



## ADDENDUM NO. 2

Issue Date: December 6, 2018

Project Name: West Wabasso Community Gravity Sewer System Phase II

Bid Number: 2019020

Bid Opening Date: December 18, 2018 at 2:00 pm

This addendum is being released to: Provide the pre-bid sign in sheet, answer questions received to date and make modifications to the bid documents.

The information and documents contained in this addendum are hereby incorporated in the invitation to bid. **This addendum must be acknowledged where indicated on the bid form, or the bid will be declared non-responsive.**

### **Modifications to Bid Documents**

#### Revised Specification Sections:

- 00310-3 Bid Form – Addendum 2
- 00530 EJCDC Standard Agreement
- 01000 Summary of Work
- 02030 Prevention, Control, and Abatement of Erosion & Water Pollution
- 02632 Submersible Wastewater Pumping Station

#### Revised Construction Plans

The bid form has been revised to reflect the 4” sanitary sewer (customer-side) laterals and related clean-outs as separate line items. Pay Item 22 – Septic Tank Abandonment: contractor shall include Building Department Permit and related \$79 fee in unit price.

Minor revisions to the other specification sections listed above have been also been made to correct references to other projects, etc. These revisions will not affect the bid price.

Revisions to construction plans are minor but may affect bid price. Contractor shall review and base their bid off the Addendum 2 Construction Plans.

(Continued)

**Pre-Bid Meeting Questions and Answers**

1. Is electrical for the lift station available, and if not, who is responsible?  
**Answer: FPL will provide electrical to the proposed power company transformer pole/handhole. It will be the responsibility of the contractor install power from the handhole to the control panel/electrical equipment rack.**
  
2. What are the requirements for MOT?  
**Answer: Please refer to Division 2, Section 02020- Maintenance of Traffic.**
  
3. Is there a proposed grading plan for the roadway and swales?  
**Answer: No. The intention is to reconstruct the roadway to the typical section as shown on the detail sheet to match existing grades. Contractors are expected to replace the swales as is existing or better condition.**
  
5. Is there a lay down area that can be used?  
**Answer: Indian River County owns a couple of parcels in the Douglas Subdivision that potentially could be utilized as a lay down area. Furthermore, the paper street (84<sup>th</sup> Place), where the proposed lift station will be installed also could be utilized as a potential lay down area.**
  
6. Is water available in the project area?  
**Yes. Indian River County Department of Utility Services (IRCDUS) will provide a hydrant meter. A deposit will be required, but refunded upon return of the meter.**
  
7. Where is the dewatering discharge area?  
**Answer: Although not specifically identified in the plans, dewatering and erosion control to follow Division 2, Section 02030- Prevention, Control and Abatement of Erosion and Water Pollution (attached as part of the subject addendum).**
  
8. Is de-mucking required?  
**Answer: IRCDUS does not anticipate any de-mucking. As stated in the Geotechnical Report, Page 2 "No "muck" or other unsuitable soils were found in the test boring except for a soft layer of dark gray sandy silt with traces of organics that was found in test boring B-2 at a depth of 3.5 feet to 6.5 feet. "N" values recorded during the boring operation indicate the existing soil density is generally firm to medium dense except for the soft layer found in test boring B-2. Therefore, it is our professional opinion that the subsurface soils are generally suitable for the proposed project except for the soft layer of sandy silt with traces of organics found in test boring B-2".**
  
9. Does the county want/need the fill?  
**Answer: Indian River County (IRC) at this time does not appear to have the need for fill material. Since the project requires the abandonment of existing septic tanks, maybe the potential exists in utilizing the additional fill as long as it meets the Department of Health (DOH) criteria.**
  
10. Any leeway in the days to final completion?  
**Answer: No.**

11. What is the engineer's estimate?  
**Just over \$2 million.**
  
13. When is Notice to Proceed anticipated?  
**Late January is the earliest anticipated time.**
  
14. What are the work hours?  
**Answer: Please refer to Article 6 under Section 00800.**
  
15. Do school busses travel in the project area?  
**Answer: The school bus route and schedules can be obtained from the following website: <https://indianriverschools.org/bus-routes>. Please contact the School District to obtain up to date information.**
  
16. There is a stray line and two different color septic icons on the aerial – can you clarify their meaning?  
**Please disregard the line located on the land-locked parcels on the east side of 62<sup>nd</sup> Avenue. The line has been removed. There is no difference between the green and red septic tank symbols.**
  
17. Are there existing benchmarks in the project area?  
**Answer: Yes.**
  
18. What is the final deadline for submittal of questions?  
**Monday, December 10, 2018 at 9:00 a.m.**

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**SECTION 00310-3-SCHEDULE A  
SCHEDULE OF BID ITEMS  
(Addendum 2)**

**BID NUMBER 2019-020  
PROJECT IDENTIFICATION:**

**Dated: 12/6/18  
West Wabasso Community Gravity Sewer  
System, Phase 2**

**THIS BID IS SUBMITTED TO:  
INDIAN RIVER COUNTY PURCHASING DIVISION  
1800 27th STREET  
VERO BEACH, FLORIDA 32960**

**By: \_\_\_\_\_  
Company Name**

<b>Bid Item No</b>	<b>Bid Item Description</b>	<b>Unit of Measure</b>	<b>Unit Price</b>	<b>Quantity</b>	<b>Bid Item Total (in figures)</b>
1	Gravity Sewer, 8" PVC: 0' - 6' Deep	LF		1,000	
2	Gravity Sewer, 8" PVC: 6' - 8' Deep	LF		2,000	
3	Gravity Sewer, 8" PVC: 8' - 10' Deep	LF		1,250	
4	Gravity Sewer, 8" PVC: 10' - 12' Deep	LF		1,000	
5	Gravity Sewer, 8" PVC: 12' - 14' Deep	LF		500	
6	4' Diam. Manholes 0' - 6' Deep	EA		7	
7	4' Diam. Manholes 6' - 8' Deep	EA		5	
8	4' Diam. Manholes 8' - 10' Deep	EA		4	
9	5' Diam. Manholes 10' - 12' Deep	EA		3	
10	5' Diam. Manholes 12' - 14' Deep	EA		3	
11	4" Ø Force Main Directional Bore (DR-11 HDPE)	LF		80	
12	4" Ø Force Main C-900 PVC	LF		180	
13	Wet Tap: 12"x4" Stainless Steel Tapping Sleeve & 4" R.S. Gate Valve	EA		1	
14	Type SP 12.5 (Traffic C) (1.5" Thick)- Per FDOT Spec 334-7	SY		12,100	
15	Optional Base Group 4 (6-inches)-FDOT Spec 285	SY		12,700	
16	Type B Stabilized Subgrade (12")- Per FDOT Spec 160-4 (LBR 40)	SY		13,300	
17	6" Thermoplastic White Per FDOT Spec 711-11	LF		50	
18	Install 6-inches of millings over 12-inches of Type B stabilized subgrade on 64th Avenue from approximately station 307+40 to 310+00.	LF		260	
19	6" Single Sewer Laterals with Clean Out (C.O)	EA		30	
20	6" Double Sewer Laterals with Clean Out (C.O)	EA		40	

Bid Item No	Bid Item Description	Unit of Measure	Unit Price	Quantity	Bid Item Total (in figures)
21	4" Sewer Service Lateral from C.O. at R/W to house connection as directed by Utility inspector, restoration of all disturbed areas with sod. <b>Related clean-outs shall be paid under Item 21a.</b>	LF		6,500	
21a	4" Sewer Service Clean Out (C.O)	EA		130	
22	Septic tank pump out and abandonment per Florida Department of Health (FDOH) requirements, fill, restoration of all disturbed areas with sod. No septic tank abandonment permits will be required by FDOH. Only, IRC Building Division permit will be required (\$79) for each parcel connected to the sewer system, therefore that permit fee of \$79.00 must also be included with the price of each.	EA		65	
23	Construct County Lift Station, Complete and Operable. Furnish Pumps Package and Dataflow System. Pump package will include pumps, cables, guide rails and assemblies, float assembly, anchor bolts and washers and nuts, lifting bailes, SS nipples and elbows, float switches, hatch covers, duplex control panel, SS base plates and spare parts, concrete drive and housekeeping pad. Lift Station construction also includes connection to the 4" force main on the east side of 63rd Court. The price to include Dataflow equipment with the spare Telemetry Control Unit (TCU) Supply spare parts per IRCDUS Construction Standards Section 10.	LS		1	
24	Temporary Traffic Control	LS		1	
25	Restoration (Sod)	LF		6,000	
26	Testing (TV & Exfiltration of all gravity mains, includes pressure test of force main)	LS		1	
27	As-built Survey	LS		1	
28	Stakeout Survey	LS		1	
29	Clearing & Grubbing 84th Place	LS		1	
30	Erosion & Sediment Control	LS		1	
31	<b>Public Construction Bond</b>	LS		1	
CONSTRUCTION COST - SUBTOTAL "A"					
30	Mobilization, Demobilization, MOT (See Section 01025)	LS		1	
CONSTRUCTION COST plus MOB/DEM & MOT- SUBTOTAL "B"					
31	Force Account				<b>\$75,000.00</b>
TOTAL LUMP SUM CONTRACT AMOUNT					

**TOTAL BID PRICE IN WORDS:**

*\*The unit prices bid for furnishing and installation of the sewer main, lift station and appurtenances shall include, but is not limited to, utilities exploration/excavation, coordination with any permitting agencies, storm water permit, audio-visual documentation, land clearing/tree removal necessary for utility installation, trenching, removing, disposing of and replacing unsuitable (i.e., plastic or organic) material, dewatering, sheeting/shoring of the excavation, installation of pipe, structures and all appurtenances, trace wires, sleeves, fittings, restrainers, connection requirements including locating, excavating existing pipe, restraining existing pipe and fittings, density testing, filling trench, soil compaction, filling, pressure testing, flushing/cleaning, density testing, irrigation repair, removal, disposition and replacement of surface over trench to pre-construction conditions, restoration of any sidewalk, landscaping or sod damaged or destroyed, removal and resetting or replacing existing guard rail or signs necessary for utility installation and Trench Safety Act Compliance. The unit price(s) bid will also include restoration of any existing utilities, drainage facilities, signs, mailboxes, driveways, etc. disturbed or damaged by the construction. All materials and installation shall be per Indian River County Utility Standards and Specifications unless otherwise noted in the bid documents. The PVC force main shall be C-900 and the PVC gravity sewer shall be SDR 26. Contractor will be provided with a copy of construction plans in AutoCADD format to use for construction stake-out and for use in preparing Record Drawings. The TOTAL of the bid above represents the total amount the contractor agrees to receive to construct a complete and operational collection and transmission sewer system as shown on the construction plans and bid documents.*

Bid Item No	Bid Item Description	Unit of Measure	Unit Price	Quantity	Bid Item Total (in figures)
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The undersigned hereby certifies that they have read and understand the contents of this solicitation and agrees to furnish at the prices shown any or all of the items above, subject to all instructions, conditions, specifications and attachments hereto. Failure to have read all the provisions of this solicitation shall not be cause to alter any resulting contract or request additional compensation.

Respectfully Submitted,

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Address

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
City

\_\_\_\_\_  
Title

\_\_\_\_\_  
State                      Zip Code

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Email

Corporate Seal

\_\_\_\_\_  
Business Tax Receipt Number

\_\_\_\_\_  
FEIN Number

SECTION 00530 – EJCDC STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR ON THE BASIS OF A STIPULATED PRICE  
**West Wabasso Community Gravity Sewer System Phase 2**  
**ADDENDUM 2**

THIS AGREEMENT (“Agreement” or “Contract”), dated the \_\_\_\_\_ day of \_\_\_\_\_ in the year 2018 by and between Indian River County, a political subdivision of the State of Florida (hereinafter called OWNER) and \_\_\_\_\_.(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 WORK

CONTRACTOR as an independent contractor and not as an employee shall furnish and complete all of the necessary labor, material, and equipment to perform the work as specified or indicated in the Contract Documents and per FDEP, FDOT, Indian County Department of Utility Services (IRCDUS) and County Engineering Department standards. The work is generally described as follows:

IRCDUS proposes to construct a new 8” Gravity Sewer Collection System within The Douglas Subdivision of West Wabasso. The facilities shall provide sewage collection infrastructure to serve about one hundred and one (101) lots on CR 510, 64<sup>th</sup> Avenue, 84<sup>th</sup> Street, 84<sup>th</sup> Place, 63<sup>rd</sup> Court, 63<sup>rd</sup> Avenue and 62<sup>nd</sup> Avenue. The gravity sewer main will consist of about 5,750 feet of 8” PVC gravity sewer, 22 manholes, service laterals, and a new IRCDUS sanitary sewer lift station. The Contractor shall also demolish all septic tanks on the lots to be connected to the laterals per the DOH standards and requirements. The Contractor will direct purchase and furnish the ABS pumps and electrical package for the lift station which includes two pumps, lifting cables, guide rails, guide rail assemblies, float hangar bracket, anchor bolts, lifting bales, upper guide brackets, SS nipples and elbows, float switches, hatch covers for both the wet well and valve vault, duplex control panel and spare parts set. The Contractor will install the furnished pumps and all appurtenances required to make the lift station operational. The Contractor will also direct purchase the Dataflow telemetry system and the Contractor will install telemetry at the lift station and schedule Dataflow to program telemetry and all necessary start-up features to make remote monitoring and operation of lift station functional. Upon successful operation of lift station, Contractor shall schedule a start-up with ABS to certify lift station has been installed in accordance with manufacturer’s requirements to affect warranty. No existing culverts are proposed to be replaced. Any existing culverts damaged shall be restored to pre-construction condition.

The construction of the utility improvements described above shall also consist of, but not limited to: resetting of signs, mailboxes, and other existing facilities disturbed during construction; utilities exploration; coordination with any permitting agencies; trenching; clearing and tree removal; dewatering; installation of pipe, structures and all appurtenances; soil backfill compaction; testing; (including T.V. testing, exfiltration testing, backfill and subgrade testing); road, landscape and



driveway restoration; regrading and grassing (sod); and traffic control. All right-of-way shall be restored to like or better condition including sidewalks and drainage. No excavation shall be left open when work is not actively being performed. Construction fencing used in the work area shall not block sight distance near intersections or driveways. All construction equipment and materials shall be stored a minimum of 15 feet from the edge of pavement and shall be protected by Type II barricades with flashing yellow lights.

The Contractor shall submit a Traffic Control Plan to the County Traffic Engineering Division a minimum of 72 hours prior to construction and notify County Traffic Engineering a minimum of 24 hours before any lane closures. A temporary access plan shall be provided indicating how local traffic will be maintained if the existing road is removed and reconstructed. Stand mounted Advance Construction signing shall be installed in accordance with FDOT Index 602. One lane closures shall be in accordance with FDOT Index 603. When any work encroaches the area between the centerline and two (2) feet outside the edge of pavement, traffic shall be restricted to a single lane.

The construction will provide existing utility customers that currently only are provided with water service, the ability to connect to the IRC regional wastewater collection and treatment system; and the connection of existing customers to the system will provide opportunities for existing residences to abandon existing septic systems, which shall benefit the environment and water quality enjoyed by all Indian River County residents.

## ARTICLE 2 ENGINEER

The West Wabasso Community Sewer System- Phase II has been designed by IRCDUS, hereinafter called ENGINEER, and who is to act as OWNER'S representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the work in accordance with the Contract Documents.

## ARTICLE 3 CONTRACT TIME

3.1 The CONTRACTOR shall be substantially completed with the following timeframe

- (a) Within 15 calendar days from effective date of Notice to Proceed, Contractor shall complete the following tasks:
  - 1. Obtain all necessary permits.
  - 2. Receive approved shop drawings for all materials and equipment to be utilized on the job.
  - 3. Perform all photographic recording and documentation of conditions prior to construction.
  - 4. Locate all existing utilities in the area of work.
  - 5. Submit and secure approval of shop drawings.
  - 6. Mobilize all labor, equipment, and materials.
  - 7. Deliver and store all equipment and materials to the job site.
  - 8. Notify all utilities and other affected parties prior to initiating construction.
- (b) From 16 calendar days to 180 calendar days from the effective date of Notice to

Proceed, the CONTRACTOR shall complete the following tasks:

1. Install all pipe and appurtenant items.
2. Perform all testing.
3. Restore all disturbed areas to their pre-construction condition.
4. Correct all deficiencies noted by Engineer.

Completion of all tasks outlined above (i.e., Subparagraphs a) and b) constitutes Substantial Completion.

(c) From 181 calendar days to 210 calendar days from the effective date of Notice to Proceed, the CONTRACTOR shall complete the following tasks:

1. Clean up project area.
2. Remove all equipment and material from project site.
3. Perform contract closeout procedures.

3.2 Completion of all tasks outlined above (i.e., Subparagraphs a, b, and c) constitute Final Completion.

3.3 Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the work is not completed within the times specified in Paragraphs 3.1 and 3.2 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER four-hundred and fifty dollars (\$450.00) for each day that expires after the time specified in Paragraph 3.1 for Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER four-hundred and fifty dollars (\$450.00) for each day that expires after the time specified in Paragraph 3.2 for completion and readiness for final payment.

3.3.1 The CONTRACTOR and OWNER agree that OWNER is authorized to deduct all or any portion of the above-stated liquidated damages due to the Owner from payments due to the Contractor; or, in the alternative, all or any portion of the above-stated liquidated damages may be collected from the Contractor or its Surety or Sureties. These provisions for liquidated damages shall not prevent the OWNER, in case of the CONTRACTOR's default, from terminating the Contractor's right to proceed as provided in this AGREEMENT.

3.3.2 In addition to the above-stated liquidated damages, the CONTRACTOR shall be responsible for reimbursing OWNER to third party consultants in administering the Project beyond the Substantial Completion date specified in this Agreement, or beyond an approved extension of time granted to CONTRACTOR, whichever date is later.

#### ARTICLE 4 CONTRACT PRICE

- 4.1 OWNER shall pay CONTRACTOR for completion of the work in accordance with the Contract Documents in current funds in the amount of \$ \_\_\_\_\_

#### ARTICLE 5 PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions and the Contract Documents.

- 5.1 Progress Payments. The OWNER shall make progress payments to the CONTRACTOR on the basis of the approved partial payment request as recommended by ENGINEER in accordance with the provisions of the Local Government Prompt Payment Act, Florida Statutes section 218.70 ET. seq. The OWNER shall retain ten percent (10%) of the payment amounts due to the CONTRACTOR until fifty percent (50%) completion of the work. After fifty percent (50%) completion of the work is attained as certified to OWNER by ENGINEER in writing, OWNER shall retain five percent (5%) of the payment amount due to CONTRACTOR until final completion and acceptance of all work to be performed by CONTRACTOR under the Contract Documents. Pursuant to Florida Statutes section 218.735(8) (b), fifty percent (50%) completion means the point at which the County as OWNER has expended fifty percent (50%) of the total cost of the construction services work purchased under the Contract Documents, together with all costs associated with existing change orders and other additions or modifications to the construction services work provided under the Contract Documents.
- 5.2 Pay Requests. Each request for a progress payment shall be submitted on the application for payment form supplied by OWNER and the application for payment shall contain the CONTRACTOR's certification. All progress payments will be on the basis of progress of the work measured by the schedule of values established, or in the case of unit price work based on the number of units completed. After fifty percent (50%) completion, and pursuant to Florida Statutes section 218.735(8)(d), the CONTRACTOR may submit a pay request to the County as OWNER for up to one half (1/2) of the retainage held by the County as OWNER, and the County as OWNER shall promptly make payment to the CONTRACTOR unless such amounts are the subject of a good faith dispute; the subject of a claim pursuant to Florida Statutes section 255.05(2005); or otherwise the subject of a claim or demand by the County as OWNER or the CONTRACTOR. The CONTRACTOR acknowledges that where such retainage is attributable to the labor, services, or materials supplied by one or more subcontractors or suppliers, the Contractor shall timely remit payment of such retainage to those subcontractors and suppliers. Pursuant to Florida Statutes section 218.735(8) (c) (2005), CONTRACTOR further acknowledges and agrees that: 1) the County as OWNER shall receive immediate written notice of all decisions made by CONTRACTOR to withhold retainage on any subcontractor at greater than five percent (5%) after fifty percent (50%) completion; and 2) CONTRACTOR will not seek release from the County as OWNER of the withheld retainage until the final pay request.
- 5.3 Paragraphs 5.1 and 5.2 do not apply to construction services work purchased by the County as OWNER which are paid for, in whole or in part, with federal funds and are subject to federal grantor laws and regulations or requirements that are contrary to any provision of the

Local Government Prompt Payment Act. In such event, payment and retainage provisions shall be governed by the applicable grant requirements and guidelines.

- 5.4 ACCEPTANCE AND FINAL PAYMENT: Upon receipt of written notice that the work is ready for final inspection and acceptance, the ENGINEER will promptly make such inspection and when the ENGINEER finds the work acceptable under the terms of the Contract and the Contract fully performed, the ENGINEER will promptly issue a final completion certificate stating that the work provided for in this Contract has been completed, and acceptance by the OWNER under the terms and the conditions thereof is recommended and the entire balance found to be due the CONTRACTOR, will be paid to the CONTRACTOR by the OWNER following County Commission approval of the final Contract payment.
- 5.5 Acceptance of Final Payment as Release. The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER from all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with the work under this Contract and for every act and neglect of the OWNER and others relating to or arising out of the work. Any payment, however, final or otherwise, shall not release the CONTRACTOR or its sureties from any obligations under the Contract Documents or the Payment and Performance Bonds.

#### ARTICLE 6 INTEREST

Not Applicable.

#### ARTICLE 7 CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

- 7.1 CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or furnishing of the work.
- 7.2 CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions, and accepts the determination set forth in Paragraph SC-4.02 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which CONTRACTOR is entitled to rely.
- 7.3 CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Paragraph 7.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the work as CONTRACTOR considers necessary for the performance of furnishing of the work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.02 of the General Conditions;

and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.

- 7.4 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing underground facilities at or contiguous to the site and assumes responsibility for the accurate location of said underground facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said underground facilities are or will be required by CONTRACTOR in order to perform and furnish the work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.04 of the General Conditions.
- 7.5 CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.
- 7.6 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

#### ARTICLE 8 CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the work consist of the following:

- 8.1 This Agreement (Section 00530).
- 8.2 Schedule of Subcontractors (Section 00431).
- 8.3 Disclosure of Relationships (Section 00452).
- 8.4 Sworn Statement under the Florida Trench Safety Act (Section 00454).
- 8.5 General Information Required of Bidders (Section 00456).
- 8.6 Public Construction Bond (Section 00600).
- 8.7 Notice of Award and Notice to Proceed (examples in Section 00800).
- 8.8 General Conditions (Section 00700).
- 8.9 Supplementary Conditions (Section 00800).
- 8.10 Documents/Specifications bearing the title **“West Wabasso Community Gravity Sewer System- Phase II / Bid No 2019-020”**
- 8.11 Addenda numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive.
- 8.12 CONTRACTOR'S Bid (Section 00300).
- 8.13 Specifications bearing the title **“IRCDUS Water and Wastewater Utility Standards, March 2018”, or the latest version thereof.**
- 8.14 The following, which may be delivered or issued after the effective date of the Agreement and are not attached hereto: All written amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to Paragraphs 3.04 of the General Conditions.

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in Paragraphs 3.04 of the General Conditions.

## ARTICLE 9 MISCELLANEOUS

- 9.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 9.2 It is agreed that the CONTRACTOR shall not assign, transfer, convey, or otherwise dispose of the contract or its right, title, or interest in or to the same or any part thereof, or allow legal action to be brought in its name for the benefit of others, without previous consent of the OWNER and concurred to by the sureties. Any attempted assignment shall be void and may, at the option of the OWNER be deemed an event of default hereunder. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the OWNER who may be a party hereto.
- 9.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.
- 9.4 The CONTRACTOR shall be properly licensed to practice its trade or trades which are involved in the completion of this Agreement and the work thereunder.
- 9.5 This Agreement shall be governed by the laws of the State of Florida. Venue for any lawsuit brought by either party against the other party or otherwise arising out of this agreement shall be in Indian River County, Florida, or, in the event of federal jurisdiction, in the United States District Court for the Southern District of Florida.
- 9.6 The CONTRACTOR shall indemnify and hold harmless the County, and its officers and employees, from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR and persons employed or utilized by the CONTRACTOR in the performance of the construction contract.
- 9.7 Pledge of Credit. The CONTRACTOR shall not pledge the OWNER'S credit or make it a guarantor of payment or surety for any Agreement, debt, obligation, judgment, lien or any form of indebtedness. The CONTRACTOR further warrants and represents that it has no obligation of indebtedness that would impair its ability to fulfill the terms of this Agreement.
- 9.8. Counterparts. This Agreement may be executed in one or more counterparts, but all such counterparts, when duly executed, shall constitute one and the same Agreement.
- 9.9. Public Records. Indian River County is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:
- A. Keep and maintain public records required by the County to perform the service.
  - B. Upon request from the County's Custodian of Public Records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in 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 for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the County.
- D. Upon completion of the contract, transfer, at no cost, to the County all public records in possession of the Contractor or keep and maintain public records required by the County to perform the service. If the Contractor transfers all public records to the County upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the Custodian of Public Records, in a format that is compatible with the information technology systems of the County.
- E. **IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:  
(772) 226-1424  
[publicrecords@ircgov.com](mailto:publicrecords@ircgov.com)  
Indian River County Office of the County Attorney  
1801 27th Street  
Vero Beach, FL 32960**
- F. Failure of the Contractor to comply with these requirements shall be a material breach of this Agreement.

This Agreement will be effective on \_\_\_\_\_, 2018 (the date the Contract is approved by the Indian River County Board of County Commissioners, which is the Effective Date of the Agreement).

**OWNER:**

**CONTRACTOR:**

INDIAN RIVER COUNTY \_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_, Chairman

By: \_\_\_\_\_ (Contractor)

By: \_\_\_\_\_  
Jason E. Brown, County Administrator

(CORPORATE SEAL)

Attest \_\_\_\_\_

**APPROVED AS TO FORM AND LEGAL SUFFICIENCY:**

By: \_\_\_\_\_  
Dylan Reingold, County Attorney

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Jeffrey R. Smith, Clerk of Court and Comptroller

License No. \_\_\_\_\_  
(Where applicable)

Attest: \_\_\_\_\_  
Clerk of Court and Comptroller  
(SEAL)

Agent for service of process: \_\_\_\_\_

Designated Representative:  
Name:  
Title:  
Contact Info:

Designated Representative:  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_

(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign.)



## SECTION 01000

### SUMMARY OF WORK

#### ADDENDUM 2

#### PART 1 -- GENERAL

##### 1.01 LOCATION OF WORK

The work is located in the right-of-way of 64<sup>th</sup> Avenue, 63<sup>rd</sup> Court, 63<sup>rd</sup> Avenue, 62<sup>nd</sup> Avenue, 84<sup>th</sup> Place and 84<sup>th</sup> Street in Indian River County, Florida.

##### 1.02 DESCRIPTION OF WORK

Contractor as an independent contractor and not as an employee shall furnish and complete all of the necessary labor, material and equipment to perform the work as specified or indicated in the Contract Documents and per FDEP, the Indian River County Department of Utility Services and County Engineering Department standards. The work is generally described as follows:

IRCDUS proposes to construct a new 8" Gravity Sewer Collection System within The Douglas Subdivision of West Wabasso. The facilities shall provide sewage collection infrastructure to serve about one hundred and one (101) lots on CR 510, 64<sup>th</sup> Avenue, 84<sup>th</sup> Street, 84<sup>th</sup> Place, 64<sup>th</sup> Avenue, 63<sup>rd</sup> Court, 63<sup>rd</sup> Avenue and 62<sup>nd</sup> Avenue. The gravity sewer main will consist of about 5,750 feet of 8" PVC gravity sewer, 22 manholes, service laterals, and a new Indian River County Department of Utility Services sanitary sewer lift station. The Contractor shall also demolish all septic tanks on the lots to be connected to the laterals per the DOH standards and requirements. The Contractor will direct purchase and furnish the ABS pumps and electrical package for the lift station which includes two pumps, lifting cables, guide rails, guide rail assemblies, float hangar bracket, anchor bolts, lifting bales, upper guide brackets, SS nipples and elbows, float switches, hatch covers for both the wet well and valve vault, duplex control panel and spare parts set. The Contractor will install the furnished pumps and all appurtenances required to make the lift station operational. The Contractor will also direct purchase the Dataflow telemetry system and the Contractor will install telemetry at the lift station and schedule Dataflow to program telemetry and all necessary start-up features to make remote monitoring and operation of lift station functional. Upon successful operation of lift station, Contractor shall schedule a start-up with ABS to certify lift station has been installed in accordance with manufacturer's requirements to affect warranty. No existing culverts are proposed to be replaced. Any existing culverts damaged shall be restored to pre-construction condition.

The construction of the utility improvements described above shall also consist of, but not limited to: resetting of signs, mailboxes, and other existing facilities disturbed during construction; utilities exploration; coordination with any permitting agencies; trenching; clearing and tree removal; dewatering; installation of pipe, structures and all appurtenances; fittings and restrainers; soil backfill compaction; testing; (including backfill and subgrade testing); road, landscape and driveway restoration; re-grading and grassing (sod); mobilization, demobilization and traffic control. All right-of-way shall be restored to like or better condition including asphalt pavement, sodding, sidewalks and drainage swales. No excavation shall be left open when work is not actively being performed. Construction fencing used in the work area shall

not block sight distance near intersections or driveways. All construction equipment and materials shall be stored a minimum of 15 feet from the edge of pavement and shall be protected by Type II barricades with flashing yellow lights.

The Contractor shall submit a Traffic Control Plan to the Indian River County Public Works Traffic Engineering Division a minimum of 72 hours prior to construction and notify County Traffic Engineering a minimum of 24 hours before any lane closures. A temporary access plan shall be provided indicating how local traffic will be maintained while the existing road is removed and reconstructed. Stand mounted Advance Construction signing shall be installed in accordance with FDOT Index 602. One lane closure shall be in accordance with FDOT Index 603. When any work encroaches the area between the centerline and two (2) feet outside the edge of pavement, traffic shall be restricted to a single lane.

**PART 2 -- PRODUCTS**

Not applicable

**PART 3 -- EXECUTION**

Not applicable

**\*\* END OF SECTION \*\***

## SECTION 02030

### PREVENTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION

#### ADDENDUM 2

#### GENERAL

The work specified in this item shall conform to Section 104 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction (2017 Edition), except as modified herein.

#### Scope

This Section covers erosion control and the treatment of dewatering water and stormwater runoff from the construction site and work area. The pollution control measures shall prevent turbid or otherwise polluted waters from being discharged from the construction site or work area, to undeveloped portions of the site or off-site.

The OWNER considers pollution from dewatering water and stormwater runoff from a construction site or work area to be a very serious offense. The CONTRACTOR is solely responsible for preventing pollution caused by dewatering water and stormwater runoff from the construction site or work area.

The pollution control measures specified herein represent minimum standards to be adhered to by the CONTRACTOR throughout the Project's construction. The OWNER reserves the right to require the CONTRACTOR to employ additional pollution control measures, when in the sole opinion of the OWNER, they are warranted. If site specific conditions require additional erosion and stormwater pollution control measures during any phase of construction or operation to prevent erosion or to control sediment or other pollution, beyond those specified in the Drawings or herein, implement additional best management practices as necessary, in accordance with Chapter 4, "Best Management Practices for Erosion and Sedimentation Control" of the Florida Erosion and Sediment Control Inspector's Manual, and other references as may be required by regulatory permits.

<http://www.dep.state.fl.us/water/nonpoint/docs/erosion/erosion-inspectors-manual.pdf>

The OWNER may terminate this Contract if the CONTRACTOR fails to comply with this Section. Alternatively, the OWNER may halt the CONTRACTOR's operations until the CONTRACTOR is in full compliance with this Section. If the OWNER halts the CONTRACTOR's work as a result of its failure to comply with this Section, the Construction Contract time clock will continue to run.

In addition to these Specifications, comply with Chapter 4 - "Best Management Practices for Erosion and Sedimentation Control" and Chapter 5 - "Best Management Practices for Dewatering" of the Florida Erosion and Sediment Control Inspector's Manual. In the event of a conflict between the referenced Chapters and these Specifications, the more stringent requirement shall prevail.

#### Some Permits to Be Obtained By the Contractor

The OWNER has obtained certain permits for this project and they are listed in paragraph SC-6.08 of the Supplementary Conditions. Per paragraph SC-6.08.A.2 of the Supplementary Conditions, the CONTRACTOR shall apply for, obtain, and pay for all other required permits, licenses, sampling, and tests. Permits the CONTRACTOR may need to secure may include but not be limited to:

1. Long-term and/or short-term dewatering permit as required by the St. Johns River Water Management District (SJRWMD). Generally, only the short-term permit is required. Contact

SJRWMD at (321) 984-4940 to determine which permit is required and the associated statutory requirements;

2. SJRWMD RDS-50 Permit (required);
3. The State of Florida Generic Permit for Stormwater Discharge From Large and Small Construction Activities (required). Contact the Florida Department of Environmental Protection (FDEP) at (866) 336-6312 (toll free) or (850) 245-7522 or [www.dep.state.fl.us/water/stormwater/npdes/](http://www.dep.state.fl.us/water/stormwater/npdes/)
4. FDEP's Uncontaminated Groundwater Release Permit (required if dewatering occurs). This permit requires water quality testing by a State certified laboratory.

Provide copies of all permits to the OWNER and ENGINEER and comply with all conditions contained in all permits at no extra cost to the OWNER. If there is a conflict between any permit requirement and these Specifications, the more stringent specification or requirement shall govern.

In addition to paying for all permit fees, CONTRACTOR shall also pay for all water quality sampling and laboratory tests required by any permit.

### **General**

Do not begin any other construction work until the pollution control and treatment system has been constructed in accordance with approved permits and approved for use by the OWNER and applicable permitting authorities.

From time to time, the OWNER or ENGINEER will inspect the pollution control and treatment system and may take effluent samples for analysis by a testing laboratory selected and paid for by the OWNER. If at any time, the OWNER or ENGINEER determines that the pollution control and treatment system is not in compliance with the approved system, the OWNER or ENGINEER will shut the portion of the project down that is not in compliance, and it shall remain shut-down until the pollution control and treatment system is properly constructed or repaired, and complies with the approved pollution control and treatment system plans and specifications.

Schedule construction to minimize erosion and stormwater runoff from the construction site. Implement erosion control measures on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased. In addition to other temporary erosion control measures that may be implemented, application of polyacrylamide is required on all such disturbed areas within seven (7) days after the construction activity in that portion of the site has temporarily or permanently ceased, unless final landscaping has been installed. Polyacrylamide application shall be as specified herein.

Inspect each pollution control system at least once per day and after each rainfall event. Clean and maintain each pollution control system as required by its manufacturer or the OWNER, until the system is no longer needed. If a water quality violation occurs, immediately cease all work contributing to the water quality violation and correct the problem.

Discharge shall not violate State or local water quality standards in the receiving waters, nor cause injury to the public health or to public or private property, nor to the Work completed or in progress. The receiving point for water from construction operations shall be approved by the applicable owner, regulatory agency, and the ENGINEER.

Promptly repair all damage at no cost to the OWNER.

## **State Certified Erosion Control Specialty Subcontractor Is Required For Installation, And Maintenance**

**State Certified Erosion Control Specialty Subcontractor is Required for Installation and Maintenance:** Installation and maintenance of all erosion and stormwater pollution control devices, shall be by a State Certified erosion control subcontractor who specializes in the installation and maintenance of such devices. After installation, this specialty subcontractor shall maintain the erosion and stormwater pollution control devices until in the ENGINEER's sole opinion, the devices are no longer necessary (such time not to extend past the date the OWNER formally accepts the project as complete). Before beginning construction, submit to Indian River County for review and approval, a Stormwater Pollution Prevention Plan (SWPPP), prepared by the certified erosion control subcontractor. Construction shall not begin until the SWPPP has been approved by Indian River County. Submit the approved SWPPP to the ENGINEER before beginning construction. Include in the SWPPP, the "Contractor's Affidavit Regarding Erosion Control and Treatment of Dewatering Water and Stormwater From the Construction Site" (located at the end of this Section).

## **"Pollution" And Certain Uncontestable Pollution Events Defined**

With respect to this Section and as may be further defined in the following paragraphs, "pollution" is the presence in off-site waters of any substances, contaminants, or manmade or human-induced impairment of off-site waters or alteration of the chemical, physical, biological, or radiological integrity of off-site water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property. Pollutants to be removed include but are not limited to, sediment and suspended solids, solid and sanitary wastes, phosphorus, nitrogen, pesticides, oil and grease, concrete truck washout, stucco mixer washout, curb machine washout, washout from other construction equipment, construction chemicals, and construction debris.

**When the Discharge is Directly Into an Existing Water Body, Pollution Occurs When . . .** An existing water body (including ditches and canals) is defined to be polluted by the CONTRACTOR's operations when at any time, the turbidity of the water immediately downstream of the CONTRACTOR's discharge point(s) is at least 29 nephelometric turbidity units (NTUs) higher than the turbidity of the background water upstream of the discharge point(s). [See Fla. Administrative Code 62-302.530] Exception: When the discharge is directly into or through an outfall discharging into "Outstanding Florida Waters," designated by Florida Statute 403.061(27), the turbidity of the discharged water cannot exceed the turbidity of the immediate receiving water. The ENGINEER or OWNER shall determine the locations where the turbidity is measured.

**When the Discharge is not Directly Into an Existing Water Body, Pollution Occurs When . . .** In some instances, dewatering water or stormwater runoff from the construction site or work area may reach a water body indirectly, such as after traveling through pipes or by overland flow. Before construction commences, the Contractor will measure background levels of total suspended solids (TSS) and turbidity, in the immediate vicinity of the discharge water's ultimate discharge point into the receiving water body. If the discharge water's TSS and turbidity measurements exceed these pre-construction background values by 20 percent for TSS and 29 NTUs for turbidity, then the discharge from the CONTRACTOR's operations is defined to be polluted.

**Pollution Always Occurs When . . .** The discharge from a construction site or work area is defined to be polluted whenever the pH of the discharge is less than 6.5 or greater than 8.5, or whenever any of the following is present in the discharge water:

- (1) Hazardous waste or hazardous materials in any quantity,
- (2) Any petroleum product or by-product in any quantity,
- (3) Any chemical in any quantity, or

(4) Concentrated pollutants.

Above paragraphs do not in any way, limit the types of conditions in which pollution may be determined to occur.

**Penalties For Noncompliance With This Section**

In addition to the OWNER's specific remedies, if erosion or pollution is caused by dewatering water or stormwater runoff from the construction site, the OWNER will immediately report the violations to the Indian River County Code Enforcement Board, SJRWMD, FDEP, Indian River Farms Water Control District (or other F. S. Chapter 298 Drainage District, as appropriate), and other pertinent regulatory or enforcement agencies.

**PART 2 - MATERIALS AND INSTALLATION**

**General**

Polyacrylamide: As required above, place polyacrylamide (PAM) on bare ground to reduce the potential for erosion. PAM may also be used in water bodies to remove turbidity. Use the anionic form of polyacrylamide that does not stick to fish gills. For PAM information and its proper application, contact Applied Polymer Systems, Inc., (678) 494-5998, [www.siltstop.com](http://www.siltstop.com).

Staked Silt Fences:

1. **General:** Use silt fences to control runoff from the construction site where the soil has been disturbed.
2. **Installation:** Install per the manufacture's recommendations and as specified herein. In general, install the silt fence in a manner that allows it to stop the water long enough for the sediment to settle while the water passes through the silt fence fabric. All supporting posts shall be on the down-slope side of the fencing. Place the bottom of the fabric 6-inches minimum, under compacted soil to prevent the flow of sediment underneath the fence. Place silt fences away from the toe of slopes. Otherwise, install in accordance with FDOT Index No. 102.
3. **Product:** All material shall be new and unused. Use FDOT Types II through IV silt fences where large sediment loads are anticipated, where slopes are 1:2 (vertical: horizontal) or steeper, or as directed by the ENGINEER; otherwise use FDOT Type III silt fence.
  - (a) For FDOT Type III Silt Fence - ACF Environmental, Catalog No. 360800000, Florida DOT Silt Fence. U.S. Sieve = 30, tensile strength = 120 pounds. The heavy-duty filter fabric shall be pre-attached to 48-inch long stakes on 6-foot centers. (1-800- 448-3636).
  - (b) For FDOT Type IV Silt Fence, modify the above Catalog No. 360800000 to comply with FDOT Index No. 102.
  - (c) Or equivalent.

Turbidity Barriers:

1. **General:** Use turbidity barriers to control sediment contamination of rivers, lakes, ponds, canals, etc.
2. **Installation:** Install per the manufacturer's recommendations and per FDOT Index No. 103 unless directed otherwise by the ENGINEER.

3. Product: All material shall be new and unused. The turbidity barrier shall be a pervious barrier and the fabric color shall be yellow.
  - a. Parker Systems, Inc.(1-866-472-7537),model Type II or Type I
  - b. Or equivalent.

#### Sedimentation Control From Dewatering or Pumping Operations Using Filter Bags:

1. Remove silt, sediment, and other particles from dewatering or pumping applications using a filter bag. The bag shall be manufactured using a polypropylene non-woven geotextile and sewn by a double-needle machine, using a high strength nylon thread. The bag shall have a fill spout large enough to accommodate a 4-inch pump discharge hose. Straps shall be attached to the bag to secure the hose and prevent pumped water from escaping without being filtered.
2. Installation: Install in accordance with the manufacturer's specifications. Use as many filter bags as required, at no additional cost to the OWNER. Legally dispose of the bags offsite, at no cost to the OWNER. If the bags are placed on aggregate to facilitate filtration efficiency, do not use limerock aggregate.
3. Product: The filter bag shall be supplied with lifting straps.
  - a. "DIRTBAG 53 or 55 as applicable," supplied by ACF Environmental, Inc. (1-800-448-3636).
  - b. "DANDY DEWATERING BAG" supplied by Dandy Products, Inc. (1-800-591-2284).
  - c. Or equivalent.

#### Curb Inlet Protection:

1. Filter stormwater before it enters curb inlets.
2. Installation: Install in accordance with the manufacturer's specifications. Use as many of the specified filtration devices as required, at no additional cost to the OWNER.
3. Product: All materials shall be new and unused. The length of the curb inlet filtration device shall be at least 2-feet longer than the curb inlet opening.
  - a. "GUTTERBUDDY," supplied by ACF Environmental, Inc. (1-800-448-3636).
  - b. Or equivalent.

#### Catch Basin Protection:

1. Filter stormwater before it enters catch basins (drop inlets). The filter "sack" shall be manufactured from woven polypropylene geotextile and sewn by a doubleneedle machine, using a high strength nylon thread. The sack shall be manufactured to fit the opening of the catch basin or drop inlet and it shall have the following features: two dump straps attached at the bottom to facilitate emptying; lifting loops as an integral part of the system to be used to lift the sack from the basin; and a colored restraint chord approximately halfway up the sack to keep the sides away from the catch basin walls. The colored restraint chord shall also serve as a visual means of indicating when the sack should be emptied.
2. Installation: Install in each catch basin in accordance with the manufacturer's specifications. Use as many of the specified filtration devices as required, at no additional cost to the OWNER.

3. Product: All materials shall be new and unused.
  - a. "SILTSACK" (regular flow), supplied by ACF Environmental, Inc. (1-800-448-3636).
  - b. "FloGuard+PLUS," supplied by Kristar Enterprises, Inc. (1-800-579-8819).
  - c. Or equivalent.

Construction Site Egress Driveways: Minimize the transport of sediment and soil from the construction site or work area by vehicle wheels. Construct a crushed rock driving surface at the vehicle exit point(s). Provide an area large enough to remove the sediment and soil from vehicle wheels before the vehicle leaves the construction site or work area. Provide wash-down stations as required to wash vehicle tires and retain all washwater on-site. Do not use limerock.

Rock and Stone for Erosion Control and Pollution Control and Treatment:

1. Crushed Limerock: Crushed limerock shall not be used under any circumstance.
2. Acceptable Material: FDOT #4 non-calcareous aggregate (usually granite), washed and meeting the requirements of FDOT Standard Specifications for Road and Bridge Construction, Section 901.

Hay Bales: Hay bales shall not be used.

### **PART 3 - EXECUTION**

Design, construct, and maintain the pollution control and treatment system to minimize erosion and capture and remove pollutants from the construction site and from all other areas disturbed by construction activities.

Apply polyacrylamide only as directed by the polyacrylamide manufacturer/supplier.

#### **Item of Payment**

Payment for the work specified in this item shall be made under: Bid Item No. 27 – Erosion & Sediment Control - Lump Sum

*[Remainder of this page was intentionally left blank]*



# CONTRACTOR'S AFFIDAVIT REGARDING POLLUTION

This sworn statement is submitted to Indian River County for

## West Wabasso Community Sewer Phase 2 Project

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Personally before me the undersigned authority, appeared \_\_\_\_\_, who upon oath duly administered, stated as follows:

1. This sworn statement is submitted by the CONTRACTOR

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

\_\_\_\_\_ and (if applicable) its Federal Identification No.(FEIN) is \_\_\_\_\_.

2. My name is \_\_\_\_\_ and my relationship to the entity named above is \_\_\_\_\_.

*(If signing as Owner's Agent, attach Letter of Authorization to Sign from Owner)*

3. I understand and agrees that in addition to complying with the terms and conditions of the Stormwater Management System Permit issued by Indian River County, Contractor is responsible for complying with the terms and conditions of the following as applicable to the site:

- (a) State of Florida Generic Permit for Stormwater Discharge From Large and Small Construction Activities (for projects one acre or larger),
- (b) Stormwater Pollution Prevention Plan (regardless of project size),
- (c) St. Johns River Water Management District permit(s) (regardless of project size),
- (d) Florida Department of Environmental Protection permit(s) (regardless of project size),
- (e) All other permits required for this project not specifically listed herein, and
- (f) All Codes and Ordinances of Indian River County.

4. I understand and agrees that "pollution" as defined by Florida Statutes Chapter 403.031(7) includes: ". . . the presence in the outdoor atmosphere or waters of the state of any substances, contaminants, noise, or manmade or human-induced impairment of air or waters or alteration of the chemical, physical, biological, or radiological integrity of air or water in quantities or at levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation unless authorized by applicable law."

5. I understand and agrees that in addition to the definition set forth in Item 4 above, "pollution" is also defined by Florida Administrative Code 62-302.530 and as may be further defined in the Indian River County permit(s).

6. I understand that Indian River County requires the design, installation, and maintenance of proper erosion control measures at all times during construction until complete stabilization is

achieved at the project site. Contractor understands that this requirement is for this project regardless of the project size.

7. I understand that there are civil and criminal penalties for pollution listed in Florida Statutes Ch. 403.141 and Ch. 403.161 and that there are other penalties listed in Indian River County's permits, including but not limited to, Indian River County issuing a Cease and Desist Order for the project. Contractor understands that it may be liable for these and other penalties if offsite pollution occurs as a result of activities associated with the Project.
8. Transfer of Ownership or County Issued Permits:
  - (a) Transfer of Interest in Real Property: Within twenty-one (21) days of any transfer of ownership or control of the real property at which the permitted activity, facility, or system is located or authorized, the Contractor shall notify in writing, both the Indian River County Engineering Division and the Indian River County Stormwater Division of the transfer. Contractor shall provide the name, mailing address, and telephone number of the transferee and a copy of the instrument effectuating the transfer. Said notification is in addition to notifying the County Attorney's Office as required by County Code.
  - (b) Transfer of a County Permit. To transfer a County issued permit, Contractor must provide (1) the information required in Item 8(a); (2) a written statement from the proposed transferee that it will be bound by all terms and conditions of the permit; and (3) a new "Contractor's Affidavit" form properly executed by the transferee. Upon proper receipt of these items the County shall transfer the permit to the transferee.
  - (c) Contractor is encouraged to request a permit transfer prior to the sale or legal transfer of the real property at which a permitted facility, system, or activity is located or authorized. However, the transfer shall not be effective prior to the sale or legal transfer.
  - (d) An "Illicit Discharge Sign" must be present at the site at the time of transfer. Replacement or additional signs may be obtained from the Indian River County Public Works Department at a cost of \$30.00 per sign.

Under penalty of perjury, Contractor declares that it has read the foregoing affidavit and the facts stated in it are true.

FURTHER AFFIANT SAYETH NAUGHT

Contractor: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_  
*(If signing as Owner's Agent, attach Letter of Authorization to Sign from Owner)*

Printed Name: \_\_\_\_\_

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

The foregoing instrument was subscribed and sworn to before me this \_\_\_ day of \_\_\_\_\_, 20 by \_\_\_\_\_, who is personally known to me or has produced \_\_\_\_\_ as identification and who did take oath.

\_\_\_\_\_  
Notary Public State of Florida at Large  
My Commission expires: \_\_\_\_\_

**\*END OF SECTION\***

## SECTION 02632

### SUBMERSIBLE WASTEWATER PUMPING STATION

#### ADDENDUM 2

#### **GENERAL**

The station shall be complete with pumps, motors, piping, valves, electrical work (including motor controls), structure, connections and all other needed appurtenances, tested and ready for service prior to the sign-off or acceptance by IRCDUS.

These specifications are intended to give a general description of what is required, but do not cover all details, which will vary in accordance with the requirements of the equipment as offered. It is, however, intended to cover the furnishing, the shop testing, the delivery and complete installation and field testing of all materials, equipment and appurtenances for the complete pumping units as herein specified, whether specifically mentioned in these specifications or not.

For all units there shall be furnished and installed all necessary and desirable accessory equipment and auxiliaries, whether specifically mentioned in these specifications or not, and as required for an installation incorporating the highest standard for the type of service, including field testing of the entire installation and instructing the IRCDUS's regular operating personnel in the care, operation and maintenance of all equipment. All operating manuals shall be supplied to IRCDUS.

All private lift stations must provide a repair company name and emergency telephone number on the electrical panel in case of a malfunction to the station. If a name and number is not provided, the IRCDUS reserves the right to call a company of it's choosing to make a service call and repair the malfunctioning station. All charges to repair said station shall be charged to the owner of the station.

A manhole shall be constructed within 20' upstream of a lift station. There shall be only one pipe connection from this manhole to the lift station. The pipe between the lift station and manhole shall be C-900, DR-18 PVC pipe.

#### **Description of Systems**

The pump station shall be comprised of a concrete wet well, concrete valve pit, RTU, at least two (2) submersible wastewater pumps and controls, discharge piping and all appurtenances as specified herein or needed. The pump station will pump raw, unscreened, domestic wastewater into a force main.

#### **Permits, Inspections & Fees**

The Contractor shall obtain and pay for all permits, official inspections and all other fees as required for project construction. ALL PERMIT, IMPACT, OR INSPECTION FEES PAYABLE TO INDIAN RIVER COUNTY IN CONNECTION WITH THE WORK ON THIS COUNTY PROJECT WILL BE PAID BY INDIAN RIVER COUNTY, WITH THE EXCEPTION OF RE-INSPECTION FEES AS SET FORTH IN THE CONTRACT.

Inspection by County personnel is required in addition to, not in lieu of, municipal and Engineering Consultant inspections.

No installation will be accepted until it has passed all inspections, including pavement installation or replacement.

### **Qualification**

To assure unity of responsibility, the motors and control system shall be furnished and coordinated by the pump manufacturer. The Engineer of Record shall assume responsibility for the satisfactory installation and operation of the entire pumping system, including pumps, motors, and controls as specified.

The pumps covered by these specifications are intended to be standard pumping equipment of proven ability as manufactured by a reputable manufacturer having extensive experience in the production of such pumps. The pumps furnished shall be designed, constructed and installed in accordance with the best practice and methods, and shall operate satisfactorily when installed. Pumps shall be manufactured in accordance with the Hydraulic Institute Standards.

The control system shall have an established record of successful performance for similar service and be approved by the IRCDUS.

All equipment furnished under this specification shall be new, and shall be the standard product of manufacturers having a successful record of manufacturing and servicing the equipment and systems specified herein for a minimum of five (5) years.

The pumps shall be furnished complete with controls and accessories required, and shall be as on the Approved Manufacturer's Product List. Grinders pumps shall be permitted for pumps 5.0 HP or less, unless otherwise approved by IRCDUS's Engineer. Three phase electrical power will be required for all pumping stations. 120/240 volt service will be required for pump stations up to 20hp. 277/480 volt service will be required for pump stations larger than 20hp.

### **Operating Instructions**

Operating and maintenance manuals shall be furnished. The manuals shall be prepared specifically for this installation and shall include all required cuts, drawings, equipment lists, descriptions, etc., that are required to instruct operating and maintenance personnel unfamiliar with such equipment. The number and special requirements shall be as specified by the County.

A factory representative of all major component manufacturers, who has complete knowledge of proper operation and maintenance, shall be provided for one (1) full day to instruct representatives of the Owner and the Engineer on proper operation and maintenance. If there are difficulties in operation of the equipment due to the manufacturer's design or fabrication, additional service shall be provided at no cost to the Owner.

### **Tools & Spare Parts**

Any special tools required shall be provided.

The manufacturer shall furnish a complete set of recommended spare parts necessary for the first three (3) years of operation of the pumping system, which shall include at least the following:

- 1) 1 - set of upper bearings
- 2) 1 - set of lower bearings
- 3) 1 - set of upper and lower shaft seals
- 4) 1 -relay and phase monitor for each type supplied with the pump control panel for each station

- 5) Gringer Pump Station (2 Complete Sets) Impeller and Bottom Plate is one set
- 6) Solid Handling Pumps (1 Impeller)
- 7) 1 -TCU001 Programmed to the corresponding Frequency

Spare parts shall be properly bound and labeled for easy identification without opening the packaging, and suitably protected for long-term storage.

### **Warranty**

The Contractor and the equipment manufacturers shall warrant all equipment supplied under this section for a period of five (5) year. Warranty period shall commence on final date when the IRCDUS accepts the project.

The equipment shall be warranted to be free from defects in workmanship, design and materials. If any part of the equipment should fail during the warranty period, it shall be replaced in the machine(s) and the unit(s) restored to service at no expense to the IRCDUS.

The manufacturer's warranty period shall run concurrently with the Contractor's warranty period. No exception to the provision shall be allowed.

### **Submittals**

Copies of all materials required to establish compliance with these specifications shall be submitted for review. Submittals shall include at least the following:

1. Certified general arrangement drawings showing all important details and materials of construction dimensions.
2. Voltages and horsepower ratings.
3. Pertinent catalog information and pump and motor performance curves.
4. Written performance guarantee.

### **Materials & Equipment**

The pumping units required under this section shall be complete, including pumps and motors with proper alignment and balancing of the individual units. All parts shall be so designed and proportioned as to have liberal strength, stability, and stiffness, and to be especially adapted for the work to be done. Ample room shall be provided for inspection, repairs, and adjustments.

Each foundation plate for each pump shall be rigidly and accurately anchored into position. The same pump manufacturer shall furnish all necessary foundation bolts, plates, nuts, and washers for installation by the Contractor. Each foundation plate shall be "W" thick Type 304 stainless steel. Foundation bolts, nuts, washers, and spare parts shall be Type 304 stainless steel.

Stainless steel nameplates giving the name of the manufacturer, head, speed, and all other pertinent data shall be attached to each pump and motor.

### **PUMPS**

#### **General**

The pumps shall be totally submersible centrifugal pumps with close-coupled motors designed to pump sewage. The design shall be such that the pumping units shall be automatically connected to the discharge piping when lowered into place on the discharge connection. The pumps shall be easily removable for inspection or service, requiring no bolts, nuts or other fastenings to be removed for this purpose, or need for personnel to enter the pump well. Each pump shall be fitted with a 304 stainless steel lifting cable of adequate strength, and shall be five (5) feet longer than wet well depth to control panel to permit raising the pump for inspection and removal.

The impeller shall be constructed of nodular iron SP. The hydraulic design shall incorporate a single vane centrifugal impeller. The design shall permit low liquid velocities and gradual acceleration and change of flow direction of the pumped media. The impeller/casing design shall result in a passage free of surfaces to which solid or fibrous materials can adhere. The overall pump design shall combine high efficiency, low required NPSH, large ball passage and the ability to handle high solids concentrations efficiently. All other parts shall be of close grain gray iron construction, with all parts coming into contact with sewage protected by a coat of rubber-asphalt paint. All external bolts and nuts shall be of stainless steel. The impeller shall be of a centrifugal type, capable of passing 3-inch minimum diameter solids, fibrous material, and heavy sludge. If riser pipes are less than 3" in the wet well then the pumps must be grinder pumps.

Each pump shall be provided with a tandem double mechanical seal running in an oil reservoir, composed of two (2) separate lapped face seals, each consisting of one (1) stationary and one (1) rotating tungsten-carbide or silicon carbide ring with each pair held in contact by a separate spring, so that the outside pressure assists spring compression in preventing the seal faces from opening. The compression spring shall be protected against exposure to the pumped liquid. The pumped liquid shall be sealed from the oil reservoir by one face seal and sealed from the oil reservoir from the motor chamber by the other. The seals shall require neither maintenance nor adjustment, and shall be easily replaced. Conventional double mechanical seals with a single spring between the rotating faces, requiring constant differential pressure to effect sealing and subject to opening and penetration by pumping forces, shall not be considered equal to tandem seal specified and required.

A sliding guide bracket shall be an integral part of the pumping unit, and the pump casing shall have a machined connecting flange to connect with the cast iron discharge connection, which shall be bolted to the floor of the sump with stainless steel anchor bolts and so designed as to receive the pump connection without the need of any bolts or nuts. Sealing of the pumping units to the discharge connection shall be accomplished by a simple linear downward motion of the pump, with the entire weight of the pumping unit guided by 304 stainless steel guides which will press it tightly against the discharge connection. No portion of the pump shall bear directly on the floor of the sump, and no rotary motion of the pump shall be required for sealing.

Pump motors shall be housed in an air-filled, watertight casing. Motors shall be a NEMA Design B with a 1.15 service factor. Insulation shall be moisture-resistant NEMA Class F with a maximum temperature rise of 90° Celsius above ambient temperature (4° Celsius). Motor characteristics are noted on the Drawings. Pump motors shall have cooling characteristics suitable to permit continuous operation, in a totally, partially or nonsubmerged condition. Each motor shall incorporate an ambient temperature compensated overheat sensing device and a moisture sending device wired in series. The protective devices shall be wired into the pump controls in such a way that if either device operates, the pump will shut down. The devices shall be self-resetting. The cable shall be fixed to the pump using a watertight trumpet assembly. The pump shall be capable of running continuously in a totally dry condition under full load, without damage, for extended periods. Before final acceptance, a field running test demonstrating this ability, with four (4) hours of continuous operation (water supplied by the contractor) under the above conditions, shall be performed for all pumps being supplied, if required by the IRCUS. Pump motor cables shall be suitable for submersible pump applications and shall be properly sealed.

Motor windings shall be treated with a mildew preventative.

Each pumping unit and its driving equipment shall be designed and constructed to withstand the maximum turbine runaway speed of the unit due to backflow through the pump.

### **Performance Requirements**

For Performance Requirements, refer to IRCDUS Standards, Pumping Station Data Table on Drawing No. S-15.

### **ACCESS FRAMES & GUIDES**

The pumping station shall be furnished with the necessary aluminum access frames, complete with hinged and hasp-equipped covers, stainless steel upper guide holder, power cable holder and level sensor cable holder. The frames shall be securely mounted above the pumps. Doors shall have safety locking handles in open position. Doors shall be of aluminum-checked plate with stainless steel hinges and hardware. The access cover and frame shall be as sized on the Drawings.

Lower guide holders shall be integral with the discharge connection. Guide bars shall be of Schedule 40, 2" Welded 304 stainless steel pipe of the size indicated on the Drawings and of the length required by the pump manufacturer.

A safety grate with stainless steel hardware is required for all wetwells and shall be in accordance with IRCDUS Approved Manufacturer's Product List.

### **PUMP CONTROL SYSTEM MANUAL SYSTEM (NON-REMOTE TRANSMITTER UNIT)** (SEE IRCDUS UTILITY CONSTRUCTION STANDARDS DETAIL DRAWINGS S-18)

#### **General**

A pump controller shall be provided for the wastewater pumping station. The controller shall respond to the liquid level sensor to automatically start and stop pumps to pace pump station influent flow, and shall be approved by IRCDUS.

The pump controller shall be the standard system of the manufacturer as modified for this application. The wet well levels to be used in operation are as shown on Detail Drawings S-14 and S-15 of the IRCDUS Standards.

#### **Operation Requirements**

The control panels shall consist of a main circuit breaker and generator breaker with mechanical interlock, an emergency power receptacle, a motor circuit protector (MCP) and magnetic starter for each pump motor, and 20 ampere, 120 volt circuit breakers as required. MCP motor control panel shall meet all requirements of service entrance by properly bonding neutral or shall be UL service entrance rated. A low and high level alarm and pump shutoff shall be accomplished by float type, liquid level control system, with all components mounted in one common enclosure. Control switches shall provide means to operate each pump manually or automatically. When operated in the automatic mode, the control assembly shall provide means to manually select or automatically alternate the position of the "lead" and "lag" pumps after each pumping cycle. A three position alternate switch labeled "test-off-auto" shall be provided to manually select which pump shall be the lead pump, when necessary, and also be able to test the alternator to see if it is still operational.



A float type liquid level control system shall continuously monitor wet well liquid level and control operation of the low-level cutoff for the pumps, and shall operate on a 24-volt circuit.

A non-fused safety switch shall be installed between the meter and panel. This switch shall be in a NEMA 4X, UL rated, stainless steel waterproof enclosure, in accordance with IRCDUS Approved Manufacturer's Product List. Amperage shall be at least equal to that of the main breaker.

### **Construction**

The electrical control equipment shall be mounted within a modified NEMA 4X, UL rated, white powder coated stainless steel, dead front enclosure. The enclosure shall be equipped with a door and may incorporate a removable back panel on which control components shall be mounted. Back panel shall be secured to enclosure with collar studs. All lines entering the enclosure shall be protected by conduit seal bushings (supplied by pump manufacturer) at the source and shall be behind the dead front enclosure, entering from the side or bottom only. The seals shall prevent moisture and gas from entering the enclosure. Two cable connectors (shall be in accordance with IRCDUS Approved Manufacturer's Product List) shall be provided to terminate the motor cables in the control panel. The connectors shall be suitable for a 2" conduit with a seal bushing suitable for the motor cables.

### **Components**

All motor branch circuit breakers, motor starters, and control relays shall be of highest industrial quality, securely fastened to the removable back panels with screws and lock washers. Back panels shall be tapped to accept all mounting screws. Self-tapping screws shall not be used to mount any component. A non-corrosive material shall be utilized for wire connection locations within the box.

A thermal-magnetic air circuit breaker, per Approved Manufacturer's Product List, shall be furnished for the main breaker. The manufacturer shall seal all circuit breakers after calibration to prevent tampering. An Motor Control Panel (MCP) shall be provided for each motor starter. Each MCP shall be adequately sized to meet the pump motor and station operating conditions.

An open frame, across-the-line, NEMA rated, magnetic motor starter, Class 8536, in accordance with IRCDUS Approved Manufacturer's Product List, shall be furnished for each pump motor. Reduced voltage motor starters, Class 8606, per Approved Manufacturer's Product List, are required for all 30 HP and larger motors. All motor starters shall be equipped to provide under-voltage release and overload protection on all three phases. Motor starter contacts shall be easily replaceable without removing the motor starter from its mounted position. Overload reset push buttons shall be located on the inside of the control compartment door.

An emergency power receptacle shall be installed in the side of the control panel and connected to the line side of the generator breaker. The receptacle; shall be in accordance with IRCDUS Approved Manufacturer's Product List.

A ground fault indicator duplex utility receptacle providing 120 volt, 20 amp, 60 hertz, single phase current shall be mounted on the internal door.

The control panel shall include an adjustable time delay relay to prevent both pumps from starting simultaneously. Time delay relays shall be electronic type.

### **Operating Controls & Instruments**

All operating controls and instruments shall be securely mounted on the control compartment door. All controls and instruments shall be clearly labeled to indicate function.

Pump mode selector switches shall be Hand-Off-Auto type to permit override of automatic level control and manual actuation of shutdown of either pump motor. Operation of pumps in manual mode shall bypass all safety shutdown circuits except pump motor overload shutdown. Switches shall be oil-tight, in accordance with IRCDUS Approved Manufacturer's Product List, providing three (3) switch positions, each of which shall be clearly labeled according to function. Separate indicator lamps, which shall operate at 115 volts input, shall be provided mounted above H.O.A. selector switches. Lamps shall be easily replaceable from the front of control compartment door without removing switch modules from their mounted positions.

Indicator lamps shall be mounted in oil-tight modules, in accordance with IRCDUS Approved Manufacturer's Product List. Lamp modules shall be equipped to operate at 115-volt input. Lamps shall be easily replaceable from the front of the control compartment door without removing lamp module from its mounted position.

A six (6) digit, non-reset elapsed time meter shall be connected to each motor starter to indicate the total running time of each pump in "hours" and "tenth of hours." The elapsed time meters shall be in accordance with IRCDUS Approved Manufacturer's Product List.

### **PUMP CONTROL SYSTEM (REMOTE TRANSMITTER UNIT)**

A Remote Telemetry Unit (RTU) shall be supplied with the pump control system. The RTU shall be capable of acquiring analog and discrete data for transmission to the Central Telemetry Unit (CTU); The RTU shall also be capable of receiving instructions from the CTU for the operation of the pumps. See IRCDUS Approved Manufacturer's Product List for the separate components. (See IRCDUS Standards, Detail Drawings S-18.)

### **SHOP PAINTING**

Before exposure to weather and prior to shop painting, all surfaces shall be thoroughly cleaned, dry and free from all millscale, rust, grease, dirt and other foreign matter.

All pumps and motors shall be shop primed, with primer compatible with the field painting.

All nameplates shall be properly protected during painting.

Gears, bearing surfaces, and other similar surfaces obviously not to be painted shall be given a heavy shop coat of grease or other suitable rust-resistant coating. This coating shall be maintained as necessary to prevent corrosion during periods of storage and erection, and shall be satisfactory to the Engineer up to the time of final acceptance test.

Control Panels shall be made of stainless steel.

### **FIELD PAINTING**

The primer and paint used in the shop shall be products of the same manufacturer as the field paint to assure compatibility.

All nameplates shall be properly protected during painting.

### **LIFT STATION - GENERAL**

The Lift Stations Wet Well shall conform to the following size:

<b>DEPTH (ft)</b>	<b>DIAMETER (ft)</b>
0-10	6
11-15	8
16-20	10
21-25	12

Or as approved by IRCDUS's Engineer.

### **LIFT STATION LINERS - GENERAL**

A protective liner for the concrete shall be installed in the lift station/wet wells, repump lift stations, receiving manholes, drop manholes, and manholes as required by IRCDUS's Engineer.

After the lift station lining operation has been completed, the Contractor in the presence of the IRCDUS's representative shall visually inspect the lift station. In addition, at the IRCDUS's request, the Contractor shall be required within one (1) year to visually inspect the lift stations that were lined. The Contractor shall redo any work that has become defective.

### **LIFT STATION LINERS MATERIAL HDPE**

The Lift Station Liner shall be HDPE (high density polyethylene) with a minimum thickness of 2 mm. All HDPE liner sheets shall be extruded with a large number of anchoring studs, a minimum of 39/ft<sup>2</sup>, manufactured during the extrusion process in one (1) piece with the sheet so there is no welding and no mechanical finishing work to attach the studs to the sheet. The liner shall have a pull out of 112.5 lbs./anchoring stud.

Flat liner sheet, non-anchored, used for overlapping joints, shall have a minimum thickness of 3mm. All joints shall be sealed by means of thermal welding performed certified welders.

The lining shall have good impact resistance, shall be flexible, and shall have an elongation sufficient to bridge up to a ¼-inch settling crack, without damage to the lining. The liner shall be able to bridge any expansion cracks that may occur.

Lining shall be repairable at any time during the life of the structure.

A certified fabricator shall custom fit the liner to the form work in order to protect the concrete surfaces from sewer gases. The interior surfaces to be protected shall include the walls, ceiling, and pipe entries.

For all lined manholes the use of HOPE Grade rings shall be used in lieu of brick or precast grade rings. Grade rings shall meet HS-25 load rating. Butyl sealant shall be used between each ring to make a watertight joint. The first grade ring shall be welded to the liner to provide a gas tight seal.

Upon request, the manufacturer shall provide written certification that the liner used meets or exceeds the requirement of this specification.

Provide a five (5) year unlimited warranty on all workmanship and products. The work includes the surface preparation and application of the liner system, shall protect the structure for at least five (5) years from all leaks, and from failure due to corrosion from exposure to corrosive gases such as hydrogen sulfide.

### **LIFT STATION LINERS – MATERIAL FIBER GLASS**

The lift station liner shall meet all requirements of ASTM Specifications D-3753 for glass fiber reinforced polyester manholes or lift stations. See IRCDUS Approved Manufacturer's Product List.

Fiberglass liners shall have a three (3) year warranty period.

## **OPERATION AND MAINTENANCE MANUAL**

The Contractor shall furnish six (6) complete sets of the Operation and Maintenance (O&M) Manual to be delivered directly to the office of the Engineer-of-Record, Masteller & Moler, Inc., 1655 27<sup>th</sup> Street, Suite 2, Vero Beach, Florida 32960. Two (2) sets of originals must be part of the required six (6) sets of O&M Manuals, including original manuals covering components manufactured by others.

The O&M Manual shall include As-built Plans of the pumping station, piping, and electrical system, as applicable. The Manual shall comply with Section 01730 and shall include the following:

- Shop drawings showing important details of construction and dimensions.
- Descriptive literature, bulletins, and/or catalogs of the equipment.
- A detailed description of the submersible wastewater pumping station operation.
- Electrical information, including control schematic and panel layout.
- Manufacturer's Operation and Maintenance Manuals with parts cross-sections, as applicable.
- Recommended spare parts.
- Contact phone numbers for troubleshooting and service.
- The Recommended Maintenance Schedule for All Equipment.
- Maintenance Instructions.

## **START-UP**

The plant manufacturer shall provide the services of a factory-trained representative to inspect the installation after the submersible wastewater pumping station has been installed with all the necessary electrical connections and all piping connections completed. Upon completion of this inspection, the representative shall instruct the purchaser, or their representative, as to the necessary adjustments that may be required of them. The manufacturer's representative shall instruct the plant operator in the proper operation of the plant for a period not to exceed two (2) working days.

**\* END OF SECTION \***