



**INVITATION FOR BID  
IFB # 15-2195DC  
SWWRF RECHARGE AND MONITORING WELLS CONSTRUCTION**

Manatee County, a political subdivision of the State of Florida, (hereinafter "Owner") will receive sealed bids from individuals, corporations, partnerships, and other legal entities organized under the laws of the State of Florida or authorized to conduct business in the State of Florida.

**NON-MANDATORY INFORMATION CONFERENCE**

In order to ensure all prospective bidders have sufficient information and understanding of Owner's needs, an Information Conference will be held at: **2:00 PM on August 5, 2015** at the **project site, located at Southwest Water Reclamation Facility, 6101 65th Street West, Bradenton, Florida 34210.** Attendance is not mandatory, but is highly encouraged.

**DEADLINE FOR CLARIFICATION REQUESTS:**      **12:00 PM on August 7, 2015**  
Reference Bid Article A.06

**BID OPENING TIME AND DATE DUE:**      **3:00 PM on August 25, 2015**

**FOR INFORMATION CONTACT:**

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Manatee County Financial Management Department  
Purchasing Division

AUTHORIZED FOR RELEASE: JDWW

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**SECTION A**  
**INFORMATION TO BIDDERS**

**A.01 OPENING LOCATION**

Sealed bids will be **publicly opened** at the **Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, Florida 34205** in the presence of Owner officials at the time and date stated, or soon thereafter. All bidders or their representatives are invited to attend the sealed bid opening.

Any bids received after the stated time and date will not be considered. It shall be the sole responsibility of the bidder to have their bid **delivered to the Manatee County Purchasing Division** for receipt on or before the stated time and date. Bidder shall be solely and strictly responsible for its timely delivery to the Purchasing Division. Bids delayed by mail, courier, or bids delayed for any other reason, shall not be considered, shall not be opened at the public opening, and arrangements shall be made for their return at the bidder's request and expense.

**A.02 SEALED & MARKED**

Bids shall be submitted in **triplicate, one original (marked Original) and three copy/copies (marked Copy)** of your **signed bid** shall be submitted in one **sealed package**, clearly marked on the outside "**Sealed Bid #15-2195DC SWWRF Recharge and Monitoring Wells Construction**" along with your company name.

For your convenience, a mailing label is provided with this Invitation for Bid (IFB) package. Or, you may address the package as follows:

Manatee County Purchasing Division  
1112 Manatee Avenue West, Suite 803  
Bradenton, Florida 34205  
Sealed Bid # \_\_\_\_\_, Title \_\_\_\_\_

All blank spaces on the bid form must be filled in as noted with amounts extended and totaled and no changes shall be made in the wording of the forms or in the items thereupon. In the event a change is made in your submittal, the bidder shall write its initials by the change. Any bid may be rejected which contains any omissions, alterations, irregularities of any kind, or which shall in any manner fail to conform to the requirements of this IFB.

A bid made by an individual, either in his/her own or proper person or under a trade or firm name, shall be executed under the individual's signature. If made by a partnership, the bid shall be executed by two or more of the general partners. If made by a corporation, the bid shall be executed by its President or other legally authorized corporate officer or agent.

**A.03 SECURING BID DOCUMENTS**

IFB's and related documents are available on <http://www.mymanatee.org/purchasing> for download in a portable document format (.PDF) file by clicking on "Bids and Proposals" from the Purchasing Division's web page. You may view and print these files using Adobe Reader software. If necessary, you may download a free copy of Adobe Reader from the link provided on the "Bids and Proposals" page.

Additionally, Manatee County collaborates with the Manatee Chamber of Commerce by announcing solicitation opportunities to the Chamber which are then passed to its members.

Manatee County may also use DemandStar to distribute bids. On the DemandStar website, <http://www.DemandStar.com>, click on the tab titled "My DemandStar" for more information regarding this service. Participation in the DemandStar system is not a requirement for doing business with Manatee County.

Complete copies of the IFB and all related documents are available for public inspection at the Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205, or by calling (941) 749-3014. Appointments are encouraged. Documents are available between the hours of 9:00 AM and 4:00 PM Monday through Friday, with the exception of holidays. A complete set of the IFB documents must be used in preparing bids. Owner assumes no responsibility for errors and misinterpretations resulting from the use of incomplete sets of bid documents.

**A.04 EXAMINATION OF BID DOCUMENTS AND SITE(S)**

It is the responsibility of each bidder before submitting a bid, to (a) examine the IFB documents thoroughly; (b) visit the Project Site(s) to become familiar with local conditions that may affect cost, progress, performance, or furnishing of the Work; (c) consider federal, state, and local codes, laws, and regulations that may affect costs, progress, performance, or furnishing of the Work; (d) study and carefully correlate bidder's observations with the IFB documents; and (e) notify Owner of all conflicts, errors, or discrepancies in the IFB documents.

Each bidder may, at bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions at or contiguous to the Project Site(s) or otherwise which may affect cost, progress, performance or furnishing of the Work and which bidder deems necessary to determine his bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the IFB documents. Owner will provide each bidder access to the site(s) to conduct such explorations and tests.

Bidder shall fill all holes, clean up and restore the Project Site(s) to its former condition upon completion of such explorations. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by successful bidder in performing the Work are identified in the IFB documents.

All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by successful bidder. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by Owner unless otherwise provided in the IFB documents.

Inspection of the Project Site(s) is **a requirement** to be considered for award of this bid. Prior to submitting a bid, each bidder shall examine the Project Site(s) and all conditions thereon fully familiarizing themselves with the full scope of the Work. Failure to become familiar with Project Site conditions will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any Work that is required to complete the Project in accordance with the Project Plans and Specifications. Bidder shall acknowledge inspection of the Project Site(s) on his/her signed, submitted Bid Form.

#### **A.05 MODIFICATION OF BID DOCUMENTS**

If a bidder wishes to recommend changes to the IFB documents, the bidder shall furnish, in writing, data and information necessary to aid Owner in evaluating the request to modify the IFB documents. Owner is not obligated to make any changes to the IFB documents. Unless an addendum is issued, the IFB documents shall remain unaltered. **Bidders must fully comply with the IFB documents in their entirety.**

#### **A.06 CLARIFICATION & ADDENDA**

Each bidder shall examine all IFB documents and shall judge all matters relating to their adequacy and accuracy. Any inquiries, suggestions or requests concerning interpretation, clarification or additional information pertaining to this IFB shall be made through the Manatee County Purchasing Division. Owner shall not be responsible for oral interpretations given by any Owner employee, representative, or others.

**12:00 PM on August 7, 2015** shall be the deadline to submit to the Purchasing Division, in writing, all inquiries, suggestions, or requests concerning interpretation, clarification or additional information pertaining to this IFB.

This deadline has been established to maintain fair treatment of all potential bidders, while maintaining progression of the Work.

If any addenda are issued to this IFB, Owner will post the documents on the Purchasing Division's web page at <http://www.mymanatee.org/purchasing>, and then by clicking on "Bids and Proposals". If the original solicitation was broadcast via DemandStar, the addenda will also be broadcast on the DemandStar distribution system to "Planholders" on this web service.

The issuance of a written addendum is the only official method whereby interpretation, clarification or additional information can be given.

It shall be the **responsibility of each bidder, prior to submitting a bid**, to contact the Purchasing Division (see contact information on the cover page) to **determine if any addenda were issued** and to make such addenda a part of their bid.

**A.07 LOBBYING**

After the issuance of any IFB, prospective bidders or their agents, representatives or persons acting at the request of such bidder shall not contact, communicate with or discuss any matter relating to the IFB with any officer, agent or employee of Manatee County other than the Purchasing Official or the contact identified in this IFB, pursuant to the Manatee County Code of Laws. This prohibition includes copying such persons on all written communication, including email correspondence. This requirement begins with the issuance of an IFB and ends upon execution of the final Agreement or when the IFB has been cancelled. Violators of this prohibition shall be subject to sanctions as provided in the Manatee County Code of Laws.

**A.08 UNBALANCED BIDDING PROHIBITED**

Owner recognizes that large and/or complex projects will often result in a variety of methods, sources, and prices. However, where in the opinion of Owner such variation does not appear to be justified, given bid requirements and industry and market conditions, the bid will be presumed to be unbalanced. Examples of unbalanced bids will include:

- a. Bids showing omissions, alterations of form, additions not specified, or required conditional or unauthorized alternate bids.
- b. Bids quoting prices that substantially deviate, either higher or lower, from those included in the bids of competitive bidders for the same line item unit costs.
- c. Bids where the unit costs offered are in excess of or below reasonable cost analysis values.

In the event Owner determines that a bid is presumed unbalanced, it will request the opportunity to and reserves the right to, review all source quotes, bids, price lists, letters of intent, etc., which the bidder obtained and upon which the bidder relied upon to develop its bid. Owner reserves the right to reject as nonresponsive any presumptive unbalanced bids where the bidder is unable to demonstrate the validity and/or necessity of the unbalanced unit costs.

**A.09 FRONT LOADING OF BID PRICING PROHIBITED**

Prices offered for performance and/or acquisition activities which occur early in the Project Schedule, such as mobilization; clearing and grubbing; or maintenance of traffic; that are substantially higher than pricing of competitive bidders within the same portion of the Project Schedule, will be presumed to be front loaded. Front loaded bids could reasonably appear to be an attempt to obtain unjustified early payments creating a risk of insufficient incentive for the bidder to complete the Work or otherwise creating an appearance of an undercapitalized bidder.

In the event Owner determines that a bid is presumed to be front loaded, it will request the opportunity to, and reserves the right to, review all source quotes, bids, price lists, letters of intent, etc., which the bidder obtained and upon which the bidder relied upon to develop the pricing or acquisition timing for these bid items. Owner reserves the right to reject as nonresponsive any presumptive front loaded bids where the bidder is unable to demonstrate the validity and/or necessity of the front loaded costs.

**A.10 WITHDRAWAL OF BIDS**

Bidders may withdraw bids as follows:

- a. Mistakes discovered before the public bid opening may be withdrawn by written notice from the bidder submitting the bid. This request must be received in the Purchasing Division prior to the time set for delivery and opening of the bids. A copy of the request shall be retained and the unopened bid returned to the bidder; or
- b. After the bids are opened or a selection has been determined, but before an Agreement is signed, a bidder alleging a material mistake of fact may be permitted to withdraw their bid if:
  1. The mistake is clearly evident in the solicitation document; or
  2. Bidder submits evidence which clearly and convincingly demonstrates that a mistake was made. Request to withdraw a bid must be in writing and approved by the Purchasing Official.

**A.11 IRREVOCABLE OFFER**

Any bid may be withdrawn up until the time and date set for opening of the bid. Any bid not so withdrawn shall, upon opening, constitute an irrevocable offer for a period of ninety (90) days to sell to Manatee County the goods or services set forth in the attached IFB until one or more of the bids have been duly accepted by Owner.

**A.12 BID EXPENSES**

All expenses for making bids to Owner are to be borne by the bidder.

**A.13 RESERVED RIGHTS**

Owner reserves the right to accept or reject any and/or all bids, to waive irregularities and technicalities, and to request resubmission. Also, Owner reserves the right to accept all or any part of the bid and to increase or decrease quantities to meet additional or reduced requirements of Owner. Any sole response received by the first submission date may or may not be rejected by Owner depending on available competition and current needs of Owner. For all items combined, the bid of the lowest, responsive, responsible bidder will be accepted, unless all bids are rejected.

The lowest, responsible bidder shall mean that bidder who makes the lowest bid to sell goods and/or services of a quality which meets or exceeds the quality of goods and/or services set forth in the IFB documents or otherwise required by Owner.

To be responsive, a bidder shall submit a bid which conforms in all material respects to the requirements set forth in the IFB.

To be a responsible bidder, the bidder shall have the capability in all respects to perform fully the bid requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance.

Also, Owner reserves the right to make such investigation as it deems necessary to determine the ability of any bidder to furnish the service requested. Information Owner deems necessary to make this determination shall be provided by the bidder. Such information may include, but shall not be limited to current financial statements, verification of availability of equipment and personnel, and past performance records.

#### **A.14 APPLICABLE LAWS**

Bidder must be authorized to transact business in the State of Florida. All applicable laws and regulations of the State of Florida and ordinances and regulations of Manatee County will apply to any resulting Agreement. Any involvement with the Manatee County Purchasing Division shall be in accordance with the Manatee County Purchasing Ordinance as amended.

#### **A.15 COLLUSION**

By submitting a bid to this IFB, bidder certifies that it has not divulged, discussed or compared its bid with any other bidder, and has not colluded with any other bidder or parties to this bid whatsoever. Also, bidder certifies, and in the case of a joint bid each party thereto certifies as to their own organization, that in connection with this bid:

- a. any prices and/or cost data submitted have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices and/or cost data, with any other bidder or with any competitor;
- b. any prices and/or cost data quoted for this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder, prior to the scheduled opening, directly or indirectly to any other bidder or to any competitor;
- c. no attempt has been made or will be made by the bidder to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition;

- d. the only person or persons interested in this bid, principal or principals is/are named therein and that no person other than therein mentioned has any interest in this bid or in the resulting Agreement to be entered into; and
- e. no person or agency has been employed or retained to solicit or secure the resulting Agreement upon an agreement or understanding or a commission, percentage, brokerage, or contingent fee except bona fide employees or established commercial agencies maintained by bidder for purpose of doing business.

**A.16 CODE OF ETHICS**

With respect to this bid, if any bidder violates, directly or indirectly, the ethics provisions of the Manatee County Purchasing Ordinance and/or Florida criminal or civil laws related to public procurement, including but not limited to Chapter 112, Part III, Code of Ethics for Public Officers and Employees, Florida Statutes, such bidder will be disqualified from eligibility to perform the Work described in this IFB, and may also be disqualified from furnishing future goods or services to, and from submitting any future bids to supply goods or services to, Manatee County.

By submitting a bid, the bidder represents to Owner that all statements made and materials submitted are truthful, with no relevant facts withheld. If a bidder is determined to have been untruthful in their bid or any related presentation, such bidder will be disqualified from eligibility to perform the Work described in this IFB, and may also be disqualified from furnishing future goods or services to, and from submitting any future bids to supply goods or services to, Manatee County.

**A.17 PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES**

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime, as that term is defined in Section 287.133, Florida Statutes, may not submit a bid to provide any goods or services to a public entity; may not submit a bid with a public entity for the construction or repair of a public building or public work; may not submit bids on leases of real property to a public entity; may not be awarded or perform Work as a contractor, supplier, Subcontractor, or consultant under an agreement with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months following the date of being placed on the convicted list.

In addition, the Manatee County Code of Laws prohibits the award of any bid to any person or entity who/which has, within the past five (5) years, been convicted of, or admitted to in court or sworn to under oath, a public entity crime or of any environmental law that, in the reasonable opinion of the Purchasing Official, establishes reasonable grounds to believe the person or business entity will not conduct business in a responsible matter.

To ensure compliance with the foregoing, the Code requires all persons or entities desiring to do business with Owner to execute and file with the Purchasing Official an

affidavit, executed under the pain and penalties of perjury, confirming that person, entity and any person(s) affiliated with the entity, does not have such a record and is therefore eligible to seek and be awarded business with Owner. In the case of a business entity other than a partnership or a corporation, such affidavit shall be executed by an authorized agent of the entity. In the case of a partnership, such affidavit shall be executed by the general partner(s). A Public Contracting and Environmental Crimes Certification form is attached herein for this purpose.

**A.18 BID FORMS**

Bids must be submitted on the provided forms, although additional pages may be attached. **Bidders must fully complete all pages of the Bid Forms. Bid Forms must be executed by an authorized signatory who has the legal authority to make the bid and bind the company. Bidders must fully comply with all requirements of this IFB in its entirety.** Failure to comply shall result in bidder being deemed nonresponsive.

**A.19 AGREEMENT FORMS**

The Agreement resulting from the Acceptance of a bid shall be in the form of the Agreement stated in this IFB, which is attached herein.

A written notice confirming award or recommendation thereof will be forwarded to the successful bidder accompanied by the required number of unsigned counterparts of the Agreement. Within ten (10) days thereafter, successful bidder shall sign and deliver the required number of counterparts of the Agreement with any other required documents to Owner. (Note: Agreement must be approved in accordance with Chapter 2-26 of the Manatee County Code of Laws and the Administrative Standards and Procedures Manual approved by the County Administrator).

**A.20 LEGAL NAME**

Bids shall clearly indicate the legal name, address and telephone number of the bidder on the Bid Form. Bid Forms shall be signed above the typed or printed name and title of the signer. The signer must have the authority to bind the bidder to the submitted bid.

When bidder is a partnership, the Bid Form shall be signed in the name of the firm and by all partners required under the terms of the partnership agreement. When a corporation is a bidder, the authorized corporate officers shall sign.

Bidders who are corporations or limited partnerships shall provide a certified copy of their permit to transact business in the State of Florida, preferably along with the Bid Form, or within forty-eight (48) hours after request by Owner.

When submitting a bid as a joint venture, it must have filed paper documents with the Division of Profession's Construction Industry Licensing Board prior to submitting a bid.

**A.21 DISCOUNTS**

Any and all discounts must be incorporated in the prices contained in the bid and not shown separately. The prices indicated on the Bid Form shall be the prices used in determining award.

**A.22 TAXES**

Manatee County is exempt from Federal Excise and State Sales Taxes. (F.E.T. Cert. No. 59-78-0089K; Florida Sales Tax Exempt Cert. No. 85-8012622206C-6); therefore, the bidder is prohibited from delineating a separate line item in his bid for any sales or service taxes. Nothing herein shall affect the bidder's normal tax liability.

The Contractor shall be responsible for the payment of taxes of any kind and character, including, but not limited to sales, consumer, use, and other similar taxes payable on account of the work performed and materials furnished under the award in accordance with the laws and Regulations of the place of the project which are applicable during the performance of the work. Nothing herein shall affect the bidder's normal tax liability.

**A.23 DESCRIPTIVE INFORMATION**

Unless otherwise specifically provided in the IFB documents, all equipment, materials and articles provided shall be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in the IFB documents, reference to any equipment, material, article or patented process, by trade name, brand name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition.

**A.24 AUTHORIZED PRODUCT REPRESENTATION**

The bidder, by virtue of submitting the name and specifications of a manufacturer's product, will be required to furnish the named manufacturer's product. Failure to perform accordingly may, in Owner's sole discretion, be deemed a material breach of the resulting Agreement, and shall constitute grounds for Owner's immediate termination of the resulting Agreement.

**A.25 ROYALTIES AND PATENTS**

The successful bidder shall pay all royalties and license fees for equipment or processes in conjunction with the equipment and/or services being furnished. Successful bidder shall defend all suits or claims for infringement of any patent, trademark or copyright, and shall save Owner harmless from loss on account thereof, including costs and attorney's fees.

**A.26 AMERICANS WITH DISABILITIES ACT**

Owner does not discriminate upon the basis of any individual's disability status. This non-discrimination policy involves every aspect of Owner's functions including one's access to, participation, employment, or treatment in its programs or activities. Anyone requiring **reasonable accommodation** for an Information Conference or Bid Opening should contact the person named on the cover page of this IFB document at least twenty-four (24) hours in advance of either activity.

**A.27 EQUAL EMPLOYMENT OPPORTUNITY CLAUSE**

In accordance with the provisions of Title VI of the Civil Rights Act of 1964 and Title 15, Part 8 of the Code of Federal Regulations, Owner hereby notifies all bidders that they will affirmatively ensure minority business enterprises will be afforded full opportunity to participate in response to this advertisement and will not be discriminated against on the grounds of race, color or national origin in consideration for bid award.

**A.28 MBE/DBE**

The State of Florida Office of Supplier Diversity provides the certification process and the database for identifying certified MBE/DBE firms. This service may be directly accessed at: <http://www.osd.dms.state.fl.us/iframe.htm>. If you have any questions regarding this State service, please contact their office at (850) 487-0915.

**A.29 MATHEMATICAL ERRORS**

Bid Forms without mathematical formulas:

In the event of multiplication/extension error(s), the unit price shall prevail. In the event of addition error(s) the extension totals will prevail. In the event the dollar amount for contract contingency is omitted, it will be added to the total price of the bid.

Bid Forms with mathematical formulas:

Interactive Bid Forms that contain mathematical formulas may be used for automating lengthy and complex bid forms. In the event these forms are used and a multiplication/extension error(s) is discovered, the unit price entered by the vendor shall prevail. The vendor shall assume the responsibility and accuracy of the information input in the bid form and therefore shall verify that the calculations are correct before submitting their bid.

Regardless of which type of bid form is used, all bids shall be reviewed mathematically and corrected, if necessary, using these standards, prior to additional evaluation.

**A.30 SUBCONTRACTORS, SUPPLIERS AND OTHERS**

The identity of Subcontractors, suppliers, and other persons and organizations (including those who are to furnish the principal items of material and equipment) may be requested by Owner for each bid item from any of the bidders; and the bidder shall respond within five (5) days after the date of such request. Such list shall be accompanied by an experience statement with pertinent information regarding similar Work and other evidence of qualification for each such Subcontractor, supplier, persons or organization if requested by Owner. If Owner, after due investigation, has reasonable objection to any proposed Subcontractor, supplier, other person or organization, Owner may, before the notice of intent to award is given, request the successful bidder to submit an acceptable substitute without an increase in Contract Sum or Contract Time.

If successful bidder declines to make any such substitution, Owner may award the resulting Agreement to the next lowest qualified bidder that proposes to use acceptable Subcontractors, suppliers, and other persons who Owner does not make written objection to. Successful bidder shall not be required to employ any Subcontractor,

supplier, other person or organization who successful bidder has reasonable objection to.

Subcontractors shall be bound by the terms and conditions of the resulting Agreement insofar as it applies to their Work, but this shall not relieve the successful bidder from the full responsibility to Owner for the proper completion of all Work to be executed under the resulting Agreement.

### **A.31 DISCLOSURE**

Upon receipt, all inquiries and responses to inquiries related to this IFB become "Public Records", and shall be subject to public disclosure consistent with Florida Statutes, Chapter 119.

Bids become subject to disclosure thirty (30) days after the opening or if a notice of intent to award decision is made earlier than this time as provided by Florida Statutes § 119.071(1)(b). No announcement or review of the bid shall be conducted at the public bid opening.

Based on the above, Owner will receive bids at the time and date stated and will make public at the opening the names of the business entities of all that submitted a bid and any amount presented as a total offer without any verification of the mathematics or the completeness of the bid.

If Owner rejects all bids and concurrently notices its intent to reissue the solicitation, the rejected bids are exempt from public disclosure until such time as Owner provides notice of an intended decision concerning the reissued solicitation or until Owner withdraws the reissued solicitation. A bid is not exempt for longer than twelve (12) months after the initial notice rejecting all bids.

Pursuant to Section 119.0701, Florida Statutes, in any Agreement entered into by Owner wherein the successful bidder is acting on behalf of Owner, successful bidder must:

- a. Keep and maintain public records that ordinarily and necessarily would be required by Owner in order to perform the service.
- b. Provide the public with access to public records on the same terms and conditions that Owner would provide and at a cost that does not exceed the cost provided in Florida Statutes, Chapter 119, or as otherwise provided by law.
- c. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law.

- d. Meet all requirements for retaining public records and transfer, at no cost, to Owner all public records in possession of successful bidder upon termination of the awarded Agreement and/or PO and destroy any duplicate public records that are exempt or confidential from public records disclosure requirements. All records stored electronically must be provided to Owner in a format that is compatible with Owner's information technology systems.

### **A.32 LOCAL PREFERENCE**

Local business is defined as a business legally authorized to engage in the sale of the goods and/or services to be procured, and which certifies within its bid that for at least six (6) months prior to the announcement of the solicitation of bids it has maintained a physical place of business in Manatee, Desoto, Hardee, Hillsborough, Pinellas or Sarasota County with at least one full-time employee at that location.

Local preference shall not apply to the following categories of Agreements:

1. Purchases or Agreements which are funded, in whole or in part, by a governmental or other funding entity, where the terms and conditions of receipt of the funds prohibit the preference.
2. Any bid announcement which specifically provides that the general local preference policies set forth in this section are suspended due to the unique nature of the goods or services sought, the existence of an emergency as found by either the County Commission or County Administrator, or where such suspension is, in the opinion of the County Attorney, required by law.

To qualify for local preference under this section, **a local business must certify to Owner** by completing an **"Affidavit as to Local Business Form"**, which is available for download at [www.mymanatee.org/vendor](http://www.mymanatee.org/vendor). Click on "Affidavit for Local Business" to access and print the form. Complete, notarize, and mail the notarized original to the following address: Manatee County Purchasing Division, 1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205.

It is the responsibility of the bidder to ensure accuracy of the Affidavit as to Local Business and notify Owner of any changes affecting same.

### **A.33 VENDOR REGISTRATION**

Registering your business with Manatee County will enhance our opportunities to identify sources for goods and services, plus identify local businesses. This information is used for soliciting quotations up to \$250,000.00 and for competitive solicitations of larger purchases.

Our staff can assist you with your registration as needed. Our office hours are 8:00 A.M. to 5:00 P.M., Monday through Friday on regular business days. Please call (941) 749-3014 if you wish to have a Purchasing staff member assist you.

**Quick steps to registration:**                    [www.mymanatee.org/purchasing](http://www.mymanatee.org/purchasing)

A link to Vendor Registration is listed on the Purchasing Division's web page under "Register as a Vendor". Click on "Vendor Registration Form" for on-line input.

Registration is not mandatory; however, by taking the time to register, you are helping Owner to provide timely notification of quotation, bid and proposal opportunities to your business.

**A.34 BE GREEN**

All bidders are encouraged to use as many **environmentally preferable** "green" products, materials, supplies, etc. as possible in order to promote a safe and healthy environment. **Environmentally preferable are products or services that have a reduced adverse effect on the environment.** Where all other evaluative factors, including local preference policies, are otherwise equal, such policies and practices will be a determinative factor in the award decision.

Provide detail of your organization's initiative and its ability to meet the goal of environmental sustainability.

**A.35 ePAYABLES**

Manatee County and Clerk of the Circuit Court have partnered to offer the ePayables program, which allows payments to be made to vendors via credit cards. The Clerk will issue a unique credit card number to each vendor; the card has a zero balance until payments have been authorized.

After goods are delivered or services rendered, vendors submit invoices to the remit to address on the purchase order according to the current process. When payments are authorized, an email notification is sent to the vendor. The email notification includes the invoice number(s), invoice date(s), and amount of payment. There is no cost for vendors to participate in this program; however, there may be a charge by the company that processes your credit card transactions.

If you are interested in participating in this program, please complete the ePayables Application attached herein and return the completed form via email to Ms. Lori Bryan, Supervisor at [lori.bryan@manateeclerk.com](mailto:lori.bryan@manateeclerk.com).

**NOTE: ANY OR ALL STATEMENTS CONTAINED IN THE FOLLOWING SECTIONS: SCOPE OF WORK, BID SUMMARY, CONSTRUCTION AGREEMENT FOR STIPULATED SUM, AND GENERAL CONDITIONS OF THE CONSTRUCTION AGREEMENT, WHICH VARY FROM THE INFORMATION TO BIDDERS, SHALL HAVE PRECEDENCE.**

**END OF SECTION A**

SECTION B  
**SCOPE OF WORK**

**B.01 SCOPE OF WORK**

The Work consists of the construction of the Southwest Water Reclamation Facility Class V Recharge Well located at 6101 65<sup>th</sup> Street West, Bradenton, Florida 34210. Construction to include:

- a. One 24" Aquifer Recharge Well, approximately 2100' depth.
- b. One 6" Recharge Zone Monitoring Well, approximately 1050' depth
- c. One 6" Suwannee Limestone Monitoring Well, approximately 700' depth.
- d. Four 2" Pad Monitoring Wells, approximately 40' depth.

Note: This project is funded in part through the state of Florida Department of Environmental Protection.

**B.02 COMPLETION OF WORK**

The Work will be completed and ready for final inspection within the specified calendar days from the date the Contract Time commences to run. Two bids shall be considered, **Bid "A" based on 450 calendar days (anticipate drilling 12 hours per day for 5 days per week)** and **Bid "B" based on 240 calendar days (anticipate drilling 24 hours per day for 5 days per week)**. Owner has the sole authority to select the bid based on the completion time which is in the best interest of Owner. **Only one award shall be made.**

**B.03 LIQUIDATED DAMAGES**

If the successful bidder fails to achieve Substantial Completion of the Work within the Contract Time and as otherwise required by the Contract Documents, the Owner shall be entitled to retain or recover from the successful bidder, as liquidated damages and not as a penalty, the sum of **\$1,742** per calendar day, commencing upon the first day following expiration of the Contract Time and continuing until the actual date of Substantial Completion. Such liquidated damages are hereby agreed to be a reasonable estimate of damages the Owner will incur as a result of delayed completion of the Work. The Owner may deduct liquidated damages as described in this paragraph from any unpaid amounts then or thereafter due the successful bidder under this Agreement. Any liquidated damages not so deducted from any unpaid amounts due the successful bidder shall be payable to the Owner at the demand of the Owner, together with interest from the date of the demand at the maximum allowable rate.

**B.04 CONTRACT CONTINGENCY WORK**

Contract contingency is a monetary allowance used solely at Owner's discretion to handle unexpected conditions as required to satisfactorily complete the Work in accordance with the IFB documents. A Field Directive must be issued by an authorized Owner representative to authorize use of contract contingency funds.

The percentage for contract contingency is listed on the Bid Form. Bidder shall enter the dollar amount for contract contingency based on the percentage of the total base bid. The total contract award will include contract contingency.

Appropriate uses of contract contingency include increases to existing bid item quantities that do not change the initial scope of Work, which may be directed by staff; modification items not originally bid which were unforeseen yet necessary during the Work to provide a safe, complete Project and that do not change the initial scope of Work; and unanticipated conflicts and/or design changes required during construction which are necessary to provide a safe, complete Project and that do not change the initial scope of Work.

Inappropriate uses of contract contingency include anything that changes the initial scope of Work, including the Contract Sum and Contract Time, and adding bid items not previously contemplated that change the initial scope of Work.

**END OF SECTION B**

**SECTION C**  
**BID SUMMARY**

**C.01 MINIMUM QUALIFICATIONS OF BIDDERS**

No person who is not licensed as a **Water Well Contractor pursuant to the requirements of the state of Florida Water Management District**, on the day the bid is submitted may be qualified to bid on this Work. In the event that a bidder is a business organization, including a partnership, corporation, business trust or other legal entity as set forth in Section 489.119(2), Florida Statutes, then the bidder shall only be qualified to bid on this Work if the bidder (the business organization) is on the day the bid is submitted properly licensed and registered as required herein.

The bidder must:

- a. demonstrate successful completion, within last ten (10) years, of at least three (3) wells approximately 1,000 feet in depth that were permitted under the Florida Department of Environmental Protection (FDEP) underground injection control program;
- b. provide references for the above stated three well projects; and
- c. have completed one well installation with a diameter of 24" or greater.

**C.02 BASIS OF AWARD**

Award shall be to the lowest, responsive, responsible bidder meeting specifications and having the lowest total offer for **Bid "A"**, or the lowest total offer for **Bid "B"**; and **dependent on cost, the inclusion of the Alternate Bid Item** for the requirements listed on the Bid Form for the Work as set forth in this IFB. The inclusion of the Alternate Bid Item in the award shall be the sole determination of the County. Bid prices shall include costs for furnishing all labor, equipment and/or materials for the completion of the Work in accordance with and in the manner set forth and described in the IFB documents to Owner's satisfaction within the prescribed time.

**Two schedules for completion of Work shall be considered. Each bid for completion by the specified stated time shall be offered as a separate "total offer". Owner has the sole authority to select the bid based on the completion time which is in the best interest of Owner. Only one award shall be made.**

**NOTE: Inspection of the site is a pre-requisite to be considered for award of this bid.**

In evaluating bids, Owner shall consider the qualifications of the bidders; and if required, may also consider the qualifications of the Subcontractors, suppliers, and other persons and organizations proposed. Owner may also consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work.

Whenever two or more bids are equal with respect to price, the bid received from a local business shall be given preference in award.

Whenever two or more bids are equal with respect to price, and all other evaluative factors are otherwise equal, including local preference policies, if the company provides documented environmentally preferable “green” products, materials, or supplies, they shall be given preference in award.

Whenever two or more bids which are equal with respect to price are received, and neither of these bids are from a local business, and neither of these bids provides documented “green” products, the award shall be determined by a chance drawing, coin toss, or similar tie-breaking method conducted by the Purchasing Division and open to the public.

**END OF SECTION C**

**SECTION D****INSURANCE AND BONDING REQUIREMENTS**

The successful bidder will not commence Work under the resulting Agreement until all insurance under this section, and such insurance coverage as might be required by Owner, has been obtained. The successful bidder shall obtain, and submit to the Purchasing Division within ten (10) calendar days from the date of notice of intent to award, at his expense, the following minimum amounts of insurance (inclusive of any amounts provided by an umbrella or excess policy):

<b>Insurance / Bond Type</b>	<b>Required Limits</b>
1. <input checked="" type="checkbox"/> Automobile Liability:	Bodily Injury and Property Damage, Owned/Non-Owned/Hired; Automobile included \$ <u>1,000,000</u> each occurrence <i>This policy shall contain severability of interests' provisions.</i>
2. <input checked="" type="checkbox"/> Commercial General Liability: (Occurrence Form - patterned after the current ISO form)	Bodily Injury and Property Damage \$ <u>1,000,000</u> single limit per occurrence; \$ <u>2,000,000</u> aggregate This shall include Premises and Operations; Independent Contractors; Products and Completed Operations and Contractual Liability. <i>This policy shall contain severability of interests' provisions.</i>
3. <input checked="" type="checkbox"/> Employer's Liability:	\$ <u>100,000</u> single limit per occurrence
4. <input checked="" type="checkbox"/> Worker's Compensation:	Statutory Limits of Chapter 440, Florida Statutes, and all Federal Government Statutory Limits & Requirements
5. <input checked="" type="checkbox"/> Other Insurance, as noted:	<p>a. <input type="checkbox"/> Aircraft Liability Coverage shall be carried in limits of not less than \$5,000,000 each occurrence if applicable to the completion of the services under this Agreement.</p> <p>b. <input checked="" type="checkbox"/> Installation Floater If the resulting Agreement <b>does not</b> include construction of or additions to above ground building or structures, but does involve the installation of machinery or equipment, successful bidder shall provide an "<b>Installation Floater</b>" with the minimum amount of insurance to be 100% of the value of such addition(s), building(s), or structure(s).</p> <p>c. <input type="checkbox"/> Maritime Coverage (Jones Act) \$ _____ per occurrence Coverage shall be maintained where applicable to the completion of the Work.</p>

Insurance / Bond Type	Required Limits
	<p>d. <input type="checkbox"/> Pollution \$ _____ per occurrence</p> <p>e. <input type="checkbox"/> Professional Liability \$ _____ per claim and in the aggregate</p> <ul style="list-style-type: none"> <li>• \$1,000,000 per claim and in the aggregate</li> <li>• \$2,000,000 per claim and in the aggregate</li> </ul> <p>f. <input type="checkbox"/> Project Professional Liability \$ _____ per occurrence</p> <p>g. <input type="checkbox"/> Property Insurance \$ _____</p> <p>If the resulting Agreement includes construction of or additions to above ground buildings or structures, bidder shall provide “<b>Builder’s Risk</b>” insurance with the minimum amount of insurance to be 100% of the value of such addition(s), building(s), or structure(s).</p> <p><i>To the extent that property damage is covered by commercial insurance, Owner and successful bidder agree to waive all subrogation rights against each other, except such rights as they may have to the proceeds of such insurance. Successful bidder shall require a similar waiver of subrogation from each of its bidder personnel and sub-consultants, to include Special Consultants; successful bidder shall provide satisfactory written confirmation to Owner of these additional waivers.</i></p> <p>h. <input type="checkbox"/> U.S. Longshoreman’s and Harborworker’s Act Coverage shall be maintained where applicable to the completion of the Work.</p> <p>i. <input type="checkbox"/> Valuable Papers Insurance \$ _____ per occurrence</p> <p>j. <input type="checkbox"/> Watercraft \$ _____ per occurrence</p>
6. <input checked="" type="checkbox"/> Bid Bond:	Bid bond shall be submitted by bidder for 5% of the total amount of the bid.
7. <input checked="" type="checkbox"/> Payment and Performance Bond:	Payment and Performance Bond shall be submitted by bidder for 100% of the award amount.

Reviewed by Risk: \_\_\_\_\_

## **INSURANCE REQUIREMENTS**

The amounts and types of insurance coverage shall conform to the minimum requirements set forth in this Exhibit, with the use of Insurance Services Office (ISO) forms and endorsements or their equivalents. If successful bidder has any self-insured retentions or deductibles under any of the listed minimum required coverage, successful bidder must identify on the certificate of insurance the nature and amount of such self-insured retentions or deductibles and provide satisfactory evidence of financial responsibility for such obligations. All self-insured retentions or deductibles will be successful bidder's sole responsibility.

Nothing herein shall in any manner create any liability of Owner in connection with any claim against the successful bidder for labor, services, or materials, or of Subcontractors; and nothing herein shall limit the liability of the successful bidder or successful bidder's sureties to Owner or to any workers, suppliers, material men or employees in relation to the resulting Agreement.

**Builder's Risk Coverage.** The successful bidder shall procure and maintain during the entire course of the Work a builder's risk policy, completed value form, insured to provide coverage on an all risk basis, including coverage for off-site stored materials and including coverage for theft. This coverage shall not be lapsed or cancelled because of partial Acceptance by the Owner prior to final Acceptance of the Project. Successful bidder shall recommend to Owner any additions to the Project Costs resulting from any casualty described in Article XII General Conditions of the Construction Agreement, including those costs, expenses and other charges (including normal and ordinary compensation to the successful bidder) necessary for reconstruction of the Project substantially in accordance with the Project Plans and Specifications. The nature, level and type of builder's risk coverage (including completed value or replacement cost coverage) shall be determined by Owner through insurers selected by successful bidder and approved by Owner.

**Excess Policy or Umbrella.** An excess policy or umbrella may be used to cover limits over and above Commercial General Liability.

**Subcontractor's Public Liability and Property Damage Insurance.** The successful bidder shall require each Subcontractor to procure and maintain during the term of the subcontract, insurance of the type specified above, or insure the activities of Subcontractors in its policy, as approved by Owner prior to performance of any services. The levels of coverage as set forth in the table above may be adjusted to require a reduced level of coverage consistent with the scope of Work to be provided by that particular Subcontractor. Any reduction in the levels of insurance coverage required by the successful bidder's standard form of subcontract shall be approved by the Owner.

**Waiver of Subrogation.** Owner and successful bidder waive against each other and the Owner's separate Vendors, Contractors, Design Consultants, Subcontractors agents and employees of each and all of them, all damages covered by property insurance provided herein, except such rights as they may have to the proceeds of such insurance. The successful bidder and Owner shall, where appropriate, require similar waivers of subrogation from the Owner's separate Vendors, Design Consultants and Subcontractors and shall require each of them to include similar waivers in their contracts.

**Worker's Compensation Insurance.** The successful bidder shall procure and maintain during the term of the Contract Documents, workers' compensation insurance for all its employees connected with the Work and shall require all Subcontractors similarly to provide workers' compensation insurance for all their employees unless such employees are covered by the protection afforded by successful bidder. Such insurance shall comply with the Florida Workers' Compensation Law. The successful bidder shall provide adequate insurance, satisfactory to Owner, for the protection of employees not otherwise protected.

**By way of its submission of a bid hereto, bidder:**

- a. Represents that bidder maintains, and will maintain during the term of any Agreement arising from this solicitation, all insurance coverage required herein from responsible companies duly authorized to do business under the laws of the State of Florida that hold a rating of "A-" or better by Best's Key Guide, latest edition, and are deemed acceptable to Owner as set forth in this solicitation.
- b. Agrees that insurance, as specified herein, shall remain in force and effect without interruption from the date of commencement of the Work throughout the duration of the Project, and shall remain in effect for at least two (2) years after the termination of the Contract Documents.
- c. Agrees that if the initial or any subsequently issued certificate of insurance expires prior to completion of the Work, successful bidder shall furnish to Owner renewal or replacement certificate(s) of insurance no later than ten (10) calendar days after the expiration date on the certificate. Failure of successful bidder to provide Owner with such renewal certificate(s) shall be considered justification for Owner to terminate any and all Agreements.
- d. Agrees that bidder and/or its insurance carrier shall provide thirty (30) days written notice to Owner of policy cancellation or non-renewal on the part of the insurance carrier or the successful bidder. Successful bidder shall also notify Owner, in a like manner, within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, non-renewal or material change in coverage or limits received by successful bidder from its insurer and nothing contained herein shall relieve successful bidder of this requirement to provide notice. In the event of a reduction in the aggregate limit of any policy to be provided by successful bidder hereunder, successful bidder shall immediately take steps to have the aggregate limit reinstated to the full extent permitted under such policy.
- e. Agrees that failure of successful bidder to obtain and maintain proper amounts of insurance at all times as called for herein shall constitute a material breach of the resulting Agreement, which may result in immediate termination.
- f. Agrees that, should at any time the successful bidder not maintain the insurance coverage(s) required herein, Owner may terminate the Agreement or at its sole discretion shall be authorized to purchase such coverage(s) and charge successful bidder for such coverage(s) purchased. If successful bidder fails to reimburse Owner for such costs within thirty (30) days after demand, Owner has the right to offset these costs from any amount due successful bidder under this Agreement or any other agreement between Owner and successful bidder. Owner shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverage(s) purchased or the insurance companies used. The decision of Owner to purchase such insurance coverage(s) shall in no way be construed to be a waiver of any of its rights under the Contract Documents.
- g. Agrees to provide, upon request, the entire and complete insurance policies required herein.

- h. The payment of deductibles for insurance required of the successful bidder by the Contract Documents shall be the sole responsibility of the successful bidder.

**Certificate of Insurance Requirements:**

- a. Certificates of insurance in duplicate evidencing the insurance coverage specified herein shall be filed with the Purchasing Division before operations are begun. The required certificates of insurance shall name the types of policy, policy number, date of expiration, amount of coverage, companies affording coverage, and also shall refer specifically to the bid number and title of the Project, and must read: For any and all work performed on behalf of Manatee County.
- b. **Additional Insured:** The Automobile Liability and Commercial General Liability policies provided by the successful bidder to meet the requirements of this IFB shall name Manatee County, Board of County Commissioners, as an additional insured as to the operations of the successful bidder under this IFB and shall contain severability of interests provisions.
- c. In order for the certificate of insurance to be accepted it **must** comply with the following:
1. The "Certificate Holder" shall be:  
**Manatee County  
Board of County Commissioners  
Bradenton, FL  
IFB# 15-2195DC SWWRF Recharge and Monitoring Wells Construction  
For any and all work performed on behalf of Manatee County.**
  2. Certificate shall be mailed to:  
**Manatee County Purchasing Division  
1112 Manatee Avenue West, Suite 803  
Bradenton, FL 34205  
Attn: Deborah Carey-Reed, CPPB, Contracts Specialist**

**BONDING REQUIREMENTS**

**Bid Bond/Certified Check.** By submitting a bid to this IFB, the bidder agrees should the bidder's bid be accepted, **to execute the form of Agreement and present the same to Manatee County for approval within ten (10) calendar days after notice of intent to award**. The bidder further agrees that failure to execute and deliver said form of Agreement **within ten (10) calendar days** will result in damages to Manatee County and as guarantee of payment of same a bid bond/certified check shall be enclosed within the submitted sealed bid in the amount of five (5%) percent of the total amount of the bid. The bidder further agrees that in case the bidder fails to enter into an Agreement, as prescribed by Manatee County, the bid bond/certified check accompanying the bid shall be forfeited to Manatee County as agreed liquidated damages. If Owner enters into an Agreement with a bidder, or if Owner rejects any and/or all bids, accompanying bond will be promptly returned.

**Payment and Performance Bonds.** Prior to commencing Work, the successful bidder shall obtain, for the benefit of and directed to Owner, a Payment and Performance Bond satisfying the requirements of Section 255.05, Florida Statutes, covering the faithful performance by the successful bidder of its obligation under the Contract Documents, including but not limited to the construction of the Project on the Project Site and the payment and obligations arising thereunder, including all payments to Subcontractors, laborers, and materialmen. The surety selected by the successful bidder to provide the Payment and Performance Bond shall be approved by Owner prior to issuance of such Bond, which approval shall not be unreasonably withheld or delayed provided that surety is rated A- or better by Best's Key Guide, latest edition.

Failure to provide the required bonds on the prescribed form may result in successful bidder being deemed nonresponsive. Bonds must be in the form prescribed in Section 255.05, Florida Statutes, and must not contain notice, demand or other terms and conditions, including informal pre-claim meetings, not provided for in Section 255.05, Florida Statutes.

Surety of such bonds shall be in an amount equal to 100% of the Contract Price issued by a duly authorized and nationally recognized surety company, authorized to do business in the State of Florida, satisfactory to Owner. Surety shall be rated as "A-" or better by Best's Key Guide, latest edition. The attorney-in-fact who signs the bonds must file with the bonds, a certificate and effective dated copy of power-of-attorney. Payment and Performance Bonds shall be issued to Manatee County, a political subdivision of the State of Florida, **within ten (10) calendar days after notice of intent to award.**

In addition, pursuant to Section 255.05(1)(b), Florida Statutes, prior to commencing Work, the successful bidder shall be responsible and bear all costs associated to record the Payment and Performance Bond with the Manatee County Clerk of the Circuit Court. A certified copy of said recording shall be furnished to the Purchasing Division upon filing. Pursuant to Section 255.05(1)(b), Florida Statutes, Owner will make no payment to the successful bidder until the successful bidder has complied with this paragraph.

Furnishing Payment and Performance Bonds shall be requisite to execution of an Agreement with Owner. Said Payment and Performance Bonds will remain in force for the duration of the Agreement with the premiums paid by the successful bidder. Failure of the successful bidder to execute such Agreement and to supply the required bonds shall be just cause for cancellation of the award. Owner may then contract with the next lowest, responsive and responsible bidder or re-advertise this IFB. If another bidder is accepted, and notice given within ninety (90) days after the opening of the bids, this Acceptance shall bind the bidder as though they were originally the successful bidder.

Failure of Owner at any time to require performance by the successful bidder of any provisions set out in the resulting Agreement will in no way affect the right of Owner, thereafter, to enforce those provisions.

**BIDDER'S INSURANCE STATEMENT**

**THE UNDERSIGNED** hereto have read and understand the aforementioned insurance requirements of this IFB and note that the evidence of insurability shall be required within ten (10) days from the date of notice of intent to award.

Bidder Name: \_\_\_\_\_ Date: \_\_\_\_\_

Bidder's Signature: \_\_\_\_\_

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

Insurance Agency: \_\_\_\_\_

Agent Name: \_\_\_\_\_ Agent Phone: \_\_\_\_\_

***Please return this completed and signed statement with your bid.***

**BID FORM**  
**(Submit in Triplicate)**

**For: #15-2195DC,  
SWWRF Recharge and Monitoring Wells Construction**

<b>Total Offer (Bid "A"):</b> _____
<b>Based on a completion time of <u>450</u> calendar days</b>
<b>Total Offer (Bid "B"):</b> _____
<b>Based on a completion time of <u>240</u> calendar days</b>

We, the undersigned, hereby declare that we have carefully reviewed the Bid Documents in their entirety and with full knowledge and understanding of the aforementioned herewith submit this bid, completely meeting each and every specification, term, and condition contained therein.

Two schedules for completion of the Work shall be considered. Each bid for completion by the specified stated time shall be offered as a separate "total offer". County has the sole authority to select the bid based on the completion time which is in the best interest of County. Only one award shall be made.

As Bidder, we understand that the Bid documents, in its entirety, including but not limited to, all specifications, terms, and conditions shall be made a part of any resulting Agreement between Manatee County and the successful Bidder. Failure to comply shall result in Agreement default, whereupon, the defaulting successful Bidder shall be required to pay for any and all re-procurement costs, damages, and attorney fees as incurred by County, and agrees to forfeit his/her bid bond.

Communications concerning this bid shall be addressed as follows: **(Complete all fields)**

Bidder's Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Telephone: ( ) \_\_\_\_\_ Fax: ( ) \_\_\_\_\_

Email Address: \_\_\_\_\_

I, \_\_\_\_\_ on [date(s)] \_\_\_\_\_ attest that I have visited the project site(s) to familiarize myself with the full scope of work required for the bid

Acknowledge Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_ Acknowledge Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_  
Acknowledge Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_ Acknowledge Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_  
Acknowledge Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_ Acknowledge Addendum No. \_\_\_\_\_ Dated: \_\_\_\_\_

**Authorized Signature(s):** \_\_\_\_\_

Name and Title of Above Signer(s): \_\_\_\_\_

Date: \_\_\_\_\_

**MAILING LABEL**

Cut along the outside border and affix this label to your sealed bid envelope to identify it as a "Sealed Bid". Be sure to include the name of the company submitting the bid and the bid due date and time where requested.

**MAILING LABEL TO AFFIX TO OUTSIDE OF SEALED BID PACKAGE:**

**BIDDER:** \_\_\_\_\_

**Request for Bid No.: IFB#**\_\_\_\_\_

**BID TITLE:** \_\_\_\_\_

**DUE DATE/TIME:** \_\_\_\_\_

(Submit In Triplicate)

Bid "A" Based on Completion Time of 450 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IA-1.	Mobilize and Demobilize All Equip. to the RW-1 Well Site to Complete Drilling and Testing Activities for RW-1, Complete, Including Drilling Pad and Four Water Table Monitoring Wells	LS	1		\$ -
IA-2.	Set Pit Casing, Complete	LS	1		\$ -
IA-3.	Drill Pilot Hole - Drill Nominal 8 to 12-¼ -Inch Dia. Pilot Hole Using Mud Rotary or Reverse-Air Drilling Techniques, Complete to Depth of:				
	a. 300 feet (Mud Rotary)	FT	300		\$ -
	b. 2,100 feet (Reverse-air)	FT	1,800		\$ -
IA-4.	Pilot Hole Reaming or Open Hole to Depth of:				
	a. 42-inch Diameter to 300 feet (Mud Rotary)	FT	300		\$ -
	b. 34-inch Diameter to 1,000 feet (Reverse-air)	FT	700		\$ -
	c. 23-inch Diameter up to 2,100 feet (Reverse-air)	FT	900		\$ -
IA-5.	Geophysical Logging - Furnish, Setup, Operate, and Remove all Equip. to Conduct Geophysical Logs in Accordance with Table 1 of Section 02679 on:				
	a. Pilot Hole to 300 feet	EA	1		\$ -
	b. Reamed Hole to 300 feet	EA	1		\$ -
	c. Pilot Hole to 1,000 feet	EA	1		\$ -
	d. Reamed Hole to 1,000 feet	EA	1		\$ -
	e. Pilot hole up to 2,100 feet	EA	2		\$ -
	f. Completed Well up to 2,100 feet	EA	1		\$ -
	g. Temperature Log Following Each Cement Stage	EA	5		\$ -
IA-6.	Furnish and Install Casing:				
	a. 34-inch Dia. Carbon Steel	FT	300		\$ -
	b. 24-inch Dia. Carbon Steel	FT	1000		\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

**BID FORM**  
(Submit In Triplicate)

IFB #15-2195DC

**Bid "A" Based on Completion Time of 450 Calendar Days**

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IA-7.	Grout Casing - Grout Carbon Steel Casing from Bottom to Land Surface and Pilot Holes Prior to Reaming Using ASTM Type II Cement with up to:				
	a. 0% Bentonite (Neat)	CF	3200		\$ -
	b. Up to 6% Bentonite	CF	1000		\$ -
	c. Up to 12% Bentonite	CF	1000		\$ -
IA-8.	Gravel - Furnish and Emplace Clean Gravel Used to Plug Cavities, Complete	CF	20		\$ -
IA-9.	Pressure Test Casing - Successfully Complete Pressure Test on Final 24-Inch Casing Prior to Drilling Out Plug, Complete	LS	1		\$ -
IA-10.	Cores - During Pilot Hole or Open Hole Drilling, Provide 10-Foot Length, 4-Inch Diameter Cores at Selected Intervals, Complete	FT	40		\$ -
IA-11.	Packer Test Set up - Furnish, Setup, Operate, and Remove all Equip. Necessary to Run Packer Pumping Test, Complete	EA	4		\$ -
IA-12.	Packer Test Pumping Time, Complete	HR	40		\$ -
IA-13.	Pumping Test Setup, Complete	LS	1		\$ -
IA-14.	Pumping Test Pumping Time, Complete	HR	10		\$ -
IA-15.	Development - Develop Well by Air Lifting, Complete	HR	24		\$ -
IA-16.	Temporary Wellhead - Complete Wellhead in accordance with the Drawings, Complete	LS	1		\$ -
IA-17.	Standby Time (Max. 12 hr/day)	HR	40		\$ -
IA-18.	Extra Work - Furnish Drilling Rig and Crew to Perform Extra Work Not Included in the Specifications When Directed by the ENGINEER, Complete	HR	40		\$ -
IA-19.	Water Sampling - Collect, Analyze, and Report Water Samples in Accordance with Section 02311 for:				
	a. Water Table Monitoring Wells Weekly Compliance Samples	EA	35		\$ -
	b. Exhibit 1, List A	EA	30		\$ -
	c. Exhibit 1, List B	EA	8		\$ -
	d. Exhibit 1, List C	EA	1		\$ -
<b>SUBTOTAL 1A - (450 CALENDAR DAYS)</b>					\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "A" Based on Completion Time of 450 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIA-1.	Mobilize and Demobilize All Equip. to the RW-1 Well Site to complete Drilling (in a 12 Hr/Day, 5 Day/Week Schedule) and testing Activities for RW-1, Complete, Including Drilling Pad and Four Water Table Monitoring Wells	LS	1		\$ -
IIA-2.	Set Pit Casing, Complete	LS	1		\$ -
IIA-3.	Drill Pilot Hole - Drill Nominal 8 to 12-¼ -Inch Dia. Pilot Hole Using Mud Rotary or Reverse-Air Drilling Techniques, Complete to Depth of:				
	a. 300 feet (Mud Rotary)	FT	300		\$ -
	b. 1,000 feet (Reverse-air)	FT	700		\$ -
IIA-4.	Pilot Hole Reaming or Open Hole to Depth of:				
	a. 20-inch Diameter to 300 feet (Mud Rotary)	FT	300		\$ -
	b. 14-inch Diameter to 1,000 feet (Reverse-air)	FT	700		\$ -
	c. 6-inch Diameter to 1,050 feet (Reverse-air)	FT	50		\$ -
IIA-5.	Geophysical Logging - Furnish, Setup, Operate, and Remove all Equip. to Conduct Geophysical Logs in Accordance with Table 1 of Section 02679 on:				
	a. Pilot Hole to 300 feet	EA	1		\$ -
	b. Reamed Hole to 300 feet	EA	1		\$ -
	c. Pilot Hole to 1,000 feet	EA	1		\$ -
	d. Reamed Hole to 1,000 feet	EA	1		\$ -
	e. Completed Well to 1,050 feet	EA	1		\$ -
IIA-6.	Furnish and Install Casing:				
	a. 14-inch Dia. Carbon Steel	FT	300		\$ -
	b. 6-inch Dia. Carbon Steel	FT	1000		\$ -
IIA-7.	Grout Casing - Grout Carbon Steel Casing from Bottom to Land Surface and Pilot Holes Prior to Reaming Using ASTM Type II Cement with up to:				
	a. 0% Bentonite (Neat)	CF	1500		\$ -
	b. Up to 6% Bentonite	CF	200		\$ -
	c. Up to 12% Bentonite	CF	200		\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "A" Based on Completion Time of 450 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIA-8.	Gravel - Furnish and Emplace Clean Gravel Used to Plug Cavities, Complete	CY	5		\$ -
IIA-9.	Development - Develop Well by Air Lifting, Complete	HR	24		\$ -
IIA-10.	Temporary Wellhead - Complete Wellhead in accordance with the Drawings, Complete	LS	1		\$ -
IIA-11.	Standby Time (Max. 12 hr/day)	HR	20		\$ -
IIA-12.	Extra Work - Furnish Drilling Rig and Crew to Perform Extra Work Not Included in the Specifications When Directed by the ENGINEER, Complete	HR	20		\$ -
IIA-13.	Water Sampling - Collect, Analyze, and Report Water Samples in Accordance with Section 02311 for:				
	a. Water Table Monitoring Wells Weekly Compliance Samples	EA	35		\$ -
	b. Exhibit 1, List A	EA	30		\$ -
	c. Exhibit 1, List C	EA	1		\$ -
<b>SUBTOTAL PART IIA (450 CALENDAR DAYS)</b>					\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "A" Based on Completion Time of 450 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIIA-1.	Mobilize and Demobilize All Equip. to the SLMW-1 Well Site to complete Drilling (in a 12 Hr/Day, 5 Day/Week Schedule) and testing Activities for SLMW-1 , Complete	LS	1		\$ -
IIIA-2.	Set Pit Casing, Complete	LS	1		\$ -
IIIA-3.	Drill Pilot Hole - Drill Nominal 8 to 12-¼ -Inch Dia. Pilot Hole Using Mud Rotary or Reverse-Air Drilling Techniques, Complete to Depth of:				
	a. 300 feet (Mud Rotary)	FT	300		\$ -
	b. 650 feet (Reverse-air)	FT	350		\$ -
IIIA-4.	Pilot Hole Reaming or Open Hole to Depth of:				
	a. 20-inch Diameter to 300 feet (Mud Rotary)	FT	300		\$ -
	b. 14-inch Diameter to 650 feet (Reverse-air)	FT	350		\$ -
	c. 6-inch Diameter to 700 feet (Reverse-air)	FT	50		\$ -
IIIA-5.	Geophysical Logging - Furnish, Setup, Operate, and Remove all Equip. to Conduct Geophysical Logs in Accordance with Table 1 of Section 02679 on:				
	a. Pilot Hole to 300 feet	EA	1		\$ -
	b. Reamed Hole to 300 feet	EA	1		\$ -
	c. Pilot Hole to 650 feet	EA	1		\$ -
	d. Reamed Hole to 650 feet	EA	1		\$ -
	e. Completed Well to 700 feet	EA	1		\$ -
IIIA-6.	Furnish and Install Casing:				
	a. 14-inch Dia. Carbon Steel	FT	300		\$ -
	b. 6-inch Dia. Carbon Steel	FT	650		\$ -
IIIA-7.	Grout Casing - Grout Carbon Steel Casing from Bottom to Land Surface and Pilot Holes Prior to Reaming Using ASTM Type II Cement with up to:				
	a. 0% Bentonite (Neat)	CF	850		\$ -
	b. Up to 6% Bentonite	CF	200		\$ -
	c. Up to 12% Bentonite	CF	200		\$ -
IIIA-8.	Gravel - Furnish and Emplace Clean Gravel Used to Plug Cavities, Complete	CY	5		\$ -
IIIA-9.	Development - Develop Well by Air Lifting, Complete	HR	24		\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "A" Based on Completion Time of 450 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIIA-10.	Temporary Wellhead - Complete Wellhead in accordance with the Drawings, Complete	LS	1		\$ -
IIIA-11.	Standby Time (Max. 12 hr/day)	HR	20		\$ -
IIIA-12.	Extra Work - Furnish Drilling Rig and Crew to Perform Extra Work Not Included in the Specifications When Directed by the ENGINEER, Complete	HR	20		\$ -
IIIA-13.	Water Sampling - Collect, Analyze, and Report Water Samples in Accordance with Section 02311 for:				
	a. Exhibit 1, List A	EA	9		\$ -
	b. Exhibit 1, List C	EA	1		\$ -
	<b>SUBTOTAL IIIA (450 CALENDAR DAYS)</b>				\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "A" Based on Completion Time of 450 Calendar Days

**BID SUMMARY**

<b>SUBTOTAL PART IA RECHARGE WELL RW-1</b>		
<b>SUBTOTAL PART IIA RECHARGE ZONE MONITOR WELL RZMW-1</b>		
<b>SUBTOTAL PART IIIA SUWANNEE LIMESTONE MONITOR WELL SLMW-1</b>		
<b>TOTAL - PARTS 1A THRU IIIA</b>		<b>\$ -</b>
<b>Contingency Amount</b>	<b>10% of Above Total</b>	<b>\$ -</b>
<b>TOTAL - PARTS 1A THRU IIIA, plus CONTINGENCY</b>		<b>\$ -</b>

**PART IV (ALTERNATE BID) WELL ACIDIZATION**

**(Acidization will only be completed during daylight hours)**

<b>Item</b>	<b>Description</b>	<b>Unit</b>	<b>Est. Qty.</b>	<b>Unit Cost</b>	<b>Computed Total Price for Item</b>
IV.A-1.	Mobilization - If Required, Re-Mobilize all Equip. Necessary to Acidize Recharge Well	LS	1		
IV.A-2.	Acidization Setup - Setup for Acidization of RW-1, Complete, Including well kills	LS	1		
IV.A-3.	Furnish and Emplace Acid, Complete	1000 GAL	25,000		
IV.A-4.	Pump Set - Set Pump and Discharge Line for Post Acid Development, Complete	EA	1		
IV.A-5.	Development Time	HR	24		
<b>PART IV.A TOTAL (ADD ALTERNATE BID)</b>		<i>Award at County's discretion.</i>			<b>\$ -</b>

<b>TOTAL - PARTS 1A THRU IIIA plus CONTINGENCY</b>	<b>\$ -</b>
<b>TOTAL - PART IV.A-1 ALTERNATE BID</b>	<b>\$ -</b>
<b>TOTAL - PARTS 1A THRU IIIA, plus CONTINGENCY, AND IV.A</b>	<b>\$ -</b>

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "B" Based on Completion Time of 240 Calendar Days

**PART IB- RECHARGE WELL RW-1**

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IB-1.	Mobilize and Demobilize All Equip. to the RW-1 Well Site to Complete Drilling and Testing Activities for RW-1, Complete, Including Drilling Pad and Four Water Table Monitoring Wells	LS	1		\$ -
IB-2.	Set Pit Casing, Complete	LS	1		\$ -
IB-3.	Drill Pilot Hole - Drill Nominal 8 to 12-¼ -Inch Dia. Pilot Hole Using Mud Rotary or Reverse-Air Drilling Techniques, Complete to Depth of:				
	a. 300 feet (Mud Rotary)	FT	300		\$ -
	b. 2,100 feet (Reverse-air)	FT	1,800		\$ -
IB-4.	Pilot Hole Reaming or Open Hole to Depth of:				
	a. 42-inch Diameter to 300 feet (Mud Rotary)	FT	300		\$ -
	b. 34-inch Diameter to 1,000 feet (Reverse-air)	FT	700		\$ -
	c. 23-inch Diameter up to 2,100 feet (Reverse-air)	FT	900		\$ -
IB-5.	Geophysical Logging - Furnish, Setup, Operate, and Remove all Equip. to Conduct Geophysical Logs in Accordance with Table 1 of Section 02679 on:				
	a. Pilot Hole to 300 feet	EA	1		\$ -
	b. Reamed Hole to 300 feet	EA	1		\$ -
	c. Pilot Hole to 1,000 feet	EA	1		\$ -
	d. Reamed Hole to 1,000 feet	EA	1		\$ -
	e. Pilot hole up to 2,100 feet	EA	2		\$ -
	f. Completed Well up to 2,100 feet	EA	1		\$ -
	g. Temperature Log Following Each Cement Stage	EA	5		\$ -
IB-6.	Furnish and Install Casing:				
	a. 34-inch Dia. Carbon Steel	FT	300		\$ -
	b. 24-inch Dia. Carbon Steel	FT	1000		\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

**BID FORM**  
(Submit In Triplicate)

IFB #15-2195DC

**Bid "B" Based on Completion Time of 240 Calendar Days**

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IB-7.	Grout Casing - Grout Carbon Steel Casing from Bottom to Land Surface and Pilot Holes Prior to Reaming Using ASTM Type II Cement with up to:				
	a. 0% Bentonite (Neat)	CF	3200		\$ -
	b. Up to 6% Bentonite	CF	1000		\$ -
	c. Up to 12% Bentonite	CF	1000		\$ -
IB-8.	Gravel - Furnish and Emplace Clean Gravel Used to Plug Cavities, Complete	CF	20		\$ -
IB-9.	Pressure Test Casing - Successfully Complete Pressure Test on Final 24-Inch Casing Prior to Drilling Out Plug, Complete	LS	1		\$ -
IB-10.	Cores - During Pilot Hole or Open Hole Drilling, Provide 10-Foot Length, 4-Inch Diameter Cores at Selected Intervals, Complete	FT	40		\$ -
IB-11.	Packer Test Set up - Furnish, Setup, Operate, and Remove all Equip. Necessary to Run Packer Pumping Test, Complete	EA	4		\$ -
IB-12.	Packer Test Pumping Time, Complete	HR	40		\$ -
IB-13.	Pumping Test Setup, Complete	LS	1		\$ -
IB-14.	Pumping Test Pumping Time, Complete	HR	10		\$ -
IB-15.	Development - Develop Well by Air Lifting, Complete	HR	24		\$ -
IB-16.	Temporary Wellhead - Complete Wellhead in accordance with the Drawings, Complete	LS	1		\$ -
IB-17.	Standby Time (Max. 12 hr/day)	HR	40		\$ -
IB-18.	Extra Work - Furnish Drilling Rig and Crew to Perform Extra Work Not Included in the Specifications When Directed by the ENGINEER, Complete	HR	40		\$ -
IB-19.	Water Sampling - Collect, Analyze, and Report Water Samples in Accordance with Section 02311 for:				
	a. Water Table Monitoring Wells Weekly Compliance Samples	EA	35		\$ -
	b. Exhibit 1, List A	EA	30		\$ -
	c. Exhibit 1, List B	EA	8		\$ -
	d. Exhibit 1, List C	EA	1		\$ -
<b>SUBTOTAL 1B - (240 CALENDAR DAYS)</b>					\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "B" Based on Completion Time of 240 Calendar Days

**PART IIB- RECHARGE ZONE MONITOR WELL RZMW-1**

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIB-1.	Mobilize and Demobilize All Equip. to the RW-1 Well Site to complete Drilling (in a 12 Hr/Day, 5 Day/Week Schedule) and testing Activities for RW-1, Complete, Including Drilling Pad and Four Water Table Monitoring Wells	LS	1		\$ -
IIB-2.	Set Pit Casing, Complete	LS	1		\$ -
IIB-3.	Drill Pilot Hole - Drill Nominal 8 to 12-¼ -Inch Dia. Pilot Hole Using Mud Rotary or Reverse-Air Drilling Techniques, Complete to Depth of:				
	a. 300 feet (Mud Rotary)	FT	300		\$ -
	b. 1,000 feet (Reverse-air)	FT	700		\$ -
IIB-4.	Pilot Hole Reaming or Open Hole to Depth of:				
	a. 20-inch Diameter to 300 feet (Mud Rotary)	FT	300		\$ -
	b. 14-inch Diameter to 1,000 feet (Reverse-air)	FT	700		\$ -
	c. 6-inch Diameter to 1,050 feet (Reverse-air)	FT	50		\$ -
IIB-5.	Geophysical Logging - Furnish, Setup, Operate, and Remove all Equip. to Conduct Geophysical Logs in Accordance with Table 1 of Section 02679 on:				
	a. Pilot Hole to 300 feet	EA	1		\$ -
	b. Reamed Hole to 300 feet	EA	1		\$ -
	c. Pilot Hole to 1,000 feet	EA	1		\$ -
	d. Reamed Hole to 1,000 feet	EA	1		\$ -
	e. Completed Well to 1,050 feet	EA	1		\$ -
IIB-6.	Furnish and Install Casing:				
	a. 14-inch Dia. Carbon Steel	FT	300		\$ -
	b. 6-inch Dia. Carbon Steel	FT	1000		\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "B" Based on Completion Time of 240 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIB-7.	Grout Casing - Grout Carbon Steel Casing from Bottom to Land Surface and Pilot Holes Prior to Reaming Using ASTM Type II Cement with up to:				
	a. 0% Bentonite (Neat)	CF	1500		\$ -
	b. Up to 6% Bentonite	CF	200		\$ -
	c. Up to 12% Bentonite	CF	200		\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "B" Based on Completion Time of 240 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIB-8.	Gravel - Furnish and Emplace Clean Gravel Used to Plug Cavities, Complete	CY	5		\$ -
IIB-9.	Development - Develop Well by Air Lifting, Complete	HR	24		\$ -
IIB-10.	Temporary Wellhead - Complete Wellhead in accordance with the Drawings, Complete	LS	1		\$ -
IIB-11.	Standby Time (Max. 12 hr/day)	HR	20		\$ -
IIB-12.	Extra Work - Furnish Drilling Rig and Crew to Perform Extra Work Not Included in the Specifications When Directed by the ENGINEER, Complete	HR	20		\$ -
IIB-13.	Water Sampling - Collect, Analyze, and Report Water Samples in Accordance with Section 02311 for:				
	a. Water Table Monitoring Wells Weekly Compliance Samples	EA	35		\$ -
	b. Exhibit 1, List A	EA	30		\$ -
	c. Exhibit 1, List C	EA	1		\$ -
	<b>SUBTOTAL PART IIB (240 CALENDAR DAYS)</b>				\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "B" Based on Completion Time of 240 Calendar Days  
**PART IIIB - SUWANNEE LIMESTONE MONITOR WELL (SLMW-1)**

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIIB-1.	Mobilize and Demobilize All Equip. to the SLMW-1 Well Site to complete Drilling (in a 12 Hr/Day, 5 Day/Week Schedule) and testing Activities for SLMW-1 , Complete	LS	1		\$ -
IIIB-2.	Set Pit Casing, Complete	LS	1		\$ -
IIIB-3.	Drill Pilot Hole - Drill Nominal 8 to 12-¼ -Inch Dia. Pilot Hole Using Mud Rotary or Reverse-Air Drilling Techniques, Complete to Depth of:				
	a. 300 feet (Mud Rotary)	FT	300		\$ -
	b. 650 feet (Reverse-air)	FT	350		\$ -
IIIB-4.	Pilot Hole Reaming or Open Hole to Depth of:				
	a. 20-inch Diameter to 300 feet (Mud Rotary)	FT	300		\$ -
	b. 14-inch Diameter to 650 feet (Reverse-air)	FT	350		\$ -
	c. 6-inch Diameter to 700 feet (Reverse-air)	FT	50		\$ -
IIIB-5.	Geophysical Logging - Furnish, Setup, Operate, and Remove all Equip. to Conduct Geophysical Logs in Accordance with Table 1 of Section 02679 on:				
	a. Pilot Hole to 300 feet	EA	1		\$ -
	b. Reamed Hole to 300 feet	EA	1		\$ -
	c. Pilot Hole to 650 feet	EA	1		\$ -
	d. Reamed Hole to 650 feet	EA	1		\$ -
	e. Completed Well to 700 feet	EA	1		\$ -
IIIB-6.	Furnish and Install Casing:				
	a. 14-inch Dia. Carbon Steel	FT	300		\$ -
	b. 6-inch Dia. Carbon Steel	FT	650		\$ -
IIIB-7.	Grout Casing - Grout Carbon Steel Casing from Bottom to Land Surface and Pilot Holes Prior to Reaming Using ASTM Type II Cement with up to:				
	a. 0% Bentonite (Neat)	CF	850		\$ -
	b. Up to 6% Bentonite	CF	200		\$ -
	c. Up to 12% Bentonite	CF	200		\$ -
IIIB-8.	Gravel - Furnish and Emplace Clean Gravel Used to Plug Cavities, Complete	CY	5		\$ -
IIIB-9.	Development - Develop Well by Air Lifting, Complete	HR	24		\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "B" Based on Completion Time of 240 Calendar Days

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IIIB-10.	Temporary Wellhead - Complete Wellhead in accordance with the Drawings, Complete	LS	1		\$ -
IIIB-11.	Standby Time (Max. 12 hr/day)	HR	20		\$ -
IIIB-12.	Extra Work - Furnish Drilling Rig and Crew to Perform Extra Work Not Included in the Specifications When Directed by the ENGINEER, Complete	HR	20		\$ -
IIIB-13.	Water Sampling - Collect, Analyze, and Report Water Samples in Accordance with Section 02311 for:				
	a. Exhibit 1, List A	EA	9		\$ -
	b. Exhibit 1, List C	EA	1		\$ -
	<b>SUBTOTAL IIIB (240 CALENDAR DAYS)</b>				\$ -

Bidder: \_\_\_\_\_

Signature: \_\_\_\_\_

(Submit In Triplicate)

Bid "B" Based on Completion Time of 240 Calendar Days

**BID SUMMARY**

SUBTOTBL PART IB RECHARGE WELL RW-1		
SUBTOTAL PART IIB RECHARGE ZONE MONITOR WELL RZMW-1		
SUBTOTAL PART IIIB SUWANNEE LIMESTONE MONITOR WELL SLMW-1		
<b>TOTAL - PARTS 1B THRU IIIB</b>		<b>\$ -</b>
Contingency Amount	10% of Above Total	\$ -
<b>TOTAL - PARTS 1B THRU IIIB, plus CONTINGENCY</b>		<b>\$ -</b>

**PART IV (ALTERNATE BID) WELL ACIDIZATION**

(Acidization will only be completed during daylight hours)

Item	Description	Unit	Est. Qty.	Unit Cost	Computed Total Price for Item
IV.B-1.	Mobilization - If Required, Re-Mobilize all Equip. Necessary to Acidize Recharge Well	LS	1		\$ -
IV.B-2.	Acidization Setup - Setup for Acidization of RW-1, Complete, Including well kills	LS	1		\$ -
IV.B-3.	Furnish and Emplace Acid, Complete	1000 GAL	25,000		\$ -
IV.B-4.	Pump Set - Set Pump and Discharge Line for Post Acid Development, Complete	EA	1		\$ -
IV.B-5.	Development Time	HR	24		\$ -
<b>PART IV.B TOTAL (ADD ALTERNATE BID)</b>		<i>Award at County's discretion.</i>			<b>\$ -</b>

<b>TOTAL - PARTS 1B THRU IIIB plus CONTINGENCY</b>	<b>\$ -</b>
<b>TOTAL - PART IV.B-1 ALTERNATE BID</b>	<b>\$ -</b>
<b>TOTAL - PARTS 1B THRU IIIB, plus CONTINGENCY, AND IV.B</b>	<b>\$ -</b>

Bidder: \_\_\_\_\_  
 Signature: \_\_\_\_\_

ATTACHMENT A  
**BIDDER'S QUESTIONNAIRE**  
(Submit in Triplicate)

The bidder warrants the truth and accuracy of all statements and answers herein contained. (Attach additional pages if necessary.)

**THIS QUESTIONNAIRE MUST BE COMPLETED AND SUBMITTED WITH YOUR BID**

1. Contact Information:

FEIN #: \_\_\_\_\_

License #: \_\_\_\_\_

License Issued to: \_\_\_\_\_

Date License Issued (MM/DD/YR): \_\_\_\_\_

Company Name: \_\_\_\_\_

Physical Address: \_\_\_\_\_

City: \_\_\_\_\_ State of Incorporation: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: ( ) \_\_\_\_\_ Fax Number: ( ) \_\_\_\_\_

Email address: \_\_\_\_\_

2. Bidding as: an individual \_\_; a partnership \_\_; a corporation \_\_; a joint venture \_\_

3. If a partnership, list names and addresses of partners; if a corporation, list names of officers, directors, shareholders, and state of incorporation; if joint venture, list names and address of ventures' and the same if any venture are a corporation for each such corporation, partnership, or joint venture:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Bidder is authorized to do business in the State of Florida:  Yes  No

For how many years? \_\_\_\_\_

5. Your organization has been in business (under this firm's name) as a

\_\_\_\_\_

Is this firm in bankruptcy? \_\_\_\_\_

6. Attach a list of the three (3) projects with references (include contact name and phone number) completed within the past ten (10) years for well construction having a minimum of 1,000 feet in depth with one including a minimum diameter of 24".

BIDDER: \_\_\_\_\_

7. Is this firm currently contemplating or in litigation? Provide summary details.

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8. Have you ever been assessed liquidated damages under a contract during the past five (5) years? If so, state when, where (contact name, address and phone number) and why.

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9. Have you ever failed to complete Work awarded to you? Or failed to complete projects within contract time? If so, state when, where (contact name, address, phone number) and why.

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10. Have you ever been debarred or prohibited from providing a bid to a governmental entity? If yes, name the entity and describe the circumstances.

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11. Will you subcontract any part of this Work? If so, describe which portion(s) and to whom.

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BIDDER: \_\_\_\_\_

12. If any, list MBE/DBE (with Agreement amount) to be utilized:

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13. What equipment do you own to accomplish this Work? (A listing may be attached)

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14. What equipment will you purchase/rent for the Work? (Specify which)

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15. List the following in connection with the surety which is providing the bond(s):

Surety's Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

Name, address, phone number and email of surety's resident agent for service of process in Florida:

Agent's Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_  
Email: \_\_\_\_\_

BIDDER: \_\_\_\_\_

ATTACHMENT B  
**PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES CERTIFICATION**

SWORN STATEMENT PURSUANT TO ARTICLE V,  
MANATEE COUNTY PROCUREMENT CODE

**THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.**

This sworn statement is submitted to the Manatee County Board of County Commissioners by

\_\_\_\_\_ [Print individual's name and title]

\_\_\_\_\_ for \_\_\_\_\_ [Print name of entity submitting sworn statement]

whose business address is \_\_\_\_\_

and (if applicable) its Federal Employer Identification Number (FEIN) is \_\_\_\_\_. If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: \_\_\_\_\_.

I understand that no person or entity shall be awarded or receive an Owner's Agreement for public improvements, procurement of goods or services (including professional services) or an Owner's lease, franchise, concession or management agreement, or shall receive a grant of Owner's monies unless such person or entity has submitted a written certification to Owner that it has not:

(1) been convicted of bribery or attempting to bribe a public officer or employee of Manatee County, the State of Florida, or any other public entity, including, but not limited to the Government of the United States, any state, or any local government authority in the United States, in that officer's or employee's official capacity; or

(2) been convicted of an agreement or collusion among bidders or prospective bidders in restraint of freedom of competition, by agreement to bid a fixed price, or otherwise; or

(3) been convicted of a violation of an environmental law that, in the sole opinion of Owner's Purchasing Official, reflects negatively upon the ability of the person or entity to conduct business in a responsible manner; or

(4) made an admission of guilt of such conduct described in items (1), (2) or (3) above, which is a matter of record, but has not been prosecuted for such conduct, or has made an admission of guilt of such conduct, which is a matter of record, pursuant to formal prosecution. An admission of guilt shall be construed to include a plea of nolo contendere; or

(5) where an officer, official, agent or employee of a business entity has been convicted of or has admitted guilt to any of the crimes set forth above on behalf of such an entity and pursuant to the direction or authorization of an official thereof (including the person committing the offense, if he is an official of the business entity), the business shall be chargeable with the conduct herein above set forth. A business entity shall be chargeable with the conduct of an affiliated entity, whether wholly owned, partially owned, or one which has common ownership or a common Board of Directors. For purposes of this Form, business entities are affiliated if, directly or indirectly, one business entity controls or has the power to control another business entity, or if an individual or group of individuals controls or has the power to control both entities. Indicia of control shall include, without limitation, interlocking management or ownership, identity of interests among family members, shared organization of a business entity following the ineligibility of a business entity under this Article, or using substantially the same management, ownership or principles as the ineligible entity.

ATTACHMENT B  
PUBLIC CONTRACTING AND ENVIRONMENTAL CRIMES CERTIFICATION

(Continued)

Any person or entity who claims that this Article is inapplicable to him/her/it because a conviction or judgment has been reversed by a court of competent jurisdiction shall prove the same with documentation satisfactory to Owner's Purchasing Official. Upon presentation of such satisfactory proof, the person or entity shall be allowed to contract with Owner.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR MANATEE COUNTY IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT ANY AGREEMENT OR BUSINESS TRANSACTION SHALL PROVIDE FOR SUSPENSION OF PAYMENTS, OR TERMINATION, OR BOTH, IF THE CONTRACTING OFFICER OR COUNTY ADMINISTRATOR DETERMINES THAT **SUCH PERSON OR ENTITY HAS MADE FALSE CERTIFICATION.**

\_\_\_\_\_  
[Signature]

STATE OF FLORIDA  
COUNTY OF \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by \_\_\_\_\_

Personally known \_\_\_\_\_ OR Produced identification \_\_\_\_\_  
[Type of identification]

\_\_\_\_\_  
Notary Public Signature My commission expires \_\_\_\_\_

\_\_\_\_\_  
[Print, type or stamp Commissioned name of Notary Public]

**Signatory Requirement** - In the case of a business entity other than a partnership or a corporation, this affidavit shall be executed by an authorized agent of the entity. In the case of a partnership, this affidavit shall be executed by the general partner(s). In the case of a corporation, this affidavit shall be executed by the corporate president.

**ATTACHMENT C  
SWORN STATEMENT  
THE FLORIDA TRENCH SAFETY ACT**

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR BY AN OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This Sworn Statement is submitted with **IFB NO. 15-2195DC SWWRP Recharge and Monitoring Wells**
2. This Sworn Statement is submitted by \_\_\_\_\_ whose business address is \_\_\_\_\_ and, if applicable, its Federal Employer Identification Number (FEIN) is \_\_\_\_\_. If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement \_\_\_\_\_.
3. Name of individual signing this Sworn Statement is: \_\_\_\_\_, Whose relationship to the above entity is: \_\_\_\_\_.
4. The Trench Safety Standards that will be in effect during the construction of this project shall include, but are not limited to: Laws of Florida, Chapters 90-96, TRENCH SAFETY ACT, and OSHA RULES AND REGULATIONS 29 CFR 1926.650 Subpart P, effective October 1, 1990.
5. The undersigned assures that the entity will comply with the applicable Trench Safety Standards and agrees to indemnify and hold harmless Owner and Engineer, and any of their agents or employees from any claims arising from the failure to comply with said standard.

6. The undersigned has appropriated the following costs for compliance with the applicable standards:

<u>Trench Safety Measure (Description)</u>	<u>Units of Measure (LF, SY)</u>	<u>Unit Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
a. _____	_____	_____	\$ _____	_____
b. _____	_____	_____	\$ _____	_____
c. _____	_____	_____	\$ _____	_____
d. _____	_____	_____	\$ _____	_____

7. The undersigned intends to comply with these standards by instituting the following procedures:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

THE UNDERSIGNED, in submitting this bid, represents that they have reviewed and considered all available geotechnical information and made such other investigations and tests as they may deem necessary to adequately design the trench safety system(s) to be utilized on this project.

\_\_\_\_\_  
(AUTHORIZED SIGNATURE / TITLE)

SWORN to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.  
**(Impress official seal)**

Notary Public, State of Florida: \_\_\_\_\_

My commission expires: \_\_\_\_\_



# R. B. "Chips" Shore

CLERK OF THE CIRCUIT COURT AND COMPTROLLER OF MANATEE COUNTY

1115 Manatee Avenue West, Bradenton, Florida 34205 - Phone (941) 749-1800 – Fax (941) 741-4082  
P.O. Box 25400, Bradenton, Florida 34206 - [www.manateeclerk.com](http://www.manateeclerk.com)

## ATTACHMENT D: E PAYABLES APPLICATION

Company name\_\_\_\_\_

Contact person\_\_\_\_\_

Phone number\_\_\_\_\_

Email Address\_\_\_\_\_

### FINANCE USE ONLY

Open orders: YES or NO

PEID \_\_\_\_\_

CREATE DATE \_\_\_\_\_

CONFIRMED WITH \_\_\_\_\_  
Name and phone number

IFAS \_\_\_\_\_

BANK \_\_\_\_\_

INITIALS \_\_\_\_\_

Return completed form to:

Via email to: [lori.bryan@manateeclerk.com](mailto:lori.bryan@manateeclerk.com)

Via fax to: (941) 741-4011

Via mail:

PO Box 1000

Bradenton, FL 34206

Revised: June 26, 2013

"Pride in Service with a Vision to the Future"

Clerk of the Circuit Court – Clerk of Board of County Commissioners – County Comptroller – Auditor and Recorder

CONTRACT DOCUMENTS

FOR

**MANATEE COUNTY SWWRF  
RECHARGE WELL SYSTEM  
RECHARGE AND MONITORING WELLS**

BRADENTON, FLORIDA

PROJECT NO. 6069081

July 2015 (Bid Documents)

PROJECT:

County of Manatee, Florida  
c/o Manatee County Purchasing Division  
1112 Manatee Avenue West  
Bradenton, Florida 34205  
941-748-4501

PREPARED BY:

CH2M HILL  
4350 West Cypress Street, Suite 600  
Tampa, Florida 33607  
813-281-7770

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[This specification includes by reference the Manatee County Utility Standards approved May 2011.](#)

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**INFRASTRUCTURE ENGINEERING**

**STANDARD SPECIFICATIONS**

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**SECTION 01005  
GENERAL REQUIREMENTS**

**PART 1 GENERAL**

1.01 SCOPE AND INTENT

- A. Description: The work to be done consists of the furnishing of all labor, materials and equipment, and the performance of all work included in this Contract.
- B. Work Included:
  - 1. The Contractor shall furnish all labor, superintendence, materials, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, shop drawings, working drawings and other means of construction necessary or proper for performing and completing the work. He shall obtain and pay for all required permits necessary for the work, other than those permits such as the DEP Class V injection well construction permit which has already been obtained. He shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the County, and in strict accordance with the Contract Documents. The Contractor shall clean up the work and maintain it during and after construction, until accepted, and shall do all work and pay all incidental costs. He shall repair or restore all structures and property that may be damaged or disturbed during performance of the Work.
  - 2. The cost of incidental work described in these General Requirements, for which there are no specific Contract Items, shall be considered as part of the general cost of doing the work and shall be included in the prices for the various Contract Items. No additional payment will be made.
  - 3. The Contractor shall be solely responsible for the adequacy of his workmanship, materials and equipment.
- C. Public Utility Installations and Structures:
  - 1. Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes and all other appurtenances and facilities pertaining thereto.
  - 2. The Contractor shall protect all installations and structures from damage during the work. Access across any buried public utility installation or structure shall be made only in such locations and by means approved by the County. All required protective devices and construction shall be provided by the Contractor at his expense. All existing public utilities

damaged by the Contractor which are shown on the Plans or have been located in the field by the utility shall be repaired by the Contractor, at his expense, as approved by the County. No separate payment shall be made for such protection or repairs to public utility installations or structures.

3. Public utility installations or structures owned or controlled by the County or other governmental body, which are required by this contract to be removed, relocated, replaced or rebuilt by the Contractor not identified in any separate bid item shall be considered as a part of the general cost of doing the work and shall be included in the prices bid for the various contract items. No separate payment shall be made.
4. Where public utility installations or structures owned or controlled by the County or other governmental body are encountered during the course of the work, and are not indicated on the Plans or in the Specifications, and when, in the opinion of the County, removal, relocation, replacement or rebuilding is necessary to complete the work under this Contract, such work shall be accomplished by the utility having jurisdiction, or such work may be ordered, in writing by the County, for the contractor to accomplish. If such work is accomplished by the utility having jurisdiction, it will be carried out expeditiously and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement or rebuilding as required. If such work is accomplished by the Contractor, it will be in accordance with the General and Supplemental General Conditions.
5. The Contractor shall give written notice to County and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least forty-eight hours in advance of breaking ground in any area or on any unit of the work. This can be accomplished by making the appropriate contact with the "Sunshine State One-Call of Florida, Inc. Call Center ("Call Sunshine") and per all requirements provided for in the Florida Underground Facilities Damage Prevention and Safety Act (Florida Statutes, Title XXXIII, Chapter 556).
6. The maintenance, repair, removal, relocation or rebuilding of public utility installations and structures, when accomplished by the Contractor as herein provided, shall be done by methods approved by the County.

## 1.02 PLANS AND SPECIFICATIONS

- A. Plans: When obtaining data and information from the Plans, figures shall be used in preference to scaled dimensions, and large scale drawings in preference to small scale drawings.

- B. Copies Furnished to Contractor: The Contractor shall furnish each of the subcontractors, manufacturers, and material men such copies of the Contract Documents as may be required for their work. Additional copies of the Plans and Specifications, when requested, may be furnished to the Contractor at cost of reproduction.
- C. Supplementary Drawings: When, in the opinion of the County, it becomes necessary to explain more fully the work to be done or to illustrate the work further or to show any changes which may be required, drawings known as Supplementary Drawings, with specifications pertaining thereto, will be prepared by the County and five paper prints thereof will be given to the Contractor.
- D. Contractor to Check Plans and Data: The Contractor shall verify all dimensions, quantities and details shown on the Plans, Supplementary Drawings, Schedules, Specifications or other data received from the County, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction or improper operation resulting therefrom nor from rectifying such conditions at his own expense. He will not be allowed to take advantage of any errors or omissions, as full instructions will be furnished by the County, should such errors or omissions be discovered. All schedules are given for the convenience of the County and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quality of materials and equipment included in work to be done under the Contract.
- E. Specifications: The Technical Specifications consist of three parts: General, Products and Execution. The General Section (or Scope) contains General Requirements which govern the work. Products (or Materials and Equipment) and Execution (or Workmanship) modify and supplement these by detailed requirements for the work and shall always govern whenever there appears to be a conflict.
- F. Intent:
  - 1. All work called for in the Specifications applicable to this Contract, but not shown on the Plans in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the Specifications, but involved in carrying out their intent or in the complete and proper execution of the work, is required and shall be performed by the Contractor as though it were specifically delineated or described.

2. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.
3. The inclusion of the Related Requirements (or work specified elsewhere) in the General part of the specifications is only for the convenience of the Contractor, and shall not be interpreted as a complete list of related Specification sections.

### 1.03 MATERIALS AND EQUIPMENT

#### A. Manufacturer:

1. All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request, in writing to the County, that the manufacturer or subcontractor deal directly with the County. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.
2. Any two or more pieces or material or equipment of the same kind, type or classification, and being used for identical types of services, shall be made by the same manufacturer.

#### B. Delivery: The Contractor shall deliver materials in ample quantities to insure the most speedy and uninterrupted progress of the work so as to complete the work within the allotted time. The Contractor shall also coordinate deliveries in order to avoid delay in, or impediment of, the progress of the work of any related Contractor.

#### C. Tools and Accessories:

1. The Contractor shall, unless otherwise stated in the Contract Documents, furnish with each type, kind or size of equipment, one complete set of suitably marked high grade special tools and appliances which may be needed to adjust, operate, maintain or repair the equipment. Such tools and appliances shall be furnished in approved painted steel cases, properly labeled and equipped with good grade cylinder locks and duplicate keys.
2. Spare parts shall be furnished as specified.
3. Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number, weight and principal rating data.

D. Installation of Equipment:

1. The Contractor shall have on hand sufficient proper equipment and machinery of ample capacity to facilitate the work and to handle all emergencies normally encountered in work of this character.
2. Equipment shall be erected in a neat and workmanlike manner on the foundations at the locations and elevations shown on the Plans, unless directed otherwise by the County during installation. All equipment shall be correctly aligned, leveled and adjusted for satisfactory operation and shall be installed so that proper and necessary connections can be made readily between the various units.
3. The Contractor shall furnish, install and protect all necessary anchor and attachment bolts and all other appurtenances needed for the installation of the devices included in the equipment specified. Anchor bolts shall be as approved by the County and made of ample size and strength for the purpose intended. Substantial templates and working drawings for installation shall be furnished.
4. The Contractor shall furnish all materials and labor for, and shall properly bed in non-shrink grout, each piece of equipment on its supporting base that rests on masonry foundations.
5. Grout shall completely fill the space between the equipment base and the foundation. All metal surfaces coming in contact with concrete or grout shall receive a coat of coal tar epoxy equal to Koppers 300 M or provide a 1/32-inch Neoprene gasket between the metal surface and the concrete or grout.

E. Service of Manufacturer's Engineer: The Contract prices for equipment shall include the cost of furnishing (as required by equipment specifications sections) a competent and experienced engineer or superintendent who shall represent the manufacturer and shall assist the Contractor, when required, to install, adjust, test and place in operation the equipment in conformity with the Contract Documents. After the equipment is placed in permanent operation by the County, such engineer or superintendent shall make all adjustments and tests required by the County to prove that such equipment is in proper and satisfactory operating condition, and shall instruct such personnel as may be designated by the County in the proper operation and maintenance of such equipment.

F. Workmanship:

1. Contractor, in addition to furnishing the services of drillers experienced in the type of formations to be encountered, shall also furnish an adequate number of competent helpers. The drillers shall keep well logs and reports of the drilling, developing, and test-pumping operations. Drillers shall also be capable of making accurate classifications of the formations and handle representative rock cuttings and water samples as

indicated in Section 02673, Drilling and Section 02311, Water Quality Testing and Sampling.

2. Contractor shall perform all Work in a workmanlike manner by qualified well drillers and shall conform with these Specifications.
3. Contractor and his personnel shall not make any representations about this Project without the written approval from the County.
4. Contractor shall furnish capable equipment to construct the well by rotary drilling with conventional mud and reverse-air circulation, as specified in Section 02673, Drilling Contractor's drilling rigs, tools, equipment and methods shall be subject to Engineer's approval.

#### 1.04 INSPECTION AND TESTING

##### A. General:

1. Inspection and testing of materials will be performed by the County unless otherwise specified.
2. For tests specified to be made by the Contractor, the testing personnel shall make the necessary inspections and tests and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Contract Documents. Three copies of the reports shall be submitted and authoritative certification thereof must be furnished to the County as a prerequisite for the acceptance of any material or equipment.
3. If, in the making of any test of any material or equipment, it is ascertained by the County that the material or equipment does not comply with the Contract, the Contractor will be notified thereof and he will be directed to refrain from delivering said material or equipment, or to remove it promptly from the site or from the work and replace it with acceptable material, without cost to the County.
4. Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with recognized test codes of the ANSI, ASME, or the IEEE, except as may otherwise be stated herein.
5. The Contractor shall be fully responsible for the proper operation of equipment during tests and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the County formally takes over the operation thereof.

##### B. Costs:

1. All inspection and testing of materials furnished under this Contract will be performed by the County or duly authorized inspection engineers or inspections bureaus without cost to the Contractor, unless otherwise expressly specified.

2. The cost of shop and field tests of equipment and of certain other tests specifically called for in the Contract Documents shall be borne by the Contractor and such costs shall be deemed to be included in the Contract price.
  3. Materials and equipment submitted by the Contractor as the equivalent to those specifically named in the Contract may be tested by the County for compliance. The Contractor shall reimburse the County for the expenditures incurred in making such tests on materials and equipment which are rejected for non-compliance.
- C. Inspections of Materials: The Contractor shall give notice in writing to the County, at least 2 weeks in advance of his intention to commence the manufacture or preparation of materials especially manufactured or prepared for use in or as part of the permanent construction. Such notice shall contain a request for inspection, the date of commencement and the expected date of completion of the manufacture or preparation of materials. Upon receipt of such notice, the County will arrange to have a representative present at such times during the manufacture as may be necessary to inspect the materials or he will notify the Contractor that the inspection will be made at a point other than the point of manufacture, or he will notify the Contractor that inspection will be waived. The Contractor must comply with these provisions before shipping any material. Such inspection shall not release the Contractor from the responsibility for furnishing materials meeting the requirements of the Contract Documents.
- D. Certificate of Manufacture: When inspection is waived or when the County so requires, the Contractor shall furnish to him authoritative evidence in the form of Certificates of Manufacture that the materials to be used in the work have been manufactured and tested in conformity with the Contract Documents. These certificates shall be notarized and shall include copies of the results of physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.
- E. Shop Tests of Operating Equipment:
1. Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function or special requirements are specified shall be tested in the shop of the maker in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents. No such equipment shall be shipped to the work until the County notifies the Contractor, in writing, that the results of such tests are acceptable.
  2. The cost of shop tests and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor.

- F. Preliminary Field Tests: As soon as conditions permit, the Contractor shall furnish all labor, materials, and instruments and shall make preliminary field tests of equipment. If the preliminary field tests disclose any equipment furnished under this Contract which does not comply with the requirements of the Contract Documents, the Contractor shall, prior to the acceptance tests, make all changes, adjustments and replacements required. The furnishing Contractor shall assist in the preliminary field tests as applicable.
- G. Final Field Tests:
1. Upon completion of the work and prior to final payment, all equipment and piping installed under this Contract shall be subjected to acceptance tests as specified or required to prove compliance with the Contract Documents.
  2. The Contractor shall furnish labor, fuel, energy, water and all other materials, equipment and instruments necessary for all acceptance tests, at no additional cost to the County. The Supplier shall assist in the final field tests as applicable.
- H. Failure of Tests:
1. Any defects in the materials and equipment or their failure to meet the tests, guarantees or requirements of the Contract Documents shall be promptly corrected by the Contractor. The decision of the County as to whether or not the Contractor has fulfilled his obligations under the Contract shall be final and conclusive. If the Contractor fails to make these corrections or if the improved materials and equipment, when tested, shall again fail to meet the guarantees of specified requirements, the County, notwithstanding its partial payment for work, and materials and equipment, may reject the materials and equipment and may order the Contractor to remove them from the site at his own expense.
  2. In case the County rejects any materials and equipment, then the Contractor shall replace the rejected materials and equipment within a reasonable time. If he fails to do so, the County may, after the expiration of a period of 30 calendar days after giving him notice in writing, proceed to replace such rejected materials and equipment, and the cost thereof shall be deducted from any compensation due or which may become due the Contractor under his Contract.
- I. Final Inspection: During such final inspections, the work shall be clean and free from water. In no case will the final pay application be prepared until the Contractor has complied with all requirements set forth and the County has made his final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the requirements of the Contract Document.

## 1.05 TEMPORARY STRUCTURES

- A. Temporary Fences: If, during the course of the work, it is necessary to remove or disturb any fence or part thereof, the Contractor shall, at his own expense, if so ordered by the County, provide a suitable temporary fence which shall be maintained until the permanent fence is replaced. The County shall be solely responsible for the determination of the necessity for providing a temporary fence and the type of temporary fence to be used.

## 1.06 SAFETY

- A. Safety: The Contractor shall comply with safety requirements in accordance with Section 01016, Safety Requirements and Protection of Property.
- B. First Aid: The Contractor shall keep upon the site, at each location where work is in progress, a completely equipped first aid kit and shall provide ready access thereto at all times when people are employed on the work.

## 1.07 LINES AND GRADES

- A. Grade: All work under this Contract shall be constructed in accordance with the lines and grades shown on the Plans, or as given by the County. The full responsibility for keeping alignment and grade shall rest upon the Contractor.
- B. Safeguarding Marks:
  - 1. The Contractor shall safeguard all points, stakes, grade marks, monuments and bench marks made or established on the work, bear the cost of reestablishing them if disturbed, and bear the entire expense of rectifying work improperly installed due to not maintaining or protecting or removing without authorization such established points, stakes and marks.
  - 2. The Contractor shall safeguard all existing and known property corners, monuments and marks adjacent to but not related to the work and, if required, shall bear the cost of reestablishing them if disturbed or destroyed.
- C. Datum Plane: All elevations indicated or specified refer to the Mean Sea Level Datum of the NGVD 1929 Datum and/or NAVD 1988.

## 1.08 ADJACENT STRUCTURES AND LANDSCAPING

- A. Responsibility:
  - 1. The Contractor shall also be entirely responsible and liable for all damage or injury as a result of his operations to all other adjacent public and private property, structures of any kind and appurtenances thereto met with during the progress of the work. The cost of protection,

replacement in their original locations and conditions or payment of damages for injuries to such adjacent public and private property and structures affected by the work, whether or not shown on the Plans, and the removal, relocation and reconstruction of such items called for on the Plans or specified shall be included in the various Contract Items and no separate payments will be made therefore. Where such public and private property, structures of any kind and appurtenances thereto are not shown on the Plans and when, in the opinion of the County, additional work is deemed necessary to avoid interference with the work, payment therefore will be made as provided for in the General Conditions.

2. Contractor is expressly advised that the protection of buildings, structures, tunnels, tanks, pipelines, etc. and related work adjacent and in the vicinity of his operations, wherever they may be, is solely his responsibility. Conditional inspection of buildings or structures in the immediate vicinity of the project which may reasonably be expected to be affected by the Work shall be performed by and be the responsibility of the Contractor.
3. Contractor shall, before starting operations, make an examination of the interior and exterior of the adjacent structures, buildings, facilities, etc., and record by notes, measurements, photographs, etc., conditions which might be aggravated by open excavation and construction. Repairs or replacement of all conditions disturbed by the construction shall be made to the satisfaction of the County. This does not preclude conforming to the requirements of the insurance underwriters. Copies of surveys, photographs, reports, etc., shall be given to the County.
4. Prior to the beginning of any excavations, the Contractor shall advise the County of all buildings or structures on which he intends to perform work or which performance of the project work will affect.

B. Protection of Trees:

1. All trees and shrubs shall be adequately protected by the Contractor with boxes and otherwise and in accordance with ordinances governing the protection of trees. No excavated materials shall be placed so as to injure such trees or shrubs. Trees or shrubs destroyed by negligence of the Contractor or his employees shall be replaced by him with new stock of similar size and age, at the proper season and at the sole expense of the Contractor.
2. Beneath trees or other surface structures, where possible, pipelines may be built in short tunnels, backfilled with excavated materials, except as otherwise specified, or the trees or structures carefully supported and protected from damage.

3. The County may order the Contractor, for the convenience of the County, to remove trees along the line or trench excavation. If so ordered, the County will obtain any permits required for removal of trees. Such tree removal ordered shall be paid for under the appropriate Contract Items.
- C. Lawn Areas: Lawn areas shall be left in as good condition as before the starting of the work. Where sod is to be removed, it shall be carefully removed, and later replaced, or the area where sod has been removed shall be restored with new sod.
- D. Restoration of Fences: Any fence, or part thereof, that is damaged or removed during the course of the work shall be replaced or repaired by the Contractor and shall be left in as good a condition as before the starting of the work. The manner in which the fence is repaired or replaced and the materials used in such work shall be subject to the approval of the County. The cost of all labor, materials, equipment, and work for the replacement or repair of any fence shall be deemed included in the appropriate Contract Item or items, or if no specific Item is provided therefore, as part of the overhead cost of the work, and no additional payment will be made therefore.

#### 1.09 PROTECTION OF WORK AND PUBLIC

- A. Barriers and Lights: During the prosecution of the work, the Contractor shall put up and maintain at all times such barriers and lights as will effectually prevent accidents. The Contractor shall provide suitable barricades, red lights, "danger" or "caution" or "street closed" signs and watchmen at all places where the work causes obstructions to the normal traffic or constitutes in any way a hazard to the public, in accordance with state and local requirements.
- B. Smoke Prevention: A strict compliance with ordinances regulating the production and emission of smoke will be required. No open fires will be permitted.
- C. Noise: The Contractor shall eliminate noise to as great an extent as practicable at all times. Air compressing plants shall be equipped with silencers and the exhaust of all engines or other power equipment shall be provided with mufflers. In the vicinity of hospitals and schools, special care shall be used to avoid noise or other nuisances. The Contractor shall strictly observe all local regulations and ordinances covering noise control.
- D. Access to Public Services: Neither the materials excavated nor the materials or plant used in the construction of the work shall be so placed as to prevent free access to all fire hydrants, valves or manholes.

- E. Dust prevention: The Contractor shall prevent dust nuisance from his operations or from traffic by keeping the roads and/or construction areas sprinkled with water at all times.

#### 1.10 CUTTING AND PATCHING

- A. The Contractor shall do all cutting, fitting or patching of his portion of the work that may be required to make the several parts thereof join and coordinate in a manner satisfactory to the County and in accordance with the Plans and Specifications. The work must be done by competent workmen skilled in the trade required by the restoration.

#### 1.11 CLEANING

- A. During Construction: During construction of the work, the Contractor shall, at all times, keep the site of the work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove the same from any portion of the site if, in the opinion of the County, such material, debris, or rubbish constitutes a nuisance or is objectionable. The Contractor shall remove from the site all of his surplus materials and temporary structures when no further need therefore develops.
- B. Final Cleaning:
  - 1. At the conclusion of the work, all equipment, tools, temporary structures and materials belonging to the Contractor shall be promptly taken away, and he shall remove and promptly dispose of all water, dirt, rubbish or any other foreign substances.
  - 2. The Contractor shall thoroughly clean all equipment and materials installed by him and shall deliver such materials and equipment undamaged in a bright, clean, polished and new operating condition.

#### 1.12 DRILLING SERVICES

- A. Contractor shall, except as specifically stated in the Contract Documents, provide all labor, materials, equipment, tools, and other facilities and services necessary for proper completion of all Work included in these Contract Documents.
- B. Contractor, in addition to furnishing the services of drillers experienced in the type of formations to be encountered, shall also furnish an adequate number of competent helpers. The drillers shall keep well logs and reports of the drilling, developing, and test-pumping operations. Drillers shall also be capable of making accurate classifications of the formations and handle representative rock cuttings and water samples as indicated in Section 02673, Drilling and Section 02311, Water Quality Testing and Sampling.

- C. Contractor shall perform all Work in a workmanlike manner by qualified well drillers and shall conform with these Specifications.
- D. Contractor and his personnel shall not make any representations about this Project without the written approval from the County.
- E. Contractor shall furnish capable equipment to construct the well by rotary drilling with conventional mud and reverse-air circulation, as specified in Section 02673, Drilling. Contractor's drilling rigs, tools, equipment and methods shall be subject to Engineer's approval.

#### 1.13 COORDINATION

- A. Contractor shall maintain a superintendent on-site during all drilling, testing, and construction operations.
- B. Contractor shall cooperate in the coordination of its work with the activities of other subcontractors in a manner that will provide the least interference with County's operations and other subcontractors and utility companies working in the area, and in the interfacing and connection of the separate elements of the overall project work without additional costs to County.
- C. If any difficulty or dispute should arise in the accomplishment of the above, the problem shall be immediately brought to the attention of County.
- D. Contractor's project superintendent shall hold monthly or bi-weekly construction coordination meetings to be held at the site during normal working hours when requested by County. No additional charge shall be made for attendance at the meetings.
- E. All subcontractors working on this site are subject to this requirement for cooperation, and all shall abide by the County's decision in resolving Project coordination problems.

#### 1.14 PERMITS

- A. Upon Notice of Award, Contractor shall acquire all necessary permits with local and state regulatory agencies for the drilling of the aquifer recharge well and monitor wells.
- B. Contractor shall be solely responsible for acquiring all other necessary permits and remaining in compliance with all permits. Drilling operations shall not commence until all other necessary construction permits have been obtained and submitted to County. No construction shall be allowed until all permits are obtained or written evidence is submitted to County demonstrating that the permitting agency has given permission to proceed.

## 1.15 SCHEDULING

- A. Contractor shall plan the Work and carry it out with minimum interference to the County and other contractors. Prior to starting the work, Contractor shall confer with Engineer and County representatives to develop an approved work schedule which will allow the Project to progress as normally as practical.
- B. Contractor's normal working hours shall be defined as Monday through Friday from 7 a.m. to 7 p.m. for Bid A. Bid B schedule is for continuous drilling (24 hours per day and 5 days per week). Bid B schedules will only be considered if the noise level is determined to be acceptable to during non-daytime hours. The County will be the sole judge as to whether the noise level is acceptable to drill at night and may require the Contractor to revert to day time hours at any time during the Project.
- C. Contractor shall make every effort to avoid drilling and testing activities on nationally recognized holidays (i.e., Labor Day, Thanksgiving Day, Christmas Day, New Day, Independence Day, Memorial Day, etc.). Work schedules should reflect these dates in particular.
- D. Contractor shall schedule all work or tests, which are attended by representatives of FDEP, to begin between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, nationally recognized holidays excluded.

## 1.16 CONSTRUCTION SCHEDULE

- A. Time constraints imposed upon the schedule require that the drilling Contractor have construction substantially complete within 450 days and final completion within 480 days of Notice to Proceed. Work will be considered substantially complete when all drilling and testing activities for the recharge well system is complete. Final completion requires that site work is substantially complete and demobilization is complete. All site work is to be 100 percent complete at 480 days and all equipment demobilized from the site before final payment is given. Failure to meet this schedule shall result in enforcement of Liquidated Damages, which are detailed in paragraph 6.0 of the Proposal.
- B. The construction summary and schedule presented in Section 01010, Summary of Work, has been prepared to illustrate the general manner that the Engineer intends for project activities to proceed.
- C. Upon award of the Contract and before start of construction, Contractor shall prepare and submit to the Engineer for his approval a detailed construction schedule containing anticipated start and completion dates for each of the steps in Section 01010, Summary of Work, as well as other major events as Contractor deems necessary.

#### 1.17 PUBLIC NUISANCE

- A. The Contractor shall not create a public nuisance including but not limited to encroachment on adjacent lands, flooding of adjacent lands, excessive noise or dust.
- B. Sound levels must meet Manatee County Ordinance No. 87-34, (which amends Ordinance 81-3, The Manatee County Noise Control Ordinance). Sound levels in excess of such ordinance are sufficient cause to have the work halted until equipment can be quieted to these levels. Work stoppage by the County for excessive noise shall not relieve the Contractor of the other portions of this specification. Contractor may be required, at their own expense, to furnish all diesel driven equipment with hospital rated noise suppression mufflers.
- C. No extra charge may be made for time lost due to work stoppage resulting from the creation of a public nuisance.

#### 1.18 OTHER REQUESTED WORK AND STANDBY TIME

- A. During the progress of the work under these Specifications, it may be necessary for Engineer to perform work of an experimental nature that will require the services of the drilling crew and drilling equipment, or work that may require such crew and equipment to standby during normal working hours. In such an event, Engineer shall request Contractor to furnish such assistance and Contractor shall promptly furnish such assistance. The time required for this purpose shall be recorded on Contractor's daily log and Engineer's daily log. If there are discrepancies, the time noted on Engineer's daily log shall prevail. This time shall be paid as stated in Contractor's Bid Schedule.

#### 1.19 MISCELLANEOUS

- A. Protection against Siltation and Bank Erosion:
  - 1. The Contractor shall arrange his operations to minimize siltation and bank erosion on construction sites and on existing or proposed water courses and drainage ditches.
  - 2. The Contractor, at his own expense, shall remove any siltation deposits and correct any erosion problems as directed by the County which results from his construction operations.
- B. Protection of Wetland Areas: The Contractor shall properly dispose of all surplus material, including soil, in accordance with Local, State and Federal regulations. Under no circumstances shall surplus material be disposed of in wetland areas as defined by the Florida Department of Environmental Protection or Southwest Florida Water Management District

- C. Existing Facilities: The work shall be so conducted to maintain existing facilities in operation insofar as is possible. Requirements and schedules of operations for maintaining existing facilities in service during construction shall be as described in the Special Provisions.
- D. Use of Chemicals: All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.
- E. Environmental Protection: Contractor shall not cause nor permit an action to occur which would allow drilling fluids, saline waters or high saline content cuttings to escape the confines of the drilling pad and or containment tanks. Contractor shall remain solely responsible for any property damage, remediation costs, or regulatory fines which might result from such occurrences.

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01010  
SUMMARY OF WORK**

**PART 1 GENERAL**

**1.01 WORK COVERED BY CONTRACT DOCUMENTS/REQUIREMENTS INCLUDED**

- A. Work Included: This section describes the work to be performed under this Contract. Detailed requirements and extent of work are stated in applicable Specification sections and shown on the Drawings.
1. The Project will generally provide County with the following:
- a. One 24-inch nominal diameter aquifer recharge well, RW-1 (Total Depth [TD] approximately 2,100 feet). The well will be completed with a final carbon steel casing cemented to land surface and is designed for aquifer recharge using reclaimed water.
  - b. One 6-inch nominal diameter recharge zone monitoring well, RZMW-1 (TD approximately 1,050 feet). The well will be completed with a final carbon steel casing cemented to land surface and will be located approximately 1,200 feet from RW-1 as shown in the Drawings.
  - c. One 6-inch nominal diameter Suwannee Limestone monitoring well, SLMW-1 (TD approximately 700 feet). The well will be located not more than 150 feet from RW-1.
  - d. Four 2-inch diameter pad monitoring wells (PMW) around the temporary drilling pads for RW-1 and RZMW-1, PMW-1 through PMW-8 (TD approximately 40 feet).
- B. The Contractor shall furnish all shop drawings, working drawings, labor, materials, equipment, tools, services and incidentals necessary to complete all work required by these Specifications and as shown on the Contract Drawings.
- C. The Contractor shall perform the work complete, in place and ready for continuous service and shall include any repairs, replacements, and/or restoration required as a result of damages caused prior to acceptance by the County.
- D. The Contractor shall furnish and install all materials, equipment and labor which is reasonably and properly inferable and necessary for the proper completion of the work, whether specifically indicated in the Contract Documents or not.

- E. County further reserves the right to select which part to perform first, and the order of the parts performed thereafter. Time is of the essence in this Contract and the time of completion must be met for the whole Project.
- F. County may elect to stop the project at any time. If so, Contractor will not be awarded any additional payment except for the work performed up to that time and demobilization and cleanup. The County will not pay for stored materials if the project is stopped.
- G. Contractor shall, except as otherwise specifically stated in applicable parts of these Contract Documents, provide and pay for labor, materials, equipment, tools, construction equipment, facilities, and services necessary for proper execution, testing, and completion of the work.
- H. Work Parts include the following:
  - Part I: Recharge Well RW-1.
  - Part II: Recharge Zone Monitoring Well RZMW-1.
  - Part III: Suwannee Limestone Monitoring Well SLMW-1.
  - Part IV: Well Acidization (Add Alternate).
- I. List of Drawings:

<b>Drawing No.</b>	<b>Drawing Title</b>
1	Location Map
2	Site Plan
3	Pad Monitoring Well Detail
4	RW-1, RZMW-1, and SLMW-1 Construction Details
5	Temporary Wellhead Completion Details
6	Acidization Setup

1.02 CONTRACTS

- A. Construct all the Work under a single contract.

1.03 WORK SEQUENCE

- A. The sequence of operations will be generally as outlined in Part 3 Execution contained at the end of this section.

- B. All work done under this Contract shall be done with a minimum of inconvenience to the users of the system or facility. The Contractor shall coordinate his work with private property owners such that existing utility services are maintained to all users to the maximum extent possible.
- C. The Contractor shall, if necessary and feasible, construct the work in stages to accommodate the County's use of the premises during the construction period; coordinate the construction schedule and operations with the County's Representative.
- D. The Contractor shall, where feasible, construct the Work in stages to provide for public convenience and not close off public use of any facility until completion of construction to provide alternative usage.

#### 1.04 CONSTRUCTION AREAS

- A. The Contractor shall: Limit his use of the construction areas for work and for storage, to allow for:
  - 1. Work by other contractors.
  - 2. County's use.
  - 3. Public use.
- B. Coordinate use of work site under direction of County's Representative.
- C. Assume full responsibility for the protection and safekeeping of products under this Contract, stored on the site.
- D. Move any stored products under the Contractor's control, which interfere with operations of the County or separate contractor.
- E. Obtain and pay for the use of additional storage of work areas needed for Contractor operations.

#### 1.05 COUNTY OCCUPANCY

- A. It is assumed that portions of the Work will be completed prior to completion of the entire Work. Upon completion of construction of each individual facility, including testing, if the County, at its sole discretion, desires to accept the individual facility, the Contractor will be issued a dated certificate of completion and acceptance for each individual facility. The County will assume ownership and begin operation of the individual facility on that date and the three-year guaranty period shall commence on that date. The County has the option of not accepting the entire work as a whole until it is completed, tested and approved by the County.

## 1.06 PARTIAL COUNTY OCCUPANCY

- A. The Contractor shall schedule his operations for completion of portions of the Work, as designated, for the County's occupancy prior to substantial completion of the entire work.

## **PART 2 PRODUCTS (NOT USED)**

## **PART 3 EXECUTION**

### 3.01 GENERAL

- A. Locate recharge well (RW-1) at approved location as shown on Drawing No. 2.
- B. Contractor shall submit cuttings disposal plan to FDEP for approval. Approval must be received prior to initiating any drilling activities. Contractor shall also provide specific drilling pad dimensions and design drawings for FDEP-approval prior to initiating drilling activities.
- C. Install four shallow surficial aquifer pad monitor wells around the drilling pads for wells RW-1 and RZMW-1 and sample for FDEP required parameters weekly during well construction. Initial sampling results shall be submitted to FDEP prior to any drilling for the respective wells.
- D. Control any potential artesian flowing zones by drilling with a containment system using closed circulation reverse-air drilling methods. A blowout preventer is required while drilling in the Floridan aquifer. Contractor shall be prepared to kill well with barite or salt if necessary.
- E. Record drilling information during all pilot hole drilling, including penetration rate, voids, water producing zones, etc., in daily reports prepared during all drilling activities. Engineer's resident inspector and Contractor shall prepare independent daily reports, which will be submitted weekly throughout the drilling period to the FDEP Technical Advisory Committee (TAC) along with a brief summary of the week's activities.
- F. Drill RW-1 well first to confirm the presence of a suitable recharge zone. The recharge zone is anticipated to be completed into, the underground source of drinking water (USDW) at the site depending on hydrogeologic conditions encountered. Once RW-1 final depth is confirmed, complete RW-1 well as a Class V aquifer recharge injection well, and construct the Suwannee Limestone Monitoring Well (SLMW-1) and Recharge Zone Monitoring Well (RZMW-1) to monitor the Class V aquifer recharge system. The two monitoring wells can be drilled concurrently at the discretion of the Contractor.

- G. Run a mechanical drift indicator in pilot holes and reamed holes at intervals not greater than 90 feet. Tool scale shall clearly delineate 10 minutes or less. Any deviation in plumbness greater than 1/2 degree shall be corrected by the drilling Contractor at its own expense.

### 3.02 RECHARGE WELL (RW-1) CONSTRUCTION SEQUENCE (BY CONTRACTOR)

- A. Construct a temporary drilling pad to contain all fluids during drilling operations.
- B. Install a 42-inch diameter pit casing through unconsolidated surficial deposits. Section 02674, Casing provides a summary of the casing specifications for the well. Drawing No. 4 shows the completion details for RW-1. The estimated depth of the surface casing is 60 feet below land surface (bls). The casing installation method shall be at the Contractor's discretion, although installation using vibratory methods will not be allowed.
- C. Drill nominal 8-inch to 12-inch diameter pilot hole to a depth of approximately 300 feet bls using standard mud rotary drilling techniques. The goal of this pilot hole is to penetrate into the Tampa Member (water producing zone) of the Hawthorn Group. Collect drill cuttings/samples every 10 feet to the total depth of the well and describe visually in a lithologic log. Include hydrogeologic-related information as applicable. Perform logging in accordance with Section 02679, Geophysical Logging.
- D. Ream pilot hole to nominal 42-inch borehole to a depth of approximately 300 feet bls. Perform logging in accordance with Section 02679, Geophysical Logging.
- E. Set and cement nominal 34-inch diameter intermediate casing to approximately 300 feet bls to isolate the surficial aquifer from the UFA and case through the clay units of the Hawthorn Group to facilitate drilling the remainder of the well using reverse-air drilling methods. Section 02674, Casing provides a summary of the casing specifications for the well.
- F. Drill a nominal 8-inch to 12-inch diameter pilot hole to approximately 1,000 feet bls using standard reverse-air drilling techniques. The goal of the pilot hole will be to penetrate the Ocala Limestone Formation.
- G. During reverse-air drilling activities, collect water samples (Table 02311-1, List A) at each approximately every 60 feet during pilot hole drilling (approximately 300 to 1,000 feet). Collect drill cuttings/samples every 10 feet to the total depth of the well and describe visually in a lithologic log. Include hydrogeologic-related information as applicable. Perform short-term (approximately 15-minute duration) drill stem specific capacity tests that includes a water sampling event at approximately every 60 feet.

- H. During pilot-hole advancement, collect up to four 4-inch diameter, 10-foot length core sections. Cores will target potential confining intervals above the proposed recharge zone. Cores will be shipped to a core laboratory or the Florida Geological Survey (FGS) for hydraulic testing.
- I. Upon reaching approximately 1,000 feet, perform geophysical logging under static and dynamic conditions in the open borehole in accordance with Table 02679-1 to the total depth of the pilot hole. Engineer to select depth for final casing using drilling, lithologic, and geophysical logs.
- J. Complete up to four straddle packer or off-bottom packer tests within the interval from 300 feet to 2,100 feet. Collect hydraulic data and water quality data during the packer testing. The goal of these packer tests will be to confirm confining properties across lower permeability intervals, define ambient groundwater quality, and potentially to evaluate hydraulic characteristics of the proposed recharge interval and locate the 10,000 mg/L Total Dissolved Solids (TDS) interface. Two separate tests will be run at each packer test setting depth, testing below the packer and above the packer (annulus).
- K. Engineer to propose a final casing setting depth to the FDEP. Complete well as described below and as shown on Drawing 4.
- L. Plug back pilot hole with cement through confining interval above the recharge zone.
- M. Ream pilot hole to nominal 34-inch borehole to approximately 1,000 feet bls. Perform logging in accordance with Table 02679-1.
- N. Set and pressure grout nominal 24-inch diameter casing to approximately 1,000 feet bls to the top of the targeted injection zone, isolating the APPZ from the permeable intervals of the Suwannee Limestone and the confinement of the Ocala Limestone. Section 02674, Casing provides a summary of the casing specifications for the well.
- O. Complete pressure test on 24-inch diameter final casing following final cement stage on well. The pressure test will utilize the cement plug at the base of the injection casing. Pressurize casing to 1.5 times the anticipated maximum necessary injection pressure in the well. The pressure test is estimated to be run at between 120 and 150 psi. The pressure test will be deemed successful if the pressure change is within plus or minus 5 percent of the starting pressure after one hour of testing. Repeat pressure test, as necessary, until pressure test is deemed successful.
- P. Drill a nominal 8-inch to 12-inch diameter pilot hole to up to 2,100 feet bls using standard reverse-air drilling techniques. The goal of the pilot hole will be to penetrate the APPZ.

- Q. During reverse-air drilling activities, collect water samples (Table 02311-1, List A) at approximately every 60 feet during pilot hole drilling (approximately 1,000 to 2,100 feet). Collect drill cuttings/samples every 10 feet to the total depth of the well and describe visually in a lithologic log. Include hydrogeologic-related information as applicable. Perform short-term (approximately 15-minute duration) drill stem specific capacity tests that includes a water sampling event at approximately every 60 feet.
- R. Upon reaching approximately 2,100 feet, perform geophysical logging under static and dynamic conditions in the open borehole in accordance with Table 02679-1 to the total depth of the pilot hole. Select total depth of open hole interval using drilling, lithologic, and geophysical logs.
- S. Drill nominal 23-inch diameter open hole from base of 24-inch diameter casing to total depth of the well using reverse-air drilling, closed circulation techniques. The total depth of the well is anticipated to extend to as deep as 2,100 feet bls.
- T. Develop open hole interval of well using air-lift and pumping and surging well development practices. Develop until clear water is produced from the well and until water quality is acceptable to onsite geologist.
- U. Following well development, perform geophysical logging under dynamic and static conditions in accordance with Table 02679-1. Run video log to total depth of well.
- V. Complete a 4-hour to 10-hour variable-rate pumping test or recirculation test followed by a recovery test on the finished well. The duration of the test will be contingent on the quality of water in the storage zone and the Contractor's ability to manage the water produced from the well. Contractor will be required to have 100,000 gallons of storage onsite. Collect up to two water samples in accordance with Table 02311-1 (List B) near the beginning and middle of the test. Collect one water sample in accordance with Table 02311-1 (List C) at the end of the testing period. Note: This test will be conducted following completion of the monitoring wells (shown on Drawing No. 4) to allow monitoring of water level impacts in this well during the test.
- W. Complete temporary wellhead at RW-1 to control fluids in well until final wellhead and appurtenances are constructed.
- X. If required, acidize RW-1 in accordance with Section 02684, Well Acidization (Add Alternate).
- Y. Demobilize all equipment from site and restore site to original or better condition. Remove drilling pad and complete permanent RW-1 well pad with dimensions shown in Drawing No. 5.

### 3.03 CONSTRUCT RECHARGE ZONE MONITOR WELL RZMW-1

- A. Locate recharge zone monitoring well (RZMW-1) to approved location as shown on Drawing No. 2.
- B. Construct a temporary drilling pad to contain all fluids during drilling operations.
- C. Install a 20-inch diameter pit casing through unconsolidated surficial deposits. Section 02674, Casing provides a summary of the casing specifications for the well. Drawing No. 4 shows the completion details for recharge zone monitoring well RZMW-1. The estimated depth of the surface casing is 60 feet bls. The casing installation method shall be at the Contractor's discretion, although the vibratory method will not be allowed.
- D. Drill nominal 8-inch to 12-inch diameter pilot hole to a depth of approximately 300 feet bls using standard mud rotary drilling techniques. Perform logging in accordance with Table 02679-1. The goal of this pilot hole will be to penetrate the fresh water units to the Tampa Member of the Hawthorn Group. Collect drill cuttings/samples every 10 feet to the total depth of the well and describe visually in a lithologic log. Include hydrogeologic-related information as applicable.
- E. Ream pilot hole to nominal 20-inch borehole to approximately 300 feet bls. Perform logging in accordance with Table 02679-1.
- F. Set and cement nominal 14-inch diameter surface casing to approximately 300 feet bls to isolate the surficial aquifer from the UFA and case through the clay units of the Hawthorn Group to facilitate drilling the remainder of the well using reverse-air drilling methods.
- G. Drill a nominal 8-inch to 12-inch diameter pilot hole to approximately 1,000 feet bls using standard reverse-air drilling techniques. The goal of the pilot hole will be to fully penetrate the Ocala Limestone Formation. Alternatively, the Driller may elect to drill the pilot hole into the monitoring interval to approximately 1,050 feet, in which case installation of a bridge plug will be required to isolate the monitoring interval prior to back-plugging the pilot hole and initiating reaming. Perform logging in accordance with Table 02679-1. During reverse-air drilling activities, collect drill cuttings/samples every 10 feet to the total depth of the well and describe visually in a lithologic log. Include hydrogeologic-related information as applicable.
- H. Engineer to propose a final casing setting depth to the FDEP. Complete well as described below and as shown on Drawing 4.

- I. Plug back pilot hole with neat cement through Ocala Limestone confining interval, set bridge plug as necessary prior to back-plugging if pilot hole penetrates the monitoring interval.
- J. Ream pilot hole to nominal 14-inch borehole to approximately 1,000 feet bls. Perform logging in accordance with Table 02679-1.
- K. Set and cement nominal 6-inch diameter intermediate casing to approximately 1,000 feet bls to isolate the proposed recharge zone from the overlying confinement and permeable intervals of the UFA. Section 02674, Casing provides a summary of the casing specifications for the well.
- L. Drill or re-establish open-hole interval of recharge zone monitoring well to approximately 1,050 feet bls. Develop open-hole interval using air-lift and pumping and surging well development practices. Develop until clear water is produced from the well and until water quality is acceptable to onsite geologist.
- M. Following well development, perform geophysical logging under static and dynamic conditions in accordance with Table 02679-1. During dynamic logging, run a variable rate pump test on RZMW-1 to estimate aquifer parameters at this well.
- N. Collect a water sample in accordance with Table 02311-1 (List C) following development and geophysical logging of the well.
- O. Complete temporary wellhead at RZMW-1 to control fluids in well until final wellhead and appurtenances are constructed.
- P. Demobilize all equipment from site and restore site to original or better condition. Remove drilling pad and complete permanent monitoring well pad as shown in Drawings.

#### 3.04 CONSTRUCT SUWANNEE LIMESTONE MONITOR WELL SLMW-1

- A. Locate shallow monitoring well (SLMW-1) at an approved location as shown on Drawing No. 2.
- B. Construct a temporary drilling pad to contain all fluids during drilling operations. No pad monitoring wells are proposed for this well construction since the ambient groundwater quality in this monitoring zone is approximately 1,000 mg/L TDS so release of brackish drilling fluids will not be an issue at this well.

- C. Install a 20-inch diameter pit casing through unconsolidated surficial deposits. Section 02674, Casing provides a summary of the casing specifications for the well. Drawing No. 6 shows the completion details for Suwannee Limestone monitoring well SLMW-1. The estimated depth of the surface casing is 60 feet bls. The casing installation method shall be at the Contractor's discretion, although the vibratory method will not be allowed.
- D. Drill nominal 8-inch to 12-inch diameter pilot hole to a depth of approximately 300 feet bls using standard mud rotary drilling techniques. Perform logging in accordance with Table 02679-1. The goal of this pilot hole will be to penetrate the fresh water units to the Tampa Member of the Hawthorn Group. Collect drill cuttings/samples every 10 feet to the total depth of the well and describe visually in a lithologic log. Include hydrogeologic-related information as applicable.
- E. Ream pilot hole to nominal 20-inch borehole to approximately 300 feet bls. Perform logging in accordance with Table 02679-1.
- F. Set and cement nominal 14-inch diameter surface casing to approximately 300 feet bls to isolate the surficial aquifer from the UFA and case through the clay units of the Hawthorn Group to facilitate drilling the remainder of the well using reverse-air drilling methods. Section 02674, Casing provides a summary of the casing specifications for the well.
- G. Drill a nominal 8-inch to 12-inch diameter pilot hole to approximately 650 feet bls using standard reverse-air drilling techniques. The goal of the pilot hole will be to penetrate the Suwannee Limestone permeable zone. Alternatively, the Driller may elect to drill the pilot hole into the monitoring interval to approximately 700 feet, in which case installation of a bridge plug will be required to isolate the monitoring interval prior to back-plugging the pilot hole and initiating reaming. Perform logging in accordance with Table 02679-1.
- H. Ream pilot hole to nominal 14-inch borehole to approximately 650 feet bls. Perform logging in accordance with Table 02679-1.
- I. Engineer to propose a final casing setting depth to the FDEP. Complete well described below.
- J. Plug back pilot hole above the bridge plug with neat cement through the upper Suwannee Limestone semi-confining interval, set bridge plug as necessary prior to back-plugging if pilot hole penetrates the monitoring interval.
- K. Set and pressure grout 6-inch diameter final casing to approximately 650 feet bls.

- L. Drill or re-establish open-hole interval of recharge zone monitoring well to approximately 700 feet bls. Develop open-hole interval using air-lift and pumping and surging well development practices. Develop until clear water is produced from the well and until water quality is acceptable to onsite geologist.
- M. Following well development, perform geophysical logging under dynamic and static conditions in accordance with Table 02679-1. Run a variable rate pump test on SLMW-1 to estimate aquifer parameters at this well.
- N. Collect a water sample in accordance with Table 02311- 1 (List C) following development and geophysical logging of the well.
- O. Complete temporary wellhead at SLMW-1 to control fluids in well until final wellhead and appurtenances are constructed.
- P. Demobilize all equipment from site and restore site to original or better condition. Remove drilling pad and complete permanent monitoring well pad as shown in the Drawings.

**END OF SECTION**

**SECTION 01015  
CONTROL OF WORK**

**PART 1 GENERAL**

1.01 WORK PROGRESS

- A. The Contractor shall furnish personnel and equipment which will be efficient, appropriate and adequately sized to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the time stipulated in the Contract. If at any time such personnel appears to the County to be inefficient, inappropriate, or insufficient for securing the quality of work required for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character, or increase the personnel and equipment and the Contractor shall conform to such order. Failure of the County to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.

1.02 PRIVATE LAND

- A. The Contractor shall not enter or occupy private land outside of easements, except by permission of the affected property owner.

1.03 WORK LOCATIONS

- A. Work shall be located substantially as indicated on the drawings, but the County reserves the right to make such modifications in locations as may be found desirable to avoid interference with existing structures or for other reasons.

1.04 OPEN EXCAVATIONS

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. Bridges provided for access to private property during construction shall be removed when no longer required. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, the County may require special construction procedures such as limiting the length of open trench, prohibiting stacking excavated material in the street and requiring that the trench shall not remain open overnight.

- B. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be barricaded and well lighted at all times when construction is not in progress.

#### 1.05 DISTRIBUTION SYSTEMS AND SERVICES

- A. The Contractor shall avoid interruptions to water, telephone, cable TV, sewer, gas, or other related utility services. He shall notify the County and the appropriate agency well in advance of any requirement for dewatering, isolating, or relocating a section of a utility, so that necessary arrangements may be made.
- B. If it appears that utility service will be interrupted for an extended period, the County may order the Contractor to provide temporary service lines at the Contractor's expense. Inconvenience of the users shall be kept to the minimum, consistent with existing conditions. The safety and integrity of the systems are of prime importance in scheduling work.

#### 1.06 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES

- A. The Contractor shall assume full responsibility for the protection of all buildings, structures and utilities, public or private, including poles, signs, services to building utilities, gas pipes, water pipes, hydrants, sewers, drains and electric and telephone cables and other similar facilities, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operation shall be repaired by the Contractor at his expense.
- B. The Contractor shall bear full responsibility for obtaining locations of all underground structures and utilities (including existing water services, drain lines and sewers). Services to buildings shall be maintained and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- C. Protection and temporary removal and replacement of existing utilities and structures as described in this Section shall be a part of the work under the Contract and all costs in connection therewith shall be included in the unit prices established in the Bid.
- D. If, in the opinion of the County, permanent relocation of a utility owned by the County is required, he may direct the Contractor, in writing, to perform the work. Work so ordered will be paid for at the Contract unit prices, if applicable, or as extra work as classified in the General Conditions. If relocation of a privately owned utility is required, the County will notify the utility to perform the work as expeditiously as possible. The Contractor shall

fully cooperate with the County and utility and shall have no claim for delay due to such relocation. The Contractor shall notify public utility companies in writing at least 48 hours (excluding Saturdays, Sundays and legal holidays) before excavating near their utilities.

1.07 TEST PITS

- A. Test pits for the purpose of locating underground pipeline or structures in advance of the construction shall be excavated and backfilled by the Contractor immediately after the utility location and the surface shall be restored in a manner equal or better than the original condition. No separate payment will be made.

1.08 CARE AND PROTECTION OF PROPERTY

- A. The Contractor shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition equal or better to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the County.
- B. All sidewalks which are disturbed by the Contractor's operations shall be restored to their original or better condition by the use of similar or comparable materials. All curbing shall be restored in a condition equal to the original construction and in accordance with the best modern practice.
- C. Along the location of this work, all fences, walks, bushes, trees, shrubbery and other physical features shall be protected and restored in a thoroughly workmanlike manner unless otherwise shown on the drawings. Fences and other features removed by the Contractor shall be replaced in the location indicated by the County as soon as conditions permit. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be regraded and sodded to equal or exceed original conditions.
- D. Trees close to the work which drawings do not specify to be removed, shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are liable to damage because of his operations, but in no case shall any tree be cut or removed without prior notification to the County. All injuries to bark, trunk, limbs and roots of trees shall be repaired by dressing, cutting and painting according to approved methods, using only approved tools and materials.

- E. The protection, removal and replacement of existing physical features along the line of work shall be a part of the work under the Contract and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the Bid.

#### 1.09 MAINTENANCE OF TRAFFIC

- A. Open pits, trenches, unpaved streets, debris, or other obstructions due to construction that will prevent the normal flow of traffic during an extended construction stoppage, for any reason, shall be minimized. In the event an extended construction stoppage is found to be necessary, Contractor shall, at his own expense, provide normal traffic flow during extended construction stoppage. Extended stoppage will be defined by the County.
- B. All excavated material shall be placed so that vehicular and pedestrian traffic may be maintained at all times. If the Contractor's operations cause traffic hazards, he shall repair the road surface, provide temporary roadways, erect wheel guards or fences, or take other safety measures which are satisfactory to the County.
- C. Any changes to the traffic pattern require a traffic control plan as detailed in Section 01570, Traffic Regulation of this specification.

#### 1.10 WATER FOR CONSTRUCTION PURPOSES

- A. In locations where public water supply is available, the Contractor may purchase water for all construction purposes.
- B. The Contractor shall be responsible for paying for all water tap fees incurred for the purpose of obtaining a potable water service or temporary use meter.

#### 1.11 MAINTENANCE OF FLOW

- A. The Contractor shall at his own cost, provide for the flow of sewers, drains and water courses interrupted during the progress of the work and shall immediately cart away and remove all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the County well in advance of the interruption of any flow.

#### 1.12 CLEANUP

- A. During the course of the work, the Contractor shall keep the site of his operations in as clean and neat a condition as is possible. He shall dispose of all residue resulting from the construction work and at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures and any other refuse remaining from the construction operations and shall leave the entire site of the work in a neat and orderly condition.

1.13 COOPERATION WITHIN THIS CONTRACT

- A. All firms or person authorized to perform any work under this Contract shall cooperate with the Contractor and his subcontractors or trades and shall assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the County.

1.14 PROTECTION OF CONSTRUCTION AND EQUIPMENT

- A. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed and all portions injured shall be reconstructed by the Contractor at his own expense.
- B. All structures shall be protected in a manner approved by the County. Should any of the floors or other parts of the structures become heaved, cracked, or otherwise damaged, all such damaged portions of the work shall be completely repaired and made good by the Contractor, at his own expense and to the satisfaction of the County. If, in the final inspection of the work, any defects, faults, or omissions are found, the Contractor shall cause the same to be repaired or removed and replaced by proper materials and workmanship without extra compensation for the materials and labor required. Further, the Contractor shall be fully responsible for the satisfactory maintenance and repair of the construction and other work undertaken herein, for at least the warranty period described in the Contract.
- C. Further, the Contractor shall take all necessary precautions to prevent damage to any structure due to water pressure during and after construction and until such structure is accepted and taken over by the County.

1.15 CONSTRUCTION WITHIN RIGHT-OF-WAY

- A. Where pipe lines are installed within FDOT right-of-way, all excavation backfill and compaction for the purpose of reconstructing roadways and/or adjacent slopes contiguous thereto shall be in accordance with FDOT or Manatee County Standards and Specifications, whichever is applicable. Contractor shall satisfy the authorized representative of the FDOT with respect to proper safety procedures, construction methods, required permitting, etc., within the FDOT right-of-way.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01016**  
**SAFETY REQUIREMENTS AND PROTECTION OF PROPERTY**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. All Work completed by Contractor shall be accomplished in accordance with Contractor's submitted Site Health and Safety Plan and in accordance with County's Corporate and Site-Specific Health and Safety compliance requirements.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. Contractor agrees that each employee, while on the project site, shall wear the protective clothing and use all equipment specified in Contractor's Site Health and Safety Plan. These requirements shall apply continuously.

**PART 3 EXECUTION**

3.01 WORKMANSHIP

- A. Contractor shall comply with its own Site Health and Safety Plan for the health and safety of persons and property in the vicinity of the Work area. All Work shall be performed in accordance with the Site Health and Safety Plan. Noncompliance by Contractor or its personnel with the Site Health and Safety Plan is grounds for a stop work order or dismissal of Contractor with payment only for the Work completed.
- B. Contractor shall develop and maintain, for the duration of this contract, a safety program that will effectively implement all required safety provisions. Contractor shall appoint an employee qualified to supervise and enforce compliance with the safety program. Contractor, as a part of its safety program, shall maintain at the jobsite, safety equipment applicable to the Work, including articles necessary for administering first-aid to the injured, and shall establish a procedure for the immediate removal to a hospital or a doctor's care of any person (including Contractor's employee) who may be injured on the jobsite.
- C. The duty of Engineer to conduct review of Contractor's performance is not intended to include a review or approval of the adequacy of Contractor's health and safety supervisor, the Health and Safety Program, or any safety measures taken in, on, or near the site.

- D. Contractor shall be familiar with and comply with all applicable safety codes, ordinances, and statutes, and bear sole responsibility for the penalties imposed for noncompliance.
- E. Contractor shall submit the name, address, and phone number of a responsible individual or individuals who will be available on a 24-hour basis to handle all emergency problems in connection with this project. Engineer and authorized government agents, and their representatives, shall at all times be provided safe access to the Work wherever it is in progress, and Contractor shall provide facilities for such access and for inspection.
- F. Contractor shall do all work necessary to protect the general public from hazards including, but not limited to, open boreholes, water sumps, and trenches or excavation. Barricades, lanterns, and proper signs shall be furnished in sufficient amount to safeguard the public and the Work. During well construction, Contractor shall construct and at all times maintain satisfactory and substantial railing, barricades, shoring, or steel plates, as applicable, at all pits, sumps, trenches, or ditches. All such barriers shall have adequate warning lights as necessary, or required, for safety.

#### **PART 4 PAYMENT**

##### **4.01 GENERAL**

- A. Payment for all work, materials, and equipment specified in this section will be at the unit price lump sum stated in Contractor's Unit Price Bid Schedule for Mobilization (Pay Item Nos. I-1, II-1, III-1, and IV-1). All other Work specified in this Section shall be considered incidental to the project cost and expenses, and shall be included as part of Contractor's Bid.

**END OF SECTION**

**SECTION 01030  
SPECIAL PROJECT PROCEDURES**

**PART 1 GENERAL**

1.01 PERMITS

- A. Upon notice of award, the Contractor shall immediately apply for all applicable permits not previously obtained by the County to do the work from the appropriate governmental agency or agencies. No work shall commence until all applicable permits have been obtained and copies delivered to the County. The costs for obtaining all permits shall be borne by the Contractor.

1.02 CONNECTIONS TO EXISTING SYSTEM

- A. The Contractor shall perform all work necessary to locate, excavate and prepare for connections to the existing systems all as shown on the Drawings or where directed by the County. The cost for this work and for the actual connection shall be included in the price bid for the project and shall not result in any additional cost to the County. The termination point for each contract shall be as shown on the Contract Drawings.

1.03 RELOCATIONS

- A. The Contractor shall be responsible for the coordination of the relocation of structures, including but not limited to light poles, power poles, signs, sign poles, fences, piping, conduits and drains that interfere with the positioning of the work as set out on the Drawings. No relocation of the items under this Contract shall be done without approval from the County.

1.04 EXISTING UNDERGROUND PIPING, STRUCTURES AND UTILITIES

- A. The attention of the Contractor is drawn to the fact that during excavation, the possibility exists of the Contractor encountering various utility lines not shown on the Drawings. The Contractor shall exercise extreme care before and during excavation to locate and flag these lines as to avoid damage to the existing lines.
- B. It is the responsibility of the Contractor to ensure that all utility or other poles, the stability of which may be endangered by the close proximity of excavation, are temporarily stayed in position while work proceeds in the vicinity of the pole and that the utility or other companies concerned be given reasonable advance notice.

- C. The existing utility locations are shown without express or implied representation, assurance, or guarantee that they are complete or correct or that they represent a true picture of underground piping to be encountered. The Contractor shall be responsible for notifying the various utility companies to locate their respective utilities in advance of construction in conformance with all requirements provided for in the Florida Underground Facilities Damage Prevention and Safety Act (Florida Statutes, Title XXXIII, Chapter 556).
- D. The existing piping and utilities that interfere with new construction shall be rerouted as shown, specified, or required. Before any piping and utilities not shown on the Drawings are disturbed, the Contractor shall notify the County and shall provide suggestions on how best to resolve the issue.
- E. The Contractor shall exercise care in any excavation to locate all existing piping and utilities. All utilities which do not interfere with complete work shall be carefully protected against damage. Any existing utilities damaged in any way by the Contractor shall be restored or replaced by the Contractor at his expense as directed by the County.
- F. It is intended that wherever existing utilities such as water, sewer, gas, telephone, electrical, or other service lines must be crossed, deflection of the pipe within recommended limits and cover shall be used to satisfactorily clear the obstruction unless otherwise indicated in the Drawings. However, when in the opinion of the County this procedure is not feasible, he may direct the use of fittings for a utilities crossing as detailed on the Drawings. No deflections will be allowed in gravity sanitary sewer lines or in existing storm sewer lines.

#### 1.05 SUSPENSION OF WORK DUE TO WEATHER

- A. Refer to FDOT Standards and Specifications Book, Section 8.

#### 1.06 HURRICANE PREPAREDNESS PLAN

- A. Within 30 days of the date of Notice to Proceed, the Contractor shall submit to the County a Hurricane Preparedness Plan. The plan should outline the necessary measures which the Contractor proposes to perform at no additional cost to the County in case of a hurricane warning.
- B. In the event of inclement weather, or whenever County shall direct, Contractor shall insure that he and his Subcontractors shall carefully protect work and materials against damage or injury from the weather. If, in the opinion of the County, any portion of work or materials is damaged due to the failure on the part of the Contractor or Subcontractors to protect the work, such work and materials shall be removed and replaced at the expense of the Contractor.

1.07 POWER SUPPLY

- A. Electricity as may be required for construction and permanent power supply shall be secured and purchased by the Contractor.

1.08 SALVAGE

- A. Any existing equipment or material, including, but not limited to, valves, pipes, fittings, couplings, etc., which is removed or replaced as a result of construction under this project may be designated as salvage by the County and if so shall be protected for a reasonable time until picked up by the County. Any equipment or material not worthy of salvaging, as directed by the County, shall be disposed of by the Contractor at no additional cost.

1.09 DEWATERING

- A. The Contractor shall do all groundwater pumping necessary to prevent flotation of any part of the work during construction operations with his own equipment.
- B. The Contractor shall pump out water and wastewater which may seep or leak into the excavations for the duration of the Contract and with his own equipment. He shall dispose of this water in an appropriate manner.

1.10 ADDITIONAL PROVISIONS

- A. Before commencing work on any of the existing pipelines, structures or equipment, the Contractor shall notify the County, in writing, at least 10 calendar days in advance of the date he proposes to commence such work.
- B. The Contractor shall provide, at his own expense, all necessary temporary facilities for access to and for protection of, all existing facilities. The County's personnel must have ready access at all times to the existing facilities. The Contractor is responsible for all damage to existing structures, equipment and facilities caused by his construction operations and must repair all such damage when and as ordered by the County.

1.11 CONSTRUCTION CONDITIONS

- A. The Contractor shall strictly adhere to the specific requirements of the governmental unit(s) and/or agency(ies) having jurisdiction over the work. Wherever there is a difference in the requirements of a jurisdictional body and these Specifications, the more stringent shall apply.

## 1.12 PUBLIC NUISANCE

- A. The Contractor shall not create a public nuisance including but not limited to encroachment on adjacent lands, flooding of adjacent lands, excessive noise or dust.
- B. Sound levels must meet Manatee County Ordinance #87-34, (which amends Ordinance 81-3, The Manatee County Noise Control Ordinance). Sound levels in excess of such ordinance are sufficient cause to have the work halted until equipment can be quieted to these levels. Work stoppage by the County for excessive noise shall not relieve the Contractor of the other portions of this specification.
- C. No extra charge may be made for time lost due to work stoppage resulting from the creation of a public nuisance.

## 1.13 WARRANTIES

- A. All material supplied under these Specifications shall be warranted by the Contractor and the manufacturers for a period of three (3) years. Warranty period shall commence on the date of County acceptance.
- B. The material shall be warranted to be free from defects in workmanship, design and materials. If any part of the system should fail during the warranty period, it shall be replaced at no expense to the County.
- C. The manufacturer's warranty period shall run concurrently with the Contractor's warranty or guarantee period. No exception to this provision shall be allowed. The Contractor shall be responsible for obtaining warranties from each of the respective suppliers or manufacturers for all the material specified under these contract specifications,
- D. In the event that the manufacturer is unwilling to provide a three-year warranty commencing at the time of County acceptance, the Contractor shall obtain from the manufacturer a four (4) year warranty starting at the time of equipment delivery to the jobsite. This four-year warranty shall not relieve the Contractor of the three-year warranty starting at the time of County acceptance of the equipment.

## 1.14 FUEL STORAGE & FILLING

- A. If the contractor is storing fuel on site, or doing his own fuel filling of portable equipment (other than hand-held equipment), he is responsible for any required response, cleanup or reporting required, at no additional cost to the county.
- B. The Contractor shall prepare and submit a fuel storage / spill abatement plan prior to start of construction if required.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01050  
FIELD ENGINEERING AND SURVEYING**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall provide and pay for field surveying service required for the Project.
- B. The Contractor shall furnish and set all necessary stakes to establish the lines and grades as shown on the Contract Drawings and layout each portion of the Work of the Contract.

1.02 QUALIFICATION OF SURVEYOR AND ENGINEER

- A. All construction staking shall be conducted by or under the supervision of a Florida Registered Professional Surveyor and Mapper. The Contractor shall be responsible for the layout of all such lines and grades, which will be subject to verification by the County.

1.03 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points for the Project are designated on the Contract Drawings.
- B. Locate and protect all survey monumentation, property corners and project control points prior to starting work and preserve all permanent reference points during construction. All costs associated with the replacement of all survey monumentation, property corners and project control points shall be borne by the Contractor.
- C. Make no changes or relocations without prior written notice to County.
- D. Report to County when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- E. Require surveyor to replace project control points which may be lost or destroyed.
- F. Establish replacements based on original survey control.

1.04 PROJECT SURVEY REQUIREMENTS

The Contractor shall establish temporary bench marks as needed, referenced to data established by survey control points.

1.05 RECORDS

- A. The Contractor shall employ a Professional Engineer or Surveyor registered in the State of Florida to verify survey data and properly prepare record drawings per Section 01720, Project Record Documentation.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01090  
REFERENCE STANDARDS**

**PART 1 GENERAL**

1.01 REQUIREMENTS

- A. Abbreviations and acronyms used in Contract Documents to identify reference standards.
  - 1. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents, or applicable codes established stricter standards.
  - 2. Publication Date: The most recent publication in effect on the date of issue of Contract Documents, except when a specific publication date is specified.

1.02 ABBREVIATIONS, NAMES AND ADDRESSES OR ORGANIZATIONS

- A. Obtain copies of reference standards direct from publication source, when needed for proper performance of work, or when required for submittal by Contract Documents.

AA Aluminum Association  
818 Connecticut Avenue, N.W.  
Washington, DC 20006

AASHTO American Association of State Highway and Transportation Officials  
444 North Capital Street, N.W.  
Washington, DC 20001

ACI American Concrete Institute  
Box 19150  
Reford Station  
Detroit, MI 48219

AI Asphalt Institute  
Asphalt Institute Building  
College Park, MD 20740

AISC American Institute of Steel Construction  
1221 Avenue of the Americas  
New York, NY 10020

AISI American Iron and Steel Institute  
1000 16th Street NW  
Washington, DC 20036

ANSI American National Standards Institute  
1430 Broadway  
New York, NY 10018

ASHRAE American Society of Heating, Refrigerating and Air Conditioning  
Engineers  
1791 Tullie Circle, N.E.  
Atlanta, GA 30329

ASME American Society of Mechanical Engineers  
345 East 47th Street  
New York, NY 10017

ASTM American Society for Testing and Materials  
1916 Race Street  
Philadelphia, PA 19103

AWWA American Water Works Association  
6666 West Quincy Avenue  
Denver, CO 80235

AWS American Welding Society  
2501 N.W. 7th Street  
Miami, FL 33125

CRSI Concrete Reinforcing Steel Institute  
180 North LaSalle Street, Suite 2110  
Chicago, IL 60601

FDEP Florida Department of Environmental Protection  
3900 Commonwealth Blvd.  
Tallahassee, Florida 32399

FDOT Florida Department of Transportation Standards Specifications for Road  
and Bridge Construction  
Maps & Publication Sales - Mail Station 12  
605 Suwannee St.  
Tallahassee, FL 32399-0450

FS Federal Specification  
General Services Administration Specifications and Consumer Information  
Distribution Section (WFSIS)  
Washington Navy Yard, Bldg. 197  
Washington, DC 20407

MCPW UTIL STD Manatee County Utility Engineering  
4410-B 66th St. W.  
Bradenton, FL 34210

MLSFA Metal Lath/Steel Framing Association  
221 North LaSalle Street  
Chicago, IL 60601

MMA Monorail Manufacturer's Association  
1326 Freeport Road  
Pittsburgh, PA 15238

NAAMM National Association of Architectural Metal Manufacturers  
221 North LaSalle Street  
Chicago, IL 60601

NEMA National Electrical Manufacturer's Assoc.  
2101 L Street N.W.  
Washington, DC 20037

OHSA Occupational Safety and Health Assoc.  
5807 Breckenridge Pkwy., Suite A  
Tampa, FL 33610-4249

PCA Portland Cement Association  
5420 Old Orchard Road  
Skokie, IL 20076

PCI Prestressed Concrete Institute  
20 North Wacker Drive  
Chicago, IL 60606

SDI Steel Door Institute  
712 Lakewood Center North  
Cleveland, OH 44107

SMACNA Sheet Metal and Air Conditioning Contractor's National Association  
8224 Old Court House Road  
Vienna, VA 22180

SSPC Steel Structures Painting Council  
402 24th Street, Suite 600  
Pittsburgh, PA 15213

SWFWMD Southwest Florida Water Management District  
2379 Broad Street  
Brooksville, FL 34604-6899

UL Underwriter's Laboratories, Inc.  
333 Pfingston Road  
Northbrook, IL 60062

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01092  
ABBREVIATIONS**

**PART 1 GENERAL**

1.01 SUMMARY

- A. This section lists many of the construction industry organizations, professional and technical associations, societies and institutes, and government agencies issuing, promoting, or enforcing standards to which references may be made in these Documents, as well as abbreviations commonly used for those references. Also included are certain general requirements for use of industry standards specified, and application of quality control standards.

1.02 USE OF REFERENCE STANDARDS

- A. Work specified by reference to the published standard or specification of a government agency, technical association, trade association, professional society or institute, testing agency, or other organization shall conform to or surpass the minimum standards of materials and workmanship quality established by the designated standard or specification.
- B. Where so specified, products or workmanship shall also conform to the additional prescriptive or performance requirements included within these Documents to establish a higher or more stringent standard of quality than that required by the referenced standard.
- C. Where the specific date or issue of the standard is not included with the reference to the standard, the latest edition, including all amendments published and available on the first published date of the Invitation to Bid, shall apply.
- D. In case of conflict between referenced standards, the Engineer shall determine which shall apply.
- E. Where two or more standards are specified to establish quality, the product and workmanship shall conform to or surpass the requirements of both.
- F. Where both a standard and a brand name are specified for a product in the Contract Documents, the proprietary product named shall conform to or surpass the requirements of the specified reference standard. The listing of a trade name in a Contract Document shall not be construed as warranting that such product conforms to the respective reference standard.
- G. Copies of Standards:
  - 1. Copies of applicable referenced standards have not been bound in these Contract Documents.

2. Where copies of standards are needed by the Contractor for superintendent and quality control of the work, obtain a copy or copies at Contractor's expense directly from the publication source and maintain in an orderly manner at the job site, available to the Contractor's personnel, subcontractors, County, and Engineer.
3. Submittals: Submit for approval the requests to use products conforming to printed standards or publications with a different publication date from that effective under the Contract. Clearly indicate the changes in product or workmanship quality involved in the proposed change, if any, and reasons for the request.

### 1.03 ABBREVIATIONS

- A. Table 01092-1 is a list of construction industry organizations and government agencies to which references may be made in the Contract Documents, with abbreviations noted.

<b>TABLE 01092-1</b>	
<b>ABBREVIATION</b>	<b>DESCRIPTION</b>
AA	Aluminum Association
ACI	American Concrete Institute
AGA	American Gas Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
API	American Petroleum Institute
APPZ	Avon Park Permeable Zone
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASR Well	Aquifer Storage Recovery Well
ASTM	American Society for Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
BLS	Below Land Surface
BOP	Blowout Preventer
CRSI	Concrete Reinforcing Steel Institute
EA	Each
FAR	Field Activity Report
FDEP	Florida Department of Environmental Protection
FGS	Florida Geological Survey
FS	Federal Specifications
FT	Feet
GPM	Gallons per Minute
HI	Hydraulic Institute

<b>TABLE 01092-1</b>	
<b>ABBREVIATION</b>	<b>DESCRIPTION</b>
HR	Hours
ICU	Intermediate Confining Unit
LFA	Lower Floridan Aquifer
LS	Lump Sum
MI	Mechanical Integrity
MSDS	Material Safety Data Sheets
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
NESC	National Electric Safety Code
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
OSHA	Occupational Safety and Health Act (both Federal and State)
PMW	Pad Monitoring Well
RTS	Radioactive Tracer Survey
RW	Recharge Well
RZMW	Recharge Zone Monitor Well
SLMW	Suwannee Limestone Monitoring Well
SWFWMD	Southwest Florida Water Management District
SK	Sacks
SWWRF	Southwest Water Reclamation Facility
TAC	Technical Advisory Committee
UFA	Upper Floridan Aquifer
UIC	Underground Injection Control
USDW	Underground Source of Drinking Water
USEPA	United States Environmental Protection Agency

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01150  
MEASUREMENT AND PAYMENT**

**PART 1 GENERAL**

1.01 DESCRIPTION OF WORK

- A. Payment for the work to be completed under this Project will be based upon the unit prices bid by the Contractor and on the Bid Form submitted by Contractors and accepted by Owner.
- B. It is the intent of the Owner to make payment for construction associated with the Project using the Pay Items in the Bid, and specify method of measurement and payment for all listed Pay Items. As may be noted below, incidental work which may be associated with a specific Pay Item is to be included in the cost proposed by the bidding contractor for that Pay Item. It is not the intent of the Owner to allow for additional compensation beyond those Pay Items included in the Schedule of Quantities and Unit Prices Bid Form submitted by the Contractor. It is therefore important that all Bidders fully acquaint themselves with all Plans, Specifications, Drawings, and other details pertaining to the Work.
- C. Work not shown or called out in either the Plans or the Specifications, but necessary in carrying out the intent of the Project or in the complete and proper execution of the Work, is required and shall be performed by the Contractor as though it were specifically delineated or described. No additional compensation will be considered for this associated and necessary Work.
- D. Damage caused by the construction activities to existing utilities including sewers and force mains, potable and reclaimed water mains and house services, underground electrical cable, TV and telephone cable and all other infrastructure shall be the sole responsibility of the Contractor. No additional payment will be made for replacement or restoration of these infrastructure components.

1.02 SUBMITTALS

- A. Informational:
  - 1. Schedule of Payment Forms: Submit on Manatee County Standard Forms PMD-1 (Application for Payment) and PMD-2 (Pay Application Schedule) with Schedule of Quantities and Unit Prices bid documentation, for approval by the Owner.

2. Monthly Progress Payments:
  - a. Submit request for monthly progress payment in accordance with the measurement and payment requirements of this section of the specifications, the general conditions, and the agreement for approval by the Owner.
  - b. Monthly applications for payment shall be provided to the Owner showing work completed through and including the 25<sup>th</sup> of the pay month in question.
3. Final Application for Payment: Submit request for final payment upon completion of all work required by the contract. A final application for payment will not be reviewed by the Owner until all work under the contract is complete. Utilize Manatee County Standard Forms PMD-8 (Certificate of Substantial Completion) and PMD-9 (Final Reconciliation, Warranty Period declaration and Contractor's Affidavit) as a part of the final payment application process.

### 1.03 APPLICATION FOR PAYMENT

- A. Transmittal Summary Form: Attach one Summary Form with each detailed Application for Payment. Execute certification by authorized officer of Contractor.
- B. Use detailed Application for Payment Form as approved by the Owner.
- C. Preparation:
  1. Calculate payment using measured lump sum quantities and unit price bid values for each pay item based upon that work actually constructed or furnished to the nearest cent.
  2. List each Change Order and Written Amendment executed prior to date of submission as separate line item. Totals to equal those shown on the Transmittal Summary Form for each schedule as applicable.
  3. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form(s).

### 1.04 MEASUREMENT—GENERAL

- A. Quantities to be paid will be based on field measurements made by the Contractor and agreed to by Engineer and the Owner.

## 1.05 ESTIMATED QUANTITIES

- A. The quantities shown are approximate and are given only as a basis of calculation upon which the award of the Contract is to be made. The Owner/Engineer does not assume any responsibility for the final quantities, nor shall the Contractor claim misunderstanding because of such estimate of quantities. The Owner has the right to change the listed quantities as they deem necessary. Final payment will be made only for satisfactorily completed quantity of each item.

## 1.06 MEASUREMENT AND PAYMENT

### A. General:

1. The Contractor shall receive and accept the compensation provided in his Bid and defined in the Agreement as full payment for furnishing all materials and all labor, tools and equipment, for performing all operations necessary to complete the work under the Project. It is the intent of these contract documents that any cost for which compensation is not directly provided by a bid item shall be prorated and included in the bid item for which they are required.
2. The prices stated in the Contractor's Schedule of Quantities and Unit Prices Bid Form include all costs and expenses for taxes, labor, materials, equipment, commissions, transportation charges and expenses, patent fees and royalties, labor for handling material during inspection together with any and all other costs and expenses for performing and completing the work as shown on the plans and specified herein. The basis of payment for any item at the unit price shown in the bid form shall be in accordance with the description of that item in this section. All work performed shall be in strict accordance with these Specifications.
3. No separate payment will be made for the following items, the cost of such work shall be included in the applicable contract pay items of work, including compliance with FDEP or any other agency:
  - a. Shop Drawings, working drawings or other contractor documentation.
  - b. Clearing and grubbing.
  - c. Excavation, including shoring, sheeting and bracing as required by OSHA trench excavation safety standards.
  - d. Dewatering and proper disposal of all water.
  - e. Backfill and proper compaction, including suitable fill and all grading.
  - f. Traffic and pedestrian control as required to complete the work and described in Specification Sections 01005, General Requirements and 01570, Traffic Regulation.
  - g. Protection, repair, replacement of existing utilities, damaged as a result of construction activities.

- h. Replacement or restoration of grass, trees and shrubbery in non-paved areas within established pay limits.
  - i. Replacement or restoration of paved or unpaved roadways, grass and shrubbery plots damaged as a result of construction activities.
  - j. Temporary facilities and controls during construction such as water/sanitary facilities, traffic control, informational signs and environmental protection, unless specifically provided for in a pay item.
  - k. Removing and disposing of waste material due to construction.
  - l. Cleanup and restoring the jobsite to its original condition, which includes but is not necessarily limited to restoring the ground surface to its original grade.
  - m. Testing of the system.
  - n. Any material and equipment required to be installed and used for the tests.
  - o. Maintaining the existing quality of service during construction.
  - p. Appurtenant work as required for a complete and operable system.
  - q. Coordination with all Federal, State and Local agencies and utilities.
  - r. Tree trimming as required by Manatee County or any other agency.
  - s. Repair of private irrigation systems damaged during construction.
  - t. Furnishing and installing suitable temporary fences, as directed by the Owner, to adequately secure areas protected by a permanent fence when that permanent fence must be removed. The temporary fence shall remain in place until the permanent fence is replaced.
- B. The Contractor's attention is again called to the fact that the bids for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Bid or Contract Pay Items, he shall include the cost for that work in some other applicable bid item, so that his Bid for the Project does reflect his total price for completing the work in its entirety.
- C. The quantities for payment under this Agreement shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the Engineer or Owner, in accordance with the applicable method of measurement therefore. A representative of the Contractor shall witness all field measurements. Measurements shall be accomplished to the following accuracy unless otherwise specified:

<b>Item</b>	<b>Measurement Accuracy</b>	<b>Method of Measurement</b>
EA	Each	Each—Field Count by Engineer or Owner
LS	One	Lump Sum—Unit is one; no measurement will be made
Gal	Gal	Gallon—Verification of Delivery Manifest by Engineer or Owner
FT	Feet	Unit of length - Field Measured by Engineer or Owner
Cubic Feet	Cubic Feet	Volume - Field Measured by Engineer or Owner
Cubic Yard	Cubic Yard	Volume – Field Measured by Engineer or Owner
HR	Hours	Hour—As Recorded by Engineer or Owner. Measured to the nearest 0.5 hour.

- D. All work and materials shall be in accordance with the Technical Specifications and Drawings herein. All materials shall be furnished by the Contractor.

#### 1.07 BID ITEM DESCRIPTIONS

- A. The following bid items establish a breakdown of the work to be performed under this Project. The item descriptions and measurement and payment shall apply to both Bid Form A and Bid Form B. For example Bid Item I-1 is applicable to I-1A and I-1B. The bid item description, method of measurement and basis for payment are listed below for each of the bid items that are a part of this Project:

### **PART I RECHARGE WELL RW-1**

#### **BID ITEM I-1: MOBILIZATION**

Description: The Contractor shall furnish all labor, materials, equipment and services to perform those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site. Includes all work as specified in Specification Section 01505, Mobilization/Demobilization and Site Work. Also include the costs of any bonds, maintenance of traffic and other pre-construction expenses necessary for the start of the Work under this Contract Item. The cost of all other work as shown, specified, directed or required for the expressed intent of the Project that is not specifically included under other Contract Items shall also be included under this Contract Item. The value of Bid Item I-1 shall not exceed 12 percent of the total value of the Part I. A total of 70 percent of the amount of Bid Item I-1 will be awarded following completion of

mobilization and 30 percent will be awarded after successful completion of demobilization and cleanup.

Measurement and Payment for Mobilization: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

#### BID ITEM I-2: SET PIT CASING

Description: Contractor shall provide and install pit casing to the depth selected by Contractor, complete.

Measurement and Payment for SET PIT CASING: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

#### BID ITEM I-3: DRILL PILOT HOLE

Description: The Contractor shall furnish all labor, materials, and equipment necessary for drilling and sampling of boreholes by the rotary method, complete, during the drilling activities as specified in Specification Section 02673, Drilling.

Measurement and Payment for DRILL PILOT HOLE: Shall be made at the unit price per foot drilled in accordance with the Bid Form. Payment for all sampling and testing activities during drilling, as described in Specification Section 02673, Drilling shall be included in the unit price per foot.

Drilling depths and casing depths are estimates only. The actual depths of these items shall be more or less as determined in the field by Engineer. Unit costs for these items shall remain the same, regardless of the actual depths or quantities used.

#### BID ITEM I-4: PILOT HOLE REAMING or OPEN HOLE

Description: The Contractor shall furnish all labor, materials, and equipment necessary for reaming pilot hole or drilling open hole by the rotary method, complete, as specified in Specification Section 02673, Drilling.

Measurement and Payment for PILOT HOLE REAMING or OPEN HOLE: Shall be made at the unit price per foot drilled in accordance with the Bid Form. Payment for all sampling and testing activities during drilling, as described in Specification Section 02673, Drilling shall be included in the unit price per foot.

Drilling depths and casing depths are estimates only. The actual depths of these items shall be more or less as determined in the field by Engineer. Unit costs for these items shall remain the same, regardless of the actual depths or quantities used.

#### BID ITEM I-5: GEOPHYSICAL LOGGING

Description: The Contractor shall furnish all labor, materials, equipment and services to perform those operations necessary for geophysical logging of the boreholes as specified in Specification Section 02679, Geophysical Logging.

Measurement and Payment for GEOPHYSICAL LOGGING: Shall be made at the unit price per logging event in accordance with the Bid Form. Standby time during logging shall be included Unit Price Bid price. No additional standby time shall be awarded during the logging events, including waiting on cement time for temperature logging following each stage of cementing the casings.

#### BID ITEM I-6: FURNISH AND INSTALL CASING

Description: The Contractor shall furnish all labor, materials, and equipment necessary for furnishing and installing the well casing and all related fittings, appurtenances, and transition adapters, complete as specified in Specification Section 02684, Well Acidization.

Measurement and Payment for FURNISH AND INSTALL CASING: Payment will be made at the unit prices per foot installed in accordance with the Bid Form.

#### BID ITEM I-7: GROUT CASING

Description: The Contractor shall furnish all labor, materials, and equipment necessary for furnishing and installing the grout seal as specified in Specification Section 02677, Grout Seal.

Measurement and Payment for GROUT CASING: Shall be made at the unit price per cubic foot of grout pumped in accordance with the Bid Form.

#### BID ITEM I-8: GRAVEL

Description: The Contractor shall furnish all labor, materials, and equipment necessary for emplacing clean gravel in highly permeable zones as specified in Specification Section 02677, Grout Seal.

Measurement and Payment for GRAVEL: Shall be made at the unit price per cubic yard installed in accordance with the Bid Form.

#### BID ITEM I-9: PRESSURE TEST CASING

Description: The Contractor shall furnish all labor, materials, and equipment necessary for demonstrating the final casing pressure test as specified in Specification Section 02674, Casing.

Measurement and Payment for PRESSURE TEST CASING: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

#### BID ITEM I-10: CORING

Description: The Contractor shall furnish all labor, materials, and equipment necessary to drill, collect, and store core samples as specified in Specification Section 02676, Coring.

Measurement and Payment for CORING: Shall be made at the unit price per foot recovered up to 10 feet per cored interval, in accordance with the Bid Form. At least 60 inches of core must be recovered in whole and undisturbed sections of not less than 6 inches in length. No payment for a core trip shall be made if the minimum recovery is not obtained.

#### BID ITEM I-11: PACKER TEST SETUP

Description: The Contractor shall furnish all labor, materials, and equipment necessary for installing and removing the packer, setting the packer, inflating the packer, installing and removing pumping equipment (including annular pump), deflating the packer, and removing the packer from the well as specified in Specification Section 02987, Packer Testing.

Measurement and Payment for PACKER TEST SETUP: Shall be made at the Unit Bid Price in accordance with the Bid Form.

#### BID ITEM I-12: PACKER TEST PUMPING TIME

Description: The Contractor shall furnish all labor, materials, and equipment necessary for the pumping, data logging, and recovery testing during the packer test as specified in Specification Section 02987, Packer Testing.

Measurement and Payment for PACKER TEST PUMPING TIME: Shall be made at the unit price per hour, to the nearest 1/2-hour in accordance with the Bid Form. Payment to Contractor shall also be made at the same unit price for running the preliminary test to determine if a suitable hydraulic seal is obtained. Payment for running the annulus tests shall be included in the unit price per hour to the nearest 1/2-hour of pumping time.

#### BID ITEM I-13: PUMPING TEST SETUP

Description: The Contractor shall furnish all labor, materials, and equipment necessary for setup of pumping test, including furnishing, temporarily installing, and removing the high capacity pump, driver and associated discharge piping, and storage as specified in Specification Section 02681, Pumping Test.

Measurement and Payment for PUMPING TEST SETUP: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

#### BID ITEM I-14: PUMPING TEST PUMPING TIME

Description: The Contractor shall furnish all labor, materials, and equipment necessary for the pumping, data logging, recovery testing, and preliminary pumping test as specified in Specification Section 02981, Pumping Testing.

Measurement and Payment for PUMPING TEST PUMPING TIME: Shall be made at the unit price per hour, to the nearest 1/2-hour in accordance with the Bid Form. Contractor will not be paid the hourly rate for the pumping test during the time the equipment is not actually in use or in the event the pumping test is not performed for the full duration directed by Engineer.

SLMW-1 and RZMW-1 MONITORING WELL PUMPING TESTS: Payment for pumping test setup and pumping time, including the preliminary pumping test, shall be made at Lump Sum Price for GEOPHYSICAL LOGGING (Item No. II-5 and III-5). These tests will be used to determine the specific capacity of each monitoring well. Each pumping test is assumed to include an estimated 4 hours of pumping time.

#### BID ITEM I-15: DEVELOPMENT

Description: The Contractor shall furnish all labor, materials, and equipment necessary to complete development of well as specified in Specification Section 02678, Well Development.

Measurement and Payment for DEVELOPMENT: Shall be made at the unit price per hour, to the nearest 1/2-hour in accordance with the Bid Form. Contractor will not be paid the hourly rate for development during the time the equipment is not actually in use or for any equipment repair, or for any time, in the opinion of Engineer, that the development procedure is not being accomplished in accordance with these Specifications, its direction, or both. Payment at the hourly rate shall constitute full compensation for all labor, materials, and equipment specified in this section. Includes setting of high capacity pump or other necessary equipment required to develop well. Development of the pad monitoring wells will be paid at the hourly rate.

#### BID ITEM I-16: TEMPORARY WELLHEAD

Description: The Contractor shall furnish all labor, materials, and equipment for installing the well heads and various manually operated valves and check valves in the wellheads, complete as specified in Specification Section 02689, Temporary Wellhead Capping and Valves.

Measurement and Payment for TEMPORARY WELLHEAD: Payment for all work, materials, and equipment shall be at the lump sum unit prices for temporary wellheads and pads in accordance with the Bid Form.

#### BID ITEM I-17: STANDBY TIME

Description: Shutdown time of the equipment and crew for any portion of the normal working day (7:00 am to 7:00 pm, Monday through Friday unless otherwise approved) when Engineer's representative orders Work to cease or when other activities at the site preclude work by Contractor, as approved by Engineer's representative as specified in Specification Section 02686, Standby Time and Down Time.

Measurement and Payment for STANDBY TIME: Payment for standby time (resulting from each cause approved by Engineer) shall be at the unit price per hour, to the nearest half-hour per day in accordance with the Bid Form.

DOWNTIME: All downtime shall be at the sole expense of Contractor.

ENGINEER STANDBY TIME - If Engineer is notified to be onsite and Contractor is not ready, then Engineer shall be reimbursed by Contractor at the rate of \$200.00 per hour, during normal working hours, starting at the time scheduled by Contractor and notified to Engineer.

#### BID ITEM I-18: EXTRA WORK

Description: That time, other than standby time, during which Contractor is directed to provide all equipment and a crew to perform extra work not specifically addressed elsewhere in these Contract Documents.

Measurement and Payment for EXTRA WORK: Payment for furnishing a crew and equipment to perform extra work at the direction of Engineer shall be at the unit price per hour in accordance with the Bid Form.

#### BID ITEM I-19: WATER SAMPLING

Description: The Contractor shall furnish all labor, materials, and equipment for water sampling and water quality testing work to be performed as specified in Specification Section 02311, Water Quality Testing and Sampling.

Measurement and Payment for WATER SAMPLING: Payment for all work, materials, and equipment specified in this section shall be at the unit price in accordance with the Bid Form.

## **PART II RECHARGE ZONE MONITOR WELL RZMW-1**

### **BID ITEM II-1: MOBILIZATION**

Description: The Contractor shall furnish all labor, materials, equipment and services to perform those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site. Includes all work as specified in Specification Section 01505, Mobilization/Demobilization and Site Work. Also include the costs of any bonds, maintenance of traffic and other pre-construction expenses necessary for the start of the Work under this Contract Item. The cost of all other work as shown, specified, directed or required for the expressed intent of the Project that is not specifically included under other Contract Items shall also be included under this Contract Item. The value of Bid Item II-1 shall not exceed 12 percent of the total value of Part II. A total of 70 percent of the amount of Bid Item II-1 will be awarded following completion of mobilization and 30 percent will be awarded after successful completion of demobilization and cleanup.

Measurement and Payment for MOBILIZATION: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

### **BID ITEM II-2: SET PIT CASING**

Description: Contractor shall provide and install pit casing to the depth selected by Contractor, complete.

Measurement and Payment for SET PIT CASING: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

### **BID ITEM II-3: DRILL PILOT HOLE**

Description: The Contractor shall furnish all labor, materials, and equipment necessary for drilling and sampling of boreholes by the rotary method, complete, during the drilling activities as specified in Specification Section 02673, Drilling.

Measurement and Payment for DRILL PILOT HOLE: Shall be made at the unit price per foot drilled in accordance with the Bid Form. Payment for all sampling and testing activities during drilling, as described in Specification Section 02673, Drilling shall be included in the unit price per foot.

Drilling depths and casing depths are estimates only. The actual depths of these items shall be more or less as determined in the field by Engineer. Unit costs for these items shall remain the same, regardless of the actual depths or quantities used.

#### BID ITEM II-4: PILOT HOLE REAMING or OPEN HOLE

Description: The Contractor shall furnish all labor, materials, and equipment necessary for reaming pilot hole or drilling open hole by the rotary method, complete, as specified in Specification Section 02673, Drilling.

Measurement and Payment for PILOT HOLE REAMING or OPEN HOLE: Shall be made at the unit price per foot drilled in accordance with the Bid Form. Payment for all sampling and testing activities during drilling, as described in Specification Section 02673, Drilling shall be included in the unit price per foot.

Drilling depths and casing depths are estimates only. The actual depths of these items shall be more or less as determined in the field by Engineer. Unit costs for these items shall remain the same, regardless of the actual depths or quantities used.

#### BID ITEM II-5: GEOPHYSICAL LOGGING

Description: The Contractor shall furnish all labor, materials, equipment and services to perform those operations necessary for geophysical logging of the boreholes as specified in Specification Section 02679, Geophysical Logging.

Measurement and Payment for GEOPHYSICAL LOGGING: Shall be made at the unit price per logging event in accordance with the Bid Form. Standby time during logging shall be included Unit Price Bid price. No additional standby time shall be awarded during the logging events, including waiting on cement time for temperature logging following each stage of cementing the casings.

RZMW-1 MONITORING WELL PUMPING TEST: Payment for pumping test setup and pumping time, including the preliminary pumping test, shall be included in the Unit Price Bid price for GEOPHYSICAL LOGGING (Item No. II-5). This test will be used to determine the specific capacity of the monitoring well. The pumping test is assumed to include an estimated 4 hours of pumping time.

#### BID ITEM II-6: FURNISH AND INSTALL CASING

Description: The Contractor shall furnish all labor, materials, and equipment necessary for furnishing and installing the well casing and all related fittings, appurtenances, and transition adapters, complete as specified in Specification Section 02674, Casing.

Measurement and Payment for FURNISH AND INSTALL CASING: Payment will be made at the unit prices per foot installed in accordance with the Bid Form.

#### BID ITEM II-7: GROUT CASING

Description: The Contractor shall furnish all labor, materials, and equipment necessary for furnishing and installing the grout seal as specified in Specification Section 02677, Grout Seal.

Measurement and Payment for GROUT CASING: Shall be made at the unit price per cubic foot of grout pumped in accordance with the Bid Form.

#### BID ITEM II-8: GRAVEL

Description: The Contractor shall furnish all labor, materials, and equipment necessary for emplacing clean gravel in highly permeable zones as specified in Specification Section 02677, Grout Seal.

Measurement and Payment for GRAVEL: Shall be made at the unit price per cubic yard installed in accordance with the Bid Form.

#### BID ITEM II-9: DEVELOPMENT

Description: The Contractor shall furnish all labor, materials, and equipment necessary to complete development of well as specified in Specification Section 02678, Well Development.

Measurement and Payment for DEVELOPMENT: Shall be made at the unit price per hour, to the nearest 1/2-hour in accordance with the Bid Form. Contractor will not be paid the hourly rate for development during the time the equipment is not actually in use or for any equipment repair, or for any time, in the opinion of Engineer, that the development procedure is not being accomplished in accordance with these Specifications, its direction, or both. Payment at the hourly rate shall constitute full compensation for all labor, materials, and equipment specified in this section. Includes setting of high capacity pump or other necessary equipment required to develop well. Development of the pad monitoring wells will be paid at the hourly rate.

#### BID ITEM II-10: TEMPORARY WELLHEAD

Description: The Contractor shall furnish all labor, materials, and equipment for installing the well heads and various manually operated valves and check valves in the wellheads, complete as specified in Specification Section 02689, Temporary Wellhead Capping and Valves.

Measurement and Payment for TEMPORARY WELLHEAD: Payment for all work, materials, and equipment shall be at the lump sum unit prices for temporary wellheads and pads in accordance with the Bid Form.

#### BID ITEM II-11: STANDBY TIME

Description: Shutdown time of the equipment and crew for any portion of the normal working day (7:00 am to 7:00 pm, Monday through Friday unless otherwise approved) when Engineer's representative orders Work to cease or when other activities at the site preclude work by Contractor, as approved by Engineer's representative as specified in Specification Section 02686, Standby Time and Down Time.

Measurement and Payment for STANDBY TIME: Payment for standby time (resulting from each cause approved by Engineer) shall be at the unit price per hour, to the nearest half-hour per day in accordance with the Bid Form.

DOWNTIME: All downtime shall be at the sole expense of Contractor.

ENGINEER STANDBY TIME - If Engineer is notified to be onsite and Contractor is not ready, then Engineer shall be reimbursed by Contractor at the rate of \$200.00 per hour, during normal working hours, starting at the time scheduled by Contractor and notified to Engineer.

#### BID ITEM II-12: EXTRA WORK

Description: That time, other than standby time, during which Contractor is directed to provide all equipment and a crew to perform extra work not specifically addressed elsewhere in these Contract Documents.

Measurement and Payment for EXTRA WORK: Payment for furnishing a crew and equipment to perform extra work at the direction of Engineer shall be at the unit price per hour in accordance with the Bid Form.

#### BID ITEM II-13: WATER SAMPLING

Description: The Contractor shall furnish all labor, materials, and equipment for water sampling and water quality testing work to be performed as specified in Specification Section 02311, Water Quality Testing and Sampling.

Measurement and Payment for WATER SAMPLING: Payment for all work, materials, and equipment specified in this section shall be at the unit price in accordance with the Bid Form.

## **PART III SUWANNEE LIMESTONE MONITOR WELL SLMW-1**

### **BID ITEM III-1: MOBILIZATION**

Description: The Contractor shall furnish all labor, materials, equipment and services to perform those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site. Includes all work as specified in Section 01505 Mobilization/Demobilization and Site Work. Also include the costs of any bonds, maintenance of traffic and other pre-construction expenses necessary for the start of the Work under this Contract Item. The cost of all other work as shown, specified, directed or required for the expressed intent of the Project that is not specifically included under other Contract Items shall also be included under this Contract Item. The value of Bid Item III-1 shall not exceed 12 percent of the total value of Part III. A total of 70 percent of the amount of Bid Item III-1 will be awarded following completion of mobilization and 30 percent will be awarded after successful completion of demobilization and cleanup.

Measurement and Payment for MOBILIZATION: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

### **BID ITEM III-2: SET PIT CASING**

Description: Contractor shall provide and install pit casing to the depth selected by Contractor, complete.

Measurement and Payment for SET PIT CASING: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

### **BID ITEM III-3: DRILL PILOT HOLE**

Description: The Contractor shall furnish all labor, materials, and equipment necessary for drilling and sampling of boreholes by the rotary method, complete, during the drilling activities as specified in Section 02673, Drilling.

Measurement and Payment for DRILL PILOT HOLE: Shall be made at the unit price per foot drilled in accordance with the Bid Form. Payment for all sampling and testing activities during drilling, as described in Section 02673, Drilling shall be included in the unit price per foot.

Drilling depths and casing depths are estimates only. The actual depths of these items shall be more or less as determined in the field by Engineer. Unit costs for these items shall remain the same, regardless of the actual depths or quantities used.

#### BID ITEM III-4: PILOT HOLE REAMING or OPEN HOLE

Description: The Contractor shall furnish all labor, materials, and equipment necessary for reaming pilot hole or drilling open hole by the rotary method, complete, as specified in Section 02673, Drilling.

Measurement and Payment for PILOT HOLE REAMING or OPEN HOLE: Shall be made at the unit price per foot drilled in accordance with the Bid Form. Payment for all sampling and testing activities during drilling, as described in Section 02673, Drilling shall be included in the unit price per foot.

Drilling depths and casing depths are estimates only. The actual depths of these items shall be more or less as determined in the field by Engineer. Unit costs for these items shall remain the same, regardless of the actual depths or quantities used.

#### BID ITEM III-5: GEOPHYSICAL LOGGING

Description: The Contractor shall furnish all labor, materials, equipment and services to perform those operations necessary for geophysical logging of the boreholes as specified in Section 02679, Geophysical Logging.

Measurement and Payment for GEOPHYSICAL LOGGING: Shall be made at the unit price per logging event in accordance with the Bid Form. Standby time during logging shall be included Unit Price Bid price. No additional standby time shall be awarded during the logging events, including waiting on cement time for temperature logging following each stage of cementing the casings.

SLMW-1 MONITORING WELL PUMPING TEST: Payment for pumping test setup and pumping time, including the preliminary pumping test, shall be included in the Unit Price Bid price for GEOPHYSICAL LOGGING (Item No. III-5). This test will be used to determine the specific capacity of the monitoring well. The pumping test is assumed to include an estimated 4 hours of pumping time.

#### BID ITEM III-6: FURNISH AND INSTALL CASING

Description: The Contractor shall furnish all labor, materials, and equipment necessary for furnishing and installing the well casing and all related fittings, appurtenances, and transition adapters, complete as specified in Section 02674, Acidization.

Measurement and Payment for FURNISH AND INSTALL CASING: Payment will be made at the unit prices per foot installed in accordance with the Bid Form.

### BID ITEM III-7: GROUT CASING

Description: The Contractor shall furnish all labor, materials, and equipment necessary for furnishing and installing the grout seal as specified in Specification Section 02677, Grout Seal.

Measurement and Payment for GROUT CASING: Shall be made at the unit price per cubic foot of grout pumped in accordance with the Bid Form.

### BID ITEM III-8: GRAVEL

Description: The Contractor shall furnish all labor, materials, and equipment necessary for emplacing clean gravel in highly permeable zones as specified in Specification Section 02677, Grout Seal.

Measurement and Payment for GRAVEL: Shall be made at the unit price per cubic yard installed in accordance with the Bid Form.

### BID ITEM III-9: DEVELOPMENT

Description: The Contractor shall furnish all labor, materials, and equipment necessary to complete development of well as specified in Specification Section 02678, Well Development.

Measurement and Payment for DEVELOPMENT: Shall be made at the unit price per hour, to the nearest 1/2-hour in accordance with the Bid Form. Contractor will not be paid the hourly rate for development during the time the equipment is not actually in use or for any equipment repair, or for any time, in the opinion of Engineer, that the development procedure is not being accomplished in accordance with these Specifications, its direction, or both. Payment at the hourly rate shall constitute full compensation for all labor, materials, and equipment specified in this section. Includes setting of high capacity pump or other necessary equipment required to develop well. Development of the pad monitoring wells will be paid at the hourly rate.

### BID ITEM III-10: TEMPORARY WELLHEAD

Description: The Contractor shall furnish all labor, materials, and equipment for installing the well heads and various manually operated valves and check valves in the wellheads, complete as specified in Specification Section 02689, Temporary Wellhead Capping and Valves.

Measurement and Payment for TEMPORARY WELLHEAD: Payment for all work, materials, and equipment shall be at the lump sum unit prices for temporary wellheads and pads in accordance with the Bid Form.

### BID ITEM III-11: STANDBY TIME

Description: Shutdown time of the equipment and crew for any portion of the normal working day (7:00 am to 7:00 pm, Monday through Friday unless otherwise approved) when Engineer's representative orders Work to cease or when other activities at the site preclude work by Contractor, as approved by Engineer's representative as specified in Specification Section 02686, Standby Time and Down Time.

Measurement and Payment for STANDBY TIME: Payment for standby time (resulting from each cause approved by Engineer) shall be at the unit price per hour, to the nearest half-hour per day in accordance with the Bid Form.

DOWNTIME: All downtime shall be at the sole expense of Contractor.

ENGINEER STANDBY TIME - If Engineer is notified to be onsite and Contractor is not ready, then Engineer shall be reimbursed by Contractor at the rate of \$200.00 per hour, during normal working hours, starting at the time scheduled by Contractor and notified to Engineer.

### BID ITEM III-12: EXTRA WORK

Description: That time, other than standby time, during which Contractor is directed to provide all equipment and a crew to perform extra work not specifically addressed elsewhere in these Contract Documents.

Measurement and Payment for EXTRA WORK: Payment for furnishing a crew and equipment to perform extra work at the direction of Engineer shall be at the unit price per hour in accordance with the Bid Form.

### BID ITEM III-13: WATER SAMPLING

Description: The Contractor shall furnish all labor, materials, and equipment for water sampling and water quality testing work to be performed as specified in Specification Section 02311, Water Quality Testing and Sampling.

Measurement and Payment for WATER SAMPLING: Payment for all work, materials, and equipment specified in this section shall be at the unit price in accordance with the Bid Form.

## **PART IV WELL ACIDIZATION (ADD ALTERNATE BID ITEM)**

### **BID ITEM IV-1: MOBILIZATION**

Description: The Contractor shall furnish all labor, materials, equipment and services to perform those operations necessary for the movement of personnel, equipment, supplies and incidentals to the project site. Includes all work as specified in Section 01505, Mobilization/Demobilization and Site Work. Also include the costs of any bonds, maintenance of traffic and other pre-construction expenses necessary for the start of the Work under this Contract Item. The cost of all other work as shown, specified, directed or required for the expressed intent of the Project that is not specifically included under other Contract Items shall also be included under this Contract Item. The value of Bid Item IV-1 shall not exceed 12 percent of the total value of Part IV. A total of 70 percent of the amount of Bid Item IV-1 will be awarded following completion of mobilization and 30 percent will be awarded after successful completion of demobilization and cleanup.

Measurement and Payment for MOBILIZATION: Shall be made at the Contract Lump Sum Bid Price in accordance with the Bid Form.

### **BID ITEM IV-2: ACIDIZATION SETUP**

Description: The Contractor shall furnish all labor, materials, and equipment necessary for acidization including well kills and storage, as specified in Specification Section 02684, Well Acidization.

Measurement and Payment for ACIDIZATION SETUP: Payment for all work, materials, and equipment to prepare the well for acidization shall be at the lump sum unit price in accordance with the Bid Form.

### **BID ITEM IV-3: FURNISH AND EMPLACE ACID**

Description: The Contractor shall furnish all labor, materials, and equipment necessary for acid emplacement in well, as specified in Specification Section 02684, Well Acidization.

Measurement and Payment for FURNISH AND EMPLACE ACID: Payment for all work, materials, and equipment to furnish and emplace the acid in the well shall be at the unit price per 1,000 gallons in accordance with the Bid Form.

### **BID ITEM IV-4: PUMP SET**

Description: The Contractor shall furnish all labor, materials, and equipment necessary to set pump and discharge line, complete, as specified in Section 02684, Well Acidization.

Measurement and Payment for PUMP SET: Payment for all work, materials, and equipment specified in this section to setup, operate, and remove equipment for post acidization development shall be at the Unit Bid Price in accordance with the Bid Form.

**BID ITEM IV-5: DEVELOPMENT TIME**

Description: The Contractor shall furnish all labor, materials, and equipment necessary to complete development of well as specified in Specification Section 02678, Well Development.

Measurement and Payment for DEVELOPMENT: Shall be made at the unit price per hour, to the nearest 1/2-hour in accordance with the Bid Form (Item IV-5). Contractor will not be paid the hourly rate for development during the time the equipment is not actually in use or for any equipment repair, or for any time, in the opinion of Engineer, that the development procedure is not being accomplished in accordance with these Specifications, its direction, or both. Payment at the hourly rate shall constitute full compensation for all labor, materials, and equipment specified in this section. Includes setting of high capacity pump or other necessary equipment required to develop well.

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01152  
REQUESTS FOR PAYMENT**

**PART 1      GENERAL**

1.01      REQUIREMENTS INCLUDED

- A.      Submit Applications for Payment to the Project Manager or as directed at the preconstruction meeting, in accordance with the schedule established by Conditions of the Contract and Agreement between County and Contractor.

1.02      FORMAT AND DATA REQUIRED

- A.      Submit payment requests in the form provided by the County with itemized data typed in accordance with the Bid Form.
- B.      Provide construction photographs in accordance with Contract Documents.

1.03      SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A.      When the County requires substantiating data, Contractor shall submit suitable information with a cover letter.
- B.      Submit one copy of data and cover letter for each copy of application.

1.04      PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A.      Fill in application form as specified for progress payments.

1.05      SUBMITTAL PROCEDURE

- A.      Submit applications for payment at the times stipulated in the Agreement.
- B.      Number: Three copies of each application; all signed and certified by the Contractor

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01153  
CHANGE ORDER PROCEDURES**

**PART 1      GENERAL**

1.01      DEFINITION

- A.    Change Order: Major change in contract scope or time that must be approved and executed by the Board before it becomes effective.
- B.    Administrative Change Adjustment: Minor change order under 10 percent of project cost or 20 percent time, does not have to be Board approved.
- C.    Field Directive Change: Change to contract quantity that does not require a change of scope or time extension.

1.02      REQUIREMENTS INCLUDED

- A.    The Contractor shall promptly implement change order procedures:
  - 1.    Provide full written data required to evaluate changes.
  - 2.    Maintain detailed records of work done on a time-and-material/force account basis.
  - 3.    Provide full documentation to County on request.
- B.    The Contractor shall designate a member of the Contractor's organization who:
  - 1.    Is authorized to accept changes to the Work.
  - 2.    Is responsible for informing others in the Contractor's employ of the authorized changes into the Work.

1.03      PRELIMINARY PROCEDURES

- A.    Project Manager may initiate changes by submitting a Request to Contractor. Request will include:
  - 1.    Detailed description of the change, products, costs and location of the change in the Project.
  - 2.    Supplementary or revised Drawings and Specifications.
  - 3.    The projected time extension for making the change.
  - 4.    A specified period of time during which the requested price will be considered valid.
  - 5.    Such request is for information only and is not an instruction to execute the changes, nor to stop work in progress.

- B. Contractor may initiate changes by submitting a written notice to the Project Manager, containing:
  - 1. Description of the proposed changes.
  - 2. Statement of the reason for making the changes.
  - 3. Statement of the effect on the Contract Sum and the Contract Time.
  - 4. Statement of the effect on the work of separate contractors.
  - 5. Documentation supporting any change in Contract Sum or Contract Time.

#### 1.04 FIELD DIRECTIVE CHANGE

- A. In lieu of a Change Order, the Project Manager may issue a Field Directive change for the Contractor to proceed with additional work within the original intent of the Project.
- B. Field Directive change will describe changes in the work, with attachments of backup information to define details of the change.
- C. Contractor must sign and date the Field Directive change to indicate agreement with the terms therein.

#### 1.05 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump sum proposal and for each unit price which has not previously been established, with sufficient substantiating data to allow the County to evaluate the quotation.
- B. On request, provide additional data to support time and cost computations:
  - 1. Labor required.
  - 2. Equipment required.
  - 3. Products required.
    - a. Recommended source of purchase and unit cost.
    - b. Quantities required.
  - 4. Taxes, insurance and bonds.
  - 5. Credit for work deleted from Contract, similarly documented.
  - 6. Overhead and profit.
  - 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal.
  - 1. Name of the County's authorized agent who ordered the work and date of the order.
  - 2. Date and time work was performed and by whom.
  - 3. Time record, summary of hours work and hourly rates paid.

4. Receipts and invoices for:
  - a. Equipment used, listing dates and time of use.
  - b. Products used, listing of quantities.
  - c. Subcontracts.

1.06 PREPARATION OF CHANGE ORDERS

- A. Project Manager will prepare each Change Order.
- B. Change Order will describe changes in the Work, both additions and deletions, with attachments as necessary to define details of the change.
- C. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.

1.07 LUMP SUM/FIXED PRICE CHANGE ORDER

- A. Project Manager initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by the Contractor, or requests from the County, or both.
- B. Once the form has been completed, all copies should be sent to Contractor for approval. After approval by Contractor, all copies should be sent to County for approval. The County will distribute executed copies after approval by the Board of County Commissioners.

1.08 UNIT CHANGE ORDER

- A. Contents of Change Orders will be based on, either:
  1. County's definition of the scope of the required changes.
  2. Contractor's Proposal for a change, as approved by the County.
  3. Survey of completed work.
- B. The amounts of the unit prices to be:
  1. Those stated in the Agreement.
  2. Those mutually agreed upon between County and Contractor.

1.09 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER/  
CONSTRUCTION CHANGE AUTHORIZATION

- A. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article "Documentation of Proposals and Claims" of this section.
- B. County will determine the allowable cost of such work, as provided in General Conditions and Supplementary Conditions.

- C. County will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
- D. County and Contractor will sign and date the Change Order to indicate their agreement therewith.

1.10 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Periodically revise Schedule of Values and Application for Payment forms to record each change as a separate item of work, and to record the adjusted Contract Sum.
- B. Periodically revise the Construction Schedule to reflect each change in Contract Time. Revise sub schedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01200  
PROJECT MEETINGS**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. The County shall schedule the pre-construction meeting, periodic progress meetings and special meetings, if required, throughout progress of work.
- B. Representatives of contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The Contractor shall attend meetings to ascertain that work is expedited consistent with Contract Documents and construction schedules.

1.02 PRE-CONSTRUCTION MEETING

- A. Attendance:
  - 1. County's Engineer.
  - 2. County's Project Manager
  - 3. Contractor.
  - 4. Resident Project Representative.
  - 5. Related Labor Contractor's Superintendent.
  - 6. Major Subcontractors.
  - 7. Major Suppliers.
  - 8. Others as appropriate.
- B. Suggested Agenda:
  - 1. Distribution and discussion of:
    - a. List of major subcontractors.
    - b. Projected construction schedules.
    - c. Coordination of utilities.
  - 2. Critical work sequencing.
  - 3. Project Coordination:
    - a. Designation of responsible personnel.
    - b. Emergency contact persons with phone numbers.
  - 4. Procedures and processing of:
    - a. Field decisions.
    - b. Submittals.
    - c. Change Orders.
    - d. Applications for Payment.
  - 5. Procedures for maintaining Record Documents.

6. Use of Premises:
  - a. Office, work and storage areas.
  - b. County's REQUIREMENTS.
7. Temporary utilities.
8. Housekeeping procedures.
9. Liquidated damages.
10. Equal Opportunity Requirements.
11. Laboratory testing.
12. Project/Job meetings: Progress meeting, other special topics as needed.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01300  
SUBMITTALS**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. Requirements and procedures necessary for scheduling, preparation, and submission of submittals.
- B. Requirements for preparation of progress schedules.

1.02 RELATED WORK SPECIFIED UNDER OTHER SECTIONS

- A. Individual Specification sections in these Contract Documents contain additional and special submittal requirements. Individual sections shall take precedence in the event of a conflict with this section.

1.03 SUBMITTALS PROCEDURE

- A. County reserves the right to modify the procedures and requirements for submittals, as necessary to accomplish the specific purpose of each submittal. Direct inquiries to Engineer regarding the procedure, purpose, or extent of any submittal.
- B. Review, acceptance, or approval of substitutions, schedules, shop drawings, lists of materials, and procedures submitted or requested by Contractor shall not add to the Contract amount, and additional costs which may result shall be solely the obligation of Contractor.
- C. County is not precluded by virtue of review, acceptance, or approval, from obtaining a credit for construction savings resulting from allowed concessions in the work or materials used to complete the work.
- D. County is not responsible to provide engineering or other services to protect Contractor from additional costs accruing from submittals.
- E. Submittals processed by Engineer do not become Contract Documents and are not Change Orders; the purpose of submittal review is to establish a reporting procedure and is intended for Contractor's convenience in organizing the work and to permit Engineer to monitor Contractor's progress and understanding of the design.
- F. Delays caused by the need for re-submittal shall not constitute basis for claim.

- G. After checking and verifying all field measurements, Contractor shall make submittals to Engineer, in accordance with the schedule of submittals for review.
1. Submittals shall bear a stamp or specific written indication that Contractor has satisfied its responsibilities under the Contract Documents with respect to the review of the submittal.
  2. Data shown shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to enable Engineer to review the information.
- H. Contractor shall check samples, and accompany with specific written indication that Contractor has satisfied requirements under the Contract Documents with respect to review of submittals, and identify clearly as to material, supplier, pertinent data such as catalog numbers, and the intended use.
- I. Before submission of each submittal, Contractor shall determine and verify quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto; review and coordinate each submittal with other submittals, requirements of the Work, and the Contract Documents.
- J. At the time of each submission, Contractor shall give Engineer specific written notice of each variation that the submittal may have from the requirements of the Contract Documents; in addition, make specific notation on each shop drawing submitted to Engineer for review and approval of each such variation.
- K. Engineer's review will be only for conformance with the design concept of the project and for compliance with the information given in the Contract Documents, not extending to means, methods, techniques, sequences, or procedures of construction (except where a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Documents) nor to safety precautions or programs incident thereto. Review of a separate item as such will not indicate review of the assembly in which the item functions.
- L. Where a shop drawing or sample is required by the Specifications, related work performed prior to Engineer's review and approval of the pertinent submission shall be the sole expense and responsibility of Contractor.

#### 1.04 ADMINISTRATIVE SUBMITTALS

The Contractor shall:

- A. Provide administrative submittals required by the Bidding Requirements, General Conditions, Supplementary Conditions, and as may be specifically required in other parts of the Contract Documents.
- B. Make required submittals promptly to the applicable federal, state, or local agency, as required by law. Failure to comply with this requirement may result in withholding of progress payments and make Contractor liable for other prescribed action and sanctions.
- C. Submit to County a copy of letters relative to the Contract including notifications, reports, certifications, and the like that are submitted directly to a federal, state, or other governing agency.

#### 1.05 SCHEDULES

A. The Contractor shall: General:

- 1. Submit estimated progress schedule and preliminary schedule of submittals to Engineer prior to any drilling activities at the site.
- 2. Revise and resubmit as specified, and identify all changes made from previous schedule submittal.

B. Progress Schedule:

- 1. Submit preliminary progress schedule within 20 days of award.
- 2. Show complete sequence of construction by activity, identifying work of separate parts and pay items as outlined in the Bid Schedule, and other logically grouped activities.
- 3. Indicate submittal dates and product manufacture and delivery dates.
- 4. Update progress schedule monthly and submit with payment application. Payment application will not be reviewed without such schedule.
- 5. Claims for Adjustment of Contract Times: Where Engineer has not yet rendered formal decision on Contractor's claim for adjustment of Contract Times, and parties are unable to agree as to amount of adjustment to be reflected in progress schedule, Contractor shall reflect that amount of time adjustment in progress schedule as Engineer may accept as appropriate for the interim. It is understood and agreed that such interim acceptance by Engineer will not be binding and will be made only for purpose of continuing to schedule Work, until such time as formal decision as to an adjustment, if any, of the Contract Times acceptable to Engineer has been rendered. Contractor shall revise progress schedule prepared thereafter in accordance with Engineer's formal decision.

- C. Schedule of Submittals, Preliminary Schedule of Submittals: Indicate submittals required by Specification section number with brief description, starting and completion dates for respective submittal preparation, and submittal review by Engineer.

## 1.06 SHOP DRAWINGS

### A. General:

1. Shop Drawings, as defined herein, consist of all drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by Contractor to illustrate some portion of the work; and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams, and other information prepared by a manufacturer and submitted by Contractor to illustrate material or equipment for distinct portions of the work. All submissions will be legible and in English (certified translation to English is acceptable).
2. Submittal of incomplete or unchecked Shop Drawings will not be acceptable. Shop Drawing submittals which do not clearly show Contractor's review stamp or specific written indication of Contractor review will be returned to Contractor for resubmission.
3. Submittal of Shop Drawings not required under these Contract Documents and not shown on the schedule of submittals will be returned to Contractor unreviewed and unstamped by Engineer.

### B. Procedures - Contractor shall:

1. Submit to Engineer for review and approval in accordance with the accepted schedule of submittals, three copies, including one reproducible copy, of Shop Drawings.
2. Combine submittals specified in each Specification section into a single package. Partial packages will not be reviewed until all submittals required for the section have been received.
3. Transmit each submittal on Engineer accepted form.
4. Sequentially number the transmittal forms; re-submittals to have original number with an alphabetic suffix.
5. Identify project, Contractor, Specification section number, pertinent drawing sheet and detail number(s), products, units and assemblies, and the system or equipment identification or tag number as shown.
6. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with requirements of the Contract Documents.

7. Transmit submittals in accordance with finalized schedule of submittals, and deliver as follows:

Submittals to County:

Manatee County Public Works, 1022 26th Avenue East  
Bradenton, FL 34208, ATTN: Antony Benitez, P.E.

Submittals to Engineer:

CH2M HILL Engineers Inc., 4350 West Cypress St. Suite 600,  
Tampa, Florida, 33607, ATTN: Niel Postlethwait, P.E.

8. Provide space for Engineer's review stamp.
  9. Revise and resubmit submittals as required; identify all changes made since previous submittal.
- C. Submittals will be acted upon by Engineer and transmitted to Contractor not later than 10 working days after receipt by Engineer.
  - D. When shop drawings have been reviewed by Engineer, two copies will be returned to Contractor appropriately annotated. If major changes or corrections are necessary, Shop Drawing may be rejected and two sets will be returned to Contractor with such changes or corrections indicated. Correct and resubmit the Shop Drawings in the same manner and quantity as specified for the original submittal. One digital copy will be provided to the County.
  - E. Material and Equipment Colors: Engineer will provide a schedule of selected colors within 30 days after approval of submittals and after receiving samples of the manufacturers' standard AWWA pipe colors for those items requiring County's selection.

#### 1.07 SAMPLES AND TEST SPECIMENS

- A. Where required in the Specifications, and as determined necessary by Engineer, submit test specimens or samples of materials, appliances, and fittings to be used or offered for use in connection with the work. Include information as to their sources and prepay cartage charges and submit such quantities and sizes for proper examination and tests to establish the quality or equality thereof, as applicable.
- B. The Contractor shall submit samples and test specimens in ample time to enable Engineer to make tests or examinations necessary, without delay to the work.
- C. The Contractor shall submit additional samples as required by Engineer to ensure equality with the original approved sample and/or for determination of Specification compliance.

- D. Tests required by the Specifications to be performed by an independent laboratory shall be made by a laboratory licensed or certified in accordance with State statutes.
- E. Samples and laboratory services shall be at the expense of County unless otherwise included in the unit prices bid for the associated work.
- F. Approved sample items (centralizers, hardware, etc.) may be incorporated into the work upon approval and when no longer needed by Engineer for reference.

#### 1.08 QUALITY CONTROL SUBMITTALS

- A. Manufacturers' Certification of Proper Installation: Where manufacturer's certification is required in the Specifications, the manufacturer shall provide certification stating the following:
  - 1. The product or system has been installed in accordance with the manufacturer's recommendations.
  - 2. The product or system has been inspected by a manufacturer's authorized representative.
  - 3. The product or system has been serviced with the proper lubricants.
  - 4. Applicable safety equipment has been properly installed.
  - 5. Proper electrical and mechanical connections have been made.
  - 6. Proper adjustments have been made and the product or system is ready for functional testing, plant startup, and operation.
- B. Certification of Compliance:
  - 1. Where specified, Contractor shall furnish certification of compliance for products specified to a recognized standard or code prior to the use of such products in the work. Certifications shall be signed by the manufacturer of the product; state that the components involved comply in all respects with the requirements of the Specifications. Furnish certification of compliance with each lot delivered to the jobsite and clearly identify the lot so certified.
  - 2. Products used on the basis of a certification of compliance may be sampled and tested at any time. The fact that a product is used on the basis of a certification of compliance shall not relieve Contractor of responsibility for incorporating products in the work which conforms to requirements of the Contract Documents. Products not conforming to such requirements will be subject to rejection whether in-place or not.
  - 3. Engineer reserves the right to refuse permission for use of products on the basis of a certification of compliance.

- C. Functional Test Certification: Where a certification of functional testing is specified for certain equipment, Contractor (as applicable to the equipment furnished) shall state in writing that:
  - 1. Necessary test pump equipment has been successfully tested.
  - 2. Necessary equipment systems have been checked for proper installation, started, and successfully tested to indicate they are operational.
  - 3. Adjustments and calibrations have been made.
  - 4. The systems and subsystems are capable of performing their intended functions.
  - 5. The facilities are ready for performance testing, or for startup and intended operation, as applicable.
  - 6. Where several manufacturers have furnished equipment in a system, obtain each manufacturer's review and acknowledgment of its respective equipment as part of a functional test for the overall system.
- D. Performance Test Reports: Contractor shall prepare and submit performance test reports where specified for equipment and systems.

1.09 OPERATION AND MAINTENANCE (O & M) MANUALS

- A. No O & M manuals are anticipated for this portion of the Project.

1.10 CONTRACT CLOSE-OUT SUBMITTALS

- A. Record Drawings: Each month, or as otherwise agreed, submit to Engineer a current listing and description of each change incorporated into the work since the preceding submittal. Engineer will prepare a set of record drawings for project which will include changes made in materials, locations, and dimensions of the work.

1.11 CONSTRUCTION PHOTOGRAPHS

- A. The Contractor shall photograph the preconstruction and post-construction site for its records.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01310**  
**CONSTRUCTION SCHEDULE AND PROJECT RESTRAINTS**

**PART 1      GENERAL**

1.01      GENERAL

- A.      Construction under this contract must be coordinated with the County and accomplished in a logical order to maintain utilization and flow through existing facilities and public properties and rights-of-way and to allow construction to be completed within the time allowed by Contract Documents and in the manner set forth in the Contract.

1.02      CONSTRUCTION SCHEDULING GENERAL PROVISIONS

- A.      No work shall be done between 7:00 p.m. and 7:00 a.m. (unless Bid B schedule is approved) nor on weekends or legal holidays without written permission of the County. However, emergency work may be done without prior permission.
- B.      Night work may be established by the Contractor as regular procedure with the written permission of the County. Such permission, however, may be revoked at any time by the County if the Contractor fails to maintain adequate equipment and supervision for the proper execution and control of the work at night.
- C.      Due to potential health hazards and requirements of the State of Florida and the U.S. Environmental Protection Agency, existing facilities must be maintained in operation.
- D.      The Contractor shall be fully responsible for providing all temporary piping, plumbing, electrical hook-ups, lighting, temporary structure, or other materials, equipment and systems required to maintain the existing facility's operations. All details of temporary piping and temporary construction are not necessarily shown on the Drawings or covered in the Specifications. However, this does not relieve the Contractor of the responsibility to insure that construction will not interrupt proper facility operations.
- E.      The Contractor shall designate an authorized representative of his firm who shall be responsible for development and maintenance of the schedule and of progress and payment reports. This representative of the Contractor shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the commitments of the Contractor's schedule.

## **PART 2      PRODUCTS**

### **2.01      GENERAL REQUIREMENTS**

- A.    The Contractor shall submit a critical path schedule as described herein.
- B.    The planning, scheduling, management and execution of the work is the sole responsibility of the Contractor. The progress schedule requirement is established to allow County to review Contractor's planning, scheduling, management and execution of the work; to assist County in evaluating work progress and make progress payments and to allow other contractors to cooperate and coordinate their activities with those of the Contractor.

### **2.02      FORM OF SCHEDULES**

- A.    Prepare schedules using the latest version of Microsoft Project, or other County approved software, in the form of a horizontal bar chart diagram. The diagram shall be time-scaled and sequenced by work areas. Horizontal time scale shall identify the first work day of each week.
- B.    Activities shall be at least as detailed as the Schedule of Values. Activity durations shall be in whole working days. In addition, man-days shall be shown for each activity or tabulated in an accompanying report.
- C.    Diagrams shall be neat and legible and submitted on sheets at least 8-1/2 inches by 11 inches suitable for reproduction. Scale and spacing shall allow space for notations and future revisions.

### **2.03      CONTENT OF SCHEDULES**

- A.    Each monthly schedule shall be based on data as of the last day of the current pay period.
- B.    Description for each activity shall be brief, but convey the scope of work described.
- C.    Activities shall identify all items of work that must be accomplished to achieve substantial completion, such as items pertaining to Contractor's installation and testing activities; items pertaining to the approval of regulatory agencies; contractor's time required for submittals, fabrication and deliveries; the time required by County to review all submittals as set forth in the Contract Documents; items of work required of County to support pre-operational, startup and final testing; time required for the relocation of utilities. Activities shall also identify interface milestones with the work of other contractors performing work under separate contracts with County.

- D. Schedules shall show the complete sequence of construction by activities. Dates for beginning and completion of each activity shall be indicated as well as projected percentage of completion for each activity as of the first day of each month.
- E. Submittal schedule for shop drawing review, product data, and samples shall show the date of Contractor submittal and the date approved submittals will be required by the County, consistent with the time frames established in the Specifications.
- F. For Contract change orders granting time extensions, the impact on the Contract date(s) shall equal the calendar-day total time extension specified for the applicable work in the Contract change orders.
- G. For actual delays, add activities prior to each delayed activity on the appropriate critical path(s). Data on the added activities of this type shall portray all steps leading to the delay and shall further include the following: separate activity identification, activity description indicating cause of the delay, activity duration consistent with whichever set of dates below applies, the actual start and finish dates of the delay or, if the delay is not finished, the actual start date and estimated completion date.
- H. For potential delays, add an activity prior to each potentially delayed activity on the appropriate critical path(s). Data for added activities of this type shall include alternatives available to mitigate the delay including acceleration alternatives and further show the following: separate activity identification, activity description indicating cause of the potential delay and activity duration equal to zero work days.

#### 2.04 SUPPORTING NARRATIVE

- A. Status and scheduling reports identified below shall contain a narrative to document the project status, to explain the basis of Contractor's determination of durations, describe the Contract conditions and restraints incorporated into the schedule and provide an analysis pertaining to potential problems and practical steps to mitigate them.
- B. The narrative shall specifically include:
  - 1. Actual completion dates for activities completed during the monthly report period and actual start dates for activities commenced during the monthly report period.
  - 2. Anticipated start dates for activities scheduled to commence during the following monthly report period.
  - 3. Changes in the duration of any activity and minor logic changes.
  - 4. The progress along the critical path in terms of days ahead or behind the Contract date.

5. If the Monthly Status Report indicates an avoidable delay to the Contract completion date or interim completion dates as specified in the Agreement, Contractor shall identify the problem, cause and the activities affected and provide an explanation of the proposed corrective action to meet the milestone dates involved or to mitigate further delays.
6. If the delay is thought to be unavoidable, the Contractor shall identify the problem, cause, duration, specific activities affected and restraints of each activity.
7. The narrative shall also discuss all change order activities whether included or not in the revised/current schedule of legal status. Newly introduced change order work activities and the CPM path(s) that they affect, must be specifically identified. All change order work activities added to the schedule shall conform with the sequencing and Contract Time requirements of the applicable Change Order.
8. Original Contract date(s) shall not be changed except by Contract change order. A revision need not be submitted when the foregoing situations arise unless required by County. Review of a report containing added activities will not be construed to be concurrence with the duration or restraints for such added activities; instead the corresponding data as ultimately incorporated into the applicable Contract change order shall govern.
9. Should County require additional data, this information shall be supplied by Contractor within 10 calendar days.

## 2.05 SUBMITTALS

- A. Contractor shall submit estimated and preliminary progress schedules (as identified in the Terms and Conditions of the Contract and the General Conditions), monthly status reports, a startup schedule and an as-built schedule report all as specified herein.
- B. All schedules, including estimated and preliminary schedules, shall be in conformance with the Contract Documents.
- C. The finalized progress schedule discussed in the Contract Documents shall be the first monthly status report and as such shall be in conformance with all applicable specifications contained herein.
- D. Monthly status report submittals shall include a time-scaled (days after notice to proceed) diagram showing all contract activities and supporting narrative. The initial detailed schedule shall use the notice to proceed as the start date. The finalized schedule, if concurred with by County, shall be the work plan to be used by the contractor for planning, scheduling, managing and executing the work.

- E. The schedule diagram shall be formatted as above. The diagram shall include (1) all detailed activities included in the preliminary and estimated schedule submittals, (2) calendar days prior to substantial completion, (3) summary activities for the remaining days. The critical path activities shall be identified, including critical paths for interim dates, if possible.
- F. The Contractor shall submit progress schedules with each application for payment.

## 2.06 MONTHLY STATUS REPORTS

- A. Contractor shall submit detailed schedule status reports on a monthly basis with the Application for Payment. The first such status report shall be submitted with the first Application for Payment and include data as of the last day of the pay period. The Monthly Report shall include a "marked-up" copy of the latest detailed schedule of legal status and a supporting narrative including updated information as described above. The Monthly Report will be reviewed by County and Contractor at a monthly schedule meeting and Contractor will address County's comments on the subsequent monthly report. Monthly status reports shall be the basis for evaluating Contractor's progress.
- B. The "marked-up" diagram shall show, for the latest detailed schedule of legal status, percentages of completion for all activities, actual start and finish dates and remaining durations, as appropriate. Activities not previously included in the latest detailed schedule of legal status shall be added, except that contractual dates will not be changed except by change order. Review of a marked-up diagram by County will not be construed to constitute concurrence with the time frames, duration, or sequencing for such added activities; instead the corresponding data as ultimately incorporated into an appropriate change order shall govern.

## 2.07 STARTUP SCHEDULE

- A. At least 60 calendar days prior to the date of substantial completion, Contractor shall submit a time-scaled (days after notice to proceed) diagram detailing the work to take place in the period between 60 days prior to substantial completion, together with a supporting narrative. County shall have 10 calendar days after receipt of the submittal to respond. Upon receipt of County's comments, Contractor shall make the necessary revisions and submit the revised schedule within 10 calendar days. The resubmittal, if concurred with by County, shall be the Work Plan to be used by Contractor for planning, managing, scheduling and executing the remaining work leading to substantial completion.

- B. The time-scaled diagram shall use the latest schedule of legal status for those activities completed ahead of the last 60 calendar days prior to substantial completion and detailed activities for the remaining 60-day period within the time frames outlined in the latest schedule of legal status.
- C. Contractor will be required to continue the requirement for monthly reports, as outlined above. In preparing this report, Contractor must assure that the schedule is consistent with the progress noted in the startup schedule.

## 2.08 REVISIONS

- A. All revised schedule submittals shall be made in the same form and detail as the initial submittal and shall be accompanied by an explanation of the reasons for such revisions, all of which shall be subject to review and concurrence by County. The revision shall incorporate all previously made changes to reflect current as-built conditions. Minor changes to the approved submittal may be approved at monthly meetings; a minor change is not considered a revision in the context of this paragraph.
- B. A revised schedule submittal shall be submitted for review when required by County.

## **PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01340**  
**SHOP DRAWINGS, PROJECT DATA AND SAMPLES**

**PART 1      GENERAL**

1.01      REQUIREMENTS INCLUDED

- A.    The Contractor shall submit to the County for review and approval: working drawings, shop drawings, test reports and data on materials and equipment (hereinafter in this section called data), and material samples (hereinafter in this section called samples) as are required for the proper control of work, including, but not limited to those working drawings, shop drawings, data and samples for materials and equipment specified elsewhere in the Specifications and in the Contract Drawings.
  
- B.    The Contractor is to maintain an accurate updated submittal log and will bring this log to each scheduled progress meeting with the County. This log should include the following items:
  - 1.    Submittal description and number assigned.
  - 2.    Date to County.
  - 3.    Date returned to Contractor (from County).
  - 4.    Status of submittal (No exceptions taken, returned for confirmation or resubmittal, rejected).
  - 5.    Date of resubmittal and return (as applicable).
  - 6.    Date material released (for fabrication).
  - 7.    Projected date of fabrication.
  - 8.    Projected date of delivery to site.
  - 9.    Projected date and required lead time so that product installation does not delay contact.
  - 10.   Status of O&M manuals submitted.

1.02      CONTRACTOR'S RESPONSIBILITY

- A.    It is the duty of the Contractor to check all drawings, data and samples prepared by or for him before submitting them to the County for review. Each and every copy of the Drawings and data shall bear Contractor's stamp showing that they have been so checked. Shop drawings submitted to the County without the Contractor's stamp will be returned to the Contractor for conformance with this requirement. Shop drawings shall indicate any deviations in the submittal from requirements of the Contract Documents.
  
- B.    Determine and verify:
  - 1.    Field measurements.
  - 2.    Field construction criteria.

3. Catalog numbers and similar data.
  4. Conformance with Specifications and indicate all variances from the Specifications.
- C. The Contractor shall furnish the County a schedule of Shop Drawing submittals fixing the respective dates for the submission of shop and working drawings, the beginning of manufacture, testing and installation of materials, supplies and equipment. This schedule shall indicate those that are critical to the progress schedule.
- D. The Contractor shall not begin any of the work covered by a drawing, data, or a sample returned for correction until a revision or correction thereof has been reviewed and returned to him, by the County, with No Exceptions Taken or Approved as Noted.
- E. The Contractor shall submit to the County all drawings and schedules sufficiently in advance of construction requirements to provide no less than 21 calendar days for checking and appropriate action from the time the County receives them.
- F. All material and product submittals, other than samples, may be transmitted electronically as a pdf file. All returns to the contractor will be as a pdf file only unless specifically requested otherwise.
- G. The Contractor shall be responsible for and bear all cost of damages which may result from the ordering of any material or from proceeding with any part of work prior to the completion of the review by County of the necessary Shop Drawings.

#### 1.03 COUNTY'S REVIEW OF SHOP DRAWINGS AND WORKING DRAWINGS

- A. The County's review of drawings, data, and samples submitted by the Contractor shall cover only general conformity to the Specifications, external connections and dimensions which affect the installation.
- B. The review of drawings and schedules shall be general and shall not be construed:
1. As permitting any departure from the Contract requirements.
  2. As relieving the Contractor of responsibility for any errors, including details, dimensions, and materials.
  3. As approving departures from details furnished by the County, except as otherwise provided herein.

- C. If the drawings or schedules as submitted describe variations and show a departure from the Contract requirements which the County finds to be in the interest of the County and to be so minor as not to involve a change in Contract Price or time for performance, the County may return the reviewed Drawings without noting any exception.
- D. When reviewed by the County, each of the Shop and Working Drawings shall be identified as having received such review being so stamped and dated. Shop Drawings stamped "REJECTED" and with required corrections shown shall be returned to the Contractor for correction and resubmittal.
- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals, the Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, to revisions other than the corrections requested by the County on previous submissions. The Contractor shall make any corrections required by the County.
- F. If the Contractor considers any correction indicated on the drawings to constitute a change to the Contract Drawings or Specifications, the Contractor shall give written notice thereof to the County.
- G. The County shall review a submittal/resubmittal a maximum of three times after which cost of review shall be borne by the Contractor. The cost of engineering shall be equal to the County's actual payroll cost.
- H. When the Shop and Working Drawings have been completed to the satisfaction of the County, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the County.
- I. No partial submittals shall be reviewed. Incomplete submittals shall be returned to the Contractor and shall be considered not approved until resubmitted.

#### 1.04 SHOP DRAWINGS

- A. When used in the Contract Documents, the term "Shop Drawings" shall be considered to mean Contractor's plans for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, drawings, setting drawings, schedule drawings, manufacturer's scale drawings and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature and performance and test data, shall be considered only as supportive to required Shop Drawings as defined above.

- B. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the County and shall bear the Contractor's stamp of approval and original signature as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval and original signature shall be returned to the Contractor for resubmission.
- C. Each Shop Drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
  - 1. Number and title of the drawing.
  - 2. Date of Drawing or revision.
  - 3. Name of project building or facility.
  - 4. Name of contractor and subcontractor submitting drawing.
  - 5. Clear identification of contents and location of the work.
  - 6. Specification title and number.
- D. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, the Contractor shall describe such variations in his letter of transmittal. If acceptable, proper adjustment in the contract shall be implemented where appropriate. If the Contractor fails to describe such variations, he shall not be relieved of the responsibility of executing the work in accordance with the Contract, even though such drawings have been reviewed.
- E. Data on materials and equipment shall include, without limitation, materials and equipment lists, catalog sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size, finish and all other pertinent data.
- F. For all mechanical and electrical equipment furnished, the Contractor shall provide a list including the equipment name and address and telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.
- G. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the County along with the required shop drawings. The installation list shall include at least five installations where identical equipment has been installed and have been in operation for a period of at least 1 year.
- H. Only the County will utilize the color "red" in marking shop drawing submittals.

## 1.05 WORKING DRAWINGS

- A. When used in the Contract Documents, the term "working drawings" shall be considered to mean the Contractor's fabrication and erection drawings for structures such as roof trusses, steelwork, precast concrete elements, bulkheads, support of open cut excavation, support of utilities, groundwater control systems, forming and false work; underpinning; and for such other work as may be required for construction of the project.
- B. Copies of working drawings as noted above, shall be submitted to the County where required by the Contract Documents or requested by the County and shall be submitted at least 30 days (unless otherwise specified by the County) in advance of their being required for work.
- C. Working drawings shall be signed by a registered professional engineer, currently licensed to practice in the State of Florida and shall convey, or be accompanied by, calculation or other sufficient information to completely explain the structure, machine, or system described and its intended manner of use. Prior to commencing such work, working drawings must have been reviewed without specific exceptions by the County, which review will be for general conformance and will not relieve the Contractor in any way from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error are assumed by the Contractor; the County and Engineer shall not have responsibility therefor.

## 1.06 SAMPLES

- A. The Contractor shall furnish, for the review of the County, samples required by the Contract Documents or requested by the County. Samples shall be delivered to the County as specified or directed. The Contractor shall prepay all shipping charges on samples. Materials or equipment for which samples are required shall not be used in work until reviewed by the County.
- B. Samples shall be of sufficient size and quantity to clearly illustrate:
  - 1. Functional characteristics of the product, with integrally related parts and attachment devices.
  - 2. Full range of color, texture and pattern.
  - 3. A minimum of two samples of each item shall be submitted.
- C. Each sample shall have a label indicating:
  - 1. Name of product.
  - 2. Name of Contractor and subcontractor.
  - 3. Material or equipment represented.
  - 4. Place of origin.
  - 5. Name of producer and brand (if any).

6. Location in project.  
(Samples of finished materials shall have additional markings that will identify them under the finished schedules.)
  7. Reference specification paragraph.
- D. The Contractor shall prepare a transmittal letter in triplicate for each shipment of samples containing the information required above. He shall enclose a copy of this letter with the shipment and send a copy of this letter to the County. Review of a sample shall be only for the characteristics or use named in such and shall not be construed to change or modify any Contract requirements.
- E. Reviewed samples not destroyed in testing shall be sent to the County or stored at the site of the work. Reviewed samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in work shall match the reviewed samples. If requested at the time of submission, samples which failed testing or were rejected shall be returned to the Contractor at his expense.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01370  
SCHEDULE OF VALUES**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall submit to the County a Schedule of Values allocated to the various portions of the work, within 10 days after date of Notice to Proceed.
- B. Upon request of the County, the Contractor shall support the values with data which will substantiate their correctness.
- C. The Schedule of Values shall be used only as the basis for the Contractor's Applications for Payment.

1.02 FORM AND CONTENT OF SCHEDULE OF VALUES

- A. Schedule of Values will be considered for approval by County upon Contractor's request. Identify schedule with:
  - 1. Title of Project and location.
  - 2. Project number.
  - 3. Name and address of Contractor.
  - 4. Contract designation.
  - 5. Date of submission.
- B. Schedule of Values shall list the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction.
- C. Follow the table of contents for the Contract Document as the format for listing component items for structures:
  - 1. Identify each line item with the number and title of the respective major section of the specification.
  - 2. For each line item, list sub values of major products or operations under item.
- D. Follow the bid sheets included in this Contract Documents as the format for listing component items for pipe lines.
- E. The sum of all values listed in the schedule shall equal the total Contract sum.

**PART 2      PRODUCTS (NOT USED)**

**PART 3      EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01380**  
**CONSTRUCTION PHOTOGRAPHS**

**PART 1      GENERAL**

1.01      REQUIREMENTS INCLUDED

- A.    The Contractor shall employ a competent photographer to take construction record photographs or perform video, recording including furnishing all labor, materials, equipment and incidentals necessary to obtain photographs and/or video recordings of all construction areas.
- B.    Preconstruction record information shall consist of video recordings on digital video disks (DVD).
- C.    Construction progress information shall consist of photographs and digital photographs on a recordable compact disc (CD-R).

1.02      QUALIFICATIONS

- A.    All photography shall be done by a competent camera operator who is fully experienced and qualified with the specified equipment.
- B.    For the video recording, the audio portion should be done by a person qualified and knowledgeable in the specifics of the Contract, who shall speak with clarity and diction so as to be easily understood.

1.03      PROJECT PHOTOGRAPHS

- A.    Provide one print of each photograph with each pay application.
- B.    Provide one recordable compact disc with digital photographs with each pay application.
- C.    Negatives:
  - 1.    All negatives shall remain the property of photographer.
  - 2.    The Contractor shall require that photographer maintain negatives or protected digital files for a period of two years from date of substantial completion of the project.
  - 3.    Photographer shall agree to furnish additional prints to County at commercial rates applicable at time of purchase. Photographer shall also agree to participate as required in any litigation requiring the photographer as an expert witness.

- D. The Contractor shall pay all costs associated with the required photography and prints. Any parties requiring additional photography or prints shall pay the photographer directly.
- E. All project photographs shall be a single weight, color image. All finishes shall be smooth surface and glossy and all prints shall be 8 inches by 10 inches.
- F. Each print shall have clearly marked on the back, the name of the Project, the orientation of view, the date and time of exposure, name and address of the photographer and the photographers numbered identification of exposure.
- G. All project photographs shall be taken from locations to adequately illustrate conditions prior to construction, or conditions of construction and state of progress. The Contractor shall consult with the County at each period of photography for instructions concerning views required.

#### 1.04 VIDEO RECORDINGS

- A. Video, recording shall be done along all routes that are scheduled for construction. Video, recording shall include full, recording of both sides of all streets and the entire width of easements plus 10 feet on each side on which construction is to be performed. All video recording shall be in full color.
- B. A complete view, in sufficient detail with audio description of the exact location shall be provided.
- C. The engineering plans shall be used as a reference for stationing in the audio portion of the recordings for easy location identification.
- D. Two complete sets of video recordings shall be delivered to the County on digital video disks (DVD) for the permanent and exclusive use of the County prior to the start of any construction on the project.
- E. All video recordings shall contain the name of the project, the date and time of the video, recording, the name and address of the photographer and any other identifying information required.
- F. Construction shall not start until preconstruction video recordings are completed, submitted and accepted by the County. In addition, no progress payments shall be made until the preconstruction video recordings are accepted by the County.

#### **PART 2 PRODUCTS (NOT USED)**

#### **PART 3 EXECUTION (NOT USED)**

#### **END OF SECTION**

**SECTION 01410**  
**TESTING AND TESTING LABORATORY SERVICES**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. County shall employ and pay for the services of an independent testing laboratory to perform testing specifically indicated on the Contract Documents or called out in the Specifications. County may elect to have materials and equipment tested for conformity with the Contract Documents at any time.
  - 1. Contractor shall cooperate fully with the laboratory to facilitate the execution of its required services.
  - 2. Employment of the laboratory shall in no way relieve the Contractor's obligations to perform the work of the Contract.

1.02 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
  - 1. Release, revoke, alter or enlarge on requirements of Contract Documents.
  - 2. Approve or accept any portion of the Work.
  - 3. Perform any duties of the Contractor.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel; provide access to Work and/or to Manufacturer's operations.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes which require control by the testing laboratory.
- D. Materials and equipment used in the performance of work under this Contract are subject to inspection and testing at the point of manufacture or fabrication. Standard specifications for quality and workmanship are indicated in the Contract Documents. The County may require the Contractor to provide statements or certificates from the manufacturers and fabricators that the materials and equipment provided by them are manufactured or fabricated in full accordance with the standard specifications for quality and workmanship indicated in the Contract Documents. All costs of this testing and providing

statements and certificates shall be a subsidiary obligation of the Contractor and no extra charge to the County shall be allowed on account of such testing and certification.

- E. Furnish incidental labor and facilities:
  - 1. To provide access to work to be tested.
  - 2. To obtain and handle samples at the project site or at the source of the product to be tested.
  - 3. To facilitate inspections and tests.
  - 4. For storage and curing of test samples.
  
- F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
  - 1. When tests or inspections cannot be performed due to insufficient notice, Contractor shall reimburse County for laboratory personnel and travel expenses incurred due to Contractor's negligence.
  
- G. Employ and pay for the services of the same or a separate, equally qualified independent testing laboratory to perform additional inspections, sampling and testing required for the Contractor's convenience and as approved by the County.
  
- H. If the test results indicate the material or equipment complies with the Contract Documents, the County shall pay for the cost of the testing laboratory. If the tests and any subsequent retests indicate the materials and equipment fail to meet the requirements of the Contract Documents, the contractor shall pay for the laboratory costs directly to the testing firm or the total of such costs shall be deducted from any payments due the Contractor.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

**PART 1      GENERAL**

1.01      WORK INCLUDED

- A.      Temporary utilities required during construction.
- B.      Temporary construction facilities, including field offices.
- C.      Requirements for security and protection of facilities and property.
- D.      Requirements for traffic regulation and access to the work.
- E.      Temporary controls for protection of environment.

1.02      SUBMITTALS

- A.      Safety and Protection Submittals: Copies of permits or approvals for construction activities from governing safety authorities.

1.03      MOBILIZATION

The CONTRACTOR shall:

- A.      Use only the area designated for Contractor's temporary facilities, shown as the construction area on Drawings. Arrange for additional area if needed for construction operations, as acceptable to County and Engineer.
- B.      Notify Engineer of obstructions not shown or not readily apparent by visual inspection of the staging area. If such obstructions adversely affect Contractor's operations, proper adjustment to Contract will be considered. Do not remove obstructions without County's prior consent.

1.04      TEMPORARY UTILITIES

- A.      Costs After Substantial Completion: Upon acceptance of the work or a portion of the work defined and certified as substantially complete by Engineer, and County commences full-time successful operation of the facility or portion thereof, the County will bear the cost for utilities used for County's operation. Contractor shall continue to pay for utilities used for their operation until final acceptance of the Work, except as provided herein.

B. Electric Power:

1. Electric power will not be available for the construction trailer. Electrical needs will be incurred and paid for by the Contractor. Contractor shall determine the type and amount available and make arrangements for obtaining temporary electric service at the site.
2. Contractor shall provide the necessary temporary electrical service required for drilling and construction operations, with branch wiring and distribution boxes located to allow service and lighting with construction type power cords.
3. Temporary electric power shall meet construction safety requirements of OSHA, State, and other governing agencies.

C. Water:

1. Water supply and transport for drilling operations is the responsibility of Contractor. It is anticipated that a supply well will need to be constructed by the Contractor.
2. If water is available by the County, water used by Contractor from County must be accounted for. Supply totalizing flow meter for Contractor use. Contractor will be responsible for conveyance of water from County supply to construction site.
3. Contractor shall not use fire hydrants for water supply unless the appropriate County supplied meter and backflow prevention is used.
4. During well acidization, a reduced pressure backflow preventer shall be installed by Contractor on any potable water supply sources.

D. Sewage:

1. Provide and maintain in sanitary condition at all times chemical toilets for Contractor's employees and subcontractors' employees that comply with regulations of local and State health departments. They shall be of watertight construction so that no contamination of the area can result from their use. Contractor shall make arrangements for frequent emptying of toilets with local sewage treatment authority. Upon completion of the work, remove toilets and restore area to original condition.
2. Use of County's existing sanitary facilities by construction personnel will not be allowed.

E. Field Offices:

1. In addition to Contractor's field office, Contractor shall furnish and maintain a separate temporary field office for Engineer at a designated location. The field office shall be an office trailer, as approved, and shall be not less than 300 square feet of floor space with an enclosed office room at one end. The office shall be situated in a location acceptable to

Engineer. The office shall be watertight and weather-proof, with screened windows and a solid door with a lock and four keys. The office shall be provided with electrical services for the duration of the contract. The office shall have any necessary equipment adequate to maintain a temperature of 72 degrees F under all conditions. The office shall be equipped with a plumbing system with drains including a separate room with lavatory, water closet, sink, wall cabinet, mirror, hand soap, and paper towels. A portable outside toilet is not acceptable. All utilities shall be provided and maintained by Contractor. No wastewater hookups to existing plant operations will be allowed. Trailer waste disposal tanks shall be pumped out by Contractor on a regular basis throughout the Project duration as required to maintain clean and sanitary conditions.

2. Contractor shall supply a water cooler with bottled water and maintain an adequate supply throughout construction.
3. The office shall be situated such to give a clear, unobstructed view of the drilling rig. The floor of the office shall be covered with linoleum or tile and shall be furnished with:
  - a. Two 30-inch by 60-inch desks with drawers and two office chairs.
  - b. Folding table(s) and chairs to seat 10 people.
  - c. One four-drawer legal size file cabinet with lock and keys.
  - d. One 7 foot by 12 inch by 3 foot steel utility shelving unit assembled.
  - e. One bookshelf.
  - f. One 3 foot by 4 foot bulletin board, mounted.
  - g. One 3 foot by 4 foot dry erase board, mounted.
  - h. One first-aid kit.
  - i. Two fire extinguishers, non-toxic, dry chemical, meeting U. L. for Class A, B and C fires.
  - j. Two waste baskets.
  - k. One plain paper copier with scanning capabilities and with enlargement and reduction capabilities and automatic feeder, as approved by Engineer. Contractor shall furnish and maintain all copier supplies during the contract.
  - l. A high speed wireless internet connection for Engineer's use for the duration of the Project.

#### 1.05 REMOVAL OF TEMPORARY FACILITIES

- A. Contractor shall remove temporary facilities after substantial completion, as directed by Engineer and prior to Final Completion inspection, and return area used by temporary facilities to same or better condition than originally provided.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION**

**3.01 TEMPORARY CONSTRUCTION**

**A. Access Roads and Parking:**

1. Temporary construction access roads will be made available to Contractor as necessary to execute the work. Maintain in good condition throughout the Project and leave the area in a condition satisfactory to the County.
2. Contractor shall use area designated on Drawings for parking of Contractor's employee vehicles. No personal vehicles will be allowed in the construction area or plant site outside of the designated construction and parking areas. Subcontractor vehicles required to be on site will be escorted to the site by County or Engineer.

**B. Storage Yards and Buildings: The Contractor shall:**

1. Construct temporary storage yards for the storage of products that are not subject to damage by weather conditions. Materials such as pipe and reinforcing and structural steel shall be stored on pallets or racks, off the ground, and in a manner to allow ready access for inspection and inventory. Temporary gravel surfacing of storage yards must be approved by Engineer.
2. Store combustible materials (paints, solvents, fuels, etc.) in a well-ventilated building remote from other buildings.

**C. Fencing and Barricades:**

1. Security Fence: Use of security fences by Contractor is permissible. Do not modify existing fencing at location without prior authorization and approval by County.
2. Barricades: Contractor shall provide barricades as necessary to prevent unauthorized entry to construction areas, both inside and outside of fenced area. Also provide barricades to protect existing facilities and adjacent properties from potential damage. Locate barriers to enable access by facility operators and property owners.

**3.02 SAFETY AND PROTECTION**

**A. Examination of Existing Facilities:**

1. After the Contract is awarded and before the commencement of work, Contractor shall make a thorough examination of all existing buildings, structures, and other improvements in the vicinity of the work, as applicable, which might be damaged by construction operations.

2. Periodic examinations of existing buildings, structures, and other improvements in the vicinity of the work shall be made jointly by authorized representatives of Contractor, Engineer, and County. The scope of examination will include cracks in structures, settlement, leakage, and similar conditions.
3. Records in triplicate of all observations shall be prepared by the authorized representative of County and of Contractor. Photographs, as requested by County, shall be made by the Contractor. One signed copy of every document and photograph will be kept on file in the office of Engineer. Contractor will also be responsible for videotaping the site prior to mobilization of drilling equipment and will submit two approved copies to Engineer prior to mobilizing equipment to the Site.
4. These records and photographs are intended for use as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Contractor's operations, and are for protection of adjacent property Countys, Contractor, and County.

B. Safety Requirements:

1. Contractor shall do whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees) and property during the Contract period. This requirement shall apply continuously and not be limited to normal working hours.
2. Safety provisions shall conform to Federal and State Departments of Labor Occupational Safety and Health Act (OSHA), and other applicable federal, state, county, and local laws, ordinances, codes, requirements set forth herein, and regulations that may be specified in other parts of these Contract Documents. Where these are in conflict, the more stringent requirement shall be followed. Contractor shall become thoroughly familiar with governing safety provisions and shall comply with the obligations set forth therein.
3. Contractor shall develop and maintain for the duration of the Contract a safety program that will effectively incorporate and implement required safety provisions. Contractor shall appoint a qualified employee who is authorized to supervise and enforce safety program compliance.
4. Engineer's duty to conduct construction review of Contractor's performance is not intended to include a review or approval of the adequacy of Contractor's safety supervisor, safety program, or safety measures taken on or near the construction site.
5. As part of safety program, Contractor shall maintain at its office or other well-known place at the job site safety equipment applicable to the work as prescribed by the governing safety authorities and articles necessary for administering first-aid. Establish procedures for the immediate removal to a hospital or a doctor's care of persons who may be injured on the jobsite.

6. Contractor shall comply with County's safety rules while on County's property.
  7. If death or serious injuries or damages occur, the accident shall be reported immediately by telephone or messenger to Engineer. In addition, Contractor shall promptly report in writing all accidents whatsoever arising out of, or in connection with, the performance of the work whether on or adjacent to the site, giving full details and statements of witnesses.
  8. If claim is made by anyone against Contractor or any subcontractor on account of accident, Contractor shall promptly report the facts in writing, giving full details of the claim.
- C. Traffic Safety and Access: Contractor shall comply with rules and regulations of the city, state, and county authorities regarding closing or restricting the use of public streets or highways. No public or private road shall be closed, except by written permission of the proper authority. Ensure the least possible obstruction to traffic, both onsite and offsite, and normal commercial pursuits. Traffic control procedures and devices used on all local, county, and state rights-of-way shall meet the requirements of the applicable current laws and regulations for traffic control.
- D. Fire Prevention: Contractor shall perform all work in a firesafe manner. Furnish and maintain on the site adequate firefighting equipment capable of extinguishing incipient fires. Comply with applicable federal, local, and state fire prevention regulations. Where these regulations do not apply, follow applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241).
- E. Use of Explosives: No blasting or use of explosives will be allowed on the job site.
- F. Protection of Work and Property:
1. General: Contractor shall employ such means and methods necessary to adequately protect public property and property of the County against damage. In the event of damage to such property, immediately restore the property to a condition equal to its original condition and to the satisfaction of Engineer and property owner, and bear all costs thereof.
  2. Finished Construction:
    - a. Contractor shall assume the responsibility for protection of finished construction and shall repair and restore any and all damage to finished work to its original or better condition, until the project has been deemed complete by County.

- b. At such time temporary facilities and utilities are no longer required for the work, Contractor shall notify Engineer of intent and schedule for their removal. Remove temporary facilities and utilities from the site as Contractor's property and leave the site in such condition as specified, as shown on the Drawings or as directed by County.
- c. In unfinished areas, Contractor shall leave the site evenly graded, sodded, or planted as necessary, in a condition that will restore original drainage, and with an appearance equal to or better than original.

3.03 ENVIRONMENTAL CONTROLS

A. General:

- 1. Contractor in executing the work shall maintain affected areas within and outside project boundaries free from environmental pollution that would be in violation of federal, state, or local regulations.
- 2. Do not impair operation of existing sewer systems. Prevent construction material, pavement, concrete, earth, volatile and corrosive wastes, and other debris from entering sewers, pump stations, or other water or wastewater treatment facility structures. Maintain original site drainage wherever possible.

B. Waste Pollution Control: The Contractor shall:

- 1. Comply with laws, rules, and regulations of the State of Florida and agencies of the United States Government prohibiting the pollution of lakes, wetlands, streams, or river waters from the dumping of refuse, rubbish, or debris.
- 2. Comply with the procedures and guidance outlined by the U.S. Environmental Protection Agency, the Florida Department of Environmental Protection, Manatee County, and the Southwest Florida Water Management District for erosion, and sediment control and control of turbidity in all discharges and obtain any necessary permits required for compliance.

C. Waste Material Disposal:

- 1. Excavated material, drilling additives, and other waste material must be disposed of by Contractor in accordance with the State of Florida and Manatee County Regulations in licensed landfills or at other sites for which approval is obtained. Contractor shall submit the proposed haul route(s) for each site intended to be used and shall bear all costs associated with the disposal of the waste. The site must be approved by FDEP prior to drilling activities. Provide watertight conveyance for liquids, semi-liquids, or saturated solids that tend to bleed during transport. A manifest

must be obtained by County prior to removal to disposal site. Disposal costs for hazardous waste materials are the responsibility of Contractor.

2. Contractor shall maintain areas covered by the contract and affected public properties free from accumulations of waste, debris, and rubbish caused by construction operations. Remove excavated materials from the site in a manner approved by Engineer.
- D. Air Pollution Control: Contractor shall minimize air pollution likely to occur from construction operations by wetting down bare soils during windy conditions, requiring proper combustion emission control devices on construction vehicles and equipment, and by shutdown of motorized equipment not in use. Trash burning will not be permitted on the construction site.
- E. Noise Control: Contractor shall minimize noise by executing work using appropriate construction methods and equipment. If necessary, provide acoustical barriers so noise emanating from tools or equipment will not exceed legal noise levels. No drilling activities or other operations will be permitted outside the normal work hours without prior approval of County, which may require additional noise control methods.

**END OF SECTION**

**SECTION 01505**  
**MOBILIZATION/DEMobilIZATION/SITE WORK**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work necessary to transport to the site all personnel, supplies, and equipment; setup workover and drill rigs and temporary facilities; equipment referenced in other sections; and temporary power, water, and per diem. This section also covers the work necessary to remove from the site all personnel, supplies, and equipment; remove workover and drill rigs and temporary facilities; equipment referenced in other sections; and site restoration and cleanup. Time is of the essence. Demobilization shall be completed within two weeks after substantial completion of other site work.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. Contractor shall provide all materials and equipment required to accomplish the work as specified.

2.02 SECURITY

- A. Contractor shall provide secured protection for equipment or materials stored at the site or locations designated and approved by County. Contractor shall assume full responsibility for all supplies, materials, and equipment required by it for the contracted work, whether furnished by itself or other parties, until the wells have been installed and accepted by Engineer and County.

**PART 3 EXECUTION**

3.01 WORKMANSHIP

- A. Install temporary facilities in accordance with Section 01500, Construction Facilities and Temporary Controls. Construct temporary drilling pad in accordance with FDEP Class V permit General Requirements II. 1. and the Florida Administrative Code (FAC) 62-528.410(9)(b). Design of temporary drilling pad must be approved by FDEP. Contractor shall provide Engineer 5 normal working days notice prior to mobilization to the drilling site. Engineer will inform FDEP and SWFWMD of the Contractor's schedule.
- B. Contractor shall set up all equipment at the site designated by Engineer. Confine work to designated work areas.

- C. Clearing and grubbing of the site will not be performed by County prior to mobilization to site. Some obstructions may not be shown on the site plan. Contractor is advised to carefully inspect the site and existing facilities before bidding on or beginning any work at the site. The removal of minor obstructions shall be anticipated and accomplished, even though not shown or specifically mentioned.
- D. Contractor is responsible for providing physical access to all work areas for all vehicles necessary for well construction and testing. Engineer accepts no liability for costs incurred due to Contractor's failure to thoroughly examine the site and review existing site plans, data, and these Specifications.

### 3.02 CONTAMINATION PRECAUTIONS

- A. Avoid contamination of the project area. Do not dump waste oil, rubbish, or other similar materials on the ground. Cleanup of any contamination by Contractor or his subcontractors shall be performed by Contractor at his sole expense.
- B. Avoid spillage of brackish water produced during drilling operations. Contractor shall be responsible for all remediation, including additional monitoring that may be required, related to releases to the surficial aquifer caused by his personnel, equipment, and/or materials.

### 3.03 SUBGRADE PREPARATION FOR AREA OF TEMPORARY PAD

- A. Prior to fill replacement for area, proof-roll the subgrade with a loaded dump truck or similar heavy wheeled vehicle to detect soft or loose zones. Notify Engineer prior to commencement of proof-rolling. If soft or loose zones are found, excavate the soft or loose material to a depth accepted by Engineer, then fill with granular fill compacted as specified for such fill. Compact the upper 12 inches of the subgrade to 95 percent of relative compaction.

### 3.04 FLEXIBLE MEMBRANE LINER POLYVINYL CHLORIDE (PVC)

- A. The PVC liner shall have a minimum thickness of 20 mils. The following manufacturers, or equal, are acceptable:
  - 1. Water Saver, Denver, CO.
  - 2. Staff Industries, Detroit, MI; or equal.

### 3.05 CLEANUP OF CONSTRUCTION AREAS

- A. Contractor shall avoid defacing of the site area. Do not dump waste oil, fuel, rubbish, or other materials on the ground. Restore the site to original or better condition when work is complete.

- B. Replace or repair any facility, equipment, buildings, fencing, etc. damaged during work. Site cleanup shall be completed to the satisfaction of County. Solid waste such as subsurface fluids shall be contained so that it shall not migrate from areas designated by Engineer. This includes drill cuttings and debris such as wood, pipe, and hose. Materials shall be segregated and identified and removed and disposed of offsite, as approved by Engineer. The replacement of minor obstructions and restoration of physical features, even though not specifically mentioned shall be anticipated and accomplished.
- C. Upon leaving the site at the completion of the work, Contractor shall clean equipment and materials of surface and subsurface materials contacted at the site.

### 3.06 HORIZONTAL AND VERTICAL CONTROL

- A. Prior to initiating drilling of the recharge well, Contractor shall survey the site to establish horizontal and vertical control of all wells including pad monitor wells, piping, and equipment. Contractor shall provide four certified copies and electronic copy in Adobe Acrobat format of survey upon initiation of work.

**END OF SECTION**



**SECTION 01510  
TEMPORARY AND PERMANENT UTILITIES**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall be responsible for furnishing all requisite temporary utilities, i.e., power, water, sanitation, etc. The Contractor shall obtain and pay for all permits required as well as pay for all temporary usages. The Contractor shall remove all temporary facilities upon completion of work.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with National Electric Code.
- B. Comply with federal, state and local codes and regulations and with utility company requirements.
- C. Comply with County Health Department regulations.

**PART 2 PRODUCTS**

2.01 MATERIALS, GENERAL

- A. Materials for temporary utilities may be "used". Materials for electrical utilities shall be adequate in capacity for the required usage, shall not create unsafe conditions and shall not violate requirements of applicable codes and standards.

2.02 TEMPORARY ELECTRICITY AND LIGHTING

- A. Arrange with the applicable utility company for temporary power supply. Provide service required for temporary power and lighting and pay all costs for permits, service and for power used.

2.03 TEMPORARY WATER

- A. The Contractor shall arrange with Manatee County Utilities Customer Service office to provide water for construction purposes, i.e., meter, pay all costs for installation, maintenance and removal, and service charges for water used.
- B. The Contractor shall protect piping and fitting against freezing.

2.04 TEMPORARY SANITARY FACILITIES

- A. The Contractor shall provide sanitary facilities in compliance with all laws and regulations.
- B. The Contractor shall service, clean and maintain facilities and enclosures.

**PART 3 EXECUTION**

3.01 GENERAL

- A. The Contractor shall maintain and operate systems to assure continuous service.
- B. The Contractor shall modify and extend systems as work progress requires.

3.02 REMOVAL

- A. The Contractor shall completely remove temporary materials and equipment when their use is no longer required.
- B. The Contractor shall clean and repair damage caused by temporary installations or use of temporary facilities.

**END OF SECTION**

**SECTION 01570  
TRAFFIC REGULATION**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. The Contractor shall be responsible for providing safe and expeditious movement of traffic through construction zones. A construction zone is defined as the immediate areas of actual construction and all abutting areas which are used by the Contractor and which interfere with the driving or walking public.
- B. The Contractor shall remove temporary equipment and facilities when no longer required, restore grounds to original or to specified conditions.

1.02 TRAFFIC CONTROL

- A. The necessary traffic control shall include, but not be limited to, such items as proper construction warning signs, signals, lighting devices, markings, barricades, channelization and hand signaling devices. The Contractor shall be responsible for installation and maintenance of all devices and detour routes and signage for the duration of the construction period. The Contractor shall utilize the appropriate traffic plan from the FDOT Maintenance of Traffic Standards, Series 600 of the FDOT Roadway and Traffic Design Standards, Latest Edition.
- B. Should there be the necessity to close any portion of a roadway carrying vehicles or pedestrians the Contractor shall submit a traffic control plan (TCP) at least 5 days before a partial or full day closure, and at least 8 days before a multi-day closure. TCP shall be submitted, along with a copy of their accreditation, by a certified IMSA or ATSA Traffic Control Specialist.
  - 1. At no time will more than one lane of a roadway be closed to vehicles and pedestrians without an approved road closure from the County Transportation Department. With any such closings, adequate provision shall be made for the safe expeditious movement of each.
  - 2. All traffic control signs must be in place and inspected at least 1 day in advance of the closure. Multi-day closures notification signs shall be in place at least 3 days in advance of the closure. All signs must be covered when no in effect, and checked twice a day by the Worksite Traffic Supervisor when they are in effect.

- C. The Contractor shall be responsible for removal, relocation, or replacement of any traffic control device in the construction area which exists as part of the normal preconstruction traffic control scheme. Any such actions shall be performed by the Contractor under the supervision and in accordance with the instructions of the applicable highway department unless otherwise specified.
- D. The Contractor will consult with the County immediately on any vehicular or pedestrian safety or efficiency problem incurred as a result of construction of the Project.
- E. The Contractor shall provide ready access to businesses and homes in the project area during construction. The Contractor shall be responsible for coordinating this work with affected homeowners.
- F. When conditions require the temporary installation of signs, pavement markings and traffic barriers for the protection of workers and traffic, the entire array of such devices shall be depicted on working drawings for each separate stage of work. These drawings shall be submitted to the County for review and approval prior to commencement of work on the site.
- G. Precast concrete traffic barriers shall be placed adjacent to trenches and other excavations deeper than 6 inches below the adjacent pavement surface.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01580**  
**PROJECT IDENTIFICATION AND SIGNS**

**PART 1      GENERAL**

1.01      REQUIREMENTS INCLUDED

- A.      Furnish, install and maintain County project identification signs.
- B.      Remove signs on completion of construction.
- C.      Allow no other signs to be displayed except for traffic control and safety.

1.02      PROJECT IDENTIFICATION SIGN (COUNTY)

- A.      One painted sign, of not less than 32 square feet (3 square meters) area, with painted graphic content to include:
  - 1.      Title of Project.
  - 2.      Name of County.
  - 3.      Names and titles of authorities as directed by County.
  - 4.      Prime Contractor.
- B.      Graphic design, style of lettering and colors: As approved by the County.
- C.      Erect on the site at a lighted location of high public visibility, adjacent to main entrance to site, as approved by the County.

1.03      INFORMATIONAL SIGNS

- A.      Painted signs with painted lettering, or standard products.
  - 1.      Size of signs and lettering: as required by regulatory agencies, or as appropriate to usage.
  - 2.      Colors: as required by regulatory agencies, otherwise of uniform colors throughout project.
- B.      Erect at appropriate locations to provide required information.

1.04      QUALITY ASSURANCE

- A.      Sign Painter: Professional experience in type of work required.
- B.      Finishes, Painting: Adequate to resist weathering and fading for scheduled construction period.



## **PART 2 PRODUCTS**

### **2.01 SIGN MATERIALS**

- A. Structure and Framing: May be new or used, wood or metal, in sound condition structurally adequate to work and suitable for specified finish.
- B. Sign Surfaces: Exterior softwood plywood with medium density overlay, standard large sizes to minimize joints.
  - 1. Thickness: As required by standards to span framing members, to provide even, smooth surface without waves or buckles
- C. Rough Hardware: Galvanized.
- D. Paint: Exterior quality, as specified in the Contract Documents.

## **PART 3 EXECUTION**

### **3.01 PROJECT IDENTIFICATION SIGN**

- A. Paint exposed surface or supports, framing and surface material; one coat of primer and one coat of exterior paint.
- B. Paint graphics in styles, size and colors selected.

### **3.02 MAINTENANCE**

- A. The Contractor shall maintain signs and supports in a neat, clean condition; repair damages to structures, framing or sign.

### **3.03 REMOVAL**

- A. The Contractor shall remove signs, framing, supports and foundations at completion of Project.

**END OF SECTION**



**SECTION 01600  
MATERIAL AND EQUIPMENT**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Material and equipment incorporated into the work:
1. Conform to applicable specifications and standards.
  2. Comply with size, make, type and quality specified, or as specifically approved in writing by the County.
  3. Manufactured and Fabricated Products:
    - a. Design, fabricate and assemble in accordance with the best engineering and shop practices.
    - b. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
    - c. Two or more items of the same kind shall be identical and manufactured by the same manufacturer.
    - d. Products shall be suitable for service conditions.
    - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
  4. Do not use material or equipment for any purpose other than that for which it is specified.
  5. All material and equipment incorporated into the project shall be new.

1.02 MANUFACTURER'S INSTRUCTIONS

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to County. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with County prior to proceeding. Do not proceed with work without clear instructions.

1.03 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site.
  - 1. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.
  - 2. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals and that products are properly protected and undamaged.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

1.04 SUBSTITUTIONS AND PRODUCTS

- A. Contractor's Options:
  - 1. For products specified only by reference standard, select any product meeting that standard.
  - 2. For products specified by naming one or more products or manufacturers and "or equal," Contractor must submit a request for substitutions of any product or manufacturer not specifically named in a timely manner so as not to adversely affect the construction schedule.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01620  
STORAGE AND PROTECTION**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Provide secure storage and protection for products to be incorporated into the work and maintenance and protection for products after installation and until completion of Work.

1.02 STORAGE

- A. Store products immediately on delivery and protect until installed in the Work, in accord with manufacturer's instructions, with seals and labels intact and legible.
- B. Exterior Storage:
  - 1. Provide substantial platform, blocking or skids to support fabricated products above ground to prevent soiling or staining.
    - a. Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
    - b. Prevent mixing of refuse or chemically injurious materials or liquids.
- C. Arrange storage in manner to provide easy access for inspection.

1.03 MAINTENANCE OF STORAGE

- A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:
  - 1. State of storage facilities is adequate to provide required conditions.
  - 2. Required environmental conditions are maintained on continuing basis.
  - 3. Surfaces of products exposed to elements are not adversely affected. Any weathering of products, coatings and finishes is not acceptable under requirements of these Contract Documents.
- B. Mechanical and electrical equipment which requires servicing during long term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.
  - 1. Equipment shall not be shipped until approved by the County. The intent of this requirement is to reduce on-site storage time prior to

installation and/or operation. Under no circumstances shall equipment be delivered to the site more than one month prior to installation without written authorization from the County.

2. All equipment having moving parts such as gears, electric motors, etc. and/or instruments shall be stored in a temperature and humidity controlled building approved by the County until such time as the equipment is to be installed.
3. All equipment shall be stored fully lubricated with oil, grease, etc. unless otherwise instructed by the manufacturer.
4. Moving parts shall be rotated a minimum of once weekly to ensure proper lubrication and to avoid metal-to-metal "welding". Upon installation of the equipment, the Contractor shall start the equipment, at least half load, once weekly for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.
5. Lubricants shall be changed upon completion of installation and as frequently as required, thereafter during the period between installation and acceptance.
6. Prior to acceptance of the equipment, the Contractor shall have the manufacturer inspect the equipment and certify that its condition has not been detrimentally affected by the long storage period. Such certifications by the manufacturer shall be deemed to mean that the equipment is judged by the manufacturer to be in a condition equal to that of equipment that has been shipped, installed, tested and accepted in a minimum time period. As such, the manufacturer will guaranty the equipment equally in both instances. If such a certification is not given, the equipment shall be judged to be defective. It shall be removed and replaced at the Contractor's expense.

#### 1.04 PROTECTION AFTER INSTALLATION

- A. Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work.
- B. Control traffic to prevent damage to equipment and surfaces.
- C. Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work

#### **PART 2 PRODUCTS (NOT USED)**

#### **PART 3 EXECUTION (NOT USED)**

### **END OF SECTION**

**SECTION 01700  
CONTRACT CLOSEOUT**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Comply with requirements stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the work.

1.02 SUBSTANTIAL COMPLETION

- A. The Contractor shall submit the following items when the Contractor considers the work to be substantially complete:
  - 1. A written notice that the work, or designated portion thereof, is substantially complete.
  - 2. A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, the County shall make an inspection to determine the status of completion.
- C. Project record documents and operations and maintenance manuals must be submitted before the project shall be considered substantially complete.
- D. If the County determines that the work is not substantially complete:
  - 1. The County shall notify the Contractor in writing, stating the reasons.
  - 2. The Contractor shall remedy the deficiencies in the work and send a second written notice of substantial completion to the County.
  - 3. The County shall reinspect the work.
- E. When the County finds that the work is substantially complete:
  - 1. The Engineer shall prepare and deliver to the County a tentative Certificate of Substantial Completion (Manatee County Project Management Form PMD-8) with a tentative list of the items to be completed or corrected before final payment.
  - 2. The Engineer shall consider any objections made by the County as provided in Conditions of the Contract. When the Engineer considers the work substantially complete, he will execute and deliver to the County a definite Certificate of Substantial Completion (Manatee County Project Management Form PMD-8) with a revised tentative list of items to be completed or corrected.

### 1.03 FINAL INSPECTION

- A. When the Contractor considered the work to be complete, he shall submit written certification stating that:
  - 1. The Contract Documents have been reviewed.
  - 2. The work has been inspected for compliance with Contract Documents.
  - 3. The work has been completed in accordance with Contract Documents.
  - 4. The equipment and systems have been tested in the presence of the County's representative and are operational.
  - 5. The work is completed and ready for final inspection.
- B. The County shall make an inspection to verify the status of completion after receipt of such certification.
- C. If the County determines that the work is incomplete or defective:
  - 1. The County shall promptly notify the Contractor in writing, listing the incomplete or defective work.
  - 2. The Contractor shall take immediate steps to remedy the stated deficiencies and send a second written certification to County that the work is complete.
  - 3. The County shall reinspect the work.
- D. Upon finding the work to be acceptable under the Contract Documents, the County shall request the Contractor to make closeout submittals.
- E. For each additional inspection beyond a total of 3 inspections for substantial and final completion due to the incompleteness of the work, the Contractor shall reimburse the County's fees.

### 1.04 CONTRACTOR'S CLOSEOUT SUBMITTALS TO COUNTY

- A. Project Record Documents (prior to substantial completion).
- B. Operation and maintenance manuals (prior to substantial completion).
- C. Warranties and Bonds.
- D. Evidence of Payment and Release of Liens: In accordance with requirements of General and Supplementary Conditions.
- E. SWFWMD Well Completion Forms.
- F. Certificate of insurance for products and completed operations.
- G. Final Reconciliation, Warranty Period Declaration, and Contractor's Affidavit (Manatee County Project Management Form PMD-9).

1.05 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the County.
- B. Statement shall reflect all adjustments to the Contract Sum:
  - 1. The original Contract Sum.
  - 2. Additions and deductions resulting from:
    - a. Previous Change Orders.
    - b. Unit prices.
    - c. Penalties and bonuses.
    - d. Deductions for liquidated damages.
    - e. Other adjustments.
  - 3. Total Contract Sum, as adjusted.
  - 4. Previous payments.
  - 5. Sum remaining due.
- C. Project Management shall prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.06 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**



**SECTION 01710  
CLEANING**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Execute cleaning during progress of the work and at completion of the work, as required by the General Conditions.

1.02 DISPOSAL REQUIREMENTS

- A. Conduct cleaning and disposal operations to comply with all federal, state and local codes, ordinances, regulations and anti-pollution laws.

**PART 2 PRODUCTS**

2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

**PART 3 EXECUTION**

3.01 DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulation of waste materials, rubbish and wind-blown debris, resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris, and rubbish.
- C. Remove waste materials, debris and rubbish from the Site periodically and dispose of at legal disposal areas away from the Site.

3.02 DUST CONTROL

- A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.

- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

3.03 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- C. Prior to final completion or County occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces and all work areas to verify that the entire work is clean.

**END OF SECTION**

**SECTION 01720**  
**PROJECT RECORD DOCUMENTS**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Contractor shall maintain at the site for the County one record copy of:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. County's field orders or written instructions.
  - 6. Approved shop drawings, working drawings and samples.
  - 7. Field test records.
  - 8. Construction photographs.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in Contractor's field office apart from documents used for construction.
  - 1. Provide files and racks for storage of documents.
  - 2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI format.
- C. Maintain documents in a clean, dry, legible, condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by the County.

1.03 MARKING DEVICES

- A. Provide felt tip marking pens for recording information in the color code designated by the County.

1.04 RECORDING

- A. Label each document "PROJECT RECORD" in neat large printed letters.
- B. Record information concurrently with construction progress.
- C. Do not conceal any work until required information is recorded.

- D. Drawings; Legibly mark to record actual construction:
  - 1. Field changes of dimensions and detail.
  - 2. Changes made by Field Order or by Change Order.
  - 3. Details not on original contract drawings.
  - 4. Equipment and piping relocations.
- E. Specifications and Addenda; Legibly mark each section to record:
  - 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
  - 2. Changes made by Field Order or by Change Order.
- F. Shop Drawings (after final review and approval): Five sets of record drawings for each process equipment, piping, electrical system and instrumentation system.

1.05 SUBMITTAL

- A. Prior to substantial completion and prior to starting the bacteria testing of water lines, deliver signed and sealed Record Documents and Record Drawings to the County. These will be reviewed and verified by the inspector. If there are any required changes or additions, these shall be completed and the entire signed and sealed set resubmitted prior to final pay application.
- B. The Contractor shall employ a Professional Engineer or Surveyor registered in the State of Florida to verify survey data and properly prepare record drawings. Record drawings shall be certified by the professional(s) (Engineer or Surveyor licensed in Florida), as stipulated by the Land Development Ordinance and submitted on signed and sealed paper drawings, signed and dated Mylar drawings together with an AutoCAD version on a recordable compact disk (CD).
- C. The CD shall contain media in AutoCad Version 2004 or later, or in any other CAD program compatible with AutoCad in DWG or DXF form. All fonts, line types, shape files or other pertinent information used in the drawing and not normally included in AutoCad shall be included on the media with a text file or attached noted as to its relevance and use.
- D. Accompany submittal with transmittal letter, containing:
  - 1. Date.
  - 2. Project title and number.
  - 3. Contractor's name and address.
  - 4. Title and number of each Record Document.
  - 5. Signature of Contractor or his authorized representative.

Note: The data required to properly prepare these record drawings shall be obtained at the site, at no cost to the County by the responsible design professional or his/her duly appointed representative. The appointed representative shall be a qualified employee of the responsible design professional or a qualified inspector retained by the responsible design professional on a project-by-project basis

**PART 2      STANDARDS**

2.01      MINIMUM RECORD DRAWING STANDARDS FOR ALL RECORD DRAWINGS SUBMITTED TO MANATEE COUNTY

- A.      Record drawings shall be submitted to at least the level of detail in the Contract Documents. It is anticipated that the original Contract Documents shall serve as at least a background for all record information. Original drawings in CAD format may be requested of the County.
- B.      Drawings shall meet the criteria of Article Recording, paragraph D above.

**PART 3      EXECUTION (NOT USED)**

**END OF SECTION**



**SECTION 01740  
WARRANTIES AND BONDS**

**PART 1 GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Compile specified warranties and bonds.
- B. Compile specified service and maintenance contracts.
- C. Co-execute submittals when so specified.
- D. Review submittals to verify compliance with Contract Documents.
- E. Submit to County for review and transmittal.

1.02 SUBMITTAL REQUIREMENTS

- A. Assemble warranties, bonds and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
- B. Number of original signed copies required: Two each.
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
  - 1. Product or work item.
  - 2. Firm, with name of principal, address and telephone number.
  - 3. Scope.
  - 4. Date of beginning of warranty, bond or service and maintenance contract.
  - 5. Duration of warranty, bond or service maintenance contract.
  - 6. Provide information for County's personnel:
    - a. Proper procedure in case of failure.
    - b. Instances which might affect the validity of warranty or bond.
  - 7. Contractor, name of responsible principal, address and telephone number.

1.03 FORM OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
  - 1. Size 8-1/2 inch x 11 inch punched sheets for standard 3-ring binder. Fold larger sheets to fit into binders.

2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS". List:
  - a. Title of Project.
  - b. Name of Contractor.
- C. Binders: Commercial quality, three-ring, with durable and cleanable plastic covers.

1.04 TIME OF SUBMITTALS

- A. Make submittals within 10 days after date of substantial completion and prior to final request for payment.
- B. For items of work, where acceptance is delayed materially beyond date of substantial completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.05 SUBMITTALS REQUIRED

- A. Submit warranties, bonds, and service and maintenance contracts as specified in respective sections of Specifications.
- B. Approval by the County of all documents required under this section is a prerequisite to requesting a final inspection and final payment.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 02311**  
**WATER QUALITY TESTING AND SAMPLING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section describes the water sampling and water quality testing work to be performed under this Contract. Contractor will contract out and pay for the services of a Florida Department of Environmental Protection (FDEP) certified water laboratory to perform water quality testing as specified within this Contract.

1.02 SUBMITTALS

- A. Contractor shall submit a statement of qualifications of the proposed laboratory with an FDEP-approved quality assurance and quality control plan to Engineer for approval prior to sampling.

**PART 2 PRODUCTS**

2.01 WATER QUALITY SAMPLING PARAMETERS

- A. Contractor shall assist Engineer with collecting and shall coordinate and pay all associated laboratory costs for samples listed in Table 02311-1.
  - 1. During reverse-air drilling of recharge well at 45-foot intervals, as described in Section 02673, Drilling: List A in Table 02311-1.
  - 2. During packer testing, as described in Section 02987, Packer Testing: List B in Table 02311-1.
  - 3. Final background analysis upon completion and development of RW-1, RZMW-1, and SLMW-1 as described in Section 02673, Drilling: List C in Table 02311-1

**PART 3 EXECUTION**

3.01 LABORATORY DUTIES

- A. Provide water quality analysis as described in Article, Water Quality Sampling Parameters above, in a timely manner as to permit data to be used to determine casing setting depths. Results are needed as quickly as possible for water quality samples as described above in order not to delay Contractor. A 1-week turnaround time is expected for all sample results except for the final background sample for each well.

- B. Perform background water sample collection using properly trained personnel for water samples after development of each well.
- C. Promptly notify Engineer and Contractor of any irregularities in sample.
- D. Submit electronic copy in Adobe Acrobat PDF format of test results immediately after completion of testing. Reports must follow FDEP Standard Operating Protocols and shall include, as a minimum, the following information:
  - 1. Well identification.
  - 2. Water sample identification showing sample depth.
  - 3. Time and date of sample.
  - 4. Laboratory name/telephone/address/QA-QC contact person.
  - 5. Signature of inspector.
  - 6. Methods of test.
  - 7. Chain-of-custody receipts.

### 3.02 WATER SAMPLES – RW-1

- A. During reverse-air drilling through the UFA (between approximately 300 feet and 2,100 feet bls), Contractor shall collect representative water samples every 60 feet for field water quality analysis by Engineer. Samples shall be collected in perfectly clean plastic bottles, supplied by Contractor, with nonmetallic caps and of a capacity of not less than 16 fluid ounces. Each bottle and cap shall be rinsed twice with the water to be sampled before collecting the corresponding sample. Sample bottles for field water quality analysis shall be clearly labeled in an indelible way with the well identification, depth, time, and date. It shall be Contractor's sole responsibility to collect, protect, and deliver the water samples, properly labeled and stored after collection, to Engineer.
- B. In addition to samples collected every 60 feet for field water quality analysis by Engineer, a duplicate set of representative water samples will be collected every 60 feet for laboratory analysis as described above. Samples shall be collected in perfectly clean plastic bottles, supplied by the Contractor, with nonmetallic caps and of a capacity of at least 16 fluid ounces. Unless preserved, each bottle and cap shall be rinsed twice with water to be sampled before collecting the corresponding sample. Contractor is responsible for delivery to and compensation to an approved laboratory for all analytical services.

- C. Sample bottles for laboratory water quality analyses shall be clearly labeled in an indelible way with the well identification, depth, time, and date. It shall be Contractor's sole responsibility to collect, protect, and deliver the water samples, properly labeled and stored after collection, to the approved water testing laboratory in a timely manner.
- D. After completion of drilling and after development of RW-1, Contractor shall arrange for an approved water laboratory to take background water samples from the well. Samples shall be collected at the end of well development as directed by Engineer. Contractor shall notify Engineer and the laboratory 48 hours prior to the sampling event. Parameters analyzed for the determination of background water quality are listed in Table 02311-1 at the end of this section.

### 3.03 WATER SAMPLES – PAD MONITORING WELLS

- A. Contractor shall obtain water samples and levels each week from the water table monitoring wells during the course of all drilling and testing operations. Contractor is responsible for supplying any equipment needed for the sampling, including power. The wells shall be purged a minimum of three well volumes by Contractor prior to sampling. Contractor will be responsible for field testing the samples for specific conductance, pH, temperature, chloride, and water level. Samples shall be collected in clean plastic bottles, supplied by Contractor, with nonmetallic caps and with a capacity of at least 16 fluid ounces. Each bottle and cap shall be rinsed twice with the water to be sampled before collecting the corresponding sample. Contractor shall be responsible for supplying conductivity/temperature meter, pH meter, and chloride titration kit such as LaMott or equivalent to complete this work. Laboratory samples for total dissolved solids are required for 1 month for the pad wells.
- B. Sample bottles shall be clearly labeled in an indelible way with the well identification, sample depth, sample time, and date.

**Table 02311-1  
Standard Water Quality Sampling Parameters**

<b>List A</b>	<b>List B</b>	<b>List C</b>
Chloride	All parameters in List A	All parameters in List B
Total dissolved solids (TDS)	Iron	State primary DWSs <sup>1</sup>
Sulfate	Calcium	State secondary DWS <sup>1</sup>
pH <sup>2</sup>	Magnesium	Municipal wastewater indicator
Conductivity <sup>2</sup>	Total alkalinity	Parameters: Ammonia, nitrogen (organic), total Kjeldahl nitrogen, nitrate + nitrite (N), total phosphorus (phosphate), orthophosphate, chloroethane, chloroform, para-dichlorobenzene, 1,2-dichloroethylene, anthracene, butylbenzylphthalate, dimethylphthalate, naphthalene, phenanthrene, aldrin, dieldrin, 2-chloro-phenol, phenol, 2,4,6-trichlorophenol
Temperature <sup>2</sup>	Total and non-carbonate hardness	
	Total nitrogen	
	Ammonia nitrogen	
		Biochemical oxygen demand
		Chemical oxygen demand

<sup>1</sup> Drinking water standards (DWSs).

<sup>2</sup> Parameters measured in the field during well construction and testing.

**END OF SECTION**

**SECTION 02575  
MECHANICAL INTEGRITY TEST**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work necessary to perform mechanical integrity testing of recharge well RW-1. The following test will be conducted to determine that the well has mechanical integrity (MI):
  - 1. Pressure test of the final 24-inch diameter casing string at RW-1, including successful preliminary and final pressure tests.
- B. Purpose: The purpose of the MI testing shall be to demonstrate that the well has adequate MI. Mechanical integrity shall be established as follows:
  - 1. Determine the absence of any well casing leaks by assessing internal mechanical integrity.

1.02 SUBMITTALS

- A. Contractor shall submit certification that the pressure testing gauge has been calibrated within 30 days prior to testing. Calibration data shall accompany the certification and shall be provided to Engineer 10 days prior to MI testing.

**PART 2 PRODUCTS**

2.01 PRESSURE TEST SETUP

- A. Furnish header sufficient to seal the drill pipe and wellhead prior to running the pressure test. Contractor's wellhead setup shall be approved by Engineer prior to use. Furnish a pressure testing gauge calibrated in 1 psi increments for pressure test. The gauge supplied shall have a calibrated range from 0 to 250 psi with an accuracy of plus or minus 1/2 percent. Contractor's pressure gauge shall be approved by Engineer prior to use.

**PART 3 EXECUTION**

3.01 GUIDELINES

- A. Pressure testing shall be conducted no less than 48 hours after casing cementing.
- B. All pressure tests will be conducted as specified in Article, Pressure Testing.

### 3.02 PRESSURE TESTING

#### A. MI Testing – RW-1 Final Casing:

1. Perform pressure test following cementing of 24-inch diameter final injection casing. Utilize cement plug in base of well prior to drilling out open-hole interval below. If the cement plug is not satisfactory to pass the test, the Contractor shall install an inflatable packer near the base of the casing at their own expense.
2. Install header assembly and pressure gauges on the well. The pressure gages shall be calibrated within 30 days prior to testing and shall be capable of indicating pressure within 1.0 psi of anticipated testing pressures.
3. Run pressure test at between 120 to 150 psi as directed by Engineer for a 1-hour duration and monitor wellhead pressure within the casing. If less than a 5 percent (plus or minus) change occurs over the 1-hour testing period, the well has demonstrated internal MI. If the pressure change exceeds 5 percent (plus or minus), the location of the leak shall be determined and the test will be re-run until it passes.

**END OF SECTION**

**SECTION 02671  
PAD MONITORING WELLS**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work necessary to construct four pad (water table) monitoring wells, complete, near each corner of two drilling pads (RW-1 and RZMW-1).
- B. Contractor shall furnish all labor, materials, tools, and equipment necessary to drill and complete the wells, including drilling, casing, sealing, gravel pack, completion of wellhead, vault, and all other work required to complete the work as specified herein and as shown on the Drawings.
- C. The total depth of the well is anticipated not to exceed 20 feet.
- D. When complete, this project will provide County with four wells around temporary drilling pad at RW-1 and RZMW-1 to enable monitoring of the water table at the site.

1.02 SUBMITTALS

- A. Contractor shall furnish, as a minimum, the manufacturer's specifications on the PVC casing and screen used for the water table monitoring wells. Contractor shall deliver submittals to Engineer in accordance with Section 01300, Submittals.

**PART 2 PRODUCTS**

2.01 PVC PIPE

- A. PVC pipe shall be the size shown on the Drawings and meet all the requirements of Schedule 80 PVC pipe in ASTM D1785. The screen sections of 2-inch PVC pipe shall have three slots perpendicular to the pipe axis on 120-degree centers. Slot size of screen shall be 0.010-inch, horizontal slotted. Screens shall be 5 feet in length. Casing shall be made available in 2-, 5-, and 10-foot lengths so that the proper amount can be installed without cutting.

2.02 PVC PIPE JOINTS

- A. PVC pipe joints shall be flush joint, threaded, leakproof with machined ends. No solvent cements shall be used.

### 2.03 SAND (GRAVEL) PACK

- A. Sand for packing around the PVC pipe shall be free from roots, trash, and other deleterious material. Sand shall be purchased in sealed bags, unopened until placed in the well. Sand size shall be 20/30. The material shall be reasonably well graded.

### 2.04 BENTONITE

- A. Bentonite required for sealing of the well shall be in a pellet form and shall be those commonly used as seals in monitoring wells. A fine sand seal may be used with concurrence by Engineer.

### 2.05 CEMENT

- A. Cement must conform to ASTM C150, Type II. The proportion of cement to water shall be five bags cement per cubic yard of grout to not more than 6 gallons of water per bag of cement.

### 2.06 WELLHEAD COMPLETION

- A. All pad monitoring wells are to be completed with above grade completion with protective steel casing or flush-mount and concrete pad completion, at the discretion of the Engineer.

## **PART 3 EXECUTION**

### 3.01 WELL DRILLING

- A. The pad monitoring wells shall be drilled to the approximate depth and diameter shown on the Drawings, and as designated by Engineer. The wells shall be drilled by the hollow stem auger method or by alternative method as approved by Engineer. The well shall be field located by Engineer.
- B. The depth of the monitoring wells as shown on the Drawings has been determined using the best information available. Engineer shall determine the screen depth interval and reserves the right to increase or decrease the depths slightly as field conditions dictate. The wells shall be installed prior to any drilling activities at RW-1 or RZMW-1.

### 3.02 PVC CASING/SCREEN ASSEMBLY INSTALLATION

- A. Following completion of the borehole to its total depth, the casing/screen assembly shall be installed. The casing/screen assembly shall be centered in the borehole. The assembly shall be suspended above the bottom of the hole so that it does not sit on the bottom. The casing sections shall be jointed watertight by use of flush-joint threaded pipe.

### 3.03 INSTALLATION OF SAND PACK

- A. Sandpack material shall be placed in the annular space gradually by slowly pouring one sack at a time, or in an approved alternate manner to prevent bridging. Sandpack material shall be placed to an elevation approximately 3 feet above the uppermost perforation in the well screen as approved by Engineer. The top of the sandpack depth shall be recorded by Contractor.

### 3.04 INSTALLATION OF BENTONITE SEAL

- A. The bentonite pellets shall be placed in the annular space by Contractor in a manner that shall produce a minimum 6-inch thick bentonite seal to isolate the sandpack below from the cement grout above. If a fine sand seal is used, the sand shall be a minimum of 12 inches thick.

### 3.05 INSTALLATION OF CEMENT GROUT

- A. Following placement of the bentonite seal, neat cement grout shall be tremied in the annular space from the bottom of the remaining annulus to the land surface in such a manner as shall ensure the complete filling of the annular space in one operation in accordance with Section 02677, Grout Seal.

### 3.06 WELL DEVELOPMENT

- A. Following placement of the casing screen assembly and gravel pack, the well shall be developed by Contractor by airlift pumping or an alternative method approved by Engineer. Development shall continue until clean, uncontaminated formation water is being produced from the well. Engineer will be the sole judge of when this condition is met.

**END OF SECTION**



**SECTION 02673  
DRILLING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work, materials, and equipment necessary for drilling and sampling of boreholes by the rotary method, complete, during the drilling activities.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. All equipment shall be in good operating condition and operated and maintained in strict conformance with manufacturer's recommendations.
- B. Contractor shall provide a drilling pad to control all fluids from discharge on site during drilling operations. The pad design shall be proposed by Contractor and approved by Engineer prior to commencing with drilling activities. No mud pits will be allowed on site.

2.02 DRILLING EQUIPMENT

- A. Contractor shall provide appropriate rotary drilling rig(s) capable of completing the wells as described in these specifications and as shown on the Drawings. Provide tools, bits, and all other necessary equipment for drilling. The head on the well shall be controlled by Contractor at all times during all drilling phases. All drilling shall be through a blow-out preventer (BOP) upon penetration of the UFA.
- B. Standard Mud Rotary and Reverse-air drilling techniques are acceptable. Other drilling techniques shall require Engineer's approval prior to use.

2.03 DRILLING FLUID

- A. Bentonite drilling mud, and other additives as approved by Engineer, shall be used to advance the borehole. Water used by Contractor during drilling must be from an Engineer-approved potable water source. Additives and fluids are also subject to approval by the regulatory agencies.
- B. Contractor shall use only drilling fluids and additives specifically recommended by the manufacturer for use in water well drilling. Avoid contamination of the samples or the aquifer. Do not introduce muds, clays, or drilling aids into the well or use lime, cement, organic matter, or other

material to stop circulation losses of the drilling fluid, without reviewing the proposed program with Engineer.

- C. Off site discharge of fluids during the well construction and testing shall be controlled by Contractor at all times. Drilling mud and cuttings generated during mud rotary drilling shall be retained within steel mud tubs. Unlined or plastic lined pits shall not be allowed. Reverse-air drilling fluids and development water shall be conveyed to a location approved by Engineer or re-circulated into the well.
- D. Water will require settling to reduce turbidity prior to disposal. Engineer must approve methods of settling excess turbidity prior to commencing each pumping test. Contractor is responsible for meeting turbidity requirements prior to discharge water entering stormwater collection systems or receiving waters. No discharges are allowed without the Engineer's approval.

## 2.04 TEST AND SAMPLING EQUIPMENT

The Contractor shall:

- A. Provide equipment for measuring drilling fluid properties.
- B. Provide approved sampling bags or containers for formation samples. Duplicate samples will be collected from each well. Engineer will provide one set for delivery to the FGS.
- C. Provide approved one-liter clean plastic sample containers for groundwater sampling during drilling and testing.
- D. Provide equipment for measuring flow rates and water levels during the short-term specific capacity tests.

## **PART 3 EXECUTION**

### 3.01 DRILLING

- A. Contractor shall notify the Engineer 5 working days (Saturdays, Sundays, and federal holidays excepted) prior to drilling.
- B. Contractor shall provide at all times a thoroughly experienced, competent, and licensed driller during all drilling operations at the site. Contractor's drilling superintendent shall be onsite during all phases of drilling and testing activities.
- C. Contractor shall construct the well in strict conformance with all laws, rules, regulations, and standards related to the construction of the wells in the State of Florida, Manatee County, and SWFWMD. All other required construction

permits shall be the responsibility of and obtained by Contractor prior to initiating drilling.

- D. Contractor shall coordinate all drilling and sampling equipment prior to initiation of drilling. Drill the boreholes to the dimensions described in these Specifications or as approved by Engineer. Final well depths shall be determined by Engineer in the field.
- E. Contractor shall drill the boreholes so as to permit the installation of the casing straight and plumb, to the tolerances specified in Section 02674, Casing.
- F. Contractor shall take all necessary precautions to prevent contaminated water, gasoline, or other deleterious substances from entering the well, either through the opening or by seepage through the ground surface. Maintain precautions during and after construction of the well until accepted by the County.
- G. The wells shall be drilled by the rotary method using mud rotary circulation through the unconsolidated formations to a depth of approximately 300 feet. Reverse-air closed circulation shall be used below the depth of 300 feet to total depth of the wells unless otherwise approved by Engineer.
- H. Borehole Preparation for Geophysical Logging shall include, but is not limited to, 1) continuation of circulation until drill cuttings have been removed from the borehole and 2) circulation of the drilling mud in the borehole until it is uniform and the drill pipe has been removed from the borehole.
- I. The Contractor must make all reasonable efforts to leave the borehole free from obstructions in preparation for geophysical logging.
- J. Drill the boreholes to the dimensions and at the approximate location shown on the well construction drawings. The exact location will be determined by Engineer in the field.
- K. Reaming of the pilot holes shall be done with a stepped bit reamer with a lead bit the size of the pilot hole bit and progressively larger diameter bits up to the reamer size required. Each bit shall be a minimum of 2 feet apart in the reamer bit assembly to ensure that the reamer assembly follows the pilot hole. Other reaming assemblies must be approved by the Engineer.
- L. When re-circulating or disposing of formation water during closed-circulation reverse-air drilling, Contractor shall allow proper settlement time to prevent cuttings from entering the well as directed by Engineer.
- M. A blowout preventer (BOP), capable of containing artesian pressure in the well, shall be placed at the wellhead ready for service at all times when drilling in zones with artesian flow. The Contractor shall demonstrate

proficiency in using the BOP to the satisfaction of the Engineer. The BOP shall be capable of closing in the well in such time as to prevent any discharge of fluids from the drilling pad.

- N. It is the intent of this Contract that no drilling fluids or waters developed during construction be allowed to escape the confines of the drilling pad. The pad sump drain must be capped off until completion of the well.
- O. During reverse-air drilling, Contractor shall establish a static water level prior to commencement of drilling operations each day. Water level shall be monitored periodically and recorded on the daily drilling report.

### 3.02 DRILLING LOGS

The Contractor shall:

- A. Furnish Engineer daily with a field activity report (FAR). The FAR shall include tabulation of quantities for each unit price pay item and a description of all approvals made by Engineer. The report shall accurately describe the geologic materials and depths encountered; the location of lost-circulation zones and methods of regaining circulation; water producing zones; drilling rates; diameters and lengths of casing installed; and time, depth, and description of any unusual occurrences or problems during drilling. The report shall give number of hours on the job, shutdown and standby time with explanation, the water level at the beginning of daily operations, types of bits used, and such other pertinent data as may be requested by Engineer. Include full names of Contractor employees and Specialty Subcontractors working at or visiting the site. Use copies of the FAR located at the end of this section, or approved equal.
- B. Keep a copy of the FAR at the drill site for inspection by the Engineer. Keep the report up-to-date with the progress of drilling and other activities. The report shall be signed by both the Contractor and Engineer at the completion of each day's drilling. Failure to keep this record up-to-date shall be grounds for the Engineer to stop drilling operations without compensation or additional contract time awarded to the Contractor. Assist Engineer with weekly submittals of drilling reports to FDEP as required by the Class V Injection Well Construction Permit.
- C. If requested by Engineer, furnish, maintain, and operate a continuous strip-chart for drilling rate, bit weight, and footage recorder such as a Geograph recorder, or equal, on the drilling rig. Submit copies of the strip charts to Engineer daily.
- D. File all drilling and well records and reports with the proper agencies required by federal, state, and local permits, codes, or regulations. Assist Engineer, as necessary, with any additional well completion reports required by the regulatory agencies.

### 3.03 BOREHOLE TESTING AND SAMPLING

- A. Contractor shall drill boreholes of the diameters and to the total depth of the well as determined in the field by Engineer. Sampling shall be conducted on the nominal 8- to 12-inch diameter pilot holes drilled during each phase of the well construction, or as otherwise determined by Engineer.
- B. Formation samples shall be logged and circulated from the borehole so to provide representative samples to the extent possible during advancement of the borehole. Contractor shall control advancement and reveal the rate of penetration information and hydraulic information to Engineer periodically and at changes in the drilling response. Contractor shall not be compensated for cores or other samples that are conducted at the Contractor's discretion to assist with drilling operations that are outside of the scope of work and direction of the Engineer.
- C. Representative formation samples shall be collected between ten feet bls to the total depth of each well drilled. Duplicate samples shall be collected at each 10-foot interval and at each change in formation or material type. The method must yield samples that are representative of the actual depth to which drilling has progressed. Each formation sample shall be approximately one pint in volume. Contractor shall place each sample in a container labeled with the date, well identification, and depth interval from which the sample was taken clearly marked on the container using indelible ink. Submit one set of samples to Engineer's construction trailer immediately upon collection. The second set of formation samples shall be kept in cloth bags which will be secured by Contractor for the FGS, 903 W. Tennessee Street, Tallahassee, FL 32304. After being put in containers and properly labeled, Contractor shall deliver one set to the FGS upon completion of each well.
- D. Contractor shall assist Engineer in obtaining a representative water quality sample at approximately every 60 feet between samples during reverse-air drilling operations through the Floridan aquifer system, as approved by Engineer. Contractor shall conduct a short-term (approximately 15- to 60-minute duration) air-lift, specific capacity test prior to each water sample collected during reverse-air drilling operations. A flow measuring device shall be installed by Contractor to monitor discharge quantities during drilling operations to within 10 percent of actual values. Contractor is responsible for measuring and recording pumping rate and well water level drawdown during tests. It is anticipated that each specific capacity test will take approximately 15 to 60 minutes. Water level instrumentation must be capable of measuring pressures of 50 feet above or 300 feet below the drilling table during the specific capacity testing. Tests shall be conducted in presence and under the direction of Engineer unless otherwise directed by Engineer.

- E. Contractor shall make available access to each well during construction for water level measurements by Engineer when requested. No daily drilling activities shall commence until static water level has been obtained to the satisfaction of Engineer.

### 3.04 DISPOSAL OF CUTTINGS AND WATER

- A. Contractor shall remove from the drill site all cuttings, mud rotary drilling fluid, and other material removed by drilling operations which are required to complete the Work. Dispose of such material at a location and in a manner approved by Engineer. Solid materials shall be disposed of by hauling to an FDEP approved site. Contractor shall submit to Engineer a letter from the disposal facility stating FDEP approval.
- B. Tanks shall be of sufficient size to allow for specific capacity testing and packer testing without the re-introduction of fluids into the well during such testing. A minimum of 100,000 gallons of storage is required during all testing activities unless otherwise approved by Engineer. No discharge to land surface of drilling fluid or saltwater will be allowed at the site.
- C. Contractor shall be responsible for providing, installing, and maintaining all necessary tank trucks, pipe, pumps, and equipment necessary to pump and haul excess pad drainage, drilling fluid and pumped water to an FDEP-approved predetermined disposal site, in accordance with federal, state, and local regulations.
- D. Contractor shall drill using closed circulation techniques during reverse-air drilling. Any exceptions must be pre-approved by Engineer.
- E. During closed circulation drilling below the final casing setting depth, Contractor shall take precautions to minimize suspended solids from re-entering the well.

### 3.05 ALIGNMENT REQUIREMENTS

- A. Pilot holes and reamed holes shall be drilled round and straight throughout.
- B. A mechanical drift indicator shall be run in pilot holes and reamed holes at intervals not greater than 90 feet. Tool scale shall clearly delineate 10 minutes or less. Any deviation in plumbness greater than 1/2 degree shall be corrected by Contractor at his own expense.
- C. Engineer may modify the requirements for plumbness and straightness if, in his judgment:
  - 1. Deviations are due to subsurface conditions and Contractor has exercised all possible care to avoid deviations; and

2. The deviations will not materially affect the usefulness or performance of the well or further drilling operations, including settings of casings, pumps, and future testing.

3.06 SUPPLEMENTS

- A. The supplement listed below, following “End of Section,” is part of this Specification:

1. Field Activity Report (RW-1/RZMW-1/SLMW-1).

**END OF SECTION**



**FIELD ACTIVITY REPORT (RW-1 / RZMW-1 / SLMW-1)**

Date: \_\_\_\_\_  
 Contractor \_\_\_\_\_

COUNTY: Manatee County Utilities  
 Well No.: \_\_\_\_\_  
 Casing/Hole Diameter: \_\_\_\_\_-inch

**Depth of Well:**  
 Start of Shift \_\_\_\_\_ feet  
 \_\_\_\_\_ feet  
 End of Shift \_\_\_\_\_ feet

**Depth to Water (below ground):**  
 Start of Shift \_\_\_\_\_ feet  
 End of Shift \_\_\_\_\_ feet

**Log of Materials Encountered**

Description	Depth	
	From	To

**Daily Materials Used**

Description	Quantity	Units

Remarks: (Drilling characteristics, hours on job, stand-by time, quantities delivered to site, etc.)

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_ Driller: \_\_\_\_\_  
 ENGINEER: \_\_\_\_\_ Helpers: \_\_\_\_\_  
 (Use other side for more comments)



**SECTION 02674  
CASING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the Work, materials, and equipment necessary for furnishing and installing the well casing and all related fittings, appurtenances, and transition adapters, complete.

1.02 SUBMITTALS

- A. The casing manufacturer’s mill certificates shall be required for each joint of casing used during construction of the recharge well and monitoring wells before pipe is delivered to site. Any casing joint not having legible, traceable identification will be rejected. Contractor shall deliver submittals in accordance with Section 01300, Submittals.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. Provide all materials and equipment necessary for joining and installing the casing and appurtenances as specified. Contractor shall provide all casing of the types, thicknesses, diameters, and weights as specified. All casing shall be of new, first quality material and free of defects in workmanship and handling. Casing sizes and thicknesses shall be as follows:

<b>Well Number</b>	<b>Outside/Inside Diameter<sup>1</sup> (inches)</b>	<b>Wall Thickness</b>	<b>Weight (lbs/ft)</b>	<b>Approximate Total Length<sup>2</sup> per Well (feet)</b>
RW-1	42.00/41.25	0.375	166.86	60
RW-1	34.00/33.25	0.375	134.79	300
RW-1	24.00/23.00	0.50	136.30	1,000
RZMW-1	20.00/19.25	0.375	78.67	60
RZMW-1	14.00/13.25	0.375	54.62	300
RZMW-1	6.625/5.875	0.375	25.05	1000
SLMW-1	20.00/19.25	0.375	78.67	60
SLMW-1	14.00/13.25	0.375	54.62	300
SLMW-1	6.625/5.875	0.375	25.05	650

<sup>1</sup> All well casing shall be steel, grade B or equal.  
<sup>2</sup> Total length shall be determined in field upon selection of optimum recharge zone.

## 2.02 WELL CASING

- A. Contractor may elect at his expense to install an additional shallow surface (pit) casing for the wells. The purpose of the pit casing is to prevent undermining of the drilling pad during initial drilling and casing setting activities. Contractor shall select the material, dimensions, and grade of pipe for this purpose; however, pipe selected is to be of sufficient strength to hold the drilled hole open until the first casing string is set and cemented. The pit casing may be driven or grouted into place at RZMW-1 however at RW-1 and SLMW-1 auger or rotary methods must be used. All surface casings shall be installed to such a depth as Contractor judges necessary to prevent washout or undermining of the drilling pad during construction of the wells. Contractor shall exercise care not to disturb existing structures adjacent to the work area.
- B. All intermediate casings for RW-1 and the associated monitoring wells shall be new and unused carbon steel pipe, shall be seamless, electric resistance welded, or double submerged arc welded with one longitudinal seam, and shall conform to the latest revision of ASTM A139, Grade B. Final casing strings in the recharge well and monitoring wells shall be new and unused carbon steel pipe and shall be seamless, and shall conform to ASTM A53, and/or API 5L, Grade B, latest revision. Ends of plain end pipe shall be perfectly square and shall be furnished beveled for field V-notch butt welding.
- C. Steel casings shall be equal to those manufactured by Bethlehem Steel Company; National Tube Division of the U.S. Steel Company; or equal. Casings shall be furnished uncoated, except that ends may be coated for protection.
- D. Casing that is delivered to the site in a condition which will not yield an acceptable cement bond shall be sandblasted prior to installation. Engineer shall determine when the casing is suitable for installation.
- E. Lengths of casing specified above are approximate. Exact lengths shall be determined in the field by Engineer.

## 2.03 FITTINGS

- A. Contractor shall provide all fittings, drive shoes, and centering guides as shown on the well construction drawings or as necessary to complete the well. All fittings, drive shoes, and centralizers will be constructed of the same material as casing.
- B. Casings shall be provided with the following minimum accessories:
  - 1. A full opening guide shoe.
  - 2. Centralizers at 5 feet above the bottom end.
  - 3. Centralizers at 25 feet above the bottom end.

4. Centralizers at 50 feet above the bottom end.
  5. Centralizers at 100 feet above the bottom end.
  6. Centralizers every 100 feet thereafter to nearest 100 feet from pad surface.
- C. Casing centralizers shall be spaced at 120 degrees around the casing at each interval and shall be constructed of the same material as the casing attached. Their concave surface shall be against the casing. Centralizers shall be installed in a vertical line to facilitate the installation of tremie pipes for grouting.
- D. Centralizers for steel casing shall be manufactured by Pathfinder Oil Tool, Lawton, OK; Halliburton Company, Duncan, OK; Dowell of Tulsa, OK; or approved equal; or may be fabricated in the field from the same material as the casing to which they are welded. Centralizers shall be aligned vertically to facilitate cementing of tubing and casing by tremie methods, allowing tremie lines to be installed near the targeted cementing depth.

### **PART 3 EXECUTION**

#### **3.01 GENERAL**

- A. All casing shall be installed by a method appropriate to the attached drawings, as selected by Contractor and approved by Engineer. The casing must be new, unused, and clean as approved by Engineer.
- B. Casing lengths shall be flush joint and joined watertight by a method appropriate to the material used, as selected by Contractor and approved by Engineer, so that the resulting joint shall have the same structural integrity as the casing itself. Any couplings shall be API or equivalent, made up so that when tight, all threads shall be buried in the lip of the coupling. No solvent or fusion welding of plastic pipe shall be permitted.
- C. Casing that fails, collapses, or separates during construction shall be removed from the hole and repaired or replaced at the Contractor's sole expense.
- D. Pressure Test: Successfully perform pressure test on RW-1 in accordance with Section 02575, Mechanical Integrity Testing. Failure of Contractor to successfully pass the pressure test shall result in Contractor, at its sole expense, proposing an alternate method of demonstrating casing integrity, up to and including Contractor setting a packer at the base of the casing and re-running the test until a successful pressure test is passed. In the event that the specified pressure cannot be maintained, corrective measures shall be undertaken by Contractor until the test is satisfactorily accomplished. The casing pressure test shall be witnessed by Engineer or his representative and the FDEP.

### 3.02 WELDING PERFORMANCE QUALIFICATIONS

- A. All welders and welding operators shall be certified at Contractor's sole expense by a qualified testing laboratory before performing any welding under this section. Qualification tests shall be in accordance with Section IX, Article III of the ASME Boiler and Pressure Vessel Code. Welders and operators shall be qualified for making groove welds in carbon steel and stainless steel pipe in positions 2G and 5G for each welding process to be used. Qualification tests may be waived if evidence of prior qualification is deemed suitable by Engineer. Contractor shall retest any welders at any time Engineer considers the quality of the welder's work substandard. When Engineer requests the retest of a previously qualified welder, the labor costs for the retest will be at County's expense if the welder successfully passes the test. If the welder fails the retest, all costs shall be at Contractor's expense.

### 3.03 END PREPARATION

- A. Pipe ends shall be prepared preferably by machine shaping. Beveled ends for butt welding shall conform to ANSI B16.25.

### 3.04 CLEANING

- A. Surfaces shall be clean and free of paint, oil, rust, scale, slag, or other material detrimental to welding.

### 3.05 ALIGNMENT AND SPACING

- A. Align ends to be joined within existing commercial tolerances on diameters, wall thickness, and out-of-roundness. Root opening of the joint shall be as stated in the procedure specification.
- B. The shielded metal-arc process shall be used for all carbon steel field welding.
- C. No welding shall be performed if there is impingement of any rain or high wind on the weld area, or if the ambient temperature is below 32 degrees F. If the ambient temperature is less than 32 degrees F, local preheating to a temperature warm to the hand is required.
- D. Tack welds, if not made by a qualified welder using the same procedure as for the completed weld, must be completely removed. Tack welds which are not removed shall be made with an electrode that is the same as, or equivalent to, the electrode to be used for the first weld pass. Tack welds that have cracked shall be removed.
- E. Each layer of deposited weld metal shall be thoroughly cleaned prior to the deposition of each additional layer of weld metal, including the final pass, with a power-driven wire brush. Surface defects which will affect the soundness of weld shall be chipped out or ground out.

- F. There shall be a minimum of three weld passes on pipe sizes 6 inches and larger. There shall be a minimum of a full root and second pass on all welded pipe 4 inches and under.
- G. Welded joints shall be allowed to cool for not less than 30 minutes before weld is placed in contact with water.

**END OF SECTION**



**SECTION 02676  
CORING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work necessary to drill and collect core samples, complete.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. Provide all materials and equipment necessary for drilling, collecting, and storing the core samples as specified.

2.02 CORE BARREL AND BIT

- A. Vertical Cores: The core barrel and bit shall be of the appropriate sizes to recover 4-inch diameter cores. Length of the core barrel shall not be less than 10 feet.

2.03 CORE BOXES

- A. Cores shall be stored at the site in sturdy wooden boxes of the proper size for the diameter of core collected. Each core box shall hold no more than 10 feet of 4-inch core. Each core box shall be clearly and permanently labeled with the depth, the top, and the bottom of the core section contained therein. The box shall be prepared for shipping prior to delivery to Engineer.
- B. In the event recovered material is not continuous, partitions shall be inserted into the core box to keep core material separate and in sequence. Such partitions shall have clearly labeled the depth and interval of the core specimen.

**PART 3 EXECUTION**

3.01 GENERAL

- A. Cores of strata penetrated shall be taken during the drilling of pilot holes at selected depths determined by Engineer between the following approximate depths:
  - 1. Four, between approximately 600 and 1,000 feet.
- B. The exact number, depths, and length of the interval to be cored may be changed by Engineer based on subsurface conditions.

- C. The method of coring and the sequence of coring and reaming the hole to full diameter is subject to Engineer's approval and shall conform to the requirements stated in these Specifications.
- D. Contractor shall obtain an acceptable core at each interval selected to be cored by Engineer before proceeding with the next drilling activity. Should less than 50 percent core recovery be achieved, the driller will be required to core again immediately below the previously cored zone until 50 percent recovery is achieved before proceeding to core into the next strata where coring is required.
- E. Drilling of the pilot hole shall be stopped to collect these core samples, but no standby time shall be charged for coring. A core barrel shall be advanced by being rotated its full length into the undisturbed formation. Once the core barrel has penetrated the desired interval, it shall be withdrawn and the core recovered, stored, and delivered to the Engineer for analysis and evaluation prior to shipment at Contractor's expense to an approved laboratory for analysis. Two samples from each core will be analyzed at the laboratory.
- F. The laboratory analysis of each of the two samples from each core shall include the following: measurement of the specific horizontal and vertical water permeability, the effective porosity, Young's modulus/elastic formation factor, Archie's cementation exponent and coefficient, specific gravity, and rock compressibility tests. The total laboratory costs shall be included in the unit rate for coring shown in the Bid Schedule. Shipping the cores to the lab shall be the responsibility of the Contractor.
- G. A core laboratory such as CORE LAB in Houston, TX; or equal will be acceptable. The proposed laboratory must be identified prior to coring for approval by Engineer. The Engineer, at its discretion, and at any time, may reject a core laboratory and request other choices of core laboratories.
- H. Results from the core laboratory shall be obtained and given to Engineer as quickly as possible as to not delay drilling operations. It is Contractor's responsibility to forward the cores and keep track of the testing schedule of the cores so that drilling operations are not delayed. One original and five copies of the final core laboratory report are required.

**END OF SECTION**

**SECTION 02677  
GROUT SEAL**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work, materials, and equipment necessary for furnishing and installing the grout seal. Work covered by this section shall be performed by a service company specialized in the field of grout sealing and cementing of oil, water and wastewater wells. The service company shall provide onsite services of a technical representative during cementing operations with demonstrated experience in the field related to this project.

1.02 SUBMITTALS

- A. Specifications on any grout used to cement the annular space.
- B. Densometer charts, when applicable.
- C. Contractor shall deliver submittals to Engineer in accordance with Section 01300, Submittals.

1.03 NOTIFICATIONS

- A. Contractor shall be responsible for notifying all other agencies as required which may need to witness grouting. These may include FDEP, SWFWMD, Manatee County Natural Resources Department, local Health Departments, etc.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. Contractor shall provide grout, additives, bentonite, and any other materials and equipment necessary for placement of the grout as specified and as directed by Engineer. Drill pipe, tremie line, water source and other materials and equipment necessary to complete the work specified shall be provided by Contractor.

2.02 PORTLAND CEMENT

- A. Must conform to ASTM C 150, Type II.

## 2.03 GRAVEL

- A. Must conform in size to SWFWMD rules, regulations, or permit conditions for well abandonment and the borehole/casing diameter. Fine gravel or sand shall only be used during grouting activities if approved by Engineer.

## 2.04 BENTONITE AND OTHER ADDITIVES

- A. Furnish all bentonite required for cementing in the proportions specified in the Bid Schedule and as directed by Engineer. Furnish other cementing additives formulated specifically for well cementing as required by Engineer.

## **PART 3 EXECUTION**

### 3.01 CEMENT GROUT MIX

- A. Contractor shall portion 1 cubic foot of cement (i.e., one sack) to not more than 5.8 gallons of potable water. All grout shall have zero percent free water when pumped.

### 3.02 ADDITIVES

- A. The use of special cements or other admixtures (ASTM C494) to reduce permeability, increase fluidity, and/or control set time and the composition of the resultant slurry must be approved by Engineer. A high shear mixer shall be used by Contractor for additives and totally hydrated to a smooth slurry before adding cement. For each grout batch, about 5 to 10 percent of the mixing water shall precede the other components. Consistency and method of mixing shall be reviewed by Engineer prior to grouting.
- B. Work covered under this Article, Additives shall be performed by a service company specialized in the field of grout sealing and cementing of oil, water, and wastewater wells. The service company shall provide on-site, during cementing operations, the services of a technical representative with demonstrated experience in the field and area related to this project. The cement service company shall be subject to approval by Engineer based upon their experience in Florida.
- C. Contractor shall furnish all bentonite and other cementing additives required for cementing in the proportions specified in Contractor's Bid Schedule and as directed by Engineer.
- D. A standard mud balance shall be used by Contractor to measure consistency of slurry density. Cool clean potable water shall be used to mechanically mix with cement at the site immediately before placement. Consistency and mixing shall be approved by Engineer.

### 3.03 PLACING

- A. The method of grout placement must force grout from the bottom of the space to be grouted to the surface. The grouting shall be done continuously and in such a manner as shall ensure the entire filling of the borehole, well, and annular space and ensure a watertight seal around the well casing to avoid downward or upward movement of water along the casing annulus and borehole. For PVC casing, grouting shall be done in multiple stages so as to not compromise the integrity of the casing.
- B. All cementing of casing shall be accomplished in the presence of Engineer or his representative. If cementing activities require observation by a SWFWMD, FDEP, or other regulatory agency representative, as determined by the Engineer, Contractor shall coordinate cementing activities to accommodate this requirement at no additional cost to County.
- C. The pressure tremie method is required for all subsequent cement stages. The bottom of the tremie line shall initially be set within five feet of the top of the previous annular grout tag in the well, as approved by Engineer. Dual tremie pipes shall be used, and have an inside diameter of not less than 1.5 inches. Dual tremie pipes shall be withdrawn as the annulus is filled and before the cement has begun to set. A single tremie pipe with a larger diameter can be used in lieu of the dual tremie pipes if approved by Engineer.
- D. Surface casing shall be grouted by pressure tremie, pressure cap, displacement plug, or grout shoe methods. Method of grouting must be approved by Engineer.
- E. Staging and use of gravel, thixotropic, or other high-yield cement types with special additives shall be required through highly permeable intervals, if approved by Engineer and FDEP. The gravel shall be introduced at a metered uniform rate in the manner to be approved by Engineer and that shall allow even placement of the gravel. Every precaution shall be taken by Contractor to ensure placement without bridging of the materials as they are introduced into the well.
- F. Engineer shall inform Contractor of the amount and type of cement to be used prior to each cementing operation. Contractor shall submit to Engineer 48 hours before cementing starts a detailed schedule for the complete operation including capacity of the pump and equipment to supply and mix cement slurry. During each cement stage pumped, grout samples shall be collected by Contractor and checked for density by a pressurized fluid density balance and by a recording Radiometric Densometer, or as otherwise approved by Engineer. These grout samples must be collected a minimum of three times for each cement batch pumped: before pumping, middle of the batch, and near the end of the batch. The slurry density determination shall be conducted in accordance with the latest edition of API Spec 10. Slurry density

determined in the field shall be compared with the specified slurry density indicated on the mill certificate which results in zero percent free water and shall be presented to Engineer prior to the start of cementing operations. No cement slurry shall be pumped until the specified slurry density is obtained.

- G. Setting Time: No drilling operations shall be permitted until grout has cured. Minimum setting time between stages shall be at least 12 hours. Longer time shall be necessary when high-yield cement is used. After cementing is completed on a casing, casing and well must remain undisturbed for at least 24 hours for setting of the cement prior to drilling out the cement plug in the well. Further setting requirements for the final casing strings on the well are contained in Section 02674, Casing.
- H. Tag Depth: Contractor shall demonstrate the tag depths to the satisfaction of Engineer and regulatory inspector prior to grouting. The depth to the top of the existing grout or borehole shall be determined by washing out the annular space, if necessary, as approved by Engineer and regulatory inspector.
- I. Contractor shall be solely responsible for any defect in the cementing work due to improper, or a lack of, equipment, technology, personnel or experience, either by Contractor or by any of its subcontractors. Contractor shall pay all costs necessary to correct such defects. Should Contractor fail to correct defects, Engineer may refuse to accept the well.
- J. Throughout all cementing operations, Contractor shall exercise extreme care to prevent the collapse of casing. As a minimum, during placement of cement by the tremie method, a pressure-tight bulkhead shall be maintained on the casing being cemented and during cementing, and for 8 hours following placement of cement, a pressure of 100 pounds shall be maintained in the casing. The heating and cooling of the cement may require that water be added or released from the casing to maintain the required pressure.
- K. Drillable Bridge Plug: Contractor shall furnish equipment and personnel to install a commercial drillable bridge plug as approved by Engineer, or may construct a bridge plug in place using cuttings and a lift of at least 10 feet of Portland ASTM 150 Type II neat cement. Amount of cement and placement method shall be reviewed and approved by Engineer.
- L. Pilot Hole Plugback: Contractor shall plugback open pilot holes with grout prior to reaming and prior to the installation of casing as directed by Engineer. Gravel shall be emplaced by the tremie method through highly permeable zones as approved by Engineer.

#### **END OF SECTION**

**SECTION 02678  
WELL DEVELOPMENT**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work, materials, and equipment necessary for the development of RW-1, RZMW-1, and SLMW-1, complete.
- B. Development of the wells shall be by closed circulation until all visible particulate matter has been removed from the well to the satisfaction of Engineer.
- C. The total development time is estimated to be 16 to 24 hours. However, Engineer shall be the sole judge as to when development is complete and shall, therefore, increase or decrease the total development time.

1.02 SUBMITTALS

- A. Contractor shall submit certification that the flow-meter has been calibrated within 30 days prior to development. Calibration data shall accompany the certification and shall be provided to Engineer 10 days prior to well development.

**PART 2 PRODUCTS**

2.01 AIR-LIFT EQUIPMENT

Contractor shall:

- A. Provide an air line and compressor of adequate size and length to be able to surge the well with air. The airlift equipment shall be capable of pumping 1000 gpm for the recharge well, 200 gpm for the monitoring wells, and a rate as limited by well yield for the pad monitor wells.
- B. Furnish and install all necessary compressors, piping, tools, pumps, and any other equipment to develop the wells be airlifting to obtain a flow of 1000 gpm with air as stated above and as approved by Engineer.
- C. Provide a tee with lateral outlet horizontal and all necessary piping to properly contain and measure the flow of water and dispose of it in accordance with these Specifications. Provide a seal on top outlet to prevent overflowing and a tee and pipe of the same diameter as the corresponding casing.

- D. Be prepared for straight air development and or reverse air. Straight air development may require educator piping lowered to the development zones to increase development action.

## 2.02 HIGH CAPACITY PUMPING EQUIPMENT

- A. Contractor shall furnish a turbine pump and discharge equipment and piping for development of the well by pumping. Pump and appurtenances are specified in Section 02681, Pumping Tests.

## **PART 3 EXECUTION**

### 3.01 INITIAL DEVELOPMENT BY AIRLIFTING

- A. The purpose of the development work is to remove effectively from the well, well walls, and the formation immediately adjacent to the well, material like mud, clay, cuttings, rock fragments, and any other type of loose or potentially loose materials. The injection well and monitoring wells shall be developed by the air development method as follows:
  - 1. Development shall be done by utilization of a single pipe air pumping system using the casing or the borehole itself as the educator line. The compressors, air lines, hoses, fittings, etc., shall be of adequate size to pump the well by the airlift principle up to a maximum flow of 1,000 gpm with air. Contractor shall initially pump the well with air until the well is developed to the point that it yields clear, sand-free water. He shall then shut off the air and allow water in the well to return to a static condition. He shall then reopen the valve and reintroduce air into the well until water is again brought to the surface by the airlift, at which time he shall close the air valve and allow the water to drop back down the well and return to a static condition. He shall repeat this lifting and dropping of the column of water until the water in the well becomes turbid at which time he shall continuously pump the well with air until it again yields clear sand-free water. Contractor shall repeat the above operations until the well no longer produces fine material when it is surged and backwashed as described above, or until Engineer is satisfied that development is complete.
  - 2. The bottom of the air line shall be placed at different levels in order to facilitate development of all intake areas and multiple water producing zones, and the process repeated until all zones yield water free of turbidity when surged and backwashed, as directed by Engineer.
- B. The pad monitoring wells shall be developed as described above except the quantity of water produced shall be as limited by well yield.

### 3.02 INSTALLATION OF PUMPING EQUIPMENT

- A. After initial development of the ASR well, the high capacity pump, flow measuring device(s), discharge piping, access pipe/air-line, and other necessary appurtenances shall be installed for development and testing as specified in Section 02681, Pumping Tests.

### 3.03 PUMPING DEVELOPMENT

- A. Contractor shall operate the pumping development equipment continuously at such rates of discharge (between approximately 1,400 and 2,100 gpm) and such periods of time as determined by Engineer. The well shall be pumped until the water is free from sand, silt, and turbidity and/or until no further improvement in turbidity and specific capacity can be observed, and in a manner that will contain all water produced. Engineer shall determine when development by high capacity pumping is complete.
- B. The static water level in the well shall be allowed to recover for a time equal to the pumping development time, as a minimum, before start of the variable-rate specific capacity test.

### 3.04 PUMP REMOVAL

- A. Do not remove the pump and appurtenant equipment until the work is complete as specified in Section 02681, Pumping Tests and as approved by Engineer.

### 3.05 WATER SAMPLING

- A. After the wells have been fully developed, as determined by Engineer, each well shall be sampled to determine background water quality. The sampling shall be conducted as specified in Section 02311, Water Quality Sampling and Testing, and Section 02673, Drilling.

**END OF SECTION**



**SECTION 02679  
GEOPHYSICAL LOGGING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work, materials, and equipment necessary for geophysical logging of the borehole and wells.
- B. Contractor is advised that the well is expected to be under artesian conditions and static logging will likely have to be accomplished through use of a standpipe or pack-off collar.

1.02 SUBMITTALS

- A. Three field copies of each requested geophysical log shall be provided to Engineer by Contractor immediately upon the completion of each logging event.
- B. Ten final copies of each field geophysical log, including one electronic copy in Adobe Acrobat format and LAS (Log ASCII Standard) format, shall be provided to Engineer by Contractor upon Engineer's review of field copy for such items as accuracy, scale, reproducibility, etc.
- C. Geophysical logging probe or sonde schematic for each downhole tool used.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. Contractor shall provide a sheave or other means from which the logging Subcontractor may hang geophysical logging equipment during logging events.
- B. Logging Subcontractor shall be provided in Contractor's list of specialty subcontractors as stated in the Bid Package.
- C. Contractor will provide continuous digital recording geophysical logging equipment capable of running the following:
  - 1. Spontaneous potential log.
  - 2. Natural gamma ray log.
  - 3. X-Y caliper log.
  - 4. Temperature and delta temperature logs.
  - 5. Fluid resistivity log.
  - 6. Flow meter (with flow interpretation analysis) log.

7. Dual induction log.
8. Borehole-compensated sonic log.
9. Video survey (with rotating head).

### **PART 3 EXECUTION**

#### **3.01 GENERAL**

- A. Geophysical logging shall be conducted in general accordance with the program outlined in Section 01010, Summary of Work, and in accordance with the Geophysical Logging summary in Table 02679-1 at the end of this section.
- B. A nominal 8- to 12-inch diameter pilot hole shall be drilled by Contractor to the depth determined by Engineer and prepared for geophysical logging. Borehole preparation shall include, but not be limited to: 1) continuation of circulation until drill cuttings have been removed from the borehole and 2) circulation of the drilling mud in the borehole until it is uniform and the drill pipe has been removed from the borehole. Contractor must make all reasonable efforts to leave the borehole free from obstructions in preparation for geophysical logging.
- C. Logging shall be performed by Contractor as soon as possible after drilling and preparation of each pilot hole. The logging interval shall be the total depth of the pilot hole or less as determined by Engineer.
- D. Temperature logging shall be conducted following each stage of cementing on the final casing for the exploratory well. Contractor shall tag the cement fill in the annular space prior to performing each log. The temperature log will be conducted from land surface to within 20 feet of the base of the casing, or as otherwise approved by Engineer. The log shall be presented at scales of 1 inch equals 2 degrees F and 1 inch equals 25 degrees FF side-by-side on the same log. Contractor shall wait a minimum of 8 hours following cementing prior to logging, with a maximum of 16 hours prior to logging the well following each cement stage.
- E. Contractor shall provide access to the well for the purpose of water level measurements or otherwise as requested by Engineer during geophysical logging events.
- F. Testing of the well may be conducted concurrent with geophysical logging events. It shall be Contractor's responsibility to assist Engineer as directed during logging events.
- G. All logs shall be clearly labeled with all pertinent information regarding the well, location, depths, scales, etc. Repeat sections shall be run to verify logging tool performance on all logs. The repeat sections shall consist of 20 percent of the borehole length up to 200 feet in length. Engineer shall select the section of the borehole to perform the repeat section.

- H. Color Video surveys of the borehole shall be recorded on DVD format. Contractor shall furnish County with a DVD of all runs, 1 field copy, and 20 copies of each survey.
- I. All logs run on the pilot holes of the exploratory well shall be run with scales of 1 inch equals 100 feet; 2 inches equals 100 feet; and 5 inches equals 100 feet.

### 3.02 NOTIFICATION REQUIREMENTS

- A. Regulatory agencies or other interested parties may require attendance at geophysical logging events. Contractor shall provide Engineer with a 24-hour notice prior to logging to facilitate coordination of the logging activities.

### 3.03 SUPPLEMENTS

- A. The supplement listed below, following “End of Section,” is part of this Specification:
  - 1. Table 02679-1, Proposed Geophysical Logging Program for the Manatee County SWWRF Recharge Well System.

**END OF SECTION**



**TABLE 02679-1**

Proposed Geophysical Logging Program for the Manatee County SWWRF Recharge Well System

Well Configuration	Interval	Geophysical Logs									
		Caliper	Natural Gamma	Dual Induction	Video Survey	BCS	Fluid Resistivity	Flow-meter	Temperature		SP
									Well	Cement Stage	
<b>RW-1</b>											
Pilot Hole	0 to 300	▲	▲	▲							▲
Reamed Hole	0 to 300	▲	▲								
Pilot Hole**	0 to 1,000	▲	▲	▲	▲	▲	▲ (S/D)	▲ (S/D)	▲ (S/D)		▲
Reamed Hole	0 to 1,000	▲	▲								
Pilot Hole	0 to 2,100	▲	▲	▲	▲	▲	▲ (S/D)	▲ (S/D)	▲ (S/D)		▲
Completed Well	0 to 2,100	▲	▲	▲	▲	▲	▲ (I)	▲ (I)	▲ (I)	▲ (FCI)	
<b>RZMW-1</b>											
Pilot Hole	0 to 300	▲	▲	▲							▲
Reamed Hole	0 to 300	▲	▲								
Pilot Hole**	0 to 1,000	▲	▲	▲	▲	▲	▲ (S/D)	▲ (S/D)	▲ (S/D)		▲
Reamed Hole	0 to 1,000	▲	▲								
Completed Well	0 to 1,050	▲	▲	▲	▲	▲					▲
<b>SLMW-1</b>											
Pilot Hole	0 to 300	▲	▲	▲							▲
Reamed Hole	0 to 300	▲	▲								
Pilot Hole **	0 to 650	▲	▲	▲	▲	▲	▲ (S/D)	▲ (S/D)	▲ (S/D)		▲
Reamed Hole	0 to 650	▲	▲								
Completed Well	0 to 700	▲	▲	▲	▲	▲					▲

Static (S); Dynamic (D); Injecting native drilling fluids back into well (I); Following Casing Installation (FCI).

\*\* List of logs assumes borehole is drilled using reverse-air drilling techniques.



**SECTION 02681  
PUMPING TESTS**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work, materials, and equipment necessary for the well pumping tests, complete.
- B. The estimated length of the variable-rate, step-drawdown pumping tests at the recharge well is 10 hours. Three to four different pumping rates shall be utilized during this test. The rates and time steps shall be determined by Engineer in the field. The pump shall be left undisturbed and in place during the recovery period, approximately equal to 50 percent of each pump test duration. However, Engineer shall be the sole judge as to length of the test and may increase or decrease the total pumping time of the test. The Engineer will have final approval for substituting re-circulation tests into the well in lieu of pump out tests to satisfy the requirements of the specific capacity testing.
- C. Engineer shall determine the time to begin the variable-rate step-drawdown test within the time constraints of the Contract period.

**PART 2 PRODUCTS**

2.01 TEST PUMP

Contractor shall:

- A. Furnish and install a test pump and driver capable of pumping from 700 to 2,100 gallons per minute (gpm). The pump shall not be fitted with a foot valve.
- B. Provide a gate valve, or equal, on the discharge side of the pump for adjustment of flow rate down to 700 gpm if the test pump engine cannot be sufficiently throttled.
- C. Provide a pumping unit prime mover, controls, and appurtenances capable of being operated without interruption for a 24-hour period.
- D. Furnish engine-driven equipment or make arrangements for power for well pumping tests.
- E. Install the pump, motor, and discharge head for access to run geophysical logs while pumping, and to provide access for water level measurements by Engineer.

## 2.02 FLOW MEASURING DEVICE

- A. Contractor shall provide machined orifice plate(s) and flowmeter(s) capable of measuring the pump discharge within plus or minus 5 percent of true flow for flow rates from 700 to 2,100 gpm.

## 2.03 DISCHARGE PIPING

- A. Contractor shall furnish, install, maintain, and operate discharge piping for the pump unit of sufficient size to convey pumped water to the designated discharge location as directed by Engineer.

## 2.04 ACCESS PIPE

- A. Contractor shall provide and install a 1-1/2-inch minimum ID pipe to permit installation of an electronic measuring device furnished by Contractor. The pipe shall terminate approximately 2 feet above the pump bowls and be of sufficient strength to remain open for the duration of the test.

## 2.05 ACCESS PORT

- A. Contractor shall provide a 1-1/2-inch minimum ID port on the wellhead for connection of a manometer tubing or pressure transducer data logger to measure water levels above land surface.

## 2.06 WATER SAMPLING PORT

- A. Contractor shall provide a spigot or other valved port on the discharge line to allow water quality sampling during the pumping test.

## **PART 3 EXECUTION**

### 3.01 INSTALLATION OF PUMPING EQUIPMENT

- A. The pump, flow measuring device(s), discharge piping, access pipe, water sampling port, and other necessary appurtenances shall be installed for the well pumping tests.

### 3.02 PRELIMINARY CAPACITY PUMPING TEST

- A. If requested, the Contractor shall run a preliminary pumping test prior to each pumping test. The preliminary pumping test shall be conducted to establish rates and evaluate equipment performance, including discharge capacity, and to estimate the production capacity of the well prior to implementation of the step drawdown test. Operate the pumping test equipment continuously at rates of discharge and for periods of time as determined by Engineer. Duration of such preliminary test shall be approximately 1 hour.

- B. Unless otherwise approved by Engineer, the preliminary capacity pumping test shall be run on the day preceding the pumping test.
- C. The static water level in the well shall be allowed to recover for a time equal to the duration of the preliminary test before start of well pumping test or longer as determined by Engineer.

### 3.03 PUMPING TEST

- A. Contractor shall operate the variable-rate step-drawdown and aquifer performance pumping test equipment continuously at rates of discharge and for periods of time prescribed by Engineer. Contractor shall provide an operator during the entire time the pump is in operation, as required by Engineer, to operate the prime mover and to regulate discharge by the throttling device during the test pumping period.
- B. At the completion of the pumping test, the pump bowls and column shall not be removed from the well for a time equal to 50 percent of the total pumping time to allow accurate water level recovery measurements to be taken, or less as determined by Engineer. No additional standby time or pumping time payment shall be awarded during this period.

### 3.04 FURTHER DEVELOPMENT

- A. If considerable quantities of fines are pumped out of the well during the test, Contractor shall discontinue the test and resume well development. Engineer shall be the sole judge as to whether such additional development is necessary.
- B. After completion of the test, Contractor shall sound the well and remove any sand or silt accumulated in the well as a result of the test.

### 3.05 DISPOSAL OF WATER

- A. Disposal of water shall be the responsibility of Contractor. Water generated during drilling will be contained on site and re-circulated into the well or disposed of offsite.
- B. Water will require settling to reduce turbidity prior to disposal or re-circulation into the well following the test. Engineer must approve methods of settling excess turbidity prior to commencing each pumping test. Water recirculated into the well shall have 5 mg/L total suspended solids or less at all times. Up to 100,000 gallons of storage may be required if requested by Engineer.

3.06 WATER LEVEL ACCESS

- A. Contractor shall provide access at the wellhead for water level measurements in the well prior to and during the pumping test.

**END OF SECTION**

**SECTION 02684  
WELL ACIDIZATION  
(ADD ALTERNATIVE)**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work necessary to acidize recharge well RW-1, complete, if directed by Engineer.

**PART 2 PRODUCTS**

2.01 GENERAL

- A. Provide all the materials and equipment required to accomplish the work as specified.

2.02 ACID STORAGE

- A. All acid storage tanks will be of appropriate material and construction for storage of HCl at the specified concentrations. One tank will be required for the termination of the blow-off pipe from the wellhead to capture acid off-gassing in the event of a pressure release from the well. The Contractor will also provide container(s) for acid storage. The total volume for the storage container(s) is not specified so that the Contractor can propose options that are most suitable for the site. A combined use of onsite staging and acid delivery tankers is acceptable provided it does not delay the injection of the acid and batches of at least 10,000 gallons can be pumped continuously.

2.03 SECONDARY CONTAINMENT

- A. The secondary containment will be of appropriate material and construction for storage of HCl. The secondary containment will encompass all areas containing chemicals including storage areas, pipeline to and from the well, pumps, and any other components that may be in contact with acid or soda ash or any other chemicals used in the well rehabilitation process. Secondary containment will be required regardless of whether the acid storage task(s) are placed on the cement well pad or not.
- B. The Contractor will be responsible for controlling the flow from the well while removing the wellhead and setting up for acidization in accordance with the appropriate sections of these documents.
- C. Acid will be 32 percent inhibited hydrochloric acid (HCl) from a source and carrier approved by the Engineer. The HCl provided shall be approved for use in potable water wells, unless otherwise approved by the Engineer.

## 2.04 ACIDIZATION HEADER

- A. Type of temporary acidization wellhead will be at the discretion of the Contractor but must be rated for a minimum working pressure of 250 psi or higher. The acidization wellhead must include, at a minimum, the following components: acid line capable of injection at the required rates, one 4-inch blow-off (or equivalent), flanged 24-inch by 12-inch Tee for injection of water at high rates, and pressure gauge for the acid blow-off valve. The wellhead shall also be equipped with valves on each pipe line to control flows. Gauges shall be suitable for intended use and shall be calibrated from 0 to 150 psi. The temporary acidization wellhead schematic is provided in the Drawings.
- B. Approximately 25,000 gallons of acid will be targeted to complete the acidization. Actual quantities used in the field shall be pre-approved by the Engineer. Certification from acid supplier will be required to verify materials and acid quantities at least 3 working days prior to acid delivery to site.
- C. All piping from the wellhead to the blow-off containment tank will be of steel suitable for 32 percent HCl. Flexible hoses may be used for the acid delivery lines to the wellhead as long as the hoses and hose connections are of appropriate material for handling 32 percent HCl and capable of withstanding operating pressures of at least 200 psi.
- D. An approved inhibitor shall be added to the acid prior to emplacement of the acid in order to protect the wellhead and casing from the acid.
- E. The inhibitor must be approved by the Engineer prior to their use.

## PART 3 EXECUTION

### 3.01 WORKMANSHIP

- A. The Contractor shall be responsible for maintaining water levels below land surface when the wellhead is open to atmosphere and be capable of closing in the well and controlling flow at all times during all activities conducted under this contract. No unauthorized flow will be allowed from the well at any time.
  - 1. Food grade salt is acceptable for lowering and maintaining the water level in the well. Other methods will require the approval of the Engineer.
  - 2. The Contractor's fluid control device shall be approved by the Engineer prior to mobilization.
- B. Install 2-inch diameter acid injection pipe to the depth selected by the Engineer (the maximum anticipated depth is 200 feet).

- C. Set up wellhead at the well designated by the Engineer in accordance with the drawings and the specifications. The acidization lines shall be installed such that no leaks occur.
- D. It is the intent that the emplacement of the acid will be done in one day in multiple batches. The general sequence for the acid injection at the RW-1 is to pump a batch of acid with a volume of approximately 4,000 to 6,000 gallons and then flush the well with approximately 2 to 3 casing volumes of reclaimed water. Then, if acceptable pressures are observed, larger batches of up to 10,000 gallons will be injected, each followed by injection of reclaimed water at high flow rates. Following the final batch of acid at each well, reclaimed water will be injected into the well for a period of 1 to 2 hours at high flow rates (up to 15 mgd).
- E. Inject water using the City's existing reclaimed water lines into the well at maximum flow rates and pressures (up to permitted rates and pressures) for 15 minutes prior to acid injection to establish baseline specific injectivity. The water flow rate will be measured using the City's existing flow meter. An additional back-up water pump will be provided by the Contractor. The pump will be connected to the City's 2-inch potable water connection at the site and piped to an access port in the acidization wellhead. The pump shall be capable of maintaining a flow rate of 100 gpm (or the rate the 2-inch line is capable of providing) at head pressures of 100 psi at a minimum. The water supply for the injection will be reclaimed water and is available at the wellhead. The Contractor shall provide all piping, fittings, and backflow devices necessary to utilize the reclaimed water.
- F. Inject the acid through the acid line at a rate of approximately 100 gpm. The HCl will be stored in a holding tank or containment system prior to injection. The tank shall be constructed of suitable material to retain the acid without leaks. The tank will be of sound construction and must not leak. The pump used to emplace the acid must be capable of pumping at a rate of approximately 100 gpm at head pressures of 30 psi at a minimum. All pipe and pipe fittings for conveying acid shall be of rigid construction and constructed of suitable material approved by the Engineer.
- G. After pumping of all acid is complete, continue water injection as described above. After water injection is complete, close all valves and allow well to remain undisturbed for a minimum 24-hour duration or as otherwise approved by Engineer.
- H. Post-acidization development will be at the discretion of the Engineer and County. Discharge of water and spent acid from the well following acidization shall be to a suitable container at the site supplied by Contractor. The Contractor will neutralize the discharge water with a suitable buffer until it is demonstrated that the pH of the water is 7.0. Neutralized water will then be discharged to a suitable conveyance as determined by Engineer or re-introduced into well

following settling of solids. Discharge piping shall be the responsibility of Contractor. The disposal location shall be approved by Engineer prior to disposal of water and spent acid. Contractor shall coordinate all discharge activities, including maximum allowable flow rates and pH stabilization, if required, with the required regulatory agencies.

**END OF SECTION**

**SECTION 02686  
STANDBY TIME AND DOWN TIME**

**PART 1 GENERAL**

1.01 DEFINITIONS

- A. Standby time shall be paid for shutdown time of the equipment and crew for any portion of the normal working day (7:00 am to 7:00 pm, Monday through Friday unless otherwise approved) when Engineer's representative orders Work to cease or when other activities at the site preclude work by Contractor, as approved by Engineer's representative. Standby time does not include time when Engineer's representative or a regulatory agency or other authority order Work to cease because of safety, lack of proper equipment or supplies, or violation of federal, state, or local rules, regulations, or statute.
- B. Downtime shall mean that time, other than standby time, during which drilling could occur but does not or when machinery is broken down, proper materials or equipment as specified in this document are not available, or Contractor elects not to drill. Downtime includes adverse weather conditions and delayed arrival of regulatory inspectors.
- C. Extra work shall mean that time, other than standby time, during which Contractor is directed to provide all equipment and a crew to perform extra work not specifically addressed in the Section 01001, General Requirements or elsewhere in these Contract Documents.

1.02 ENGINEER STANDBY TIME

- A. Engineer must be given 24 hours' notice exclusive of weekends and holidays, prior to any testing or grouting activities. If Engineer is notified to be on site for these activities and Contractor is not ready, then Engineer shall be reimbursed by Contractor at the rate of \$200.00 per hour, during normal working hours, starting at the time scheduled by Contractor and notified to Engineer.

**PART 2 PRODUCTS (NOT USED)**

**PART 3 EXECUTION (NOT USED)**

**END OF SECTION**



**SECTION 02689**  
**TEMPORARY WELLHEAD CAPPING AND VALVES**

**PART 1      GENERAL**

1.01      WORK INCLUDED

- A.      This section covers the work necessary for furnishing and installing the well heads and various manually operated valves and check valves in the wellheads, complete.

1.02      GENERAL

- A.      Like items of equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for operation, maintenance, spare parts, and manufacturer's service.

1.03      SUBMITTALS

- A.      Submittals shall be made in accordance with Section 01300, Submittals.

**PART 2      PRODUCTS**

2.01      GENERAL

- A.      Provide all materials and equipment necessary for capping RW-1, RZMW-1, and SLMW-1 as specified and shown in Drawing No. 5 and in accordance with these Specifications.
- B.      All valves shall be complete with all necessary operating handwheels, extension stems, worm and gear operators, operating nuts, chains, and wrenches which are required for the proper completion of the work included under this section.
- C.      Renewable parts including discs, packing, and seats shall be of types recommended by valve manufacturer for intended service.
- D.      All units shall have the name of the manufacturer and the size of the valve cast on the body or bonnet or shown on a permanently attached plate in raised letters.
- E.      For the purpose of designating the type and grade of valve desired, a manufacturer's name and list or figure number is given in the following specifications. Valves of equal quality by other manufacturers will be considered in accordance with the General Conditions.

## 2.02 DESIGN FEATURES

- A. Provide all materials as specified on Drawing No. 5 for well RW-1 temporary wellhead, complete, whether or not materials are explicitly called out in this section.
- B. Brass and Bronze Components:
  - 1. Brass and bronze components of valves and appurtenances which have surfaces in contact with the water shall be alloys containing less than 16 percent zinc and 2 percent aluminum.
  - 2. Approved alloys are of the following ASTM Designations: B61, B62, B98 (Alloy A, B, or D) B139 (Alloy A), B143 (Alloy 1-B), B164, B194, B292 (Alloy A), and B127. Type 304 or Type 316 stainless steel with inconell cladding on flow wetting parts may be substituted for bronze at the option of the manufacturer and with the approval of the Engineer.
  - 3. All gland bolts on iron body valves shall be bronze and shall be fitted with brass nuts.

## PART 3 EXECUTION

### 3.01 GENERAL

- A. Bolt holes of flanged valves shall straddle the vertical centerline of the pipe run. Prior to installing flanged valves, the flange faces shall be thoroughly cleaned. After cleaning, insert gasket and bolts, and tighten the nuts progressively and uniformly. If flanges leak under pressure, loosen or remove the nuts and bolts, reseal or replace the gasket, retighten and/or reinstall the nuts and bolts, and retest the joints. Joints shall be watertight at test pressures before acceptance.
- B. Thoroughly clean threads of screwed joints by wire brushing, swabbing, or other approved methods. Apply approved joint compound to threads prior to making joints. Joints shall be watertight at test pressures before acceptance.

### 3.02 PLACING

- A. Generally, unless otherwise indicated on the Drawings, all valves installed in horizontal runs of pipe having centerline elevations 4 feet 6 inches or less above the finish floor or grade shall be installed with their operating stems vertical. Valves installed in horizontal runs of pipe having centerline elevations between 4 feet 6 inches and 6 feet 9 inches above the finish floor or grade shall be installed with their operating stems horizontal. If adjacent piping prohibits this, the stems and operating handwheel shall be installed above the valve horizontal centerline as close to horizontal as possible. Valves installed in vertical runs of pipe shall have their operating stems oriented to facilitate the most practicable operation.

### 3.03 TESTING

- A. Wellhead fittings and valves shall be tested for leaks. The test shall be performed on the assembled wellhead prior to shipment at 300 psi for 30 minutes with no pressure loss. Joints shall show no visible leakage under test. Repair all joints that show signs of leakage prior to final acceptance. If there are any special parts of control systems or operators that might be damaged by the wellhead test, they shall be properly protected. Contractor will be held responsible for any damage caused by the testing.
- B. If requested by Engineer, the valve manufacturer shall furnish an affidavit stating the materials option furnished and/or that they have complied with these and other referenced Specifications.

### 3.04 PAINTING

- A. Painting shall be executed and with materials as approved by Engineer.

**END OF SECTION**



**SECTION 02987  
PACKER TESTING**

**PART 1 GENERAL**

1.01 WORK INCLUDED

- A. This section covers the work, materials, and equipment necessary for performing the packer tests as specified in these documents.

1.02 SUBMITTALS

- A. Contractor shall furnish Engineer with packer schematic and manufacturers' recommended installation and operating information. This shall include at a minimum the recommended borehole size range of packer, the inflation pressures required to inflate the packer to its minimum and maximum diameter, recommended sealing pressure, inflation instructions detailing method of inflation (i.e., nitrogen, water, etc.), and methods for determining proper packer seating. Packer submittals shall be submitted to Engineer at least 5 working days prior to packer testing activities.
- B. Contractor shall furnish Engineer with flow meter calibration certificate for flow meters used in the packer testing activities. All meters used shall have been calibrated within the previous 3 months prior to packer testing activities. Meters shall be capable of accurately showing flow rates from 5 to 100 gpm within plus or minus 5 percent.
- C. Contractor shall furnish Engineer with calibration certificate for the gauge used for packer inflation. The gauge shall have been calibrated within the last 3 months prior to packer testing activities and shall be capable of measuring pressures from 0 to 150 percent of required packer inflation pressure. The gauge shall have divisions of 10 psi or less and be certified accurate to plus or minus 2 percent over its entire range.

**PART 2 PRODUCTS**

2.01 PACKER

- A. Straddle Packer: The packer shall be Baker, TAM J, Baski, or equal, straddle packer, of a diameter appropriate for the size of the hole as calipered by the geophysical logging. The packer shall seal tightly against the borehole walls to effectively isolate the interval between the packers. Engineer shall be the sole judge as to the effectiveness of the packer element's isolation of other sections of the borehole. Furnish drill pipe and all required fittings for running and setting the packer to the appropriate setting depth and as specified by the manufacturer. Packer element separations shall be between 10 and 100 feet in 2-foot increments as directed by Engineer.

- B. Off-Bottom Packer: The packer shall be Baker, TAM J, Baski, or equal, open-hole single packer, or equal, of a diameter appropriate for the size of the hole as calipered by the geophysical logging. The packer shall seal tightly against the borehole walls to effectively isolate the interval below the packers. Engineer shall be the sole judge as to the effectiveness of the packer element's isolation of other section of the borehole. Furnish drill pipe and all required fittings for running and setting the packer to the appropriate setting depth and as specified by the manufacturer.
- C. Off-bottom packer tests on the monitoring wells are intended to confirm specific capacity of the proposed monitoring zone prior to final casing installation. An annular pressure test will also be performed following the off-bottom test prior to releasing the packer to evaluate confinement above the proposed monitoring interval.
- D. Packer shall be run on drill pipe or tubing having a minimum inside diameter of 6 inches from the surface to the appropriate testing depths.
- E. Packer inflation pressure shall be measured by a calibrated pressure gauge capable of measuring pressures from 0 to 150 percent of required inflation pressure. The gauge shall have divisions of 10 psi or less and be certified accurate to plus or minus 2 percent over its entire range.

## 2.02 SUBMERSIBLE PUMP AND FITTINGS

Contractor shall:

- A. Provide a 4-inch submersible pump and piping capable of being set a minimum of 200 feet below the static water level inside the drill pipe. For the annular test, the submersible pump must be set in the annulus.
- B. Provide pump or pumps which have capacities which range from 200 gpm at a total head of 200 feet, to not less than 5 gpm at a total head of at least 200 feet. Contractor is advised that pump selection will be dependent upon formation being tested, and may result in changing to a larger or smaller capacity pump once testing has begun.
- C. Provide pump discharge with 2-inch throttling valve to regulate flow from 5 to 200 gpm or supply multiple pumps to meet this requirement.
- D. Provide a flow meter to measure pump discharge to within 5 percent of true flow. A certificate of meter calibration within past 3 months is required.

## 2.03 WATER LEVEL DATA LOGGER

- A. Contractor shall provide a data logger with two submersible transducers to be used during the packer testing. The data logger shall be approved by the Engineer.

- B. Engineer will assist Contractor in preparing data logger for test.
- C. Data from the logger will be given to Engineer on a CD in an ASCII tabular format. Contractor shall retain a copy for their records.
- D. Contractor is solely responsible for proper operation of the data logger. Should the data logger fail during the test, Contractor shall re-run the tests as needed, without additional charge, until such time that accurate data are collected. Engineer shall be the sole judge as to data integrity.

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Contractor shall run packer pump-out tests in the intervals selected by Engineer as follows: Set packer assembly to the deepest interval selected for testing and open ports between packer (or below packer in the case of the off-bottom packer test) at the test interval determined by Engineer. Install submersible pump to a depth of 150 feet below the water level inside the tubing or drill pipe. For each off-bottom packer test, Contractor shall also install a submersible pump in the annulus and run a separate annulus test (testing the zone above the single off-bottom packer) as part of each off-bottom packer test setting.
- B. The packer shall be inflated at a pressure recommended by the packer manufacturer or packer service company representative such that an effective hydraulic seal is maintained throughout the testing activities.
- C. Contractor shall demonstrate to Engineer that packer is seated securely against borehole through increases in the observed total string weight during inflation or other string weight variations during testing activities.
- D. Contractor shall provide and install one water level measuring transducer to a depth of up to 150 feet below the water level inside the tubing or drill pipe. Provide and install one water level measuring transducer outside the drill pipe, within the well bore 20 feet below static water level. The two transducers will be switched, including the corresponding depths, to run the annulus packer test.
- E. Water level data per time for both transducers shall be recorded in log-cycle intervals during the packer pumping tests. Engineer will assist Contractor in preparing the data logger for data collection and its operation during the test.
- F. Data from transducers must be recorded continuously, without interruption, and given to Engineer in an electronic ASCII format.

- G. Engineer may order a change in pumps if the first pump selected does not match the producing capability of the formation being tested. Changing pumps shall be included in the cost of each packer test.
- H. Prior to commencing each packer test, Contractor shall, in the presence of Engineer, run a preliminary test to confirm that the packer has seated and that all equipment is functioning properly. Preliminary testing shall be run for up to one hour or until Engineer is satisfied that equipment is functioning properly.
- I. If, in the opinion of Engineer, there is evidence of a leak in or around a packer element, or a malfunction in any way, Contractor shall release and reset the packers at a depth selected by Engineer. Up to four resets shall be included in the cost of each packer test. The Engineer may, at its discretion, require a Memory Gauge attached below the lowermost packer to document an adequate seal on the lower packer for straddle packer tests. The type of Memory Gauge and method of transferring data following the test shall be approved by Engineer.
- J. Contractor shall assist Engineer in collecting water quality samples during the packer testing as described in Section 02673, Drilling or as directed by Engineer.
- K. Upon completion of the packer pump test, recovery data shall be collected for a time equal to the pumping time or for a minimum of one hour, whichever is greater, or as directed by Engineer.
- L. Contractor shall remove water level measuring devices, submersible pump and associated equipment, deflate packers, and remove packers from well.

**END OF SECTION**

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## **DRAWINGS**

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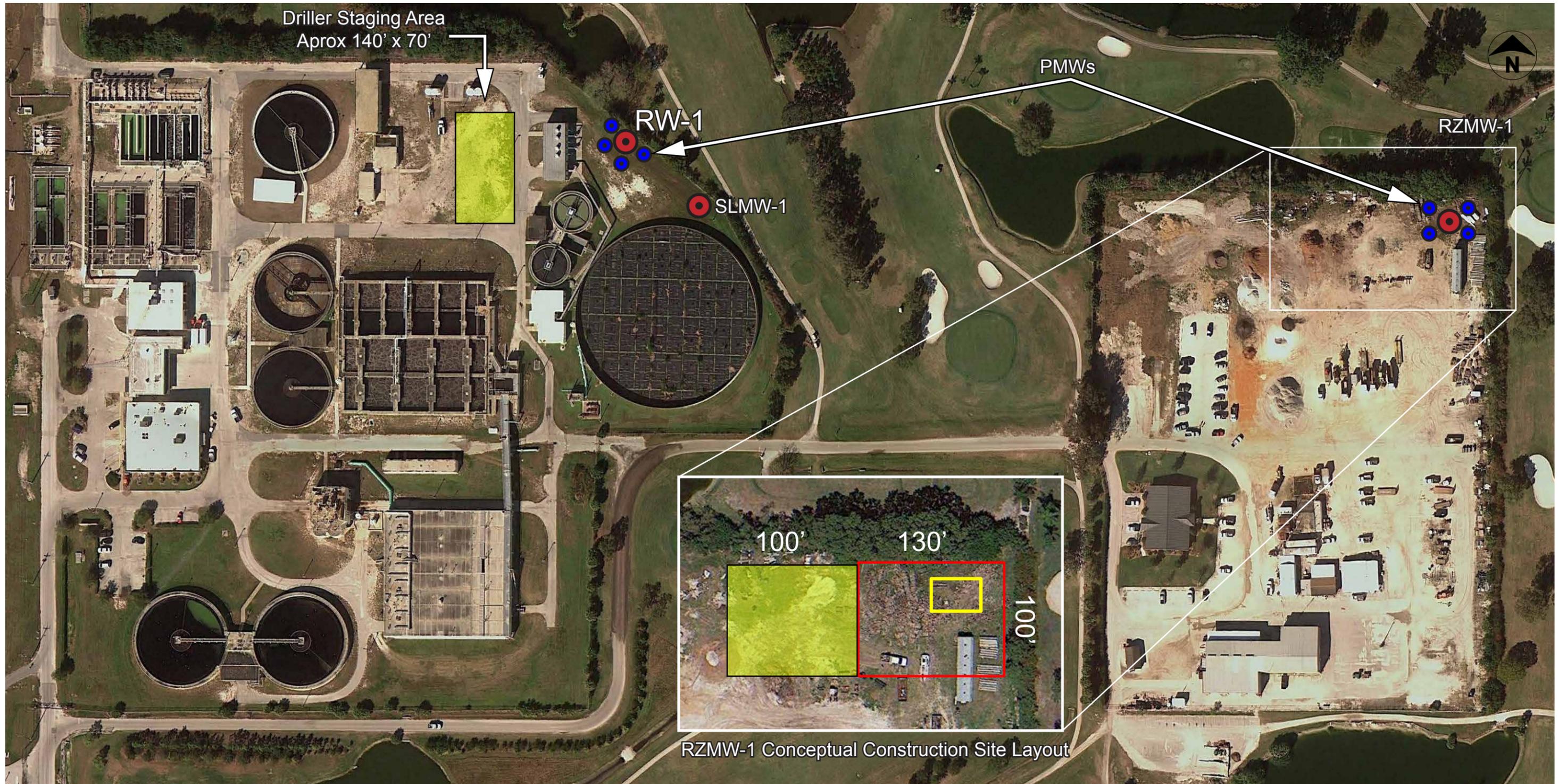




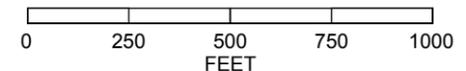
**DRAWING 1**  
 Location Map  
 SWWRF Recharge Well System







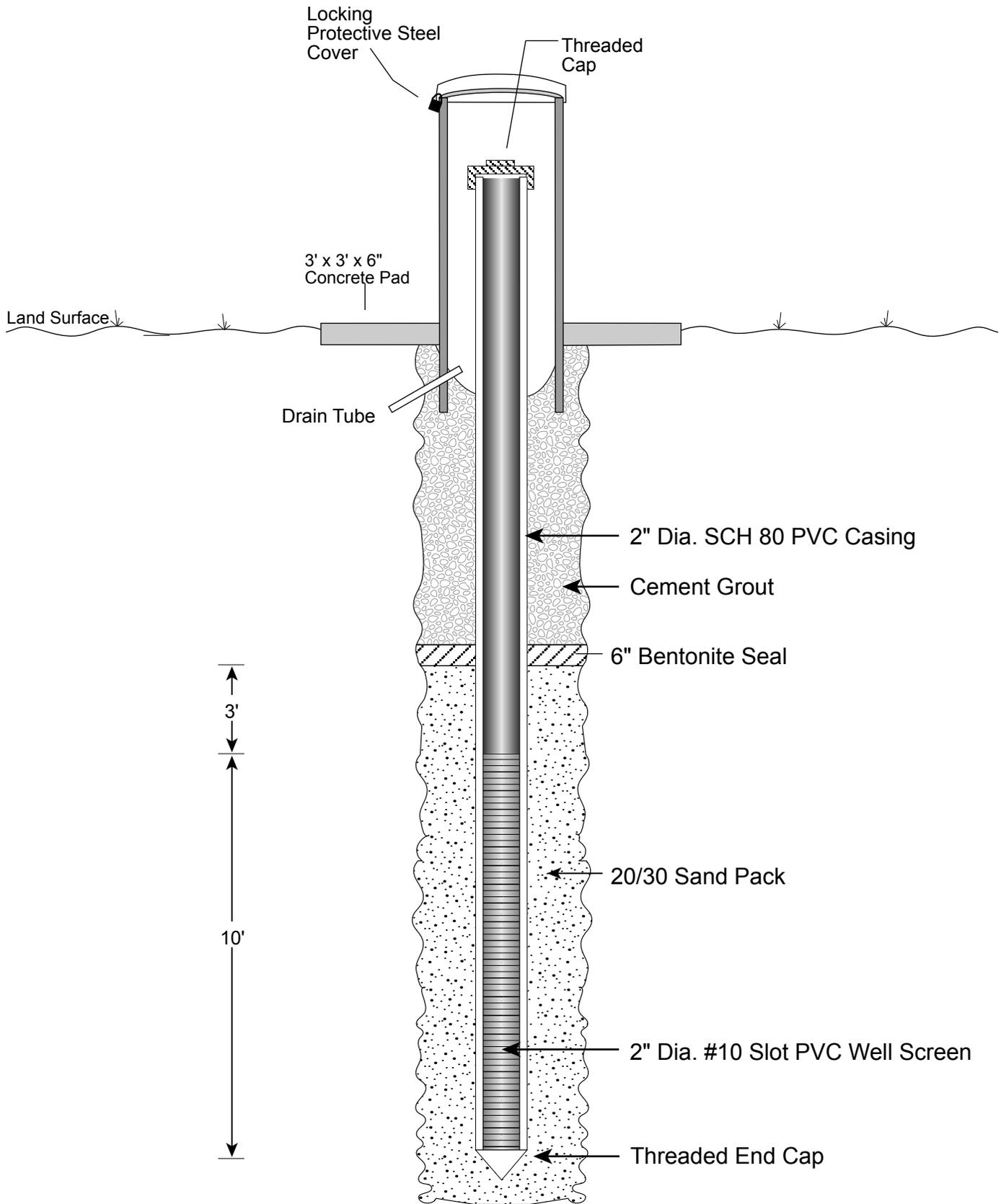
LEGEND		
<span style="color: red;">●</span>	= Proposed Wells	RZMW = Recharge Zone Monitor Well
<span style="color: blue;">●</span>	= Pad Monitoring Wells	SLMW-1 = Suwanee Limestone Monitor Well
RW	= Recharge Well	PMW = Pad Monitoring Wells
<span style="border: 1px solid yellow; display: inline-block; width: 15px; height: 10px;"></span>	Well Pad	<span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px;"></span> Construction Site
<span style="background-color: #90EE90; display: inline-block; width: 15px; height: 10px;"></span>	Pipe Staging Area and Parking	



**DRAWING 2**  
 Site Map  
 SWWRF Recharge Well System



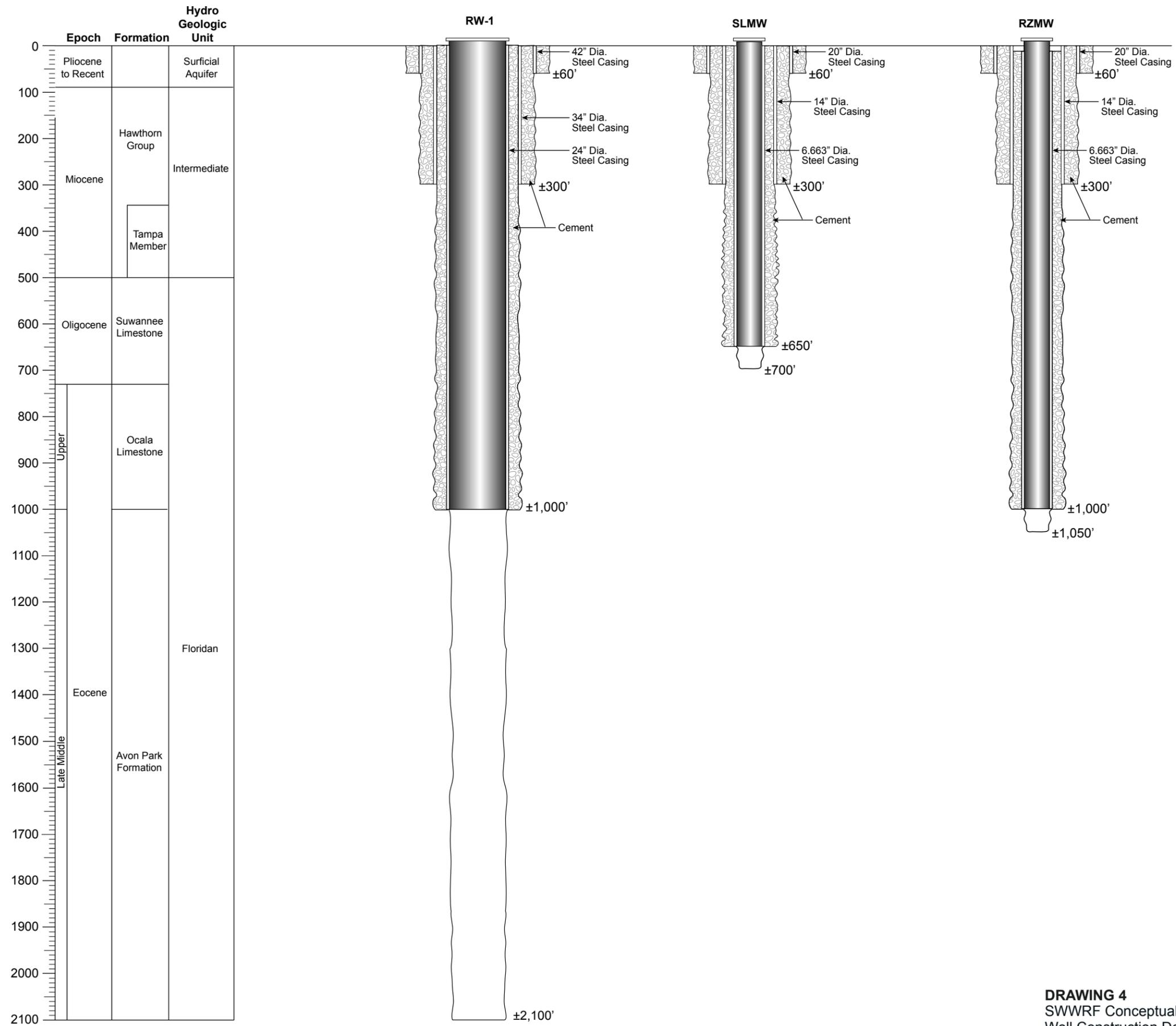




Not to Scale

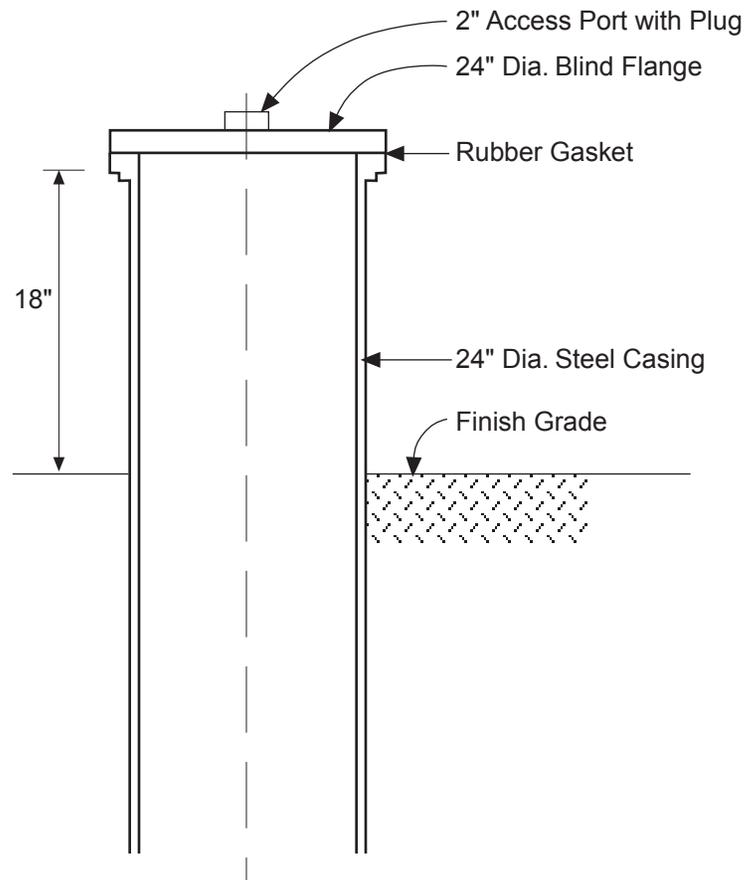
**DRAWING 3**  
 Typical Pad Monitor Well  
 Construction Diagram





**DRAWING 4**  
 SWWRF Conceptual Recharge Well  
 Well Construction Details

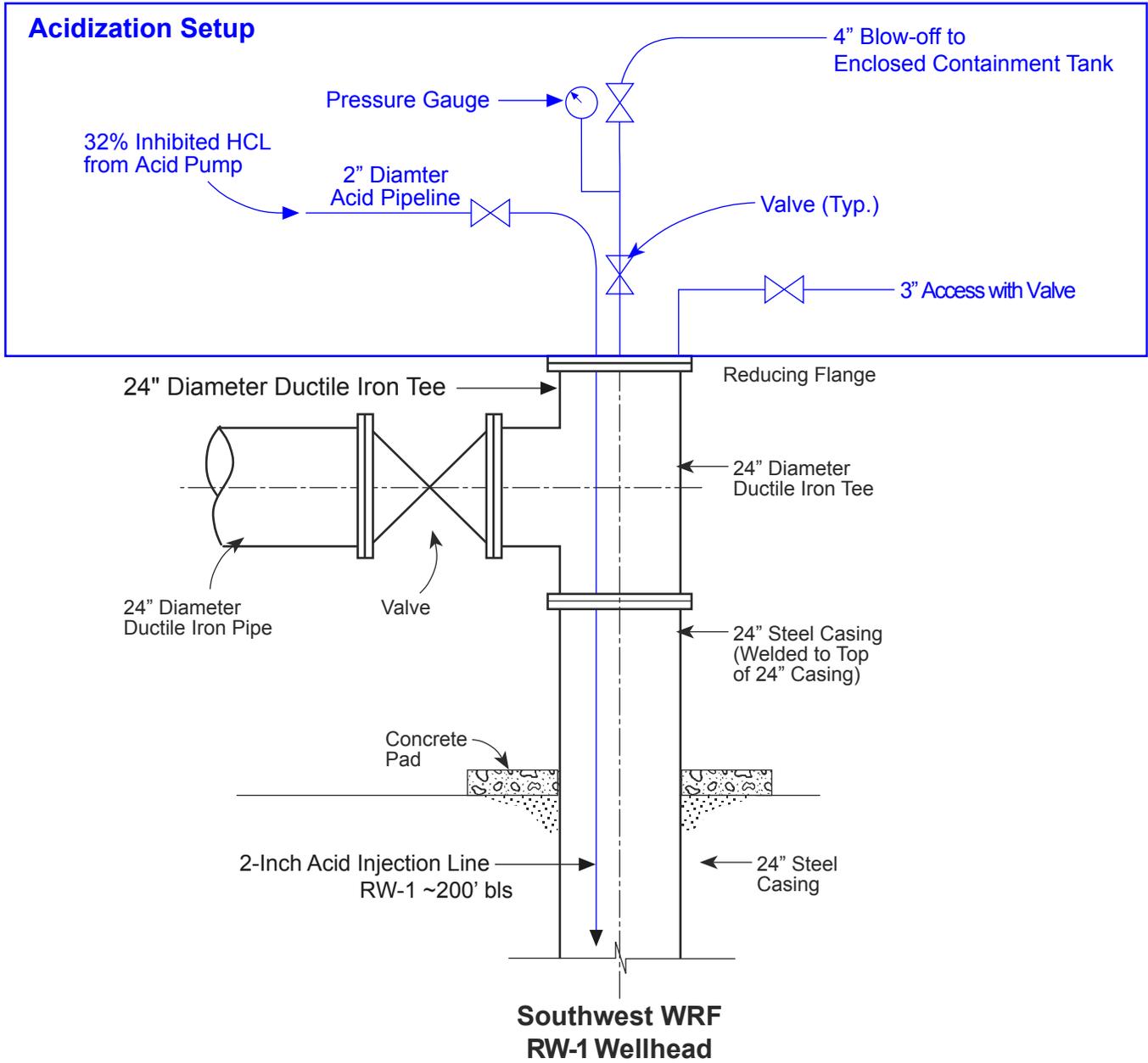




*NOTE: 34-inch and 42-inch diameter casings will be finished two-feet below grade.*

**DRAWING 5**  
ASR Well Temporary Wellhead Completion





bls = below land surface

**Drawing 6**  
Typical Setup for Acidization



CONSTRUCTION AGREEMENT

*for*

STIPULATED SUM

*between*

MANATEE COUNTY (AS OWNER)

*and*

\_\_\_\_\_ (AS CONTRACTOR)



**FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION**

BOB MARTINEZ CENTER  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT  
GOVERNOR

CARLOS LOPEZ-CANERA  
LT. GOVERNOR

JONATHAN P. STEVERSON  
SECRETARY

SENT VIA ELECTRONIC MAIL:

In the Matter of an Application for Permit by:

February 24, 2015

Charles M. Gore, Director of Utilities Department  
Manatee County Utilities  
4410 66<sup>th</sup> Street West  
Bradenton, Florida 34210  
[mike.gore@mymanatee.org](mailto:mike.gore@mymanatee.org)

Manatee County UIC  
UIC Permit Number 329514-001-UC/5R  
WACS ID 102092  
Class V Injection Well System  
Construction and Testing Permit

**NOTICE OF PERMIT**

Enclosed is Permit Number 329514-001-UC/5R to construct and operationally test: A non-hazardous Injection Well System, consisting of one (1) Class V, Group 2, recharge well (RW-1).

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, [agency\\_cleck@dep.state.fl.us](mailto:agency_cleck@dep.state.fl.us); 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 this Notice is filed with the Clerk of the Department.

Executed in Leon County, Florida.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

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Joseph Haberfeld, P.G.  
Aquifer Protection Program Administrator

PERMITTEE: Charles M. Gore, Director  
Manatee County Utilities  
Southwest Water Reclamation Facility

Permit Number: 329514-001-UC/5R  
WACS ID: 102092

### CERTIFICATE OF SERVICE

The undersigned designated clerk hereby certifies that this **NOTICE OF PERMIT** and all copies were mailed before the close of business on Tuesday, February 24, 2015 to the listed persons.

### FILING AND ACKNOWLEDGMENT

**FILED**, on this date, pursuant to Section 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

  
\_\_\_\_\_  
Clerk

February 24, 2015

\_\_\_\_\_  
Date

#### Copies Furnished To:

Joseph Haberfeld, FDEP/TLH  
Douglas Thornton, FDEP/TLH  
George Heuler, FDEP/TLH  
Jeff Goodwin, MCU  
Mark Simpson, MCU  
Mark McNeal, ASRUS/Tampa  
Pete Larkin, ASRUS/Tampa  
Thomas Waldeck, CH2M/Tampa  
Chuck Froman, MCU  
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**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

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RICK SCOTT  
GOVERNOR

CARLOS LOPEZ-CANERA  
LT. GOVERNOR

JONATHAN P. STEVERSON  
SECRETARY

**Underground Injection Control  
Class V, Group 2, Injection Well System  
Construction and Testing Permit**

**Permittee:**

Charles M. Gore, Director  
Manatee County Utilities  
4410 66<sup>th</sup> Street West  
Bradenton, Florida 34210  
[mike.gore@mymanatee.org](mailto:mike.gore@mymanatee.org)

**Permit/Certification**

Permit Number: 329514-001-UC/5R  
WACS ID: 102092  
Date of Issuance: February 24, 2015  
Date of Expiration: February 23, 2020  
Permit Processor: Douglas Thornton

**Facility**

Southwest Water Reclamation Facility  
5101 65<sup>th</sup> Street West  
Bradenton, Florida 34210

**Location**

County: Manatee County UIC  
Latitude: 27° 27' 16" N  
Longitude: 82° 37' 20" W

**Project:** Class V, Group 2, Injection Well System RW-1.

This permit is issued under the provisions of Chapter 403, Florida Statutes, and the rules adopted thereunder. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows.

**TO CONSTRUCT AND OPERATIONALLY TEST:** An Injection Well System, consisting of one (1) non-hazardous Class V, Group 2, recharge well (RW-1) with, nominal twenty-four inch (24") diameter steel casing to 1000 feet below land surface (bls), and a total depth of 1,500 feet bls. Injection will be into the Avon Park Formation of the Floridan aquifer for the purpose of recharging excess reclaimed water which has received high level disinfection from the Southwest Water Reclamation Facility. Maximum injected volume shall be 15 million gallons per day during wet season months. A monitoring well SLMW-1 will be constructed to monitor the overlying aquifer from 500 to 700 feet bls and a recharge zone monitoring well RZMW-1 will be constructed to monitor the recharge zone from 1000 to 1050 feet bls. Existing monitor well MW-2 will monitor the recharge zone from 980 to 1140 feet bls.

**IN ACCORDANCE WITH** The Application to Construct DEP Form No. 62-528.900(1) received, September 17, 2014, response to the Department's October 8, 2014, request for additional information, and supporting information submitted to this agency.

**PERMITTEE:** Charles M. Gore, Director  
 Manatee County Utilities  
 Southwest Water Reclamation Facility

**Permit Number:** 329514-001-UC/5R  
**WACS ID:** 102092

**LOCATION:** Southwest Water Reclamation Facility, 5101 65<sup>th</sup> Street West, Bradenton, Florida 34210, in the county of Manatee.

The injection and monitoring wells at this facility are designated as follows:

Injection Wells:

<i>Well Name</i>	<i>WACS Effluent Testsite ID</i>	<i>Total Well Depth *</i>	<i>Casing Diameter (inches)</i>	<i>Casing or Tubing Type</i>	<i>Casing or Interval*</i>
RW-1	14020	1500	42	Steel	60
			34	Steel	300
			24	Steel	1000
			Open hole		From 1000 to 1500

\*Feet Below Land Surface

Monitoring Wells

<i>Well Name</i>	<i>WACS Monitoring Well Testsite ID</i>	<i>Monitoring Zone</i>	<i>Casing Diameter (OD)</i>	<i>Casing Type</i>	<i>Casing Depth*</i>	<i>Monitoring Depth*</i>
SLMW-1			20	Steel	60	
			14	Steel	300	
			6	Steel	500	
	29461	Monitoring Zone				From 500 to 700
RZMW-1			20	Steel	60	
			14	Steel	300	
			6	Steel	1000	
	29462	Monitoring Zone				From 1000 to 1050
MW-2			8	Steel	300	
			3	Steel	980	
	29463	Monitoring Zone				From 980 to 1140

\*Feet Below Land Surface

**SUBJECT TO:** Specific Conditions I-VII and General Conditions 1-24.

Specific Conditions

**I. GENERAL REQUIREMENTS**

1. This permit is for Manatee County Utilities to construct and operationally test one (1) non-hazardous Class V recharge well (RW-1). Monitoring well SLMW-1 will be constructed to monitor the recharge zone from 500 to 700 feet bls and a recharge zone monitoring well RZMW-1 will be constructed to monitor the recharge zone from 1000 to 1050 feet bls. This permit does not authorize the construction or operational testing of any other well or wells. [62-528.440(2)(a)]

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2. In the event a well must be plugged or abandoned, the permittee shall obtain a permit from the Department as required by Chapter 62-528, Florida Administrative Code. When no longer used for their intended purpose, these wells shall be properly plugged and abandoned. Within 180 days of well abandonment, the permittee shall submit to the Department the proposed plugging method, pursuant to Rule 62-528.460, F.A.C. [62-528.460(1) and 62-528.435(6)]
3. If injection is to continue beyond the expiration date of this permit the permittee shall apply for, and obtain an operation permit. If necessary to complete the two-year operational testing period, the permittee shall apply for renewal of the construction permit at least 60 days prior to the expiration date of this permit. [62-528.307(2)(a)]
4. **Zone of Discharge**
  - a. A zone of discharge under Rule 62-520.465(2)(b), F.A.C, is established for this injection project for secondary drinking water standards and for sodium. The zone of discharge extends to the permittee's property boundary. [62-520.465(2)(b)]
  - b. Compliance with the zone of discharge shall be demonstrated at monitor well RZWM-1, and secondary drinking water standards and sodium must be met at this compliance well. If the concentration for any standard in the natural background quality is greater than that which is listed in Rule 62-520.420(1), F.A.C., or in the case of pH is also less than the minimum, the representative natural background quality shall be the prevailing standard. [62-520.420, 62-520.600]
  - c. Should ground water monitoring during operation indicate secondary drinking water parameters or sodium are not met at compliance wells RZMW-1, the permittee shall, upon the Department's request, submit a report addressing the results of the collected ground water monitoring data. The report shall be submitted to the Department no later than 90 days after the request and shall include a discussion of the changes in water quality for parameters exceeding maximum contaminant levels. The report shall also address the adequacy of the zone of discharge and the steps to be taken to come into compliance. [62-520.700, 62-528.610(1)]

## II. SITE REQUIREMENTS

1. A drilling pad shall be provided to collect spillage of contaminants and to support the heaviest load that will be encountered during drilling. Spillage during construction activities, and any fluids spilled during maintenance, testing or repairs to the system(s) shall be contained on the pad(s) and directed to a means of treatment or proper disposal. The specifications for a temporary containment structure around the borehole during the drilling of the recharge well and storage zone monitoring wells shall be submitted to and approved by the Department prior to those wells being constructed. [62-528.410(9)(b)]
2. No drilling operations shall begin without an approved disposal site for drilling fluids, cuttings, or waste. It shall be the permittee's responsibility to obtain the necessary approval(s) for disposal prior to the start of construction. A detailed disposal plan shall be

submitted to the Department prior to the commencement of drilling activities for the injection and monitoring wells. *[62-528.410(9)(a)]*

3. Four surficial aquifer monitoring wells, identified as Pad Monitoring Wells (PMWs), shall be located near the corners of the pads to be constructed for RW-1 and RZMW-1, and shall be identified by location number and pad location, i.e. NW, SE. If located in a traffic area the well head(s) must be protected by traffic bearing enclosure(s) and cover(s). Each cover must lock and be specifically marked to identify the well and its purpose. The PMWs shall be sampled as follows:

- a. During the construction and associated testing phases, the PMWs shall be sampled weekly for chlorides (mg/L), specific conductance ( $\mu\text{mho/cm}$  or  $\mu\text{S/cm}$ ), temperature, and water level relative to the North American Vertical Datum of 1988 (NAVD 88). Initial PMW analyses shall be submitted prior to the onset of drilling activities.
- b. The PMWs shall also be sampled for total dissolved solids (mg/L) during the first four weeks of PMW sampling and at all times when specifically requested by the Department.
- c. The results of the PMW analyses shall be submitted to the Department in the weekly progress report. The PMWs shall be retained in service throughout the construction phase of the project. Upon completion of construction, the permittee may submit a request to the Department for cessation of sampling followed by capping, or plugging and abandonment of these wells.

*[62-528.410(9)(b)]*

4. Hurricane Preparedness – Upon the issuance of a “Hurricane Watch” by the National Weather Service, the preparations to be made include but are not necessarily limited to the following:
  - a. Secure all on-site salt and stockpiled additive materials to prevent surface and/or groundwater contamination.
  - b. Properly secure drilling equipment and rig(s) to prevent damage to well(s) and on-site treatment process equipment.

*[62-528.307(1)(f)]*

5. The permittee shall submit the proposed well locations on a scaled facility map and receive Department approval prior to drilling contractor mobilization to wells RZMW-1 and SLMW-1. *[62-528.425(1)(e)]*

### III. CONSTRUCTION AND TESTING REQUIREMENTS

#### A. General

1. Any construction, modification, repair, or abandonment of a well shall be performed by a Florida licensed water well contractor, licensed under Chapter 62-532, F.A.C., to engage in the business of construction, modification, repair or abandonment of a well.

*[62-532.200]*

2. Well construction shall follow the requirements of Rule 62-532.500 for Water Well Construction Standards. *[62-532.500]*

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3. The measurement points for drilling and logging operations shall be surveyed and referenced to the North American Vertical Datum of 1988 (NAVD 88) prior to the onset of drilling activities for the injection well and associated dual zone monitoring well. *[62-160.240(2)]*
4. Blow-out preventers or comparable flow control devices shall be installed on the wells prior to penetration of the Floridan aquifer system. *[62-528.410(9)(c)]*
5. The Department shall be notified 7 days prior to the mobilization of drilling operations to the site. *[62-528.307(1)(g)]*
6. Waters spilled during construction or testing of the injection well system shall be contained and properly disposed. *[62-528.410(9)(b)]*
7. If additives that were not approved in the permit application are used during grouting, for lost circulation, or for any other reason, information on their properties shall be submitted to FDEP prior to their use for Department review and approval. *[62-528.410(5)(c)]*
8. No more than 6% bentonite gel should be used to cement any casing unless advance approval is received from the Department due to conditions found during the drilling and logging of the well. *[62-528.420(5)(c)]*

#### **B. Evaluation and Testing**

1. The construction, geophysical logging program, and packer testing program shall be implemented in accordance with this permit and as proposed in the following submittals:
  - September 17, 2014, "Well Construction Application";
  - October 8, 2014, Response to RAI;
  - Other approved submittals received by the Department.*[62.528.307(1)(b)]*
2. Exact depths of casing seats and monitoring intervals will be determined based on field conditions and the results obtained during the construction and testing program, and are subject to the conditions of this permit. *[62-528.410(4)(c)]*
3. Department approval is required prior to the following stages of construction and testing:
  - a. Contract documents and spud date
  - b. Final (24-inch) casing seat in each injection well
  - c. Final (6-inch O.D.) casing seat in each monitoring well
  - d. Monitoring zone selection
  - e. Operational testing*[62-528.410(4)(c) and 62-528.420(4)(c)]*
4. The depth of the USDW (if encountered) and the background water quality of the monitoring zones shall be determined during drilling and testing using the following information:
  - a. Water samples from packer test data with analysis and interpretation

- b. Geophysical logging upon reaching the total depth of the appropriate pilot hole interval including the following logs: caliper, gamma, dual induction, borehole compensated sonic, pumping flowmeter, temperature, and fluid resistivity
  - c. Plots of sonic porosity and apparent formation fluid resistivity (RWA). Interpretation will include calculation of sonic porosity and RWA. The input parameters used to make this calculation shall be provided.  
*[62-528.405(1)(a) and 62-528.405(3)(b)]*
5. The data and analysis supporting the selection of the monitoring intervals shall be submitted to the Department after the collection, interpretation, and analysis of all pertinent cores, geophysical logs, packer tests and analysis of fluid samples. The Department shall approve the final selection of the specific monitoring intervals prior to monitor well completion. *[62-528.420(3)(c)]*
6. To identify the monitoring zones, the following information (if applicable) from the injection well and all available on-site sources of data shall be analyzed, interpreted and submitted for Department review and approval:
  - a. The characteristics of the transition zone (especially regarding TDS) in the vicinity of the USDW
  - b. Packer test data including water quality (TDS, chlorides, sulfate, specific conductance, ammonia, and total Kjeldahl nitrogen, at a minimum)
  - c. The specific capacity of the proposed monitoring zones based on packer testing results
  - d. The identification of the base of the USDW  
*[62-528.420(4)(c)]*
7. Confinement shall be demonstrated using at a minimum, directly measured lithologic properties, geophysical evidence, and tests performed while pumping the formation.  
*[62-528.405(2)(c)]*
8. Test results pertaining to confinement shall include and/or specifically reference the following informational and quality control items:
  - a. Information that documents the calibration of tools, including field checks prior to testing.
  - b. The conditioning/development of the borehole prior to logging, including the techniques used and the time periods in which they were applied, and
  - c. Pertaining to packer/pump testing - recording the pumping rate regularly throughout the test to account for possible variations in the pumping rate, and providing information regarding the detection of packer leaks, if any, during testing.  
*[62-528.405(2)(c)]*
9. Representative samples of circulation fluid shall be collected when drilling with water, air, or reverse air during the drilling of the pilot holes of Injection Well RW-1 and Monitoring Well RZMW-1. Representative samples of circulation fluid shall be collected at a minimum of every 90 feet in drilling. The circulation fluid samples shall be analyzed for chloride and specific conductance at a minimum. *[62-528.405(1)(a), 62-528.420(6)(g)]*

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10. If effluent is encountered or suspected during pilot hole drilling and testing, the Department shall be notified immediately by telephone and in writing and immediate appropriate precautionary measures shall be taken to prevent any upward fluid movement. *[62-528.440(2)(d)]*

### **C. Surface Equipment**

1. The integrity of the monitoring zone sampling systems shall be maintained at all times. Sampling lines shall be clearly and unambiguously identified by monitoring zone at the point at which samples are drawn. All reasonable and prudent precautions shall be taken to ensure that samples are properly identified by monitoring zone and that samples obtained are representative of those zones. Sampling lines and equipment shall be kept free of contamination with independent discharges and no interconnections with any other lines. *[62-528.307(1)(f) and 62-528.307(3)(b)]*
2. The surface equipment and piping for the recharge and monitoring wells shall be kept free of corrosion at all times. *[62-528.307(1)(f) and 62-528.307(3)(b)]*
3. The injection well pads shall be maintained and retained in service for the life of the injection wells. The injection well pads are not, unless specific approval is obtained from the Department, to be used for storage of any material or equipment at any time. *[62-528.307(1)(f) and 62-528.307(3)(b)]*

### **IV. QUALITY ASSURANCE/QUALITY CONTROL**

1. The permittee shall ensure that the construction and operational testing of this injection well system shall be as described in the application and supporting documents. Any proposed modifications to the permit shall be submitted in writing to the Tallahassee office of the Aquifer Protection Program for review and clearance prior to implementation. Changes of negligible impact to the environment and staff time will be reviewed by the program manager, cleared when appropriate and incorporated into this permit. Changes or modifications other than those described above will require submission of a completed application and appropriate processing fee as per Rule 62-4.050, F.A.C. *[62-528.100, 62-4.050]*
2. Proper operation and maintenance include effective performance and appropriate quality assurance procedures; adequate operator staffing and training; and adequate laboratory and process controls. *[62-528.307(2)(b)]*
3. All water quality samples required by this permit shall be collected in accordance with the appropriate Department Standard Operation Procedures (SOP), pursuant to Chapter 62-160, Field Procedures. A certified laboratory shall conduct the analytical work, as provided by Chapter 62-160, F.A.C., Laboratory Certification. Department approved test methods shall be utilized, unless otherwise stated in this permit. All calibration procedures for field testing and laboratory equipment shall follow manufacturer's instrumentation manuals and satisfy the requirements of the Department SOPs. A listing

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of the SOPs pertaining to field and laboratory activities is available at the FDEP website at: <http://www.dep.state.fl.us/water/sas/sop/sops.htm>. [62-4.246, 62-160]

4. All indicating, recording and totalizing devices associated with the injection well system shall be maintained in good operating condition and calibrated annually at a minimum. The pressure gauges, flow meter, and chart records shall be calibrated using standard engineering methods. [62-528.307(1)(f) and 62-528.307(2)(b)]
5. All reports submitted to satisfy the requirements of this permit shall be signed by a person authorized under Rule 62-528.340(1), F.A.C., or a duly authorized representative of that person under Rule 62-528.340(2), F.A.C. All reports required by this permit which are submitted to the Department shall contain the following certification as required by Rule 62-528.340(4), F.A.C.:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

[62-528.340(1), (2), and (4)]

6. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Southwest District as being more representative of ground water conditions. [62-520.310(5)]
7. A professional engineer registered pursuant to Chapter 471, F.S., shall be retained throughout the construction period to be responsible for the construction operation and to certify the application, specifications, completion report and other related documents. The Department shall be notified immediately of any change of engineer. [62-528.440(5)(b)]
8. Continuous on-site supervision by qualified personnel (engineer and/or geologist, as applicable) is required during all testing and geophysical logging operations. [62-528.440(5)(b)]

## V. REPORTING REQUIREMENTS

1. The drilling and construction schedule, site layout of drilling pad, and pad monitoring well locations shall be submitted to the Department during site preparation but prior to drilling operation commencement for the injection well system. [62-528.430(2)(a)]
2. Weekly progress reports shall be submitted to the Department's Tallahassee and Southwest District offices throughout the construction period for each well. These reports, which may be submitted by electronic mail, shall be submitted within 48 hours of the end of the period of record and shall include at a minimum the following information:
  - a. A cover letter summary of the daily engineer report, driller's log and a projection for activities in the next reporting period

- b. Daily engineers reports and driller's/work logs with detailed descriptions of all drilling progress, cementing, testing, logging, and casing installation activities.
  - c. Description of daily footage drilled by diameter of bit or size of hole opener or reamer being used.
  - d. Collection of drilling cuttings every 10 feet and at every formation change;
  - e. Description of work during installation and cementing of casing, including amounts of casing and cement used. Details of cementing operations shall include the number of cementing stages, and the following information for each stage of cementing: the volume of cement pumped, the theoretical fill depth, and the actual tag depth. From both the physical tag and the geophysical logs, a percent fill shall be calculated. An explanation of any significant deviation between actual versus theoretical fill shall be provided
  - f. Details of the additions of salt or other materials to suppress well flow, including the date, depth and amount of material used.
  - g. Description of testing accomplished including (but not limited to) pumping and packer tests
  - h. Lithologic logs and core descriptions with cuttings description, formation and depth encountered
  - i. Geophysical logs, video logs, and deviation survey results.
  - j. Water quality analyses, including but not limited to the weekly water quality analysis and water levels for the PMWs.
  - k. Well development records
  - l. Description of any construction problems that developed during the reporting period and current status
  - m. Interpretations included with all test results and logs submitted.
  - n. Documentation of disposal of drilling fluids, cuttings, formation water, or waste as per specific condition II.2.
  - o. Description of any construction problems that developed during the reporting period and current status;
  - p. Copies of the driller's log are to be submitted with the weekly summary;
  - q. Description of any deviation survey conducted;
- [62-528.430(1) and 62-528.410(9)(a)]
3. Natural background ground water quality samples shall be obtained from the recharge well and monitoring wells RZMW-1 and SLMW-1 for primary and secondary standards (Chapter 62-550.310 and 320, F.A.C.), excluding asbestos, dioxin, butachlor, acrylamide, and epichlorohydrin. The analysis shall also include dissolved oxygen, total iron, fecal coliform, *Cryptosporidium*, and *Giardia lamblia* (count and viability testing, where applicable). "Natural Background" means the condition of waters in the absence of man-induced alterations based on the best scientific information available to the Department [Rule 62-520.200(12), F.A.C.]. The samples shall be taken after final completion and clearance of drilling fluids from each well and prior to the initiation of any injection.  
[62-528.600(5)(a)]
4. The final selection of specific injection and monitoring intervals must be approved by the Department. In order to obtain an approval, the permittee shall submit a written request to the Department's Tallahassee office. All casing seat requests for the injection well(s) and

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the monitoring well(s) shall be accompanied by technical justification. To the extent possible, each casing seat request should address the following items:

- a. Lithologic and geophysical logs with interpretations, as the interpretations relate to the casing seat.
- b. Water quality data (including but not necessarily limited to TDS concentrations)
- c. Identification of confining units, including hydrogeologic data and interpretations
- d. Identification of monitoring zones
- e. Casing depth evaluation (mechanically secure formation, potential for grout seal)
- f. Lithologic drilling rate and weight on bit data, with interpretations (related to the casing seat)
- g. Identification of the base of the USDW using water quality, RWA plots, and geophysical log interpretations
- h. A certified evaluation of all logging and test results, submitted with test data.
- i. Transmissivity or specific capacity of proposed monitoring zone
- j. Packer test drawdown curves and interpretation

*[62-528.410(4)(c), 62-528.420(4)(c) and 62-528.605(2)]*

5. Upon completion of analysis of cores and sample cuttings recovered during the construction of wells covered by this permit (when no longer needed by the well owner), the permittee shall contact the Geological & Geotechnical Data Acquisition Program of the Florida Geological Survey (FGS) to arrange for the transfer of the cores and cuttings. The FGS shall also be contacted to arrange for the collection of 100 ml water samples, with nitric acid preservative for metal analysis, at the end of each packer test (where sufficient water is available) and aquifer background sample collection events.  
*[62-528.450(5)]*
6. All cores, cuttings, and water samples for FGS shall be shipped to the Florida Geological Survey, Geological & Geotechnical Data Acquisition Program, 3915 Commonwealth Boulevard, Tallahassee, Florida 32399. All cores and samples shall clearly identify the site name, well name/number, depths of samples/cores, and the latitude/longitude location of the well(s) using the form in this permit. *[62-528.450(5)]*
7. A final report of the construction and testing of the injection well(s) and monitoring well(s), shall be submitted no later than 120 days after commencement of operational testing, pursuant to Rule 62-528.430(1)(e), F.A.C. In addition, a copy of the cover letter for the report shall be sent to the U. S. Environmental Protection Agency, Region 4, UIC program, 61 Forsyth St. SW, Atlanta, GA 30303-8909. This report shall include as a minimum, definitions of the injection interval, all relevant confining units, the depth of the base of the USDW, and all monitoring zones, including all relevant data and interpretations. *[62-528.450(5)]*

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## VI. OPERATIONAL TESTING AND MONITORING REQUIREMENTS

### A. Operational Testing

1. The permittee shall conduct operational testing of the injection well system to demonstrate that the well can absorb the design and peak daily flows that are expected, prior to granting approval for operation. *[62-528.450(3)(a)]*
2. Prior to operational testing, the permittee shall comply with the requirements of rule 62-528.450(3)(a),(b), and (c), F.A.C. *[62-528.307(2)(e)]*
3. The operational testing of the Class V injection well system under this permit shall not commence without written authorization from the Department. *[62-528.450(3)(b)]*
4. Prior to operational testing approval, the following items must be submitted with the request for operational testing approval for Department review and approval:
  - a. Lithologic and geophysical logs with interpretations.
  - b. Certification of mechanical integrity and interpreted test data (if applicable).
  - c. A description of the actual injection procedure including the anticipated maximum pressure and flow rate at which the well will be operated under normal and emergency conditions.
  - d. Certification of completion of well construction by the Engineer of Record.
  - e. Calibration certificates for pressure gauges and flow meters.
  - f. Signed and sealed record "as-built" engineering drawings of the injection well system including all well construction, subsurface and surface piping and equipment, and appurtenances. These shall include the following:
    1. Process flow diagram (from injection pumps to aquifer recharge well);
    2. Injection and monitor well downhole and wellhead details;
    3. Design features for surge control and water hammer protection;
    4. Instruments and other devices related to flow, pressure, water sampling, and monitoring;
    5. Monitor well purge piping, sample points and separation of sampling lines from other lines to prevent cross connection and intended disposal method of purge water.
  - g. Demonstration of confinement and definition of the injection and confining sequences shall utilize data collected during the drilling, logging, and testing of the injection and monitoring wells. This submittal shall be prepared, signed, and sealed by a Florida Registered Professional Geologist or appropriately qualified Florida Registered Professional Engineer.
  - h. Background water quality data from the monitoring and injection zones (specific condition V.3).
  - i. Other data obtained during well construction needed by the Department to evaluate whether the well will operate in compliance with Department rules.  
*[62-528.450 (3)(a)3.i. and 62-528.455(1)(c)6]*

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5. Pressure gauges and flow meters shall be installed on the injection well prior to initiating injection activities at the site. [62-528.450(3)(a)]
6. Prior to the authorization of operational testing by the Department, the permittee shall contact the Southwest District office to arrange a site inspection. The inspection will determine if the conditions of the permit have been met and to verify that the injection well system is operational. During the inspection, emergency procedures and reporting requirements shall be reviewed. [62-528.450(3)(c)]
7. The Engineer of Record or designated qualified representative must be present for the start-up operations and the Department must be notified in writing of the date operational testing commenced for the subject well. [62-528.440(5)(b)]

## **B. Monitoring**

1. The permittee shall submit monthly to the Department the results of all injection well and monitoring well data required by this permit no later than the last day of the month immediately following the month of record. The report shall include:
  - a. A cover page summarizing the current status of all monthly activities, including the certification and signature required in condition II.5.;
  - b. Operational and water quality data in a tabular format. The following identifying information must be included on each data sheet:
    - i. Facility Name
    - ii. Well Name
    - iii. UIC Permit Number
    - iv. WACS Facility ID
    - v. WACS Testsite ID (on appropriate data sheet) as provided on the Injection Well and Monitoring Well tables on page 2 of this permit.
  - c. Laboratory pages and supporting documentation.[62-528.307(3)(d)]

2. The report may be sent via electronic mail in Adobe™ (.pdf) format to the following Program e-mail addresses:

Southwest District	SWD_UIC@dep.state.fl.us
Tallahassee – UIC Program	TAL_UIC@dep.state.fl.us

If a paper copy of the report is submitted, it should be sent to Department staff at the following addresses:

Southwest District	13051 N. Telecom Parkway Temple Terrace, Florida 33637
Tallahassee – UIC Program	2600 Blair Stone Road, MS 3530 Tallahassee, Florida, 32399-2400

[62-528.307(3)(d)]

3. The injection system shall be monitored in accordance with Rules 62-528.425(1)(g) and 62-528.430(2), F.A.C. The following injection well performance data and monitor zone data shall be recorded and reported in the Monthly Operating Report (MOR) as indicated below. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.  
 [62-528.307(2)(d), 528.430(2), and 62-528.450(3)(b)5.]

PARAMETER	UNIT	RECORDING FREQUENCY	FREQUENCY OF ANALYSES			
			RW-1 14020	RZMW-1 29462	SLMW-1 29461	MW-2 29463
Injection Pressure, max.	psi	continuous	a			
Injection Pressure, min.	psi	continuous	a			
Injection Pressure, avg.	psi	continuous	a			
Flow Rate, max.	gpm	continuous	a			
Flow Rate, min.	gpm	continuous	a			
Flow Rate, avg.	gpm	continuous	a			
Total Volume Injected	mg	daily/monthly	D/M			
Pressure or Water Level max.	psi or ft NAVD	continuous		a	a	
Pressure or Water Level min.	psi or ft NAVD	continuous		a	a	
Pressure or Water Level avg.	psi or ft NAVD	continuous		a	a	Q
Dissolved Oxygen <sup>b</sup>	mg/L	grab	W	W	W	Q
Fecal Coliform	#/100 ml	grab	W	W	S	
pH <sup>b</sup>	std. units	grab	W	W	W	Q
Oxidation-Reduction Potential	mV	grab	W	W	W	Q
Specific Conductance <sup>b</sup>	µmhos/cm	grab	W	W	W	Q
Total Coliform	#/100 ml	grab	W	W	S	
Total Trihalomethanes	µg/L	grab	W	W	S	
Temperature <sup>b</sup>	°C	grab	W	W	W	Q
Arsenic	µg/L	grab	S	W	S	Q
Ammonia (as N)	mg/L	grab	S	S	S	Q
Chloride	mg/L	grab	S	S	S	Q
Nitrate + Nitrite (as N)	mg/L	grab	S	S	Q	
Sodium	mg/L	grab	S	S	S	
Sulfate	mg/L	grab	S	S	S	
Sulfide	mg/L	grab	S	S	S	
Total Kjeldahl Nitrogen	mg/L	grab	S	S	S	Q
Total Dissolved Solids	mg/L	grab	S	S	S	Q
Total Iron	mg/L	grab	M	M	M	
Total Organic Carbon	mg/L	grab	M	M	M	
Total Alkalinity	mg/L	grab	M	M	M	
Total Suspended Solids	mg/L	grab	M	M	M	
Turbidity	NTU	grab	M	M	M	Q
Gross Alpha	pCi/L	grab	Q	Q		
Radium <sup>226</sup>	pCi/L	grab	Q	Q		
Radium <sup>228</sup>	pCi/L	grab	Q	Q		
Source Water, Primary and Secondary Standards		Composite	A			

See injection well and monitoring well tables at beginning of permit for more information.

W - Weekly; S- Semi-monthly (twice per month); M - Monthly; Q - Quarterly; A - Annual

<sup>a</sup> - Operational data reporting for flows, pressures and water levels: daily max, min and average from continuous reporting; monthly max, min and average (calculated from daily averages).

<sup>b</sup> - Field samples

\* - Sampling schedule may be adjusted after sufficient data has been collected to support a written request to do so, and with written Department approval.

4. Pertaining to the evacuation (purging) of the monitoring well(s), which is required prior to the collection of samples for the Monthly Operating Reports (MORs), the facility may elect to follow either one of the following two purging protocols:
  - a. The protocol stated below:

A minimum of three well volumes of fluid shall be evacuated from the monitoring systems prior to sampling for the chemical parameters listed above. Sufficient purging shall have occurred when either of the following has occurred:

    - 1) pH, specific conductance and temperature when sampled, upon purging the third or subsequent well volume, each vary less than 5% from that sampled upon purging the previous well volume; or
    - 2) Upon purging the fifth well volume.
  - b. The following protocol taken from DEP-SOP-001/01(Field Procedures):
    - 1) Purge until the water level has stabilized (well recovery rate equals the purge rate), then purge a minimum of one well volume, and then collect the first set of stabilization parameters, namely pH, specific conductance and temperature;
    - 2) Thereafter, collect stabilization parameters  $\geq$  every  $\frac{1}{4}$  well volume;
    - 3) Purging shall be complete when either of the following have occurred:
      - a) 3 consecutive readings of the parameters listed below are within the following ranges<sup>[1]</sup>:
        - pH  $\pm$  0.2 Standard Units
        - Specific Conductance  $\pm$  5.0% of reading
        - Temperature  $\pm$  0.2°C
      - b) Upon purging the fifth well volume.

*[62-160.210(1) and 62-528.430(2)]*
5. The flow from the monitoring zones during well evacuation and sampling shall not be discharged to surface waters or aquifers containing an underground source of drinking water. Waters purged from monitoring wells in preparation for sampling shall be diverted to the injection well head via the pad drainage system, wet well, or treatment plant. *[62-4.030, 62-620.320]*

## VII. ABNORMAL EVENTS

1. In the event the permittee is temporarily unable to comply with any of the conditions of a permit due to breakdown of equipment, power outages or destruction by hazard of fire, wind, or by other cause, the permittee of the facility shall notify the Southwest District office. *[62-528.415(4)(a)]*
2. Notification shall be made in person, by telephone, or by electronic mail (e-mail) within 24 hours of breakdown or malfunction to the Southwest District office.  
*[62-528.307(1)(x)]*
3. A written report of any noncompliance referenced in Specific Condition (1) above shall be submitted to the Southwest District office and the Tallahassee office within five days after

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<sup>[1]</sup> Provided dissolved oxygen in the groundwater of the zone being monitored is  $\leq$  20% of saturation for the measured temperature and turbidity is  $\leq$  20 NTUs. This assumption holds true for groundwater in most zones of the Floridan aquifer.

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its occurrence. The report shall describe the nature and cause of the breakdown or malfunction, the steps being taken or planned to be taken to correct the problem and prevent its reoccurrence, emergency procedures in use pending correction of the problem, and the time when the facility will again be operating in accordance with permit conditions. [62-528.415(4)(b)]

### General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are "permit conditions" and are binding and enforceable pursuant to section 403.141, F.S. [62-528.307(1)(a)]
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. [62-528.307(1)(b)]
3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor 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. [62-528.307(1)(c)]
4. This permit conveys no title to land, 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. [62-528.307(1)(d)]
5. This permit does not relieve the permittee from liability for harm to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties there from; 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. [62-528.307(1)(e)]
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, or 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. [62-528.307(1)(f)]
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 this permit;
  - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

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- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
- d. Reasonable time will depend on the nature of the concern being investigated.

*[62-528.307(1)(g)]*

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 the 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.

*[62-528.307(1)(h)]*

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 proscribed by sections 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. *[62-528.307(1)(i)]*

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.

*[62-528.307(1)(j)]*

11. This permit is transferable only upon Department approval in accordance with rules 62-4.120 and 62-528.350, F.A.C. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department. *[62-528.307(1)(k)]*

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

*[62-528.307(1)(l)]*

13. 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 shall be extended automatically unless the Department determines that the records are no longer required.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation)

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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:
  - i. the date, exact place, and time of sampling or measurements;
  - ii. the person responsible for performing the sampling or measurements;
  - iii. the dates analyses were performed;
  - iv. the person responsible for performing the analyses;
  - v. the analytical techniques or methods used;
  - vi. the results of such analyses.
- d. The permittee shall furnish to the Department, within the time requested in writing, any information which the Department requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
- e. If the permittee becomes aware that 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.

*[62-528.307(1)(m)]*

14. All applications, reports, or information required by the Department shall be certified as being true, accurate, and complete. *[62-528.307(1)(n)]*
15. Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each scheduled date. *[62-528.307(1)(o)]*
16. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *[62-528.307(1)(p)]*
17. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-528.307(1)(q)]*
18. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit. *[62-528.307(1)(r)]*
19. This permit may be modified, revoked and reissued, or terminated for cause, as provided in 40 C.F.R. sections 144.39(a), 144.40(a), and 144.41 (1998). The filing of a request by the permittee for a permit modification, revocation or reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. *[62-528.307(1)(s)]*
20. The permittee shall retain all records of all monitoring information concerning the nature and composition of injected fluid until five years after completion of any plugging and abandonment procedures specified under rule 62-528.435, F.A.C. The permittee shall

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deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records.

*[62-528.307(1)(t)]*

21. All reports and other submittals required to comply with this permit shall be signed by a person authorized under rules 62-528.340(1) or (2), F.A.C. All reports shall contain the certification required in rule 62-528.340(4), F.A.C. *[62-528.307(1)(u)]*
22. The permittee shall notify the Department as soon as possible of any planned physical alterations or additions to the permitted facility. In addition, prior approval is required for activities described in rule 62-528.410(1)(h). *[62-528.307(1)(v)]*
23. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity which may result in noncompliance with permit requirements. *[62-528.307(1)(w)]*
24. The permittee shall report any noncompliance which may endanger health or the environment including:
  - a. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or
  - b. Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

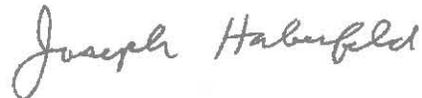
*[62-528.307(1)(x)]*

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Issued this 24<sup>th</sup> day of February 2015

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION



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Joseph Haberfeld, P.G.  
Aquifer Protection Program Administrator  
Division of Water Resource Management

**CONSTRUCTION AGREEMENT FOR  
STIPULATED SUM**

**Southeast Water Reclamation Facility (SEWRF) Septage / Grease Receiving Station Project**

**THIS AGREEMENT** (“Agreement”) is made and entered into by and between Manatee County, a political subdivision of the State of Florida, referred to herein as “Owner”, and the firm of \_\_\_\_\_, incorporated in the State of \_\_\_\_\_ and registered and licensed to do business in the State of Florida (license # \_\_\_\_\_), referred to herein as “Contractor.”

**WHEREAS**, the Owner intends to construct [-----], the aforementioned improvements being hereinafter referred to and defined as the “Project”; and

**WHEREAS**, in response to Owner’s Invitation for Bid No. \_\_\_\_\_ (the “IFB”), Contractor has submitted its Bid (the “Contractor’s Bid”) to provide the aforementioned construction services.

**NOW THEREFORE**, the Owner and the Contractor, in consideration of the mutual covenants hereinafter set forth, the sufficiency of which is hereby acknowledged, agree as follows:

**1. Contract Documents.** The Contract Documents consist of this Agreement and attached Exhibits, the attached General Conditions of the Construction Agreement, Supplementary Conditions (if any), Special Conditions (if any), Drawings (the titles of which are attached hereto as Exhibit A), Specifications (the titles of which are attached hereto as Exhibit B), Addenda issued prior to execution of this Agreement, the Invitation for Bid (including any Instructions to Bidders, Scope of Work, Bid Summary, Supplements, and Technical Specifications), any interpretations issued pursuant to the Invitation for Bid, the Contractor’s Bid, permits, notice of intent to award, Notice to Proceed, purchase order(s), any other documents listed in this Agreement, and Modifications [to include written Amendment(s), Change Order(s), Work Directive Change(s) and Field Directive(s)] issued after execution of this Agreement. These form the Agreement, and are as fully a part of the Agreement as if attached or repeated herein. This Agreement represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. No other documents shall be considered Contract Documents.

**2. Work.** The Contractor shall fully execute the Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others.

**3. Date of Commencement and Substantial Completion.**

A. Date of Commencement. The date of commencement of the Work shall be the date fixed in a Notice to Proceed issued by the Owner.

B. Contract Time. The Contract Time shall be measured from the date of commencement.

C. Substantial Completion. The Contractor shall achieve Substantial Completion of the entire Work not later than \_\_\_ days from the date of commencement, or as follows:

<b>Portion of Work</b>	<b>Substantial Completion Date</b>
------------------------	------------------------------------

subject to adjustments of this Contract Time as provided in the Contract Documents.

Time is of the essence in the Contract Documents and all obligations thereunder. If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time and as otherwise required by the Contract Documents, the Owner shall be entitled to retain or recover from the Contractor, as liquidated damages and not as a penalty, the sum of \$\_\_\_\_\_ per calendar day, commencing upon the first day following expiration of the Contract Time and continuing until the actual date of Substantial Completion. Such liquidated damages are hereby agreed to be a reasonable estimate of damages the Owner will incur as a result of delayed completion of the Work. The Owner may deduct liquidated damages as described in this paragraph from any unpaid amounts then or thereafter due the Contractor under this Agreement. Any liquidated damages not so deducted from any unpaid amounts due the Contractor shall be payable to the Owner at the demand of the Owner, together with interest from the date of the demand at the maximum allowable rate.

#### **4. Contract Sum.**

A. Payment. The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be \_\_\_\_\_ Dollars and Zero Cents (\$\_\_\_\_\_), subject to additions and deductions as provided in the Contract Documents.

B. Alternates. The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner. *(State the numbers or other identification of accepted alternates. If decisions on other alternates are to be made by the Owner subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)*

C. Unit Prices. Unit prices, if any, are reflected in the Contractor's Bid.

#### **5. Payments.**

A. Progress Payments.

(1) Based upon Applications for Payment submitted to the Architect/Engineer by the Contractor and Certificates for Payment issued by the Architect/Engineer, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

- (2) The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.
- (3) Payments shall be made by Owner in accordance with the requirements of Section 218.735, Florida Statutes.
- (4) Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect/Engineer may require. This schedule, unless objected to by the Owner or Architect/Engineer, shall be used as a basis for reviewing the Contractor's Applications for Payment.
- (5) Applications for Payment shall indicate the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.
- (6) Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:
  - i. Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of ten percent (10.00%). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 3.3.B. of the General Conditions;
  - ii. Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), supported by paid receipts, less retainage of ten percent (10.00%);
  - iii. Subtract the aggregate of previous payments made by the Owner; and
  - iv. Subtract amounts, if any, for which the Architect/Engineer has withheld or nullified an Application for Payment, in whole or in part as provided in Section 3.3.C. of the General Conditions.
- (7) The progress payment amount determined in accordance with Section 5.A(6) shall be further modified under the following circumstances:

- i. Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect/Engineer shall determine for incomplete Work, retainage applicable to such work and unsettled claims.
- ii. Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 3.2.B. of the General Conditions.

(8) Reduction or limitation of retainage, if any, shall be as follows:

Notwithstanding the foregoing, upon completion of at least 50% of the Work, as determined by the Architect/Engineer and Owner, the Owner shall reduce to five percent (5%) the amount of retainage withheld from each subsequent progress payment.

(9) Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

B. Final Payment. Final Payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when:

- (1) The Contractor has fully performed the Work except for the Contractor's responsibility to correct Work as provided in Section 2.4.C. of the General Conditions, and to satisfy other requirements, if any, which extend beyond final payment; and
- (2) A final Application for Payment has been approved by the Architect/Engineer.

**6. Termination or Suspension.**

A. Termination. The Agreement may be terminated by the Owner or the Contractor as provided in Article XIV of the General Conditions.

B. Suspension by Owner. The Work may be suspended by the Owner as provided in Article XIV of the General Conditions.

**7. Other Provisions.**

A. Substantial Completion Defined. Substantial Completion shall be defined as provided in Article I of the General Conditions. In the event a temporary certificate of

occupancy or completion is issued establishing Substantial Completion, the Contractor shall diligently pursue the issuance of a permanent certificate of occupancy or completion.

B. Project Meetings. There shall be a project meeting, at the jobsite or other location acceptable to the parties, on a regularly scheduled basis. The meeting will be attended by a representative of the Contractor, Architect/Engineer and Owner. These representatives shall be authorized to make decisions that are not otherwise contrary to the requirements of this Agreement.

C. Weather. Any rainfall, temperatures below 32 degrees Fahrenheit or winds greater than 25 m.p.h. which actually prevents Work on a given day, shall be considered lost time and an additional day added to the Contract Time, provided no work could be done on site, and provided written notice has been submitted to the Owner by the Contractor documenting same.

D. Shop Drawings; Critical Submittals. In consideration of the impact of timely review of submittals and shop drawings on the overall progress of the Work, it is hereby agreed that the Owner shall cause his agents and design professionals to accomplish the review of any particular "critical" submittals and/or shop drawings and return same to the Contractor within fourteen (14) days.

E. Applications for Payment. Applications for Payment shall be submitted once monthly at regular intervals and shall include detailed documentation of all costs incurred.

F. Punch List. Within 30 days after obtainment of Substantial Completion, the Owner shall generate a "punch list" of all work items requiring remedial attention by the Contractor. Within 5 days thereafter the Architect/Engineer shall assign a fair value to the punch list items, which sum shall be deducted from the next scheduled progress payment to the Contractor. Upon satisfactory completion of the punch list items, as certified by the Architect/Engineer, the previously deducted sum shall be paid to the Contractor.

G. Closeout documentation. Within 30 days after obtainment of Substantial Completion and before final payment, Contractor shall gather and deliver to Owner all warranty documentation, all manufacturer's product and warranty literature, all manuals (including parts and technical manuals), all schematics and handbooks, and all as-built drawings.

H. Governing Provisions; Conflicts. In the event of a conflict between this Agreement and the Specifications or as between the General Conditions and the Specifications, the Specifications shall govern.

I. E-Verify. The Contractor's employment of unauthorized aliens is a violation of Section 274(e) of the Federal Immigration and Employment Act. The Contractor shall utilize the U.S. Department of Homeland Security E-Verify system to verify the employment eligibility of all new employees hired during the term of this Agreement, and shall require the same verification procedure of all Subcontractors.

**8. Insurance and Bonding.** If and to the extent required by the Invitation for Bid documents, the Contractor shall furnish insurance coverage for (but not necessarily limited to)

workers' compensation, commercial general liability, auto liability, excess liability, and builder's risk. The Contractor shall furnish to the Owner all appropriate policies and Certificate(s) of Insurance. The Contractor shall also post a Payment and Performance Bond for the Contract Sum, within ten (\_\_\_) days following notification of intent to award, and otherwise in accordance with the Invitation for Bid documents.

**9. Independent Contractor.** The Contractor acknowledges that it is functioning as an independent contractor in performing under the terms of this Agreement, and it is not acting as an employee of the Owner.

**10. Entire Agreement.** This Agreement (inclusive of the Contract Documents incorporated herein by reference) represents the full agreement of the parties.

**11. Amendments; Waivers; Assignment.**

A. Amendments. This Agreement may be amended only pursuant to an instrument in writing that has been jointly executed by authorized representatives of the parties hereto.

B. Waivers. Neither this Agreement nor any portion of it may be modified or waived orally. However, each party (through its governing body or properly authorized officer) shall have the right, but not the obligation, to waive, on a case-by-case basis, any right or condition herein reserved or intended for the benefit or protection of such party without being deemed or considered to have waived such right or condition for any other case, situation, or circumstance and without being deemed or considered to have waived any other right or condition. No such waiver shall be effective unless made in writing with an express and specific statement of the intent of such governing body or officer to provide such waiver.

C. Assignment. The rights and obligations of either party to this Agreement may be assigned to a third party only pursuant to a written amendment hereto.

**12. Validity.** Each of the Owner and Contractor represents and warrants to the other its respective authority to enter into this Agreement.

**13. Covenant To Defend.** Neither the validity of this Agreement nor the validity of any portion hereof may be challenged by any party hereto, and each party hereto hereby waives any right to initiate any such challenge. Furthermore, if this Agreement or any portion hereof is challenged by a third party in any judicial, administrative, or appellate proceeding (each party hereby covenanting with the other party not to initiate, encourage, foster, promote, cooperate with, or acquiesce to such challenge), the parties hereto collectively and individually agree, at their individual sole cost and expense, to defend in good faith its validity through a final judicial determination or other resolution, unless all parties mutually agree in writing not to defend such challenge or not to appeal any decision invalidating this Agreement or any portion thereof.

**14. Disclaimer of Third-Party Beneficiaries; Successors and Assigns.** This Agreement is solely for the benefit of the parties hereto, and no right, privilege, or cause of action shall by reason hereof accrue upon, to, or for the benefit of any third party. Nothing in this Agreement is intended or shall be construed to confer upon or give any person, corporation,

partnership, trust, private entity, agency, or other governmental entity any right, privilege, remedy, or claim under or by reason of this Agreement or any provisions or conditions hereof. This Agreement shall be binding upon, and its benefits and advantages shall inure to, the successors and assigns of the parties hereto.

**15. Construction.**

A. Headings and Captions. The headings and captions of articles, sections, and paragraphs used in this Agreement are for convenience of reference only and are not intended to define or limit their contents, nor are they to affect the construction of or be taken into consideration in interpreting this Agreement.

B. Legal References. All references to statutory sections or chapters shall be construed to include subsequent amendments to such provisions, and to refer to the successor provision of any such provision. References to “applicable law” and “general law” shall be construed to include provisions of local, state and federal law, whether established by legislative action, administrative rule or regulation, or judicial decision.

**16. Severability.** The provisions of this Agreement are declared by the parties hereto to be severable. In the event any term or provision of this Agreement shall be held invalid by a court of competent jurisdiction, such invalid term or provision should not affect the validity of any other term or provision hereof; and all such terms and provisions hereof shall be enforceable to the fullest extent permitted by law as if such invalid term or provision had never been part of this Agreement; provided, however, if any term or provision of this Agreement is held to be invalid due to the scope or extent thereof, then, to the extent permitted by law, such term or provision shall be automatically deemed modified in order that it may be enforced to the maximum scope and extent permitted by law.

**17. Governing Law; Venue.** This Agreement shall be governed by the laws of the State of Florida. Venue for any petition for writ of certiorari or other court action allowed by this Agreement shall be in the Circuit Court of the Twelfth Judicial Circuit in and for Manatee County, Florida.

**18. Attorney’s Fees and Costs.** In any claim dispute procedure or litigation arising from this Agreement, each party hereto shall be solely responsible for paying its attorney’s fees and costs.

**19. Notices.** All notices, comments, consents, objections, approvals, waivers, and elections under this Agreement shall be in writing and shall be given only by hand delivery for which a receipt is obtained, or certified mail, prepaid with confirmation of delivery requested, or by electronic mail with delivery confirmation. All such communications shall be addressed to the applicable addressees set forth below or as any party may otherwise designate in the manner prescribed herein.

To the Owner:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Email: \_\_\_\_\_

To the Contractor:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Email: \_\_\_\_\_

Notices, comments, consents, objections, approvals, waivers, and elections shall be deemed given when received by the party for whom such communication is intended at such party's address herein specified, or such other physical address or email address as such party may have substituted by notice to the other.

**20. Exhibits.** Exhibits to this Agreement are as follows:

Exhibit A—Title(s) of Drawings

Exhibit B—Title(s) of Specifications

Exhibit C—Affidavit of No Conflict

Exhibit D—Certificate(s) of Insurance

Exhibit E—Payment and Performance Bond

Exhibit F—Standard Forms

- 1—Application for Payment
- 2—Certificate of Substantial Completion
- 3—Final Reconciliation / Warranty / Affidavit
- 4—Change Order
- 5—Public Construction Bond Form

*WHEREFORE, the parties hereto have executed this Agreement as of the date last executed below.*

\_\_\_\_\_  
Name of Contractor

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**MANATEE COUNTY**, a political subdivision  
of the State of Florida

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

GENERAL CONDITIONS  
*of the*  
CONSTRUCTION AGREEMENT

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**GENERAL CONDITIONS**  
**ARTICLE I**  
**DEFINITIONS**

**1.1 Definitions.** For purposes of the Contract Documents, the following terms shall have the following meanings.

A. Acceptance: The acceptance of the Project into the Owner's operating public infrastructure.

B. Application for Payment: The form approved and accepted by the Owner, which is to be used by Contractor in requesting progress payments or final payment and which is to include such supporting documentation as is required by the Contract Documents.

C. Architect/Engineer: \_\_\_\_\_, a \_\_\_\_\_ corporation, registered and licensed to do business in the State of Florida.

D. Change Order: A written order signed by the Owner, the Architect/Engineer and the Contractor authorizing a change in the Project Plans and/or Specifications and, if necessary, a corresponding adjustment in the Contract Sum and/or Contract Time, pursuant to Article V.

E. Compensable Delay: Any delay beyond the control and without the fault or negligence of the Contractor resulting from Owner-caused changes in the Work, differing site conditions, suspensions of the Work, or termination for convenience by Owner.

F. Contractor's Personnel: The Contractor's key personnel designated by Contractor.

G. Construction Services: The Construction Services to be provided by Contractor pursuant to Section 2.4, in accordance with the terms and provisions of the Contract Documents.

H. Contract Sum: The total compensation to be paid to the Contractor for Construction Services rendered pursuant to the Contract Documents, as set forth in Contractor's Bid, unless adjusted in accordance with the terms of the Contract Documents.

I. Construction Team: The working team established pursuant to Section 2.1.B.

J. Contract Time: The time period during which all Construction Services are to be completed pursuant to the Contract Documents, to be set forth in the Project Schedule.

K. Days: Calendar days except when specified differently. When time is referred to in the Contract Documents by days, it will be computed to exclude the first and

include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or legal holiday, such day will be omitted from the computation.

L. Defective: When modifying the term “Work”, referring to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or that does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or that has been damaged prior to Owner’s approval of final payment (unless responsibility for the protection thereof has been assumed by Owner).

M. Excusable Delay: Any delay beyond the control and without the negligence of the Contractor, the Owner, or any other contractor caused by events or circumstances such as, but not limited to, acts of God or of a public enemy, fires, floods, freight embargoes, acts of government other than Owner or epidemics. Labor disputes and above average rainfall shall give rise only to excusable delays.

N. Field Directive: A written order issued by Owner which orders minor changes in the Work not involving a change in Contract Time, to be paid from the Owner’s contingency funds.

O. Final Completion Date: The date upon which the Project is fully constructed and all Work required on the Project and Project Site is fully performed as verified in writing by the Owner.

P. Float or Slack Time: The time available in the Project Schedule during which an unexpected activity can be completed without delaying substantial completion of the Work.

Q. Force Majeure: Those conditions constituting excuse from performance as described in and subject to the conditions described in Article XII.

R. Inexcusable Delay: Any delay caused by events or circumstances within the control of the Contractor, such as inadequate crewing, slow submittals, etc., which might have been avoided by the exercise of care, prudence, foresight or diligence on the part of the Contractor.

S. Non-prejudicial Delay: Any delay impacting a portion of the Work within the available total Float or Slack Time and not necessarily preventing Substantial Completion of the Work within the Contract Time.

T. Notice to Proceed: Written notice by Owner (after execution of Contract) to Contractor fixing the date on which the Contract Time will commence to run and on which Contractor shall start to perform the Work.

U. Owner: Manatee County, a political subdivision of the State of Florida.

V. Owner’s Project Representative: The individual designated by Owner to perform those functions set forth in Section 7.8.

W. Payment and Performance Bond: The Payment and Performance Bond security posted pursuant to Section 2.4.Y to guarantee payment and performance by the Contractor of its obligations hereunder.

X. Permitting Authority: Any applicable governmental authority acting in its governmental and regulatory capacity which is required to issue or grant any permit, certificate, license or other approval which is required as a condition precedent to the commencement or approved of the Work, or any part thereof, including the building permit.

Y. Prejudicial Delay: Any excusable or compensable delay impacting the Work and exceeding the total float available in the Project Schedule, thus preventing completion of the Work within the Contract Time unless the Work is accelerated.

Z. Progress Report: A report to Owner that includes all information required pursuant to the Contract Documents and submitted in accordance with Section 2.4.EE, hereof.

AA. Project: The total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by Owner and by separate contractors. For the purposes of the Contract Documents, the term Project shall include all areas of proposed improvements and all areas which may reasonably be judged to have an impact on the Project.

BB. Project Costs: The costs incurred by the Contractor to plan, construct and equip the Project and included within, and paid as a component of, the Contract Sum.

CC. Project Manager: Subject to the prior written consent of Owner, the individual designated to receive notices on behalf of the Contractor, or such other individual designated by the Contractor, from time to time, pursuant to written notice in accordance with the Contract Documents.

DD. Project Plans and Specifications: The one hundred percent (100%) construction drawings and specifications prepared by the Architect/Engineer, and any changes, supplements, amendments or additions thereto approved by the Owner, which shall also include any construction drawings and final specifications required for the repair or construction of the Project, as provided herein.

EE. Project Schedule: The schedule and sequence of events for the commencement, progression and completion of the Project, developed pursuant to Section 2.3., as such schedule may be amended as provided herein.

FF. Project Site: The site depicted in the Project Plans and Specifications, inclusive of all rights of way, temporary construction easements or licensed or leased sovereign lands.

GG. Pre-operation Testing: All field inspections, installation checks, water tests, performance tests and necessary corrections required of Contractor to demonstrate that

individual components of the Work have been properly constructed and do operate in accordance with the Contract Documents for their intended purposes.

HH. Procurement Ordinance: The Manatee County Procurement Code, Chapter 2-26 of the Manatee County Code of Laws, as amended from time to time.

II. Punch List Completion Date: The date upon which all previously incomplete or unsatisfactory items, as identified by the Contractor, the Architect/Engineer and/or the Owner are completed in a competent and workmanlike manner, consistent with standards for Work of this type and with good building practices in the State of Florida.

JJ. Subcontractor: Any individual (other than a direct employee of the Contractor) or organization retained by Contractor to plan, construct or equip the Project pursuant to Article IV.

KK. Substantial Completion and Substantially Complete: The stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use; provided, however, that as a condition precedent to Substantial Completion, the Owner has received all certificates of occupancy or completion and other permits, approvals, licenses, and other documents from any governmental authority which are necessary for the beneficial occupancy of the Project.

LL. Substantial Completion Date: The date on which the Project is deemed to be Substantially Complete, as evidenced by receipt of (i) the Architect/Engineer's certificate of Substantial Completion, (ii) written Acceptance of the Project by the Owner, and (iii) approvals of any other authority as may be necessary or otherwise required.

MM. Unit Price Work: Work to be paid for on the basis of unit prices.

NN. Work: The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

OO. Work Directive Change: A written directive to Contractor, issued on or after the effective date of the Agreement pursuant to Section 5.8 and signed by Owner's Project Representative, ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed or responding to emergencies.

## ARTICLE II RELATIONSHIP AND RESPONSIBILITIES

**2.1 Relationship between Contractor and Owner.** The Contractor accepts the relationship of trust and confidence established with Owner pursuant to the Contract Documents. The Contractor shall furnish its best skill and judgment and cooperate with Owner and Owner's Project Representative in furthering the interests of the Owner. The Contractor agrees to provide the professional services required to complete the Project consistent with the Owner's direction and the terms of the Contract Documents. All services provided hereunder by Contractor, either directly or through Subcontractors, shall be provided in accordance with sound construction practices and applicable professional construction standards.

A. Purpose. The purpose of the Contract Documents is to provide for the provision of construction services for the Project on the Project Site by the Contractor, and construction of the Project by the Contractor in accordance with the Project Plans and Specifications. The further purpose of the Contract Documents is to define and delineate the responsibilities and obligations of the parties to the Contract Documents and to express the desire of all such parties to cooperate together to accomplish the purposes and expectations of the Contract Documents.

B. Construction Team. The Contractor, Owner and Architect/Engineer shall be called the "Construction Team" and shall work together as a team commencing upon full execution of the Contract Documents through Substantial Completion. As provided in Section 2.2, the Contractor and Architect/Engineer shall work jointly through completion and shall be available thereafter should additional services be required. The Contractor shall provide leadership to the Construction Team on all matters relating to construction. The Contractor understands, acknowledges and agrees that the Architect/Engineer shall provide leadership to the Construction Team on all matters relating to design.

C. Response to Invitation for Bid. The Contractor acknowledges that the representations, statements, information and pricing contained in its Bid have been relied upon by the Owner and have resulted in the award of this Project to the Contractor.

**2.2 General Contractor Responsibilities.** In addition to the other responsibilities set forth herein, the Contractor shall have the following responsibilities pursuant to the Contract Documents:

A. Personnel. The Contractor represents that it has secured, or shall secure, all personnel necessary to perform the Work, none of whom shall be employees of the Owner. Primary liaison between the Contractor and the Owner shall be through the Owner's Project Representative and Contractor's Project Manager. All of the services required herein shall be performed by the Contractor or under the Contractor's supervision, and all personnel engaged in the Work shall be fully qualified and shall be authorized or permitted under law to perform such services.

B. Cooperation with Architect/Engineer. The Contractor's services shall be provided in conjunction with the services of the Architect/Engineer. In the performance of

professional services, the Contractor acknowledges that time is critical for Project delivery. The Contractor acknowledges that timely construction utilizing the services of an Architect/Engineer and a Contractor requires maximum cooperation between all parties.

C. Timely Performance. The Contractor shall perform all services as expeditiously as is consistent with professional skill and care and the orderly progress of the Work, in accordance with the Project Schedule. Verification of estimated Project Schedule goals will be made as requested by the Owner.

D. Duty to Defend Work. In the event of any dispute between the Owner and any Permitting Authority that relates to the quality, completeness or professional workmanship of the Contractor's services or Work, the Contractor shall, at its sole cost and expense, cooperate with the Owner to defend the quality and workmanship of the Contractor's services and Work.

E. Trade and Industry Terminology. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials, or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Owner or Contractor, or any of their agents or employees from those set forth in the Contract Documents. Computed dimensions shall govern over scaled dimensions.

**2.3 Project Schedule.** The Contractor, within ten (10) days after being awarded the Contract, shall prepare and submit for the Owner's and Architect/Engineer's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of Work.

A. The Project Schedule shall show a breakdown of all tasks to be performed, and their relationship in achieving the completion of each phase of Work, subject to review of Owner and Architect/Engineer and approval or rejection by Owner. The Project Schedule shall show, at a minimum, the approximate dates on which each segment of the Work is expected to be started and finished, the proposed traffic flows during each month, the anticipated earnings by the Contractor for each month and the approximate number of crews and equipment to be used. The Project Schedule shall include all phases of procurement, approval of shop drawings, proposed Change Orders in progress, schedules for Change Orders, and performance

testing requirements. The Project Schedule shall include a construction commencement date and Project Substantial Completion Date, which dates shall accommodate known or reasonably anticipated geographic, atmospheric and weather conditions.

- B. The Project Schedule shall serve as the framework for the subsequent development of all detailed schedules. The Project Schedule shall be used to verify Contractor performance and to allow the Owner's Project Representative to monitor the Contractor's efforts.
- C. The Project Schedule may be adjusted by the Contractor pursuant to Article V. The Owner shall have the right to reschedule Work provided such rescheduling is in accord with the remainder of terms of the Contract Documents.
- D. The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect/Engineer's approval. The Architect/Engineer's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect/Engineer reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.
- E. The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect/Engineer.

**2.4 Construction Services.** The Contractor shall provide the following Construction Services:

A. Construction of Project. The Contractor shall work from the receipt of a Notice to Proceed through the Substantial Completion of the Project in accordance with the terms of the Contract Documents to manage the construction of the Project. The Construction Services provided by the Contractor to construct the Project shall include without limitation (1) all services necessary and commensurate with established construction standards, and (2) all services described in the Invitation for Bid and the Bid.

B. Notice to Proceed. A Notice to Proceed may be given at any time within thirty (30) days after the effective date of the Agreement. Contractor shall start to perform the Work on the date specified in the Notice to Proceed, but no Work shall be done at the site prior to the issuance of the Notice to Proceed.

C. Quality of Work. If at any time the labor used or to be used appears to the Owner as insufficient or improper for securing the quality of Work required or the required rate of progress, the Owner may order the Contractor to increase its efficiency or to improve the character of its Work, and the Contractor shall conform to such an order. Any such order shall

not entitle Contractor to any additional compensation or any increase in Contract Time. The failure of the Owner to demand any increase of such efficiency or any improvement shall not release the Contractor from its obligation to secure the quality of Work or the rate of progress necessary to complete the Work within the limits imposed by the Contract Documents. The Owner may require the Contractor to remove such personnel as the Owner deems incompetent, careless, insubordinate or otherwise objectionable, or whose continued employment on the Project is deemed to be contrary to the Owner's interest. The Contractor shall provide good quality workmanship and shall promptly correct construction defects without additional compensation. Acceptance of the Work by the Owner shall not relieve the Contractor of the responsibility for subsequent correction of any construction defects.

D. Materials. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by Architect/Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instruction of the applicable supplier except as otherwise provided in the Contract Documents.

E. Accountability for Work. The Contractor shall be solely accountable for its Work, including plans review and complete submittals. The Contractor shall be solely responsible for means and methods of construction.

F. Contract Sum. The Contractor shall construct the Project so that the Project can be built for a cost not to exceed the Contract Sum.

G. Governing Specifications. The Project shall be constructed in accordance with applicable Owner design standards and guidelines. In the absence of specified Owner design standards or guidelines, the Architect/Engineer shall use, and the Contractor shall comply with, the most recent version of the applicable FDOT or AASHTO design standards. In general, the Project shall be constructed by the Contractor in accordance with applicable industry standards. The Contractor shall be responsible for utilizing and maintaining current knowledge of any laws, ordinances, codes, rules, regulations, standards, guidelines, special conditions, specifications or other mandates relevant to the Project or the services to be performed.

H. Adherence to Project Schedule. The development and equipping of the Project shall be undertaken and completed in accordance with the Project Schedule, and within the Contract Time described therein.

I. Superintendent. The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project Site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

(1) The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect/Engineer the name and qualifications of the proposed superintendent. The Architect/Engineer may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect/Engineer has reasonable objection to the proposed superintendent or (2) that the Architect/Engineer requires additional time to review.

Failure of the Architect/Engineer to reply within 14 days shall constitute notice of no reasonable objection.

(2) The Contractor shall not employ a proposed superintendent to whom the Owner or Architect/Engineer has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not be unreasonably withheld or delayed.

J. Work Hours. Contractor shall provide competent, suitable qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and Contractor shall not permit overtime work or the performance of Work on a Saturday, Sunday or legal holiday without Owner's written consent given after prior notice to Architect/Engineer (at least seventy-two (72) hours in advance).

K. Overtime-Related Costs. Contractor shall pay for all additional Architect/Engineering charges, inspection costs and Owner staff time for any overtime work which may be authorized. Such additional charges shall be a subsidiary obligation of Contractor and no extra payment shall be made by Owner on account of such overtime work. At Owner's option, such overtime costs may be deducted from Contractor's monthly payment request or Contractor's retainage prior to release of final payment.

L. Insurance, Overhead and Utilities. Unless otherwise specified, Contractor shall furnish and assume full responsibility for all bonds, insurance, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

M. Cleanliness. The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project Site. Contractor shall restore to original conditions all property not designated for alteration by the Contract Documents. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from Contractor.

N. Loading. Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

O. Safety and Protection. Contractor shall comply with the Florida Department of Commerce Safety Regulations and any local safety regulations. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in

connection with the Work. Contractor shall take all necessary precautions for the safety of and shall provide the necessary protection to prevent damage, injury or loss to:

- (1) All employees on the Work and other persons and organizations who may be affected thereby;
- (2) All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project Site; and
- (3) Other property at the Project Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.

Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss, and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for the protection required by public authority or local conditions. Contractor shall provide reasonable maintenance of traffic for the public and preservation of the Owner's business, taking into full consideration all local conditions. Contractor's duties and responsibilities for safety and protection with regard to the Work shall continue until such time as all the Work is completed.

P. Emergencies. In emergencies affecting the safety or protection of persons or the Work or property at the Project Site or adjacent thereto, Contractor, without special instruction or authorization from Architect/Engineer or Owner, shall act to prevent threatened damage, injury or loss. Contractor shall give Owner prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Owner determines that a change in the Project is required because of the action taken in response to an emergency, a Work Directive Change or Change Order will be issued to document the consequences of the changes or variation.

Q. Substitutes. For substitutes not included with the Bid, but submitted after the effective date of the Contract Documents, Contractor shall make written application to Architect/Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will also contain an itemized estimate of all costs and delays or schedule impacts that will result directly or indirectly from review, acceptance and provisions of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by the Architect/Engineer in evaluating the proposed substitute. Architect/Engineer may require Contractor to furnish at Contractor's expense, additional data about the proposed substitute. In rendering a decision, Owner, Architect/Engineer and Contractor shall have access to any available Float Time in the Project Schedule. In the event that substitute materials or equipment not included as part of the Bid, but proposed after the effective date of the Contract Documents, are accepted and are less costly than the originally specified materials or equipment, then the net difference in cost shall be credited to the Owner and an appropriate Change Order executed to adjust the Contract Sum.

- (1) If a specific means, method, technique, sequence of procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Architect/Engineer if Contractor submits sufficient information to allow Architect/Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents.
- (2) Architect/Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. Architect/Engineer will be the sole judge of acceptability and no substitute will be ordered, installed or utilized without Architect/Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved shop drawing. Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- (3) Contractor shall reimburse Owner for the charges of Architect/Engineer and Architect/Engineer's Consultants for evaluating each proposed substitute submitted after the effective date of the Contract Documents and all costs resulting from any delays in the Work while the substitute was undergoing review.

R. Surveys and Stakes. The Contractor shall furnish, free of charge, all labor, stakes, surveys, batter boards for structures, grade lines and other materials and supplies and shall set construction stakes and batter boards for establishing lines, position of structures, slopes and other controlling points necessary for the proper prosecution of the Work. Where rights-of-way, easements, property lines or any other conditions which make the lay-out of the Project or parts of the Project critical are involved, the Contractor shall employ a competent surveyor who is registered in the State of Florida for lay-out and staking. These stakes and marks shall constitute the field control by and in accord with which the Contractor shall govern and execute the Work. The Contractor shall be held responsible for the preservation of all stakes and marks and if for any reason any of the stakes or marks or batter boards become destroyed or disturbed, they shall be immediately and accurately replaced by the Contractor.

S. Suitability of Project Site. The Contractor has, by careful examination, satisfied itself as to the nature and location of the Work and all other matters which can in any way affect the Work, including, but not limited to details pertaining to borings, as shown on the drawings. Such boring information is not guaranteed to be more than a general indication of the materials likely to be found adjacent to holes bored at the Project Site, approximately at the locations indicated. The Contractor has examined boring data, where available, made its own interpretation of the subsurface conditions and other preliminary data, and has based its Bid on its own opinion of the conditions likely to be encountered. Except as specifically provided in Sections 2.4.U., 5.4 and 5.5, no extra compensation or extension of time will be considered for any Project Site conditions that existed at the time of bidding. No verbal agreement or conversation with any officer, agent or employee of the Owner, before or after the execution of the Agreement, shall affect or modify any of the terms or obligations herein contained.

T. Project Specification Errors. If the Contractor, in the course of the Work, finds that the drawings, specifications or other Contract Documents cannot be followed, the Contractor shall immediately inform the Owner in writing, and the Owner shall promptly check the accuracy of the information. Any Work done after such discovery, until any necessary changes are authorized, will be done at the Contractor's sole risk of non-payment and delay.

U. Remediation of Contamination: Owner and Contractor recognize that remediation of subsurface conditions may be necessary due to potential hazardous materials contamination. Because the presence or extent of any contamination is not known, Contractor shall include no cost in the Contract Sum, and no time in the Project Schedule, for cost or delays that might result from any necessary remediation. The Project Schedule will provide a period of time between demolition activities and the start of the next activity to commence any remediation if needed. Contractor shall use all reasonable efforts in scheduling the Project to minimize the likelihood that remediation delays construction. Any hazardous materials remediation Work which Contractor agrees to perform shall be done pursuant to a Change Order or amendment consistent with the following:

- (1) The dates of Substantial Completion shall be equitably adjusted based on delays, if any, incurred in connection with remediation efforts.
- (2) Contractor, and any Subcontractors which have mobilized on the Project Site, shall be paid for demonstrated costs of overhead operations at the Project Site during any period of delay in excess of seven (7) days, except to the extent that Work proceeds concurrently with remediation. The categories of costs to be reimbursed are limited to those reasonably incurred at the jobsite during the delay period (such as trailers or offices, telephones, faxes, and the like); equipment dedicated to the Project and located at the Project Site; salaries and associated costs of personnel dedicated to the Project to the extent that they do not perform Work on other projects; and other jobsite costs that are reasonable and which are incurred during the delay period. Subcontractors and suppliers which have not mobilized are limited to the costs set forth in Section 2.4.U(3).
- (3) Contractor and any Subcontractor or supplier on the Project who is eligible for compensation shall be paid any demonstrated costs of escalation in materials or labor, and reasonable costs of off-site storage of materials identified to the Project, arising as a result of any delay in excess of seven (7) days. Such Contractor, Subcontractors and suppliers are obligated to take all reasonable steps to mitigate escalation costs, such as through early purchase of materials.
- (4) Contractor, for itself and all Subcontractors and suppliers on the Project, hereby agrees that the extension of time for delays under Section 2.4.U(1), and payment of the costs identified in Sections 2.4.U(2) and/or Section 2.4.U(3), are the sole remedies for costs and delays described in this Section, and waives all claims and demands for extended home office overhead (including, but not limited to, "Eichleay" claims), lost profit or lost opportunities, and any special, indirect, or consequential damages

arising as a result of delays described in this Section. The Contract Sum shall be adjusted to reflect payment of allowable costs.

- (5) If any delay described in this section causes the time or cost for the Project to exceed the Contract Time or the Contract Sum, then the Owner may terminate the Agreement pursuant to Section 14.2.
- (6) Contractor and any Subcontractor or supplier seeking additional costs under this Section 2.4.U. shall promptly submit estimates or any costs as requested by Owner, and detailed back-up for all costs when payment is sought or whenever reasonably requested by Owner. All costs are auditable, at Owner's discretion. Bid, estimate and pricing information reasonably related to any request for additional compensation will be provided promptly upon request.
- (7) Contractor shall include provisions in its subcontracts and purchase orders consistent with this Section.

V. Interfacing.

- (1) The Contractor shall take such measures as are necessary to ensure proper construction and delivery of the Project, including but not limited to providing that all procurement of long-lead items, the separate construction Subcontractors, and the general conditions items are performed without duplication or overlap to maintain completion of all Work on schedule. Particular attention shall be given to provide that each bid package clearly identifies the Work included in that particular separate subcontract, its scheduling for start and completion, and its relationship to other separate contractors.
- (2) Without assuming any design responsibilities of the Architect/Engineer, the Contractor shall include in the Progress Reports required under this Section 2.4 comments on overlap with any other separate subcontracts, omissions, lack of correlation between drawings, and any other deficiencies noted, in order that the Architect/Engineer may arrange for necessary corrections.

W. Job Site Facilities. The Contractor shall arrange for all job site facilities required and necessary to enable the Contractor and Architect/Engineer to perform their respective duties and to accommodate any representatives of the Owner which the Owner may choose to have present on the job.

X. Weather Protection. The Contractor shall provide temporary enclosures of building areas in order to assure orderly progress of the Work during periods when extreme weather conditions are likely to be experienced. The Contractor shall also be responsible for providing weather protection for Work in progress and for materials stored on the Project Site. A contingency plan shall be prepared upon request of the Owner for weather conditions that may affect the construction.

Y. Payment and Performance Bond. Prior to the construction commencement date, the Contractor shall obtain, for the benefit of and directed to the Owner, a Payment and Performance Bond satisfying the requirements of Section 255.05, Florida Statutes, covering the faithful performance by the Contractor of its obligations under the Contract Documents, including but not limited to the construction of the Project on the Project Site and the payment of all obligations arising thereunder, including all payments to Subcontractors, laborers, and materialmen. The surety selected by the Contractor to provide the Payment and Performance Bond shall be approved by the Owner prior to the issuance of such Bond, which approval shall not be unreasonably withheld or delayed provided that the surety is rated A or better by Best's Key Guide, latest edition.

Z. Construction Phase; Building Permit; Code Inspections. Unless otherwise provided, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work.

- (1) Building Permit. The Owner and Architect/Engineer shall provide such information to any Permitting Authority as is necessary to obtain approval from the Permitting Authority to commence construction prior to beginning construction. The Contractor shall pull any required building permit, and shall be responsible for delivering and posting the building permit at the Project Site prior to the commencement of construction. The cost of the building permit is included in the Contract Sum. The Owner and Architect/Engineer shall fully cooperate with the Contractor when and where necessary.
- (2) Code Inspections. The Project requires detailed code compliance inspection during construction in disciplines determined by any Permitting Authority. These disciplines normally include, but are not necessarily limited to, structural, mechanical, electrical, plumbing general building and fire. The Contractor shall notify the appropriate inspector(s) and the Architect/Engineer, no less than 24 hours in advance, when the Work is ready for inspection and before the Work is covered up. All inspections shall be made for conformance with the applicable ordinances and building codes. Costs for all re-inspections of Work found defective and subsequently repaired shall not be included as Project Costs and shall be borne by the Contractor or as provided in the contract between Contractor and Subcontractor.
- (3) Contractor's Personnel. The Contractor shall maintain sufficient off-site support staff and competent full-time staff at the Project Site authorized to act on behalf of the Contractor to coordinate, inspect, and provide general direction of the Work and progress of the Subcontractors. At all times during the performance of the Work, the Owner shall have the right to demand replacement of Contractor Personnel to whom the Owner has reasonable objection, without liability to the Contractor.

- (4) Lines of Authority. To provide general direction of the Work, the Contractor shall establish and maintain lines of authority for its personnel and shall provide this information to the Owner and all other affected parties, such as the code inspectors of any Permitting Authority, the Subcontractors, and the Architect/Engineer. The Owner and Architect/Engineer may attend meetings between the Contractor and his Subcontractors; however, such attendance is optional and shall not diminish either the authority or responsibility of the Contractor to administer the subcontracts.

AA. Quality Control. The Contractor shall develop and maintain a program, acceptable to the Owner and Architect/Engineer, to assure quality control of the construction. The Contractor shall be responsible for and supervise the Work of all Subcontractors, providing instructions to each when their Work does not conform to the requirements of the Project Plans and Specifications, and the Contractor shall continue to coordinate the Work of each Subcontractor to ensure that corrections are made in a timely manner so as to not affect the efficient progress of the Work. Should a disagreement occur between the Contractor and the Architect/Engineer over the acceptability of the Work, the Owner, at its sole discretion and in addition to any other remedies provided herein, shall have the right to determine the acceptability, provided that such determination is consistent with standards for construction projects of this type and generally accepted industry standards for workmanship in the State of Florida.

BB. Management of Subcontractors. All Subcontractors shall be compensated in accordance with Article IV. The Contractor shall solely control the Subcontractors. The Contractor shall negotiate all Change Orders and Field Orders with all affected Subcontractors and shall review the costs and advise the Owner and Architect/Engineer of their validity and reasonableness, acting in the Owner's best interest. When there is an imminent threat to health and safety, and Owner's Project Representative concurrence is impractical, the Contractor shall act immediately to remove the threats to health and safety and shall subsequently fully inform Owner of all such action taken. The Contractor shall also carefully review all shop drawings and then forward the same to the Architect/Engineer for review and actions. The Architect/Engineer will transmit them back to the Contractor, who will then issue the shop drawings to the affected Subcontractor for fabrication or revision. The Contractor shall maintain a suspense control system to promote expeditious handling. The Contractor shall request the Architect/Engineer to make interpretations of the drawings or specifications requested of him by the Subcontractors and shall maintain a business system to promote timely response. The Contractor shall inform the Architect/Engineer which shop drawings or requests for clarification have the greatest urgency, so as to enable the Architect/Engineer to prioritize requests coming from the Contractor. The Contractor shall advise the Owner and Architect/Engineer when timely response is not occurring on any of the above.

CC. Job Requirements.

- (1) The Contractor shall provide each of the following as a part of its services hereunder:
  - (a) Maintain a log of daily activities, including manpower records, equipment on site, weather, delays, major decisions, etc;
  - (b) Maintain a roster of companies on the Project with names and telephone numbers of key personnel;
  - (c) Establish and enforce job rules governing parking, clean-up, use of facilities, and worker discipline;
  - (d) Provide labor relations management and equal opportunity employment for a harmonious, productive Project;
  - (e) Provide and administer a safety program for the Project and monitor for subcontractor compliance without relieving them of responsibilities to perform Work in accordance with best acceptable practice;
  - (f) Provide a quality control program as provided under Section 2.4.C above;
  - (g) Provide miscellaneous office supplies that support the construction efforts which are consumed by its own forces;
  - (h) Provide for travel to and from its home office to the Project Site and to those other places within Manatee County as required by the Project;
  - (i) Verify that tests, equipment, and system start-ups and operating and maintenance instructions are conducted as required and in the presence of the required personnel and provide adequate records of same to the Architect/Engineer;
  - (j) Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and sample submissions, reproductions of original Contract Documents including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the Agreement, Owner/Architect/Engineer's clarifications and interpretations of the Contract Documents, progress reports, as-built drawings, and other project related documents;

- (k) Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions; list of visiting officials and representatives or manufacturers, fabricators, suppliers and distributors; daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures, and provide copies of same to Owner/Architect/Engineer;
  - (l) Record names, addresses and telephone numbers of all Contractors, Subcontractors and major suppliers of materials and equipment;
  - (m) Furnish Owner/Architect/Engineer periodic reports, as required, of progress of the Work and Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions;
  - (n) Consult with Owner/Architect/Engineer in advance of scheduling major tests, inspections or start of important phases of the Work;
  - (o) Verify, during the course of the Work, that certificates, maintenance and operations manuals and other data required to be assembled and furnished are applicable to the items actually installed, and deliver same to Owner/Architect/Engineer for review prior to final Acceptance of the Work; and
  - (p) Cooperate with Owner in the administration of grants.
- (2) The Contractor shall provide personnel and equipment, or shall arrange for separate Subcontractors to provide each of the following as a Project Cost:
- (a) Services of independent testing laboratories, and provide the necessary testing of materials to ensure conformance to contract requirements; and
  - (b) Printing and distribution of all required bidding documents and shop drawings, including the sets required by Permitting Authority inspectors.

DD. As-Built Drawings. The Contractor shall continuously review as-built drawings and mark up progress prints to provide as much accuracy as possible. Prior to, and as a requirement for authorizing final payment to the Contractor due hereunder, the Contractor shall provide to the Owner an original set of marked-up, as-built Project Plans and Specifications and an electronic format of those records showing the location and dimensions of the Project as constructed, which documents shall be certified as being correct by the Contractor and the Architect/Engineer. Final as-built drawings shall be signed and sealed by a registered Florida surveyor.

EE. Progress Reports. The Contractor shall forward to the Owner, as soon as practicable after the first day of each month, a summary report of the progress of the various parts of the Work under the Contract, in fabrication and in the field, stating the existing status, estimated time of completion and cause of delay, if any. Together with the summary report, the Contractor shall submit any necessary revisions to the original schedule for the Owner's review and approval. In addition, more detailed schedules may be required by the Owner for daily traffic control.

FF. Contractor's Warranty. The Contractor warrants to the Owner and Architect/Engineer that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements will be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect/Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

- (1) Contractor shall use its best efforts and due diligence to ensure that during the warranty period, those entities or individuals who have provided direct warranties to the Owner as required by the Contract Documents perform all required warranty Work in a timely manner and at the sole cost and expense of such warranty providers. Any such cost or expense not paid by the warranty providers shall be paid by the Contractor, to include any costs and attorney's fees incurred in warranty-related litigation between Contractor and any Subcontractors.
- (2) The Contractor shall secure guarantees and warranties of Subcontractors, equipment suppliers and materialmen, and assemble and deliver same to the Owner in a manner that will facilitate their maximum enforcement and assure their meaningful implementation. The Contractor shall collect and deliver to the Owner any specific written guaranties or warranties given by others as required by subcontracts.
- (3) At the Owner's request, the Contractor shall conduct, jointly with the Owner and the Architect/Engineer, no more than two (2) warranty inspections within three (3) years after the Substantial Completion Date.

GG. Apprentices. If Contractor employs apprentices, their performance of Work shall be governed by and comply with the provisions of Chapter 446, Florida Statutes.

HH. Schedule of Values. Unit prices shall be established for this Contract by the submission of a schedule of values within ten (10) days of receipt of the Notice to Proceed. The schedule shall include quantities and prices of items equaling the Contract Sum and will subdivide the Work into components in sufficient detail to serve as the basis for progress payments during construction. Such prices shall include an appropriate amount of

overhead and profit applicable to each item of Work. Upon request of the County, the Contractor shall support the values with data which will substantiate their correctness.

II. Other Contracts. The Owner reserves the right to let other Contracts in connection with this Work. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and execution of their Work, and promptly connect and coordinate the Work with theirs.

### **ARTICLE III COMPENSATION**

**3.1 Compensation.** The Contract Sum constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change in the Contract Sum.

A. Adjustments. The Contract Sum may only be changed by Change Order or by a written amendment. Any claim for an increase or decrease in the Contract Sum shall be based on written notice delivered by the party making the claim to the other party. Notice of the amount of the claim with supporting data shall be delivered within fifteen (15) days from the beginning of such occurrence and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event. Failure to deliver a claim within the requisite 15-day period shall constitute a waiver of the right to pursue said claim.

B. Valuation. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Sum shall be determined in one of the following ways (at Owner's discretion):

- (1) In the case of Unit Price Work, in accordance with Section 3.1.C, below;  
or
- (2) By mutual acceptance of lump sum; or
- (3) On the basis of the cost of the Work, plus a negotiated Contractor's fee for overhead and profit. Contractor shall submit an itemized cost breakdown together with supporting data.

C. Unit Price Work. The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment pursuant to a requested Change Order under the following conditions:

- (1) If the total cost of a particular item of Unit Price Work amounts to 5% or more of the Contract Sum and the variation in the quantity of the particular item of Unit Price Work performed by Contractor differs by more than 15% from the estimated quantity of such item indicated in the Agreement;  
and

- (2) If there is no corresponding adjustment with respect to any other item of Work; and
- (3) If Contractor believes that it has incurred additional expense as a result thereof; or
- (4) If Owner believes that the quantity variation entitles it to an adjustment in the unit price; or
- (5) If the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

**3.2 Schedule of Compensation.** All payments for services and material under the Contract Documents shall be made in accordance with the following provisions.

A. Periodic Payments for Services. The Contractor shall be entitled to receive payment for Construction Services rendered pursuant to Section 2.4 in periodic payments which shall reflect a fair apportionment of cost and schedule of values of services furnished prior to payment, subject to the provisions of this Section.

B. Payment for Materials and Equipment. In addition to the periodic payments authorized hereunder, payments may be made for material and equipment not incorporated in the Work but delivered and suitably stored at the Project Site, or another location, subject to prior approval and acceptance by the Owner on each occasion.

C. Credit toward Contract Sum. All payments for Construction Services made hereunder shall be credited toward the payment of the Contract Sum as Contractor's sole compensation for the construction of the Project.

**3.3 Invoice and Payment.** All payments for services and materials under the Contract Documents shall be invoiced and paid in accordance with the following provisions.

A. Invoices. The Contractor shall submit to the Owner periodic invoices for payment, in a form acceptable to the Owner, which shall include a sworn statement certifying that, to the best of the Contractor's knowledge, information and belief, the construction has progressed to the point indicated, the quality and the Work covered by the invoice is in accord with the Project Plans and Specifications, and the Contractor is entitled to payment in the amount requested, along with the cost reports required pursuant to Article II, showing in detail all monies paid out, Project Costs accumulated, or Project Cost incurred during the previous period. This data shall be attached to the invoice.

B. Additional Information; Processing of Invoices. Should an invoiced amount appear to exceed the Work effort believed to be completed, the Owner may, prior to processing of the invoice for payment, require the Contractor to submit satisfactory evidence to support the invoice. All progress reports and invoices shall be delivered to the attention of the Owner's Project Representative. Invoices not properly prepared (mathematical errors, billing not reflecting actual Work done, no signature, etc.) shall be returned to the Contractor for correction.

C. Architect/Engineer's Approval. Payment for Work completed shall be subject to the Architect/Engineer approving the payment requested by the Contractor and certifying the amount thereof that has been properly incurred and is then due and payable to the Contractor, and identifying with specificity any amount that has not been properly incurred and that should not be paid. .

D. Warrants of Contractor with Respect to Payments. The Contractor warrants that (1) upon payment of any retainage, materials and equipment covered by a partial payment request will pass to Owner either by incorporation in construction or upon receipt of payment by the Contractor, whichever occurs first; (2) Work, materials and equipment covered by previous partial payment requests shall be free and clear of liens, claims, security interests, or encumbrances, hereinafter referred to as "liens"; and (3) no Work, materials or equipment covered by a partial payment request which has been acquired by the Contractor or any other person performing Work at the Project Site, or furnishing materials or equipment for the Project, shall be subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or any other person.

E. All Compensation Included. Contractor's compensation includes full payment for services set forth in the Contract Documents, including but not limited to overhead, profit, salaries or other compensation of Contractor's officers, partners and/or employees, general operating expenses incurred by Contractor and relating to this Project, including the cost of management, supervision and data processing staff, job office equipment and supplies, and other similar items.

## **ARTICLE IV SUBCONTRACTORS**

**4.1 Subcontracts.** At the Owner's request, the Contractor shall provide Owner's Project Representative with copies of all proposed and final subcontracts, including the general and supplementary conditions thereof.

A. Subcontracts Generally. All subcontracts shall: (1) require each Subcontractor to be bound to Contractor to the same extent Contractor is bound to Owner by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor, (2) provide for the assignment of the subcontracts from Contractor to Owner at the election of Owner, upon termination of Contractor, (3) provide that Owner will be an additional indemnified party of the subcontract, (4) provide that Owner will be an additional insured on all insurance policies required to be provided by the Subcontractor, except workers' compensation, (5) assign all warranties directly to Owner, and (6) identify Owner as an intended third-party beneficiary of the subcontract.

(1) A Subcontractor is a person or entity who has a direct contract with Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

(2) A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term “Sub-subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

B. No Damages for Delay. Except when otherwise expressly agreed to by Owner in writing, all subcontracts shall provide:

“LIMITATION OF REMEDIES – NO DAMAGES FOR DELAY. The Subcontractor's exclusive remedy for delays in the performance of the contract caused by events beyond its control, including delays claimed to be caused by the Owner or Architect/Engineer or attributable to the Owner or Architect/Engineer and including claims based on breach of contract or negligence, shall be an extension of its contract time and shall in no way involve any monetary claim.”

Each subcontract shall require that any claims by the Subcontractor for delay must be submitted to the Contractor within the time and in the manner in which the Contractor must submit such claims to the Owner, and that failure to comply with the conditions for giving notice and submitting claims shall result in the waiver of such claims.

C. Subcontractual Relations. The Contractor shall require each Subcontractor to assume all the obligations and responsibilities which the Contractor owes the Owner pursuant to the Contract Documents, by the parties to the extent of the Work to be performed by the Subcontractor. Said obligations shall be made in writing and shall preserve and protect the rights of the Owner and Architect/Engineer, with respect to the Work to be performed by the Subcontractor, so that the subcontracting thereof will not prejudice such rights. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with its sub-subcontractor.

D. Insurance; Acts and Omissions. Insurance requirements for Subcontractors shall be no more stringent than those requirements imposed on the Contractor by the Owner. The Contractor shall be responsible to the Owner for the acts and omissions of its employees, agents, Subcontractors, their agents and employees, and all other persons performing any of the Work or supplying materials under a contract to the Contractor.

**4.2 Relationship and Responsibilities.** Except as specifically set forth herein with respect to direct materials acquisitions by Owner, nothing contained in the Contract Documents or in any Contract Document does or shall create any contractual relation between the Owner or Architect/Engineer and any Subcontractor. Specifically, the Contractor is not acting as an agent of the Owner with respect to any Subcontractor. The utilization of any Subcontractor shall not relieve Contractor from any liability or responsibility to Owner, or obligate Owner to the payment of any compensation to the Subcontractor or additional compensation to the Contractor.

**4.3 Payments to Subcontractors; Monthly Statements.** The Contractor shall be responsible for paying all Subcontractors from the payments made by the Owner to Contractor pursuant to Article III, subject to the following provisions:

A. Payment. The Contractor shall, no later than ten (10) days after receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, pay to each Subcontractor the amount to which the Subcontractor is entitled in accordance with the terms of the Contractor's contract with such Subcontractor. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-Subcontractors in a similar manner. After receipt of payment from Owner, if the need should arise to withhold payments to Subcontractors for any reason, as solely determined by Contractor, the Contractor shall promptly restore such monies to the Owner, adjusting subsequent pay requests and Project bookkeeping as required.

B. Final Payment of Subcontractors. The final payment of retainage to Subcontractors shall not be made until the Project has been inspected by the Architect/Engineer or other person designated by the Owner for that purpose, and until both the Architect/Engineer and the Contractor have issued a written certificate that the Project has been constructed in accordance with the Project Plans and Specifications and approved Change Orders. Before issuance of final payment to any Subcontractor without any retainage, the Subcontractor shall submit satisfactory evidence that all payrolls, material bills, and other indebtedness connected with the Project have been paid or otherwise satisfied, warranty information is complete, as-built markups have been submitted, and instruction for the Owner's operating and maintenance personnel is complete. Final payment may be made to certain select Subcontractors whose Work is satisfactorily completed prior to the completion of the Project, but only upon approval of the Owner's Project Representative.

**4.4 Responsibility for Subcontractors.** As provided in Section 2.4.BB, Contractor shall be fully responsible to Owner for all acts and omissions of the Subcontractors, suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect Contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions.

**4.5 Contingent Assignment of Subcontracts.** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that:

- (1) assignment is effective only after termination of the Contract by the Owner for cause pursuant to Article XIV and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- (2) assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Agreement.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract. Upon such assignment, if the Work has been suspended for more than thirty (30) days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension. Upon such assignment to the Owner, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner

shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## **ARTICLE V CHANGES IN WORK**

**5.1 General.** Changes in the Work may be accomplished after execution of the Agreement, and without invalidating the Agreement, by Change Order, Work Directive Change or order for a minor change in the Work, subject to the limitations stated in this Article V and elsewhere in the Contract Documents. A Change Order shall be based upon agreement among the Owner, Contractor and Architect/Engineer; a Work Directive Change requires agreement by the Owner and Architect/Engineer and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect/Engineer alone. Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Work Directive Change or order for a minor change in the Work.

**5.2 Minor Changes in the Work.** The Owner or Architect/Engineer shall have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such change will be effected by written order signed by the Architect/Engineer and shall be binding on the Owner and Contractor. The Contractor shall abide by and perform such minor changes. Such changes shall be effected by a Field Directive or a Work Directive Change. Documentation of changes shall be determined by the Construction Team, and displayed monthly in the Progress Reports. Because such changes shall not affect the Contract Sum to be paid to the Contractor, they shall not require a Change Order pursuant to Section 5.6.

**5.3 Emergencies.** In any emergency affecting the safety of persons or property, the Contractor shall act at its discretion to prevent threatened damage, injury, or loss. Any increase in the Contract Sum or extension of time claimed by the Contractor on account of emergency Work shall be determined as provided in Section 5.6. However, whenever practicable, the Contractor shall obtain verbal concurrence of the Owner's Project Representative and Architect/Engineer where the act will or may affect the Contract Sum or Contract Time.

**5.4 Concealed Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect/Engineer before conditions are disturbed and in no event later than ten (10) days after first observance of the conditions. The Architect/Engineer will promptly investigate such conditions and, if the Architect/Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect/Engineer determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect/Engineer

shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect/Engineer's determination or recommendation, that party may proceed as provided in Article VIII.

**5.5 Hazardous Materials.** In the event the Contractor encounters on the Project Site material reasonably believed to be hazardous, petroleum or petroleum related products, or other hazardous or toxic substances, except as provided in Section 2.4.U, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and the Architect/Engineer in writing. The Work in the affected area shall not thereafter be resumed except by written amendment, if in fact the material or substance has not been rendered harmless. The Work in the affected area shall be resumed when the Project Site has been rendered harmless, in accordance with the final determination by the Architect/Engineer or other appropriate professional employed by Owner. The Contractor shall not be required to perform without its consent any Work relating to hazardous materials, petroleum or petroleum related products, or other hazardous or toxic substances. In the event the Contractor encounters on the Project Site materials believed in good faith to be hazardous or contaminated material, and the presence of such hazardous or contaminated material was not known and planned for at the time the Contractor submitted its Bid, and it is necessary for the Contractor to stop Work in the area affected and delays Work for more than a seven (7) day period, adjustments to the Contract Sum and/or Contract Time shall be made in accordance with this Article V.

**5.6 Change Orders; Adjustments to Contract Sum.**

A. Change Orders Generally. The increase or decrease in the Contract Sum resulting from a change authorized pursuant to the Contract Documents shall be determined:

- (1) By mutual acceptance of a lump sum amount properly itemized and supported by sufficient substantiating data, to permit evaluation by the Architect/Engineer and Owner; or
- (2) By unit prices stated in the Agreement or subsequently agreed upon; or
- (3) By any other method mutually agreeable to Owner and Contractor.

If Owner and Contractor are unable to agree upon increases or decreases in the Contract Sum and the Architect/Engineer certifies that the work needs to be commenced prior to any such agreement, the Contractor, provided it receives a written Change Order signed by or on behalf of the Owner, shall promptly proceed with the Work involved. The cost of such Work shall then be determined on the basis of the reasonable expenditures of those performing the Work attributed to the change. However, in the event a Change Order is issued under these conditions, the Owner, through the Architect/Engineer, will establish an estimated cost of the Work and the Contractor shall not perform any Work whose cost exceeds that estimated without prior written approval by the Owner. In such case, the Contractor shall keep and present in such form as the Owner may prescribe an itemized accounting, together with appropriate supporting data of the increase in overall costs of the Project. The amount of any decrease in the Contract Sum to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in costs will be the amount of the actual net decrease.

**5.7 Unit Prices.** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if the quantities originally contemplated are so changed in a proposed Change Order that application of the agreed unit prices to the quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices and Contract Sum shall be equitably adjusted.

**5.8 Owner-Initiated Changes.** Without invalidating the Agreement and without notice to any Surety, Owner may, at any time, order additions, deletions or revisions in the Work. These will be authorized by a written amendment, a Field Directive, a Change Order, or a Work Directive Change, as the case may be. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided). A Work Directive Change may not change the Contract Sum or the Contract Time; but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Sum or Contract Time.

**5.9 Unauthorized Work.** Contractor shall not be entitled to an increase in the Contract Sum or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents.

**5.10 Defective Work.** Owner and Contractor shall execute appropriate Change Orders (or written amendments) covering changes in the Work which are ordered by Owner, or which may be required because of acceptance of defective Work, without adjustment to the Contract Sum.

**5.11 Estimates for Changes.** At any time Architect/Engineer may request a quotation from Contractor for a proposed change in the Work. Within twenty-one (21) calendar days after receipt, Contractor shall submit a written and detailed proposal for an increase or decrease in the Contract Sum or Contract Time for the proposed change. Architect/Engineer shall have twenty one (21) calendar days after receipt of the detailed proposal to respond in writing. The proposal shall include an itemized estimate of all costs and time for performance that will result directly or indirectly from the proposed change. Unless otherwise directed, itemized estimates shall be in sufficient detail to reasonably permit an analysis by Architect/Engineer of all material, labor, equipment, subcontracts, overhead costs and fees, and shall cover all Work involved in the change, whether such Work was deleted, added, changed or impacted. Notwithstanding the request for quotation, Contractor shall carry on the Work and maintain the progress schedule. Delays in the submittal of the written and detailed proposal will be considered non-prejudicial.

**5.12 Form of Proposed Changes.** The form of all submittals, notices, Change Orders and other documents permitted or required to be used or transmitted under the Contract Documents shall be determined by the Owner. Standard Owner forms shall be utilized.

**5.13 Changes to Contract Time.** The Contract Time may only be changed pursuant to a Change Order or a written amendment to the Contract Documents. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered by the party making the claim to the other party. Notice of the extent of the claim with supporting data shall be delivered within fifteen (15) days from detection or beginning of such occurrence and

shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. The Contract time will be extended in an amount equal to time lost due to delays beyond the control of Contractor. Such delays shall include, but not be limited to, acts or neglect by Owner or others performing additional Work; or to fires, floods, epidemics, abnormal weather conditions or acts of God. Failure to deliver a written notice of claim within the requisite 15-day period shall constitute a waiver of the right to pursue said claim.

## **ARTICLE VI ROLE OF ARCHITECT/ENGINEER**

### **6.1 General.**

A. Retaining. The Owner shall retain an Architect/Engineer (whether an individual or an entity) lawfully licensed to practice in Florida. That person or entity is identified as the Architect/Engineer in the Agreement and is referred to throughout the Contract Documents as if singular in number.

B. Duties. Duties, responsibilities and limitations of authority of the Architect/Engineer as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner and Architect/Engineer. Consent shall not be unreasonably withheld.

C. Termination. If the employment of the Architect/Engineer is terminated, the Owner shall employ a successor Architect/Engineer as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect/Engineer.

**6.2 Administration.** The Architect/Engineer will provide administration of the Agreement as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect/Engineer approves the final Application for Payment. The Architect/Engineer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

A. Site Visits. The Architect/Engineer will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work complete, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. Unless specifically instructed by Owner, the Architect/Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect/Engineer will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

B. **Reporting.** On the basis of the site visits, the Architect/Engineer will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect/Engineer will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect/Engineer will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

**6.3 Interpretation of Project Plans and Specifications.** The Architect/Engineer will be the interpreter of the requirements of the Project Plans and Specifications. Upon receipt of comments or objections by Contractor or Owner, the Architect/Engineer will make decisions on all claims, disputes, or other matters pertaining to the interpretation of the Project Plans and Specifications.

**6.4 Rejection of Non-Conforming Work.** Upon consultation with Owner, the Architect/Engineer shall have the authority to reject Work which does not conform to the Project Plans and Specifications.

**6.5 Correction of Work.** The Contractor shall promptly correct all Work rejected by the Architect/Engineer for being defective or as failing to conform to the Project Plans and Specifications, whether observed before or after the Substantial Completion Date and whether or not fabricated, installed, or completed. The Contractor shall bear all costs of correcting such rejected Work, including compensation for Architect/Engineer's additional services made necessary thereby.

**6.6 Timely Performance of Architect/Engineer.** The Contractor shall identify which requests for information or response from the Architect/Engineer have the greatest urgency and those items which require prioritizing in response by the Architect/Engineer. The Contractor shall also identify the preferred time period for response and shall request a response time which is reasonably and demonstrably related to the needs of the Project and Contractor. In the event that Architect/Engineer claims that Contractor's expectations for a response are unreasonable, Owner shall require Architect/Engineer to communicate such claim to Contractor in writing together with the specific time necessary to respond and the date upon which such response will be made. In the event that Contractor believes that Architect/Engineer is not providing timely services or responses, Contractor shall notify Owner of same in writing not less than two (2) weeks before Contractor believes performance or response time from Architect/Engineer is required without risk of delaying the Project.

**ARTICLE VII  
OWNER'S RIGHTS AND RESPONSIBILITIES**

**7.1 Project Site; Title.** The Owner shall provide the lands upon which the Work under the Contract Documents is to be done, except that the Contractor shall provide all necessary additional land required for the erection of temporary construction facilities and storage of his materials, together with right of access to same. The Owner hereby represents to the Contractor that it currently has and will maintain up through and including the Substantial Completion Date, good title to all of the real property constituting the Project Site. Owner agrees to resolve, at its expense, any disputes relating to the ownership and use of the Project Site which might arise during the course of construction.

**7.2 Project Plans and Specifications; Architect/Engineer.** The parties hereto acknowledge and agree that Owner has previously entered into an agreement with Architect/Engineer. Pursuant to the terms of such agreement, the Architect/Engineer, as an agent and representative of Owner, is responsible for the preparation of Project Plans and Specifications which consist of drawings, specifications, and other documents setting forth in detail the requirements for the construction of the Project. All of such Project Plans and Specifications shall be provided either by Owner or the Architect/Engineer, and Contractor shall be under no obligation to provide same and shall be entitled to rely upon the accuracy and completeness of the Project Plans and Specifications provided by the Architect/Engineer and all preliminary drawings prepared in connection therewith. The Contractor will be furnished a reproducible set of all drawings and specifications reasonably necessary for the performance of Contractor's services hereunder and otherwise ready for printing. The Contractor shall be notified of any written modification in the agreement between Owner and Architect/Engineer.

**7.3 Surveys; Soil Tests and Other Project Site Information.** Owner shall be responsible for providing a legal description and certified land survey of the Project Site in a form and content and with such specificity as may be required by the Architect/Engineer and Contractor to perform their services. To the extent deemed necessary by Owner and Architect/Engineer, and solely at Owner's expense, Owner may engage the services of a geotechnical consultant to perform test borings and other underground soils testing as may be deemed necessary by the Architect/Engineer or the Contractor. Contractor shall not be obligated to provide such surveys or soil tests and shall be entitled to rely upon the accuracy and completeness of the information provided; subject, however, to the provisions of Section 2.4.S hereof. Owner shall provide Contractor, as soon as reasonably possible following the execution of the Contract Documents, all surveys or other survey information in its possession describing the physical characteristics of the Project Site, together with soils reports, subsurface investigations, utility locations, deed restrictions, easements, and legal descriptions then in its possession or control. Upon receipt of all surveys, soils tests, and other Project Site information, Contractor shall promptly advise Owner of any inadequacies in such information and of the need for any additional surveys, soils or subsoil tests. In performing this Work, Contractor shall use the standard of care of experienced contractors and will use its best efforts timely to identify all problems or omissions. Owner shall not be responsible for any delay or damages to the Contractor for any visible or disclosed site conditions or disclosed deficiencies in the Project Site which should have been identified by Contractor and corrected by Owner prior to the execution of the Contract Documents.

**7.4 Information; Communication; Coordination.** The Owner's Project Representative shall examine any documents or requests for information submitted by the Contractor and shall advise Contractor of Owner's decisions pertaining thereto within a reasonable period of time to avoid unreasonable delay in the progress of the Contractor's services. Contractor shall indicate if any such documents or requests warrant priority consideration. However, decisions pertaining to approval of the Project Schedule as it relates to the date of Substantial Completion, the Project Cost, Contractor's compensation, approving or changing the Contract Sum shall only be effective when approved by Owner in the form of a written Change Order or amendment to the Contract Documents. Owner reserves the right to designate a different Owner's Project Representative provided Contractor is notified in writing of any such change. Owner and Architect/Engineer may communicate with Subcontractors, materialmen, laborers, or suppliers engaged to perform services on the Project, but only for informational purposes. Neither the Owner nor the Architect/Engineer shall attempt to direct the Work of or otherwise interfere with any Subcontractor, materialman, laborer, or supplier, or otherwise interfere with the Work of the Contractor. Owner shall furnish the data required of Owner under the Contract Documents promptly.

**7.5 Governmental Body.** The Contractor recognizes that the Owner is a governmental body with certain procedural requirements to be satisfied. The Contractor has and will make reasonable allowance in its performance of services for such additional time as may be required for approvals and decisions by the Owner and any other necessary government agency.

**7.6 Pre-Completion Acceptance.** The Owner shall have the right to take possession of and use any completed portions of the Work, although the time for completing the entire Work or such portions may not have expired, but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents.

**7.7 Ownership and Use of Drawings, Specifications and Other Instruments of Service.**

- (1) The Architect/Engineer and the Architect/Engineer's consultants shall be deemed the authors and owners of their respective instruments of service, including the Project Plans and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the instruments of service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect/Engineer's or Architect/Engineer's consultants' reserved rights.
- (2) The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the drawings and specifications provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Project Plans and Specifications or other instruments of service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the

drawings or specifications on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect/Engineer and the Architect/Engineer's consultants.

**7.8 Owner's Project Representative.** Owner's Project Representative is Owner's Agent, who will act as directed by and under the supervision of the Owner, and who will confer with Owner/Architect/Engineer regarding his actions. The Owner's Project Representative's dealings in matters pertaining to the on-site Work shall, in general, be only with the Owner/Architect/Engineer and Contractor and dealings with Subcontractors shall only be through or with the full knowledge of Contractor.

A. Responsibilities. Except as otherwise instructed in writing by Owner, the Owner's Project Representative will:

- (1) Attend preconstruction conferences; arrange a schedule of progress meetings and other job conferences as required in consultation with Owner/Architect/Engineer and notify those expected to attend in advance; and attend meetings and maintain and circulate copies of minutes thereof;
- (2) Serve as Owner/Architect/Engineer's liaison with Contractor, working principally through Contractor's superintendent, to assist in understanding the intent of the Contract Documents. As requested by Owner/Architect/Engineer, assist in obtaining additional details or information when required at the job site for proper execution of the Work;
- (3) Report to Owner/Architect/Engineer whenever he believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents;
- (4) Accompany visiting inspectors representing public or other agencies having jurisdiction over the project; record the outcome of these inspections and report to Owner/Architect/Engineer;
- (5) Review applications for payment with Contractor for compliance with the established procedure for their submission and forward them with recommendations to Owner/Architect/Engineer; and
- (6) Perform those duties as set forth elsewhere within the Contract Documents.

B. Limitations. Except upon written instructions of Owner, Owner's Project Representative shall not:

- (1) Authorize any deviation from the Contract Documents or approve any substitute materials or equipment;

- (2) Exceed limitations on Owner/Architect/Engineer's authority as set forth in the Contract Documents;
- (3) Undertake any of the responsibilities of Contractor, Subcontractors or Contractor's superintendent, or expedite the Work;
- (4) Advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents;
- (5) Advise on or issue directions as to safety precautions and programs in connection with the Work;
- (6) Authorize Owner to occupy the project in whole or in part; or
- (7) Participate in specialized field or laboratory tests.

**ARTICLE VIII  
RESOLUTION OF DISAGREEMENTS;  
CLAIMS FOR COMPENSATION**

**8.1 Owner to Decide Disputes.** The Owner shall reasonably decide all questions and disputes, of any nature whatsoever, that may arise in the execution and fulfillment of the services provided for under the Contract Documents, in accordance with the Procurement Ordinance.

**8.2 Finality.** The decision of the Owner upon all claims, questions, disputes and conflicts shall be final and conclusive, and shall be binding upon all parties to the Contract Documents, subject to judicial review as provided in Section 8.5 below.

**8.3 No Damages for Delay.** If at any time Contractor is delayed in the performance of Contractor's responsibilities under the Contract Documents as the result of a default or failure to perform in a timely manner by Owner or Owner's agents or employees, Contractor shall not be entitled to any damages except for compensation specifically authorized in Article III. Contractor's sole remedy will be a right to extend the time for performance. Nothing herein shall preclude Contractor from any available remedy against any responsible party other than Owner. Contractor shall be responsible for liquidated damages for delay pursuant to Section 3 of the Agreement.

**8.4 Permitted Claims Procedure.** Where authorized or permitted under the Contract Documents, all claims for additional compensation by Contractor, extensions of time affecting the Substantial Completion Date, for payment by the Owner of costs, damages or losses due to casualty, Force Majeure, Project Site conditions or otherwise, shall be governed by the following:

- (1) All claims must be submitted as a request for Change Order in the manner as provided in Article V.

- (2) The Contractor must submit a notice of claim to Owner's Project Representative and to the Architect/Engineer within fifteen (15) days of when the Contractor was or should have been aware of the fact that an occurrence was likely to cause delay or increased costs. Failure to submit a claim within the requisite 15-day period shall constitute a waiver of the right to pursue said claim.
- (3) Within twenty (20) days of submitting its notice of claim, the Contractor shall submit to the Owner's Project Representative its request for Change Order, which shall include a written statement of all details of the claim, including a description of the Work affected.
- (4) After receipt of a request for Change Order, the Owner's Project Representative, in consultation with the Architect/Engineer, shall deliver to the Contractor, within twenty (20) days after receipt of request, its written response to the claim.
- (5) In the event the Owner and Contractor are unable to agree on the terms of a Change Order, the Owner shall have the option to instruct the Contractor to proceed with the Work. In that event, the Owner shall agree to pay for those parts of the Work, the scope and price of which are not in dispute. The balance of the disputed items in the order to proceed will be resolved after completion of the Work, based upon completed actual cost.
- (6) The rendering of a decision by Owner with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment) will be a condition precedent to any exercise by Owner or Contractor of such right or remedies as either may otherwise have under the Contract Documents or by laws or regulations in respect of any such claim, dispute or other matter.

**8.5 Contract Claims and Disputes.** After completion of the process set forth in Section 8.4 above, any unresolved dispute under this Agreement shall be decided by the Purchasing Official in accordance with Section 2-26-63 of the Manatee County Code of Laws, subject to an administrative hearing process as provided in Section 2-26-64. The decision of the Board of County Commissioners in accordance with Section 2-26-64 of the Manatee County Code of Laws shall be the final and conclusive County decision subject to exclusive judicial review in circuit court by a petition for certiorari.

**8.6 Claims for Consequential Damages.** The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

- (1) damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

- (2) damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article XIV. Nothing contained in this Section 8.6 shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.

## **ARTICLE IX INDEMNITY**

### **9.1 Indemnity.**

A. Indemnification Generally. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect/Engineer, Architect/Engineer's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.1.

B. Claims by Employees. In claims against any person or entity indemnified under this Section 9.1 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 9.1.A. shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

**9.2 Duty to Defend.** The Contractor shall defend the Owner in any action, lawsuit mediation or arbitration arising from the alleged negligence, recklessness or intentionally wrongful conduct of the Contractor and other persons employed or utilized by the Contractor in the performance of the Work. So long as Contractor, through its own counsel, performs its obligation to defend the Owner pursuant to this Section, Contractor shall not be required to pay the Owner's costs associated with the Owner's participation in the defense.

**ARTICLE X**  
**ACCOUNTING RECORDS; OWNERSHIP OF DOCUMENTS**

**10.1 Accounting Records.** Records of expenses pertaining to all services performed shall be kept in accordance with generally accepted accounting principles and procedures.

**10.2 Inspection and Audit.** The Contractor's records shall be open to inspection and subject to examination, audit, and/or reproduction during normal working hours by the Owner's agent or authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the Contractor or any of its payees during the performance of the Work. These records shall include, but not be limited to, accounting records, written policies and procedures, Subcontractor files (including proposals of successful and unsuccessful bidders), original estimates, estimating worksheets, correspondence, Change Order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to the Contract Documents. They shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with the Contract Documents. For the purpose of such audits, inspections, examinations and evaluations, the Owner's agent or authorized representative shall have access to said records from the effective date of the Contract Documents, for the duration of Work, and until three (3) years after the date of final payment by the Owner to the Contractor pursuant to the Contract Documents.

**10.3 Access.** The Owner's agent or authorized representative shall have access to the Contractor's facilities and all necessary records in order to conduct audits in compliance with this Article. The Owner's agent or authorized representative shall give the Contractor reasonable advance notice of intended inspections, examinations, and/or audits.

**10.4 Ownership of Documents.** Upon completion or termination of the Contract Documents, all records, documents, tracings, plans, specifications, maps, evaluations, reports, transcripts and other technical data, other than working papers, prepared or developed by the Contractor under the Contract Documents shall be delivered to and become the property of the Owner. The Contractor at its own expense may retain copies for its files and internal use.

**ARTICLE XI**  
**PUBLIC CONTRACT LAWS**

**11.1 Equal Opportunity Employment.**

A. Employment. The Contractor shall not discriminate against any employee or applicant for employment because of race, creed, sex, color, national origin, disability or age, and will take affirmative action to insure that all employees and applicants are afforded equal

employment opportunities without discrimination because of race, creed, sex, color, national origin, disability or age. Such action will be taken with reference to, but shall not be limited to, recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff or termination, rates of training or retraining, including apprenticeship and on-the-job training.

B. Participation. No person shall, on the grounds of race, creed, sex, color, national origin, disability or age, be excluded from participation in, be denied the proceeds of, or be subject to discrimination in the performance of the Agreement.

**11.2 Immigration Reform and Control Act of 1986.** Contractor acknowledges that it is responsible for complying with the provisions of the Immigration Reform and Control Act of 1986, located at 8 U.S.C. Section 1324, et seq., and regulations relating thereto. Failure to comply with the above statutory provisions shall be considered a material breach and shall be grounds for immediate termination of this Agreement.

**11.3 No Conflict of Interest.** The Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Contractor to solicit or secure the Contract Documents, and that it has not paid or agreed to pay any person, company, corporation, individual, or firm other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, gift or any other consideration, contingent upon or resulting from the award or making of the Contract Documents.

A. No Interest in Business Activity. By accepting award of this Contract, the Contractor, which shall include its directors, officers and employees, represents that it presently has no interest in and shall acquire no interest in any business or activity which would conflict in any manner with the performance of services required hereunder, including without limitation as described in the Contractor's own professional ethical requirements. An interest in a business or activity which shall be deemed a conflict includes but is not limited to direct financial interest in any of the material and equipment manufacturers, suppliers, distributors, or contractors who will be eligible to supply material and equipment for the Project for which the Contractor is furnishing its services required hereunder.

B. No Appearance of Conflict. The Contractor shall not knowingly engage in any contractual or professional obligations that create an appearance of a conflict of interest with respect to the services provided pursuant to the Contract Documents. The Contractor has provided the Affidavit of No Conflict, incorporated into the Contract Documents as Exhibit "C", as a material inducement for Owner entering into the Contract Documents. If, in the sole discretion of the County Administrator or designee, a conflict of interest is deemed to exist or arise during the term of the County Administrator or designee may cancel this Agreement, effective upon the date so stated in a written notice of cancellation, without penalty to the Owner.

**11.4 Truth in Negotiations.** By execution of the Contract Documents, the Contractor certifies to truth-in-negotiations and that wage rates and other factual unit costs supporting the compensation are accurate, complete and current at the time of contracting. Further, the original Contract Sum and any additions thereto shall be adjusted to exclude any significant sums where the Owner determines the Contract Sum was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs. Such adjustments must be made within one (1) year after final payment to the Contractor.

**11.5 Public Entity Crimes.** The Contractor is directed to the Florida Public Entity Crimes Act, Section 287.133, Florida Statutes, specifically section 2(a), and the Owner's requirement that the Contractor comply with it in all respects prior to and during the term of the Agreement.

## **ARTICLE XII FORCE MAJEURE, FIRE OR OTHER CASUALTY**

### **12.1 Force Majeure.**

A. Unavoidable Delays. Delays in any performance by any party contemplated or required hereunder due to fire, flood, sinkhole, earthquake or hurricane, acts of God, unavailability of materials, equipment or fuel, war, declaration of hostilities, revolt, civil strife, altercation or commotion, strike, labor dispute, or epidemic, archaeological excavation, lack of or failure of transportation facilities, or any law, order, proclamation, regulation, or ordinance of any government or any subdivision thereof, or for any other similar cause to those enumerated, beyond the reasonable control and which with due diligence could not have been reasonably anticipated, shall be deemed to be events of Force Majeure and any such delays shall be excused. In the event such party is delayed in the performance of any Work or obligation pursuant to the Contract Documents for any of the events of Force Majeure stated in this Section 12.1, the date for performance required or contemplated by the Contract Documents shall be extended by the number of calendar days such party is actually delayed

B. Concurrent Contractor Delays. If a delay is caused for any reason provided in 12.1.A. or as a result of an extension of time provided by Change Order, and during the same time period a delay is caused by Contractor, the date for performance shall be extended as provided in 12.1.A. but only to the extent the time is or was concurrent.

C. Notice; Mitigation. The party seeking excuse for nonperformance on the basis of Force Majeure shall give written notice to the Owner, if with respect to the Contractor, or to the Contractor if with respect to the Owner, specifying its actual or anticipated duration. Each party seeking excuse from nonperformance on the basis of Force Majeure shall use its best efforts to rectify any condition causing a delay and will cooperate with the other party, except that neither party shall be obligated to incur any unreasonable additional costs and expenses to overcome any loss of time that has resulted.

**12.2 Casualty; Actions by Owner and Contractor.** During the construction period, if the Project or any part thereof shall have been damaged or destroyed, in whole or in part, the Contractor shall promptly make proof of loss; and Owner and Contractor shall proceed promptly to collect, or cause to be collected, all valid claims which may have arisen against insurers or others based upon such damage or destruction. The Contractor shall diligently assess the damages or destruction and shall prepare an estimate of the cost, expenses, and other charges, including normal and ordinary compensation to the Contractor, necessary for reconstruction of the Project substantially in accordance with the Project Plans and Specifications. Within fifteen (15) days following satisfaction of the express conditions described in subsections (1), (2) and (3) below, the Contractor covenants and agrees diligently to commence reconstruction and to

complete the reconstruction or repair of any loss or damage by fire or other casualty to the Project to substantially the same size, floor area, cubic content, and general appearance as prior to such loss or damage:

- (1) Receipt by the Owner or the trustee of the proceeds derived from collection of all valid claims against insurers or others based upon such damage or destruction, and receipt of other sums from any source such that the funds necessary to pay the Project Cost and any additions to the Project Cost necessitated for repair or reconstruction are available;
- (2) Written agreement executed by the Contractor and the Owner, by amendment to the Contract Documents or otherwise, authorizing and approving the repair or reconstruction and any additions to the Project Cost necessitated thereby, including any required adjustment to the Contract Sum; and
- (3) Final approval by the Owner of the Project Plans and Specifications for such repair or reconstruction and issuance of any required building permit.

**12.3 Approval of Plans and Specifications.** The Owner agrees to approve the plans and specifications for such reconstruction or repair if the reconstruction or repair contemplated by such plans and specifications is economically feasible, and will restore the Project, or the damaged portion thereof, to substantially the same condition as prior to such loss or damage, and such plans and specifications conform to the applicable laws, ordinances, codes, and regulations. The Owner agrees that all proceeds of any applicable insurance or other proceeds received by the Owner or the Contractor as a result of such loss or damage shall be used for payment of the costs, expenses, and other charges of the reconstruction or repair of the Project.

**12.4 Notice of Loss or Damage.** The Contractor shall promptly give the Owner written notice of any significant damage or destruction to the Project, defined as loss or damage which it is contemplated by Contractor will increase the Contract Sum or extend the Substantial Completion Date, stating the date on which such damage or destruction occurred, the then expectations of Contractor as to the effect of such damage or destruction on the use of the Project, and the then proposed schedule, if any, for repair or reconstruction of the Project. Loss or damage which the Contractor determines will not affect the Contract Sum or Substantial Completion Date will be reported to Owner and Architect/Engineer immediately, and associated corrective actions will be undertaken without delay.

## **ARTICLE XIII REPRESENTATIONS, WARRANTIES AND COVENANTS**

**13.1 Representations and Warranties of Contractor.** The Contractor represents and warrants to the Owner that each of the following statements is presently true and accurate:

A. The Contractor is a construction company, organized under the laws of the State of \_\_\_\_\_, authorized to transact business in the State of Florida, with \_\_\_\_\_ as the primary qualifying agent. Contractor has all requisite power and authority to carry on its business as now conducted, to own or hold its properties, and to enter into and perform its obligations hereunder and under each instrument to which it is or will be a party, and is in good standing in the State of Florida.

B. Each Contract Document to which the Contractor is or will be a party constitutes, or when entered into will constitute, a legal, valid, and binding obligation of the Contractor enforceable against the Contractor in accordance with the terms thereof, except as such enforceability may be limited by applicable bankruptcy, insolvency, or similar laws from time to time in effect which affect creditors' rights generally and subject to usual equitable principles in the event that equitable remedies are involved.

C. There are no pending or, to the knowledge of the Contractor, threatened actions or proceedings before any court or administrative agency, within or without the State of Florida, against the Contractor or any partner, officer, or agent of the Contractor which question the validity of any document contemplated hereunder, or which are likely in any case, or in the aggregate, to materially adversely affect the consummation of the transactions contemplated hereunder, or materially adversely affect the financial condition of the Contractor.

D. The Contractor has filed or caused to be filed all federal, state, local, or foreign tax returns, if any, which were required to be filed by the Contractor, and has paid, or caused to be paid, all taxes shown to be due and payable on such returns or on any assessments levied against the Contractor.

E. Neither Contractor nor any agent or person employed or retained by Contractor has acted fraudulently or in bad faith or in violation of any statute or law in the procurement of this Agreement.

F. The Contractor shall timely fulfill or cause to be fulfilled all of the terms and conditions expressed herein which are within the control of the Contractor or which are the responsibility of the Contractor to fulfill. The Contractor shall be solely responsible for the means and methods of construction.

G. It is recognized that neither the Architect/Engineer, the Contractor, nor the Owner has control over the cost of labor, materials, or equipment, over a Subcontractor's methods of determining bid prices, or over competitive bidding, market, or negotiating conditions.

H. During the term of the Contract Documents, and the period of time that the obligations of the Contractor under the Contract Documents shall be in effect, the Contractor shall cause to occur and to continue to be in effect those instruments, documents, certificates, and events contemplated by the Contract Documents that are applicable to, and the responsibility of, the Contractor.

I. The Contractor shall assist and cooperate with the Owner and shall accomplish the construction of the Project in accordance with the Contract Documents and the

Project Plans and Specifications, and will not knowingly violate any laws, ordinances, rules, regulations, or orders that are or will be applicable thereto.

J. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective, and that Owner, representatives of Owner, governmental agencies with jurisdictional interests will have access to the Work at reasonable time for their observation, inspecting and testing. Contractor shall give Architect/Engineer timely notice of readiness of the Work for all required approvals and shall assume full responsibility, including costs, in obtaining required tests, inspections, and approval certifications and/or acceptance, unless otherwise stated by Owner.

K. If any Work (including Work of others) that is to be inspected, tested, or approved is covered without written concurrence of Architect/Engineer, it must, if requested by Architect/Engineer, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given Architect/Engineer timely notice of Contractor's intention to cover the same and Architect/Engineer has not acted with reasonable promptness in response to such notice. Neither observations by Architect/Engineer nor inspections, tests, or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

L. If the Work is defective, or Contractor fails to supply sufficient skilled workers, or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof and terminate payments to the Contractor until the cause for such order has been eliminated. Contractor shall bear all direct, indirect and consequential costs for satisfactory reconstruction or removal and replacement with non-defective Work, including, but not limited to fees and charges of Architect/Engineers, architects, attorneys and other professionals and any additional expenses experienced by Owner due to delays to other Contractors performing additional Work and an appropriate deductive change order shall be issued. Contractor shall further bear the responsibility for maintaining schedule and shall not be entitled to an extension of the Contract time and the recovery of delay damages due to correcting or removing defective Work.

M. If Contractor fails within seven (7) days after written notice to correct defective Work, or fails to perform the Work in accordance with the Contract Documents, or fails to comply with any other provision of the Contract Documents, Owner may correct and remedy any such deficiency to the extent necessary to complete corrective and remedial action. Owner may exclude Contractor from all or part of the site, take possession of all or part of the Work, Contractor's tools, construction equipment and machinery at the site or for which Owner has paid Contractor but which are stored elsewhere. All direct and indirect costs of Owner in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Architect/Engineer and a Change Order will be issued incorporating the necessary revisions.

N. If within three (3) years after the Substantial Completion Date or such longer period of time as may be prescribed by laws or regulations or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's

written instructions, either correct such defective Work or if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instruction, Owner may have the defective Work corrected/removed and all direct, indirect and consequential costs of such removal and replacement will be paid by Contractor. Failing payment by the Contractor and notwithstanding any other provisions of the Contract Documents to the contrary, Owner shall have the right to bring a direct action in the Circuit Court to recover such costs.

**13.2 Representations of the Owner.** To the extent permitted by law, the Owner represents to the Contractor that each of the following statements is presently true and accurate:

A. The Owner is a validly existing political subdivision of the State of Florida.

B. The Owner has all requisite corporate or governmental power and authority to carry on its business as now conducted and to perform its obligations under the Contract Documents and each Contract Document contemplated hereunder to which it is or will be a party.

C. The Contract Documents and each Contract Document contemplated hereby to which the Owner is or will be a party has been duly authorized by all necessary action on the part of, and has been or will be duly executed and delivered by, the Owner, and neither the execution and delivery thereof nor compliance with the terms and provisions thereof or hereof: (a) requires the approval and consent of any other person or party, except such as have been duly obtained or as are specifically noted herein; (b) contravenes any existing law, judgment, governmental rule, regulation or order applicable to or binding on the Owner; or (c) contravenes or results in any breach of, default under, or result in the creation of any lien or encumbrance upon the Owner under any indenture, mortgage, deed of trust, bank loan, or credit agreement, the charter, ordinances, resolutions, or any other agreement or instrument to which the Owner is a party, specifically including any covenants of any bonds, notes, or other forms of indebtedness of the Owner outstanding on the date of the Contract Documents.

D. The Contract Documents and each document contemplated hereby to which the Owner is or will be a party constitutes, or when entered into will constitute, a legal, valid, and binding obligation of the Owner enforceable against the Owner in accordance with the terms thereof, except as such enforceability may be limited by applicable bankruptcy, insolvency, or similar laws from time to time in effect which affect creditors' rights generally, and subject to usual equitable principles in the event that equitable remedies are involved.

E. There are no pending or, to the knowledge of the Owner, threatened actions or proceedings before any court or administrative agency against the Owner which question the validity of the Contract Documents or any document contemplated hereunder, or which are likely in any case or in the aggregate to materially adversely affect the consummation of the transactions contemplated hereunder or the financial or corporate condition of the Owner.

F. The Owner shall use due diligence to timely fulfill or cause to be fulfilled all of the conditions expressed in the Contract Documents which are within the control of the Owner or which are the responsibility of the Owner to fulfill.

G. During the pendency of the Work and while the obligations of the Owner under the Contract Documents shall be in effect, the Owner shall cause to occur and to continue to be in effect and take such action as may be necessary to enforce those instruments, documents, certificates and events contemplated by the Contract Documents that are applicable to and the responsibility of the Owner.

H. The Owner shall assist and cooperate with the Contractor in accomplishing the construction of the Project in accordance with the Contract Documents and the Project Plans and Specifications, and will not knowingly violate any laws, ordinances, rules, regulations, orders, contracts, or agreements that are or will be applicable thereto or, to the extent permitted by law, enact or adopt any resolution, rule, regulation, or order, or approve or enter into any contract or agreement, including issuing any bonds, notes, or other forms of indebtedness, that will result in the Contract Documents or any part thereof, or any other instrument contemplated by and material to the timely and effective performance of a party's obligations hereunder, to be in violation thereof.

## **ARTICLE XIV TERMINATION AND SUSPENSION**

**14.1 Termination for Cause by Owner.** This Agreement may be terminated by Owner upon written notice to the Contractor should Contractor fail substantially to perform a material obligation in accordance with the terms of the Contract Documents through no fault of the Owner. In the event Owner terminates for cause and it is later determined by a court of competent jurisdiction that such termination for cause was not justified, then in such event such termination for cause shall automatically be converted to a termination without cause pursuant to Section 14.2.

A. Nonperformance. If the Contractor fails to timely perform any of his obligations under the Contract Documents, including any obligation the Contractor assumes to perform Work with his own forces, or if it persistently or repeatedly refuses or fails, except in case for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or fails, without being excused, to maintain an established schedule (failure to maintain schedule shall be defined as any activity that falls thirty (30) days or more behind schedule) which has been adopted by the Construction Team, or it fails to make prompt payment to Subcontractors for materials or labor, or disregards laws, rules, ordinances, regulations, or orders of any public authority having jurisdiction, or otherwise is guilty of substantial violations of the Agreement the Owner may, after seven (7) days written notice, during which period the Contractor fails to perform such obligation, make good such deficiencies and perform such actions. The Contract Sum, or the actual Cost of the Project, whichever is less, shall be reduced by the cost to the Owner of making good such deficiencies, and the Contractor's compensation shall be reduced by an amount required to manage the making good of such deficiencies. Provided, however, nothing contained herein shall limit or preclude Owner from pursuing additional damages from Contractor as a result of its breach.

B. Insolvency. If the Contractor is adjudged bankrupt, or if it makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its

insolvency, then the Owner may, without prejudice to any other right or remedy, and after giving the Contractor and its surety, if any, fourteen (14) days written notice, and during which period the Contractor fails to cure the violation, terminate the Agreement. In such case, the Contractor shall not be entitled to receive any further payment. Owner shall be entitled to recover all costs and damages arising as a result of failure of Contractor to perform as provided in the Contract Documents, as well as reasonable termination expenses, and costs and damages incurred by the Owner may be deducted from any payments left owing the Contractor.

C. Illegality. Owner may terminate the Agreement if Contractor disregards laws or regulations of any public body having jurisdiction.

D. Rights of Owner. The Owner may, after giving Contractor (and the Surety, if there is one) seven (7) days written notice, terminate the services of Contractor for cause; exclude Contractor from the Project site and take possession of the Work and of all Contractor's tools, construction equipment and machinery at the Project site and use the same to the full extent they could be used (without liability to Contractor for trespass or conversion); incorporate in the Work all materials and equipment stored at the Project site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case, Contractor shall not be entitled to receive any further payment beyond an amount equal to the value of material and equipment not incorporated in the Work, but delivered and suitably stored, less the aggregate of payments previously made. If the direct and indirect costs of completing the Work exceed the unpaid balance of the Contract Sum, Contractor shall pay the difference to Owner. Such costs incurred by Owner shall be verified by Owner in writing; but in finishing the Work, Owner shall not be required to obtain the lowest quote for the Work performed. Contractor's obligations to pay the difference between such costs and such unpaid balance shall survive termination of the Agreement. In such event and notwithstanding any other provisions of the Contract Documents to the contrary, Owner shall be entitled to bring a direct action in the Circuit Court to recover such costs.

**14.2 Termination without Cause by Owner.** The Owner, through its County Administrator or designee, shall have the right to terminate the Agreement, in whole or in part, without cause upon sixty (60) calendar days written notice to the Contractor. In the event of such termination for convenience, the Owner shall compensate Contractor for payments due through the date of termination, and one subsequent payment to cover costs of Work performed through the date of termination, subject to the terms and conditions of Section 3.1. The Contractor shall not be entitled to any other further recovery against the Owner, including, but not limited to, anticipated fees or profit on Work not required to be performed, or consequential damages or costs resulting from such termination.

A. Release of Contractor. As a condition of Owner's termination rights provided for in this subsection, Contractor shall be released and discharged from all obligations arising by, through, or under the terms of the Contract Documents, and the Payment and Performance Bond shall be released. Owner shall assume and become responsible for the reasonable value of Work performed by Subcontractors prior to termination plus reasonable direct close-out costs, but in no event shall Subcontractors be entitled to unabsorbed overhead, anticipatory profits, or damages for early termination.

B. Waiver of Protest. Contractor hereby waives any right to protest the exercise by Owner of its rights under this Section that may apply under the Procurement Ordinance.

**14.3 Suspension without Cause.** Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety (90) days by written notice to Contractor, which will fix the date on which Work will be resumed. Contractor shall be allowed an increase in the Contract Sum or an extension of the Contract Time, or both, directly attributable to any suspension if Contractor makes an approved claim therefor.

**14.4 Termination Based Upon Abandonment, Casualty or Force Majeure.** If, after the construction commencement date (i) Contractor abandons the Project (which for purposes of this paragraph shall mean the cessation of all construction and other activities relating to the Project, excluding those which are necessary to wind down or otherwise terminate all outstanding obligations with respect to the Project, and no recommencement of same within one hundred twenty (120) days following the date of cessation), or (ii) the Project is stopped for a period of thirty (30) consecutive days due to an instance of Force Majeure or the result of a casualty resulting in a loss that cannot be corrected or restored within one hundred twenty (120) days (excluding the time required to assess the damage and complete the steps contemplated under Section 12.2), the Owner shall have the right to terminate the Agreement and pay the Contractor its compensation earned or accrued to date.

**14.5 Vacation of Project Site; Delivery of Documents.** Upon termination by Owner pursuant to Section 14.2 or 14.4, Contractor shall withdraw its employees and its equipment, if any, from the Project Site on the effective date of the termination as specified in the notice of termination (which effective date shall not be less than two (2) working days after the date of delivery of the notice), regardless of any claim the Contractor may or may not have against the Owner. Upon termination, the Contractor shall deliver to the Owner all original papers, records, documents, drawings, models and other material set forth and described in the Contract Documents.

**14.6 Termination by the Contractor.** If, through no act or fault of Contractor, the Work is suspended for a period of more than ninety (90) consecutive days by Owner or under an order of court or other public authority, or Owner fails to act on any Application for Payment or fails to pay Contractor any sum finally determined to be due; then Contractor may, upon fourteen (14) days written notice to Owner terminate the Agreement and recover from Owner payment for all Work executed, any expense sustained plus reasonable termination expenses. In lieu of terminating the Agreement, if Owner has failed to act on any Application for Payment or Owner has failed to make any payment as aforesaid, Contractor may upon fourteen (14) days written notice to Owner stop the Work until payment of all amounts then due.

Exhibit A  
Title(s) of Drawings

Exhibit B  
Title(s) of Specifications

Exhibit C  
Affidavit of No Conflict

Exhibit D  
Contractor's Certificate(s) of Insurance

Exhibit E  
Contractor's Payment and Performance Bond

Exhibit F  
Standard Forms