price and payment shall be full compensation for pipe fittings, installation by directional drill in locations indicated on the Contract Documents, all fusion welding, mechanical joint adapters, braided insulated conducting wire, silt fencing, buoyancy control, drilling mud recycling and disposal, site restoration, including landscaping, tree trimmings, vegetation removal and replacement, sidewalk removal and replacement, sod removal and replacement, silt fencing, removal and replacement of fences, removal and replacement of driveways and roadways disturbed during construction and all other equipment and labor necessary to complete the installation within the limits shown for each drill.

9. Polyvinyl Chloride (PVC) Storm Drain Pipe, Fittings and Storm Drain Structures (Bid Item No. 11):

- a. Measurement for pipe, except as otherwise specified, will be based on the lump sum cost to install the storm drain pipe and fittings as shown on the Contract Drawings.
- a. Payment for pipe will be made at the Contract lump sum price for the installation of the storm drain piping, which price and payment shall be full compensation for piping, fittings, installation in locations indicated on the Construction Drawings, all pipe fittings, clearing, grubbing, excavation, tree trimming, site restoration, sidewalk removal and replacement, asphalt removal and replacement, curb and gutter removal and replacement, dewatering, sod removal and replacement, pipe bedding, backfill and compaction, pressure testing, flushing/filling of main, joint restraints, bacteriological testing and sampling assemblies, silt fencing, pipe identification tape, insulated conducting wire, pipe supports, hiring of power company to hold and support power poles, hiring of power company to relocate power pole as required, vegetation removal and replacement, removal and replacement of fences, removal and replacement of driveways and roadways disturbed during construction and all equipment and all other work

necessary to complete the installation as specified. All cost to clean, repair new or existing piping and appurtenances will be included under the payment for linear feet of pipe.

10. Gate Valves and Appurtenances (Bid Item Nos. 12 and 13):

- a. Measurement for Gate Valves, except as otherwise specified, will be based on the number of actual gate valves installed and accepted.
- b. Payment for gate valves will be made at the Contract unit price per the item, which price and payment shall be full compensation for furnishing, installing and testing the valve, complete with mechanical restraints, nut with extension, tie rods, valve box, pad, disk and cover.

11. Air Release Valve and Appurtenances (Bid Item No. 14):

- a. Measurement for Air Release Valve, except as otherwise specified, will be based on the number of air release valves to be paid for will be determined by the actual units installed and accepted.
- b. Payment for Air Release Valve will be made at the Contract unit price per the item, which price and payment shall be full compensation for furnishing, installing and testing the valve, complete with tapping saddle, gate valves, supports, vent, vault, bedding rock, footing, frame, cover, access lid, piping, fittings and bends, enclosures, and appurtenances.

12. Blow-off Assembly (Bid Item No. 15)

- a. The number of Blow-off Assemblies to be paid for will be determined by the actual units installed and accepted.
- b. Payment for Blow-off Assembly will be made at the Contract unit price per the item, which price and payment shall be full compensation for furnishing, installing to finished grade and testing the valve, complete with the cap, nipple, valve, double meter box, bedding rock, cover, access lid, piping, fittings and bends, other required appurtenances, site restoration, including landscape and/or sodding as necessary, tree trimmings, vegetation removal, site restoration, including landscaping and/or sodding as necessary, tree trimmings, vegetation removal, and for all equipment and all other work necessary to complete the installation as specified.

13. Fire Hydrant Assembly: (Bid Item No. 16)

- a. Measurement and payment for the Fire Hydrants to be paid for will be determined by the actual count of units installed and accepted.
- b. Payment for Fire Hydrants will be made at the Contract unit price per hydrant for the respective size and type, which price and payment shall be full compensation for furnishing, installing (to finished grade) and testing the hydrant, complete with restraining mechanisms, hydrant painting, site restoration, including landscaping and/or sodding as necessary, tree trimmings, vegetation removal, existing hydrant removal and disposal, and for all equipment and all other work necessary to complete the installation as specified. The hydrant tee, pipe stub from the main to the hydrant, the gate valve and box and removal of existing hydrants within project limits will also be paid for under this item.

14. Service Connections (Bid Item Nos. 17 and 18):

- a. Measurement for the number of Service Connections to be paid for will be determined by the actual count of units installed and accepted.
- b. Payment for Service Connections will be made at the Contract unit price per service up to the meter box including clean out and connection, which price shall be full compensation for all labor, installation, material, fittings, and services required for the installation of the piping below the existing services, sitework, installation, trenching, demolition, and backfilling and restoration of site including driveways, sidewalks, landscaping and sodding.

15. Remove & Replace Existing Driveway (Bid Item No. 19)

- a. Measurement for remove and replace concrete driveway will be determined by the actual number of concrete driveways satisfactorily installed and accepted. Limits shall not exceed limits shown on Drawings unless approved by Engineer.
- b. Payment for Remove/Replace Existing Driveway will be made at the Contract unit price per driveway repaired and shall include all labor, equipment and materials necessary for the removing, disposing and replacement of existing driveways to match the portion of the driveway unaffected, driveway material to be replaced, slope driveway, ditch pavement and curb and gutter,

where required because of construction operations. Specifically excludes retaining walls and drainage structures. No additional compensation will be allowed for additional materials required to bring the proposed driveways to finished grade. It shall be the Contractors responsibility to determine material of driveway prior to bid.

16. Grout and Abandon Existing Pipe (Bid Item No. 20)

- a. Measurement of this item will be the actual length of pipe abandoned in place, as measured along the centerline.
- b. Payment to abandon the existing pipe will be made at the contract unit price per linear foot, which price and payment shall be full compensation for all cutting, capping, restraint, and grouting of the existing pipe, site restoration, including landscaping and/or sodding as necessary, tree trimmings, vegetation removal, and for all equipment and all other work necessary to complete the installation as specified. Costs associated with exposure to and handling of Asbestos Cement (AC) pipe are included in this item.

17. Remove and Dispose Existing Pipe (Bid Item No. 21)

- a. Measurement of this item will be the actual length of pipe removed and disposed, as measured along the centerline.
- b. Payment to remove and dispose of existing pipe will be made at the contract unit price per linear foot, which price and payment shall be full compensation for all cutting, capping, restraint, and removal of the existing pipe, site restoration, including landscaping and/or sodding as necessary, tree trimmings, vegetation removal, and for all equipment and all other work necessary to complete the installation as specified. Costs associated with exposure to, disposal of and handling of Asbestos Cement (AC) pipe are included in this item.

18. Lift Station Pump Out Assembly (Bid Item No. 22)

- a. Measurement for Lift Station Pump Out Assembly will not be made for payment and all items shall be included in the lump sum price.
- b. Payment for Lift Station Pump Out Assembly will be made at the Contract lump sum price for the piping and assembly, which price shall be full compensation for all labor, installation, material, and

services required for the installation of the assembly, sitework, installation out of the wet well, site restoration, and all other work necessary to install the vault in accordance with the Drawings and Specifications.

19. Core Manhole and Install Rubber Boot Connection (Bid Item No. 23)

- a. The number of boot connections of the various sizes and types to be paid for will be determined by the actual count of connections installed and accepted.
- b. Payment for resilient boot connections will be made at the Contract unit price per resilient boot connection for the respective size and type, which price and payment shall be full compensation for furnishing boot connection through manhole, installing, cleaning, testing of proposed and depressurized existing main, complete with plugs, caps, mechanical restraints, and other required appurtenances, thrust collars or other restraint of existing and new pipes, pipe identification tape, insulated conducting wire, site restoration, including landscaping and/or sodding, tree trimmings, vegetation removal, and for all equipment and all other work necessary to complete the installation as specified. This item shall include all work required to notify and/or provide temporary service to existing customers during shut downs. All cost to clean, repair and restrain new or existing piping and appurtenances at the connection point as required by the restrained joint table are included under the payment of this item.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 02510

PIPELINE REMOVAL AND GROUT ABANDONMENT

PART 1 GENERAL

1.01 DESCRIPTION

- A. Scope of Work: The work specified in this Section consists of furnishing all labor, equipment and materials and performing all work connected with the removal and/or grout abandonment of existing pipelines and placement of the cementaceous grout to fill the voids.
- B. Applicable Codes, Standard and Specifications:
1. American Water Works Association (AWWA) and American National Standards Institute (ANSI) latest edition: ANSI/AWVA C 110/A2 1.10 - Ductile Iron Gray Iron Fittings; ANSI/AWWA C153/A21.53 - Compact Ductile Iron Fittings
 2. All work associated with asbestos material shall be performed in accordance with the standards listed below and all other applicable local, State, or Federal standards.
 - a. Florida Administrative Code, Chapter 17-25 1, "Asbestos"
 - b. National Emission Standards Hazardous Air Pollution (NESHAP), 40 CFR 61, subpart M.
 - c. Occupational Safety and Health Act, 29 CFR
 - d. Environmental Protection Agency (EPA) Asbestos Abatement Worker Protection Rule
 - e. Florida Statute 455.300
- C. Definitions:
1. Pipeline Abandonment - isolate from active pipelines, remove from service, dispose of pipeline contents, grout fill pipeline, plug pipeline, leave pipe in place.
 2. Pipeline Removal - isolate from active pipelines, remove from service. dispose of pipeline contents, remove pipe, valves, fittings, dispose or stockpile removed materials as required.

1.02. QUALITY ASSURANCE

- A. All work associated with the removal or taking out of service of existing asbestos cement pipelines shall be performed by a licensed asbestos abatement contractor or subcontractor registered in the State of Florida.

1.03 SUBMITTALS

- A. Shop Drawings: Shop Drawings shall be submitted in accordance with Division 1. In addition, the following shall be submitted to the Engineer for acceptance prior to construction.
 - 1. A detailed description of equipment and operational procedures to accomplish the grouting operation, including grout mixture design, grout mixer data, grout samples and test data.
 - 2. Asbestos abatement contractor/subcontractor licensing and qualifications, if necessary.
 - 3. Pipeline grouting contractor/subcontractor licensing and qualifications.

PART 2 PRODUCTS

2.01 FITTINGS

- A. Fittings shall be manufactured of ductile iron, conforming to ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53.
- B. All fittings shall be Class 250.

2.02 CONCRETE GROUT

- A. Provide grout with minimum 28 day compressive strength of 1000 psi, minimum slump of 5 inches, maximum slump of 9 inches. The grout mixture per cubic yard shall be:
 - 1. Cement - 500 pounds
 - 2. Fly Ash - 500 pounds
 - 3. Water - 350 pounds (42 gallons)
 - 4. Sand - 2248 pounds
 - 5. Air entrainment admixture (Darex or equal) - 3 ounces

6. Bentonite - 6 pounds (to be mixed with sufficient water to form colloidal mixture, added at the job site)

2.03 EQUIPMENT

- A. All grout shall be mixed with a high shear, high energy colloidal type mixer to achieve the best uniform density.
- B. The grout shall be pumped with a non-pulsating centrifugal or tri-plex pump.
- C. The mixer shall be capable of continuous mixing. Batch mixing shall not be permitted.

PART 3 EXECUTION

3.01 PREPARATION

- A. Traffic control measures shall be implemented prior to construction.

3.02 PERFORMANCE

- A. Pipe Isolation:
 1. Where indicated on the Drawings, line stops shall be utilized to isolate portions of pressurized mains.
 2. In lieu of line stops, the use of existing valves may be used to isolate portions of the pipeline. Submit work plan showing existing valves to be closed to provide isolation. Review of plan will be conducted by Engineer and Utility to determine affected area. In no case will service to residences and businesses affected by the isolation be allowed to be interrupted by more than 1 hour.
 3. Line stops shall be completed while the pipelines are pressurized.
 4. Line stops shall consist of a line stop fitting, stopping valve, blind flange for installation after stop is completed, and 1 inch equalization/purge fitting.
 5. Provide additional pipe restraining in the vicinity of the line stop for preventing pipe movement due to any unbalanced forces created by the line stop and subsequent cutting and removal of existing pipe adjacent to any line stop.

6. In the event a pressurized potable water pipeline that will remain in service loses pressure to less than 20 psi, disinfect the water main and submit bacteriological test results to the Florida Department of Environmental Protection. Satisfactory test results are required to be submitted for tests conducted on two consecutive days.

B. Pipe Cutting and Plugging:

1. Cut all pipe as necessary. Cut sections of pipe shall be cleared and smoothed. The contents of the pipe are to be removed and disposed as allowed by local rules and regulations.
2. Plug ends of pipe to remain in accordance with the following:
 - a. Remaining pressurized pipe - install ductile iron plug fitting. Install restraining devices to prevent pipe movement.
 - b. Remaining non-pressurized pipe - grout ends of pipe or install ductile iron cap fitting.

C. Pipeline Abandonment: Limits of removal and/or abandonment (take out of service) shall be in accordance with information shown on the Drawings. Abandonment shall be in accordance with the following:

1. Pipes under roadways or less than five feet from the edge of pavement, 2-inches and larger, shall be fully grouted along entire length. Pipe sizes less than 2-inches shall be capped or grouted at the ends of the pipe.
2. Pipes outside of roadways five feet or greater from the edge of pavement, 2-inches and larger, shall be fully grouted along entire length. Pipes sizes less than 2 inches shall be capped or grouted at the ends of the pipe. All ductile iron pipes shall be capped or grouted at the ends of the pipe.

D. Pipeline Grouting:

1. Grouting of the annular space due to the abandonment of the existing water pipe will be allowed in continuous individually bulkheaded segments of up to 500 linear feet.
2. Grout shall be placed in a maximum of three stages, with the initial stage volume equal to or greater than 50% of the total volume for that section of pipe being grouted. The maximum time wait between grouting stages shall be 24 hours.

3. For each stage, mix and pump the material in one continuous process so as to avoid partial setting of some grout material during that stage, thus, eliminating voids and possible subsequent surface damage due to "cave-ins".
4. Each section shall be grouted by injecting grout from the lowest point and allowing it to flow toward the highest point to displace water from the annulus and assure complete void-free coverage. Grout shall be placed through tubes installed in the bulkheads at the insertion pits or manholes. Grout tubes shall be at least 2-inch nominal diameter.
5. One set of the 3 inch x 6 inch sample test cylinders shall be made for each grout mix preparation.
6. After the ends of each section of pipe are exposed, the entire space, not to exceed 500 linear feet end to end, shall be sealed by controlled pumping of grout until it flows from the pipe at the opposite end of the grouting. Grouting shall be carried out until the entire space is filled.
7. Grout pressure in the void space is not to exceed five (5) psi above maximum hydrostatic groundwater level. An open ended, highpoint tap or equivalent vent must be provided and monitored at the bulkhead opposite to the bulkhead through which grout is injected. This bulkhead will be blocked closed as grout escapes to allow the pressuring of the annular space.
8. The pump used for grouting shall be a continuous flow positive displacement model with a pugmill type mixing vat having a minimum shaft speed of 60 rpm and incorporated as an integral part of the equipment. Alternate equipment may be used subject to the approval of the Engineer. The rate of pumping shall not exceed 6 cubic feet per minute.

E. Restoration

1. All areas disturbed as a result of pipeline removal and abandonment shall be restored to equal or better condition than the existing condition.

3.03 FIELD QUALITY CONTROL

- A. The quality of the grout, application of the equipment and installation techniques is the responsibility of the Contractor. The review and acceptance or approval of specific mix design, equipment or installation procedures shall in no way relieve the Contractor of his obligation to provide the final product as specified herein.

- B. Contractor shall coordinate with the Owner to shut-off all system valves. Only the Owner's staff may operate valves. All valves shall be shut-off and water service shall be verified for all customers in the affected area prior to grout being injected.

END OF SECTION

APPENDIX A

GEOTECHNICAL
REPORT

GFA INTERNATIONAL

FLORIDA'S LEADING ENGINEERING SOURCE

Report of Soil Evaluation

**Royal Harbor Water System Improvements
Kingfish Road and Sheepshead Drive
Naples, Collier County, Florida**

April 9, 2014

GFA Project No. 14-0437

For: Tetra Tech





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April 9, 2014

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Site: **Royal Harbor Water System Improvements**
Kingfish Road and Sheepshead Drive
Naples, Collier County, Florida
GFA Project No. 14-0437

Dear Mr. Messner:

GFA International, Inc. (GFA) has completed the subsurface exploration and geotechnical engineering evaluation for the above-referenced project in accordance with the geotechnical and engineering service agreement for this project. The scope of services was completed in accordance with our Geotechnical Engineering Proposal (14-0437.R1), planned in conjunction with and authorized by you.

EXECUTIVE SUMMARY

The purpose of our subsurface exploration was to classify the nature of the subsurface soils and general geomorphic conditions and evaluate their impact upon the proposed construction. This report contains the results of our subsurface exploration at the site and our engineering interpretations of these, with respect to the project characteristics described to us.

We understand the project consists of the installation of approximately 30,000 linear feet of water main piping within the Royal Harbor Community canal system. We understand the water mains will extend to depths of approximately -20 feet N.G.V.D. At this time you requested GFA conduct two land borings at locations selected by you to depths of 40 feet below the existing ground surface and provide our evaluation of the encountered soils. A total of two (2) standard penetration test (SPT) borings to depths of approximately 40 feet below ground surface (BGS) were completed for this study.

The subsurface soil conditions encountered at this site generally consists of very loose to medium dense sand (SP), sand with organics, peat (Pt), silty sand (SM), and weathered limestone (WLS) to the boring termination depths. Please refer to Appendix D - Record of Test Borings for a detailed account of each boring.

We appreciate the opportunity to be of service to you on this project and look forward to a continued association. Please do not hesitate to contact us if you have any questions or comments, or if we may further assist you as your plans proceed.

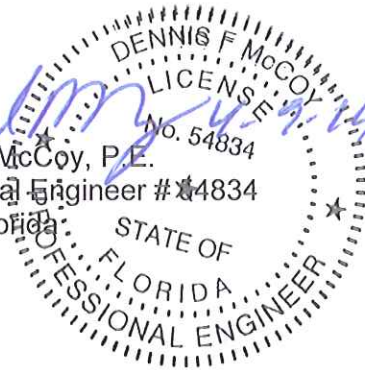
Respectfully Submitted,
GFA International, Inc.
Florida Certificate of Authorization Number 4930



Chris Ingram, E. I.
Staff Engineer



Dennis F. McCoy, P.E.
Professional Engineer # 4834
State of Florida



Copies: 1, Addressee



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1.0 INTRODUCTION

1.1 Scope of Services

The objective of our geotechnical services was to collect subsurface data for the subject project, summarize the test results, and discuss any apparent site conditions that may have geotechnical significance for building construction. The following scope of service is provided within this report:

1. Prepare records of the soil boring logs depicting the subsurface soil conditions encountered during our field exploration.
2. Conduct a review of each soil sample obtained during our field exploration for classification and additional testing if necessary.
3. Analyze the existing soil conditions found during our exploration.
4. Provide estimated soil design properties for the encountered soils below 15 feet.

1.2 Project Description

We understand the project consists of the installation of approximately 30,000 linear feet of water main piping within the Royal Harbor Community canal system. We understand the water mains will extend to depths of approximately -20 feet N.G.V.D. At this time you requested GFA conduct two land borings at locations selected by you to depths of 40 feet below the existing ground surface and provide our evaluation of the encountered soils.

2.0 OBSERVATIONS

2.1 Site Inspection

The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. GFA would be pleased to perform these services for an additional fee, if required.



2.2 Field Exploration

A total of two (2) standard penetration test (SPT) borings to depths of approximately 40 feet below ground surface (BGS) were completed for this study. The locations of the borings performed are illustrated in Appendix B: "Test Location Plan". Due to vegetation and underground utilities, access to the canal bank was limited. Borings were completed as close to the canal as possible. The Standard Penetration Test (SPT) boring method was used as the investigative tool within the borings. SPT tests were performed in substantial accordance with ASTM Procedure D-1586, "Penetration Test and Split-Barrel Sampling of Soils". This test procedure consists of driving a 1.4-inch I.D. split-tube sampler into the soil profile using a 140-pound hammer falling 30 inches. The number of blows per foot, for the second and third 6-inch increment, is an indication of soil strength.

The soil samples recovered from the soil borings were visually classified and their stratification is illustrated in Appendix D: "Record of Test Borings". It should be noted that soil conditions might vary between the strata interfaces, which are shown. The soil boring data reflect information from a specific test location only. Site specific survey staking for the test locations was not provided for our field exploration. The indicated depth and location of each test was approximated based upon existing grade and estimated distances and relationships to obvious landmarks. The boring depths were selected based on our knowledge of vicinity soils and to include the zone of soil likely to be stressed by the proposed construction.

2.3 Laboratory Analysis

Soil samples recovered from our field exploration were returned to our laboratory where they were visually examined in general accordance with ASTM D-2488. Samples were evaluated to obtain an accurate understanding of the soil properties and site geomorphic conditions. After a thorough visual examination of the recovered site soils, no laboratory testing was deemed necessary. Bag samples of the soil encountered during our field exploration will be held in our laboratory for your inspection for 30 days and then discarded unless we are notified otherwise in writing.

2.4 Geomorphic Conditions

Boring logs derived from our field exploration are presented in Appendix D: "Record of Test Borings". The boring logs depict the observed soils in graphic detail. The Standard Penetration Test borings indicate the penetration resistance, or N-values, logged during the drilling and sampling activities. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples. All soil samples reviewed have been depicted and classified in general accordance with the Unified Soil Classification System, modified as necessary to describe typical southwest Florida conditions. See Appendix E: "Discussion of Soil Groups", for a detailed description of various soil groups.

The subsurface soil conditions encountered at this site generally consists of very loose to medium dense sand (SP), sand with organics, peat (Pt), silty sand (SM), and weathered limestone(WLS) to the boring termination depths. Please refer to Appendix D - Record of Test Borings for a detailed account of each boring.



2.5 Hydrogeological Conditions

On the dates of our field exploration, the groundwater table was encountered at depths of about 3 feet below the existing ground surface at the boring locations. The groundwater table will fluctuate seasonally depending upon local rainfall and other site specific and/or local influences such as tidal events. Brief ponding of stormwater may occur across the site after heavy rains.

No additional investigation was included in our scope of work in relation to the wet seasonal high groundwater table or any existing well fields in the vicinity. Well fields may influence water table levels and cause significant fluctuations. If a more comprehensive water table analysis is necessary, please contact our office for additional guidance.

3.0 ENGINEERING EVALUATION

3.1 Soil Properties

The following table presents estimated soil properties for the soils uncouncted in our borings:

Depth Range (FT. B.G.S.)	Soil Type	SPT "N" Value	Internal Friction Angle (Degrees)	Unit Weight (pcf) Dry/Submerged
10 - 17	Sand some Silt (SP-SM)	7-16	30	110/48
17 - 23	Silty Sand (SM)	1 - 3	28	105/43
23 - 33	Weathered Limestone (WLS)	2 - 4	28	110/48
33 - 40	Weathered Limestone (WLS)	9 - 39	34	120/58

4.0 REPORT LIMITATIONS

This consulting report has been prepared for the exclusive use of the members of the design team for the Royal Harbor Water Improvements Project in Naples, Collier County, Florida. This report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied. The evaluation submitted in this report, is based in part upon the data collected during a field exploration, however, the nature and extent of variations throughout the subsurface profile may not become evident until the time of construction. If variations then appear evident, it may be necessary to reevaluate information and professional opinions as provided in this report. In the event changes are made in the nature, design, or locations of the proposed structure, the evaluation and opinions contained in this report shall not be considered valid, unless the changes are reviewed and conclusions modified or verified in writing by GFA International. GFA is not responsible for damage caused by soil improvement and/or construction activity vibrations related to this project. GFA is also not



responsible for damage concerning drainage or moisture related issues for the proposed or nearby structures.

5.0 BASIS FOR REPORT

The analysis submitted in this report are based on the data obtained from the tests performed at the locations indicated on the attached figure in Appendix B. This report does not reflect any variations, which may occur between borings. While the borings are representative of the subsurface conditions at their respective locations and for their vertical reaches, local variations characteristic of the subsurface soils of the region are anticipated and may be encountered. The delineation between soil types shown on the soil logs is approximate and the description represents our interpretation of the subsurface conditions at the designated boring locations on the particular date drilled.

Any third party reliance of our geotechnical report or parts thereof is strictly prohibited without the expressed written consent of GFA International. The methodology (ASTM D-1586) used in performing our borings and for determining penetration resistance is specific to the sampling tools utilized and does not reflect the ease or difficulty to advance other tools or materials.



Appendix A - Vicinity Map

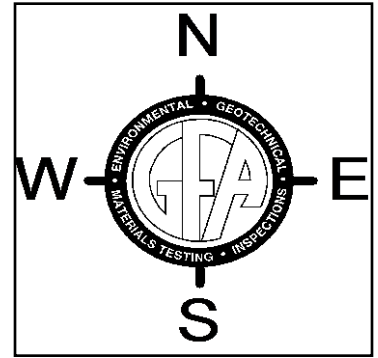




VICINITY MAP

Royal Harbor Water System Improvements

Kingfish Road and Sheepshead Drive
Naples, Collier County, Florida
GFA International Project No.: 14-0437



*Scale is an approximation and may not be accurate.

Appendix B - Test Location Plan

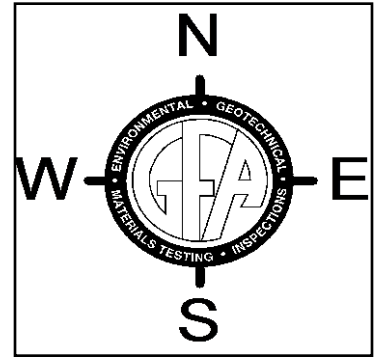




TEST LOCATION PLAN

Royal Harbor Waster System Improvements

Kingfish Road and Sheepshead Drive
Naples, Collier County, Florida
GFA International Project No.: 14-0437



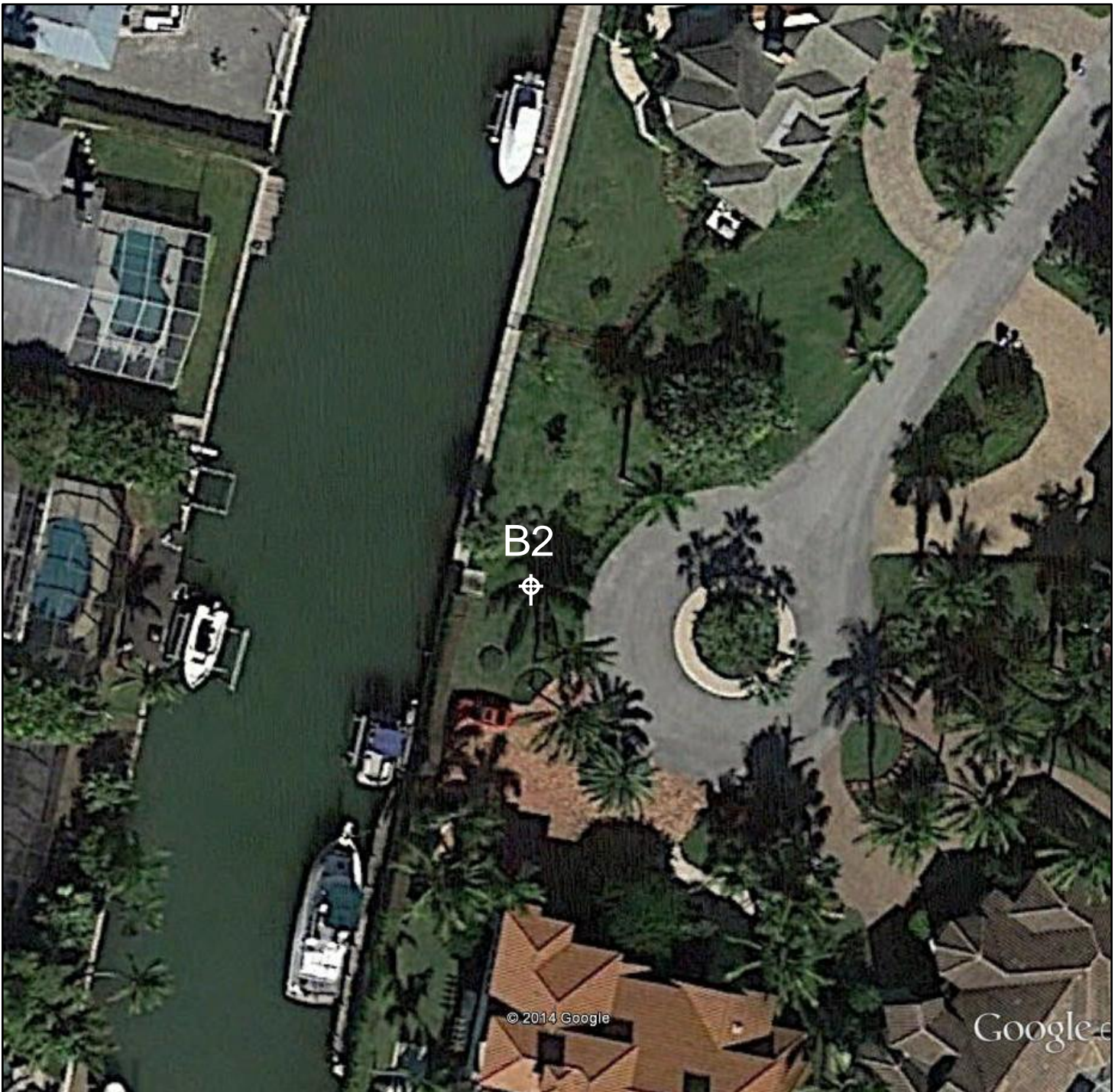
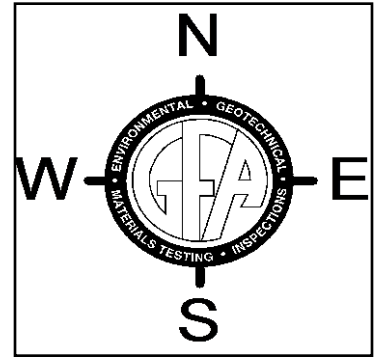
*Scale is an approximation and may not be accurate.



TEST LOCATION PLAN

Royal Harbor Water System Improvements

Kingfish Road and Sheepshead Drive
Naples, Collier County, Florida
GFA International Project No.: 14-0437



*Scale is an approximation and may not be accurate.

Appendix C - Notes Related to Borings



**NOTES RELATED TO
RECORDS OF TEST BORING AND
GENERALIZED SUBSURFACE PROFILE**

1. Groundwater level was encountered and recorded (if shown) following the completion of the soil test boring on the date indicated. Fluctuations in groundwater levels are common; consult report text for a discussion.
2. The boring location was identified in the field by offsetting from existing reference marks and using a cloth tape and survey wheel.
3. The borehole was backfilled to site grade following boring completion, and patched with asphalt cold patch mix when pavement was encountered.
4. The Record of Test Boring represents our interpretation of field conditions based on engineering examination of the soil samples.
5. The Record of Test Boring is subject to the limitations, conclusions and recommendations presented in the Report text.
6. "Field Test Data" shown on the Record of Test Boring indicated as 11/6 refers to the Standard Penetration Test (SPT) and means 11 hammer blows drove the sampler 6 inches. SPT uses a 140-pound hammer falling 30 inches.
7. The N-value from the SPT is the sum of the hammer blows required to drive the sampler the second and third 6-inch increments.
8. The soil/rock strata interfaces shown on the Records of Test Boring are approximate and may vary from those shown. The soil/rock conditions shown on the Records of Test Boring refer to conditions at the specific location tested; soil/rock conditions may vary between test locations.

9. Relative density for sands/gravels and consistency for silts/clays are described as follows:

SPT	CPT	SANDS/GRAVELS	SPT	CPT	SILTS/CLAYS
BLOWS/FOOT	KG/CM ²	RELATIVE DENSITY	BLOWS/FOOT	KG/CM ²	CONSISTENCY
0-4	0-16	Very loose	0-1	0-3	Very soft
5-10	17-40	Loose	2-4	4-9	Soft
11-30	41-120	Medium Dense	5-8	10-17	Firm
31-50	over 120	Dense	9-15	18-31	Stiff
over 50		Very Dense	16-30	32-60	Very stiff
			31-50	over 60	Hard

10. Grain size descriptions are as follows:

NAME	SIZE LIMITS	PROPORTION	ADJECTIVE
Boulder	12 Inches or more	Up to 10%	with a trace
Cobbles	3 to 12 Inches	10 to 30%	with some
Coarse Gravel	¾ to 3 Inches		
Fine Gravel	No. 4 sieve to ¾ inch		
Coarse Sand	No. 10 to No. 4 sieve		
Medium Sand	No. 40 to No. 10 sieve		
Fine Sand	No. 200 to No. 40 sieve		
Fines	Smaller than No. 200 sieve		

11. Definition of Descriptive Terms of Fines:

PROPORTION	ADJECTIVE	APPROXIMATE ROOT DIAMETER	ADJECTIVE
Up to 10%	with a trace	Less than 1/32"	Fine roots
10 to 30%	with some	1/32" to ¼"	Small roots
30 to 50%	with	¼" to 1"	Medium roots
		Greater than 1"	Large roots

11. Definitions related to adjectives used in soil/rock descriptions:

PROPORTION	ADJECTIVE	APPROXIMATE ROOT DIAMETER	ADJECTIVE
Up to 10%	with a trace	Less than 1/32"	Fine roots
10 to 30%	with some	1/32" to ¼"	Small roots
30 to 50%	with	¼" to 1"	Medium roots
		Greater than 1"	Large roots



Appendix D - Record of Test Borings





GFA International, Inc
 5851 Country Lakes Drive
 Fort Myers, Florida 33905
 239-489-2443 P
 239-489-3438 F

BORING NUMBER B-1

PAGE 1 OF 1

CLIENT Tetra Tech	PROJECT NAME Royal Harbor Water System Improvements
PROJECT NUMBER 14-0437	PROJECT LOCATION Naples, FL
DATE STARTED 4/4/14 COMPLETED 4/4/14	GROUND ELEVATION NA
DRILLING CONTRACTOR GFA International	GROUND WATER LEVEL:
DRILLING METHOD SPT/MUD ROTARY	▽ ENCOUNTERED AT (ft): 3
DRILLED BY G.Cole	NOTES Kingfish Road

DEPTH (ft)	SPT GRAPHIC LOG	MAIN SOIL COMPONENT	OTHER COMPONENTS	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● N-VALUE CURVE
0						
0 - 6		SAND (SP)	Gray to Brown (0 to 6 ft Augured by Hand)		100	
5 - 7		PEAT (Pt)	Dark Brown with silt		100	
7 - 9				1-2-5-9 (7)	100	
9 - 11		SAND (Loose to Medium Dense)	Brown some silt	4-6-6-6 (12)	100	
11 - 15		Silty SAND (SM) Very Loose	Brown	2-5-6-7 (11)	100	
15 - 20		SAND (SP) Very Loose	Gray some gravel	2-1-0-1 (1)	100	
20 - 25		Silty SAND (SM) Very Loose	Gray with shell and limestone	1-2-1-2 (3)	100	
25 - 30		WEATHERED LIMESTONE (WLS) Very Loose	Gray with silt and shell	2-2-2-3 (4)	100	
30 - 35		WEATHERED LIMESTONE (WLS) Medium Dense	Gray with silt and shell	6-6-8-11 (14)	100	
35 - 40				18-19-20-19 (39)	100	

MAIN BORING LOG 14-0437 CANAL BORINGS.GPJ MASTER BORING LOG.GDT 4/9/14

Bottom of hole at 40.0 feet.



GFA International, Inc
 5851 Country Lakes Drive
 Fort Myers, Florida 33905
 239-489-2443 P
 239-489-3438 F

BORING NUMBER B-2

PAGE 1 OF 1

CLIENT Tetra Tech **PROJECT NAME** Royal Harbor Water System Improvements
PROJECT NUMBER 14-0437 **PROJECT LOCATION** Naples, FL
DATE STARTED 4/4/14 **COMPLETED** 4/4/14 **GROUND ELEVATION** NA
DRILLING CONTRACTOR GFA International **GROUND WATER LEVEL:**
DRILLING METHOD SPT/MUD ROTARY ENCOUNTERED AT (ft): 3
DRILLED BY G.Cole **NOTES** Sheepshead Drive

DEPTH (ft)	SPT GRAPHIC LOG	MAIN SOIL COMPONENT	OTHER COMPONENTS	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	N-VALUE CURVE
0						
0 to 6		SAND (SP)	Gray to Brown (0 to 6 ft Augured by Hand)		100	
5		PEAT (Pt)	Dark Brown with Silt		100	
5 to 6		SAND (SP) Loose	Brown some silt and organics	1-2-4-6 (6)	100	
6 to 10		Silty SAND (SM) Medium Dense	Gray with silt	3-8-8-7 (16)	100	
10 to 15		SAND (SP) Loose	Gray	4-4-3-2 (7)	100	
15 to 20		Silty SAND (SM) Very Loose	Brown	1-0-1-1 (1)	100	
20 to 25		Silty SAND (SM) Very Loose	Gray with shell and limestone	1-1-1-2 (2)	100	
25 to 30		WEATHERED LIMESTONE (WLS) Very Loose	Gray with silt and shell	1-1-1-1 (2)	100	
30 to 35		WEATHERED LIMESTONE (WLS) Loose to Medium Dense	Gray with silt and shell	2-3-6-7 (9)	100	
35 to 40				8-7-7-8 (14)	100	

MAIN BORING LOG 14-0437 CANAL BORINGS.GPJ MASTER BORING LOG.GDT 4/9/14

Bottom of hole at 40.0 feet.

Appendix E - Discussion of Soil Groups



DISCUSSION OF SOIL GROUPS

COARSE GRAINED SOILS

GW and SW GROUPS. These groups comprise well-graded gravelly and sandy soils having little or no plastic fines (less than 5 percent passing the No. 200 sieve). The presence of the fines must not noticeably change the strength characteristics of the coarse-grained fraction and must not interface with its free-draining characteristics.

GP and SP GROUPS. Poorly graded gravels and sands containing little or no plastic fines (less than 5 percent passing the No. 200 sieve) are classed in GP and SP groups. The materials may be called uniform gravels, uniform sands or non-uniform mixtures of very coarse material and very fine sands, with intermediate sizes lacking (sometimes called skip-graded, gap-graded or step-graded). This last group often results from borrow pit excavation in which gravel and sand layers are mixed.

GM and SM GROUPS. In general, the GM and SM groups comprise gravels or sands with fines (more than 12 percent passing the No. 200 sieve) having low or no plasticity. The plasticity index and liquid limit of soils in the group should plot below the "A" line on the plasticity chart. The gradation of the material is not considered significant and both well and poorly graded materials are included.

GC and SC GROUPS. In general, the GC and SC groups comprise gravelly or sandy soils with fines (more than 12 percent passing the No. 200 sieve), which have a fairly high plasticity. The liquid limit and plasticity index should plot above the "A" line on the plasticity chart.

FINE GRAINED SOILS

ML and MH GROUPS. In these groups, the symbol M has been used to designate predominantly silty material. The symbols L and H represent low and high liquid limits, respectively, and an arbitrary dividing line between the two is set at a liquid limit of 50. The soils in the ML and MH groups are sandy silts, clayey silts or inorganic silts with relatively low plasticity. Also included are loess type soils and rock flours.

CL and CH GROUPS. In these groups the symbol C stands for clay, with L and H denoting low or high liquid limits, with the dividing line again set at a liquid limit of 50. The soils are primarily inorganic clays. Low plasticity clays are classified as CL and are usually lean clays, sandy clays or silty clays. The medium and high plasticity clays are classified as CH. These include the fat clays, gumbo clays and some volcanic clays.



OL and OH GROUPS. The soil in the OL and OH groups are characterized by the presence of organic odor or color, hence the symbol O. Organic silts and clays are classified in these groups. The materials have a plasticity range that corresponds with the ML and MH groups.

HIGHLY ORGANIC SOILS

The highly organic soils are usually very soft and compressible and have undesirable construction characteristics. Particles of leaves, grasses, branches, or other fibrous vegetable matter are common components of these soils. They are not subdivided and are classified into one group with the symbol PT. Peat humus and swamp soils with a highly organic texture are typical soils of the group.



APPENDIX B

FDEP WATER PERMIT



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

SOUTH DISTRICT
P.O. BOX 2549
FORT MYERS, FL 33902-2549

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

April 29, 2014

**In the matter of an
Application for Permit by:**

Justin Frederiksen, P.E.
Deputy Utility Director
City of Naples
380 Riverside Circle
Naples, FL 34102
jfrederiksen@naplesgov.com

Naples Royal Harbor Water System Improvements
(City of Naples WTP)
DEP File No. 320682-002-DS/C
PWS ID No. 5110198
Collier County

NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number 320682-002-DS to construct the subject water distribution system improvements, issued pursuant to Section 403.861(9), Florida Statutes.

This permit is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the paragraphs below or unless a request for extension of time in which to file a petition is filed within the required timeframe and conforms to Rule 62-110.106(4), F.A.C. Upon timely filing of a petition or a request for an extension, this permit will not be effective until further Order of the Department.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) with the Agency Clerk for the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, within 14 days of receipt of this Notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-106.205, F.A.C.

A petition must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of how and when the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts which petitioner contends warrant reversal or modification of the Department's action;
- (f) A statement of the specific rules or statutes the petitioner contends requires reversal or modification of the Department's action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by petitioner, stating precisely the action that the petitioner wants the Department to take.

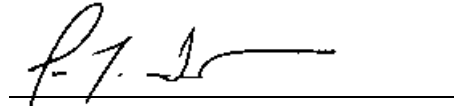
Notice of Permit Issuance
Naples Royal Harbor Water System Improvements
(City of Naples WTP)
DEP File No. 320682-002-DS/C

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise contain the same information as set forth above, as required by Rule 28-106.301, F.A.C. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any such final decision of the Department on the petition have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to section 120.68 of the Florida Statutes, by filing a Notice of Appeal pursuant to Rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the final order is filed with the Clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Jon M. Iglehart
Director of District Management
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901
Phone Number (239) 344-5600

CERTIFICATION OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Permit Issuance and all copies were mailed/electronically transmitted before the close of business on **April 29, 2014** to those persons listed.

FILING AND ACKNOWLEDGEMENT

Filed, on this date, under section 120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


Clerk

April 29, 2014
Date

JMI/BTS/se

Enclosure: Permit

Cc: Brett Messner, P.E. Brett.messner@tetrattech.com
AJ Satyal, DEP; Ajaya.satyal@dep.state.fl.us



**FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION**

SOUTH DISTRICT
P.O. BOX 2549
FORT MYERS, FL 33902-2549

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

April 29, 2014

ELECTRONIC CORRESPONDENCE

PERMITTEE:

Justin Frederiksen, P.E., Deputy Utility Director
City of Naples
380 Riverside Circle
Naples, FL 34266
jfrederiksen@naplesgov.com

PWS ID NUMBER: 5110198

PERMIT NUMBER: 320682-002-DS/C

DATE OF ISSUE: April 29, 2014

EXPIRATION DATE: April 28, 2019

COUNTY: Collier

PROJECT: Naples Royal Harbor Water System
Improvements (City of Naples WTP)

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4 and 62-555. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

TO CONSTRUCT: Replacement of 1500 LF of 4" and 28,500 LF of 8" asbestos cement (AC) water main (WM) at Naples Royal Harbor with 4" and 8" PVC water mains:

PROPOSED CONSTRUCTION INCLUDES:

- 1.) Installation of 1,500 LF of 4-inch PVC WM and 28,500 LF of 8-inch PVC WM along with associated fire hydrant assemblies and valves to provide increase flow and pressure for fire protection requirements;
- 2.) Installation of two (2) 10-inch HDPE directional drills WM for a total of 735 LF underneath the canal to "loop" the system;

IN ACCORDANCE WITH: Tetra Tech, Inc., design drawings, sheet numbers Cover, G-002, G-003, G-101, G-102, G-201, G-202, G-301, G-302, C-101 through C-111, C-201 through C-205, C-301 through C-304, and D-101 through D-105, dated April 7, and 28, 2014. The design drawings were submitted in support of the construction application. The application was dated February 4, 2014, and received on April 9, 2014.

LOCATION: The project is located within the Royal Harbor Community, South of US 41 and East of Naples Bay, in Collier County, Florida.

Work must be conducted in accordance with the General and Specific Conditions, attached hereto.

Issued this 29th day of April, 2014.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Jon M. Iglehart
Director of District Management

Attachments

PERMITTEE:

Justin Frederiksen, P.E., Deputy Utility Director
City of Naples

PWS ID NUMBER: 5110198**PERMIT NUMBER:** 320682-002-DS/C**PROJECT:** Naples Royal Harbor Water System
Improvements (City of Naples WTP)**GENERAL CONDITIONS:**

The following General Conditions are referenced in Florida Administrative Code Rule 62-4.160.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonable necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages, which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

PERMITTEE:

Justin Frederiksen, P.E., Deputy Utility Director
City of Naples

PWS ID NUMBER: 5110198**PERMIT NUMBER:** 320682-002-DS/C**PROJECT:** Naples Royal Harbor Water System
Improvements (City of Naples WTP)

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300 F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (BACT)
 - b. Determination of Prevention of Significant Deterioration (PSD)
 - c. Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
 - d. Compliance with New Source Performance Standards
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 1. the date, exact place, and time of sampling or measurements;
 2. the person responsible for performing the sampling or measurements;
 3. the dates analyses were performed;
 4. the person responsible for performing the analyses;
 5. the analytical techniques or methods used;
 6. the results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law, which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

PERMITTEE:

Justin Frederiksen, P.E., Deputy Utility Director
City of Naples

PWS ID NUMBER: 5110198**PERMIT NUMBER:** 320682-002-DS/C**PROJECT:** Naples Royal Harbor Water System
Improvements (City of Naples WTP)**SPECIFIC CONDITIONS:**

1. The Permittee shall retain a Florida-licensed professional engineer in accordance with subsection 62-555.530(3), F.A.C., to take responsible charge of inspecting construction of the project for the purpose of determining in general if the construction proceeds in compliance with the permit, including the approved preliminary design report or drawings and specifications for the project.
2. The Permittee shall have complete record drawings produced for the project in accordance with subsection 62-555.530(4), F.A.C.
3. The Permittee shall provide an operation and maintenance manual for all new or altered facilities to fulfill the requirements under subsection 62-555.350(13), F.A.C.
4. The Permittee shall submit a certification of construction completion to the Department and obtain approval or clearance, from the Department per Rule 62-555.345, F.A.C., before placing any public water system components constructed or altered under this permit in operation for any purpose other than disinfection, testing for leaks, or testing equipment operation. This does not prohibit the Permittee from cutting into existing water mains, and returning the water mains to operation in accordance with subsection 62-555.340(5), F.A.C., without the Department's approval.
5. Chemicals that are contained in coatings that are applied to a surface in contact with drinking water, or are otherwise on equipment surfaces that come into contact with the water, and additives and chemicals used to treat water shall conform to American National Standards Institute (ANSI)/NSF International Standard 60-1988. Water system components whose surfaces come into contact with drinking water shall conform to ANSI/NSF Standard 61-1991. The authorized representative of the public water system shall certify in writing that each item conforms to the appropriate standard prior to release for operation. [Ref. 62-555.320(3)(a), 62-555.320(3)(b) and 62-555.320(3)(d)]
6. The installation or repair of any public water system, or any plumbing in residential or nonresidential facility providing water for human consumption, which is connected to a public water system, shall be lead free. [Ref. 62-555.322(1)]
7. When any existing asbestos cement (AC) pipes are replaced under this permit, the permittee shall do so in accordance with the applicable rules of Federal Asbestos Regulation and Florida DEP requirements. For specific requirements applicable to AC pipes, the permittee should contact the Air and Waste Management section managers prior to commencing any such activities at (239) 344-5600. Please be aware that a notification is required to be submitted to the Department for a regulated project.
8. Permittee shall maintain vertical clearance and horizontal separation between water mains and sanitary sewers, storm sewers, etc. unless approved otherwise by the Department, as provided in Rule 62-555.314, F.A.C., and Section 8.6 of Recommended Standards for Water Works, a manual adopted by reference in Rule 62-555.330(3), F.A.C.
9. The permittee must instruct the engineer of record to request system clearance from the Department within sixty (60) days of completion of construction, testing and disinfecting the system. Bacteriological test results shall be considered unacceptable if the test were completed more than 60 days before the Department received the results. [F.A.C. Rule 62-555.340(2)(c)]

Permitted construction or alteration of a public water system may not be placed into service until a letter of clearance has been issued by this Department. [F.A.C. Rule 62-555.345]

PERMITTEE:

Justin Frederiksen, P.E., Deputy Utility Director
City of Naples

PWS ID NUMBER: 5110198**PERMIT NUMBER:** 320682-002-DS/C**PROJECT:** Naples Royal Harbor Water System
Improvements (City of Naples WTP)**SPECIFIC CONDITIONS:**

10. Prior to placing this project into service, Permittee shall submit, at a minimum, all of the following to the Department for evaluation and approval for operation, as provided in Rules 62-555.340 and 62-555.345, F.A.C.:
 - a. the engineer's Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components Into Operation {DEP Form 62-555.900(9)};
 - b. certified record drawings, if there are any changes noted for the permitted project.
 - c. copy of a satisfactory pressure test of the process piping performed in accordance with AWWA Standards. [F.A.C. Rule 62-555.320(21)(a)(1)]
 - d. two consecutive days of satisfactory distribution bacteriological analytical results (see paragraph 3 below).

In order to facilitate the issuance of a letter of clearance, the Department requests that all of the above information be submitted as one package.

11. The permittee or suppliers of water shall telephone the State Warning Point (SWP), at 1-800-320-0519 immediately (i.e. within two hours) after discovery of any actual or suspected sabotage or security breach, or any suspicious incident, involving a public water system in accordance with the F.A.C. Rule 62-555.350(10).

APPENDIX C

FLUCFCS MAP



FLUCFCS Code	Description	State Status	Project area in acres
1210	Medium density residential	N	124.15
5101	Tidal creek (not part of project)	OSW	0.00
5103	Canal	OSW	25.00
5410	Naples Bay (not part of project)	OSW	0.00
6129	Mangrove swamp - disturbed	W	1.41
Total			150.56

LEGEND

N = Non-wetland
 W = Wetland
 OSW = Other Surface Water

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NOTES

1. The aerial photograph shown was provided by Collier County government and was taken in 2013.
2. Nomenclature and delineations as per the Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT, 1999).
3. The wetland lines shown have not been GPS located or agency verified and are subject to change.

LEGEND

- FLUCFCS polygons
- Wetlands

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REVISIONS	

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 Collier County, Florida

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FLUCFCS Map				
DATE	PROJECT	FILE NO.	SCALE	SHEET
April 2014	20149616-000	--	As Shown	Figure 2

City of Naples

Royal Harbor Water System Improvements Project
ITB 14-039
April 24, 2014 10:00 AM Local Time

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City of Naples

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City of Naples

Royal Harbor Water System Improvements Project

ITB 14-039

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Royal Harbor Water System Improvements Project

ITB 14-039

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