

February 13, 2018

**BOARD OF COUNTY COMMISSIONERS  
ORANGE COUNTY, FLORIDA**

**ADDENDUM NO. 3 / IFB NO. Y18-729-TA**

**SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
IMPROVEMENTS**

**BID OPENING DATE: ~~February 22, 2018~~ March 15, 2018**

This addendum is hereby incorporated into the bid documents of the project referenced above. The following items are clarifications, corrections, additions, deletions and/or revisions to and shall take precedence over the original documents. Additions are indicated by underlining, deletions are indicated by ~~strikethrough~~.

**A. QUESTIONS AND ANSWERS**

1. **Q. I was inquiring to see if Coldwell-Wilcox Technologies can get added to the spec or approved as “or equal” for the wastewater gates for the South Water Reclamation Facility Influent Pump Station Improvements Project?**

A. The County does not consider requests for substitution during bidding. The selected Contractor may submit a request for a product substitution as a submittal after Notice of Award, in accordance with the General Conditions.

2. **Q. I’m writing to request Tesco Controls, Inc. (TESCO) be added as an approved Instrumentation System Supplier (ISS) under specification section 13300-1.05-D for the above-mentioned project.**

A. The County does not consider requests for substitution during bidding. The selected Contractor may submit a request for a product substitution as a submittal after Notice of Award, in accordance with the General Conditions.

3. **Q. Can you please consider listing RW Gate Company in the list of ACCEPTABLE MANUFACTURERS in Section 11201 2.01 A?**

A. The County does not consider requests for substitution during bidding. The selected Contractor may submit a request for a product substitution as a submittal after notice of Award, in accordance with the General Conditions.

4. **Q. We ask for your consideration for WACO to be named in section 11201 Stainless Steel Slide Gates and Appurtenances for the Orange County SWRF Influent Pump Station project.**

A. The County does not consider requests for substitution during bidding. The selected Contractor may submit a request for a product substitution as a submittal after Notice of Award, in accordance with the General Conditions.

5. **Q. We ask While analyzing your upcoming project: South Water Reclamation Facility (SWRF) Influent Pump Station Improvements, we identified on page 13300-8 (p. 844/1423) within Division 13 - SPECIAL CONSTRUCTION the following reading:**

**D. The ISS shall be one of the following without exception:**

**1. Revere Control Systems  
2240 Rocky Ridge Rd.  
Birmingham, AL 35216  
TEL: (205) 824-0004**

**2. Curry Controls Company  
P. O. Drawer 5408  
Lakeland, FL 33807  
TEL: (863) 646-5781**

**We believe CCS has all the capabilities to deliver top-of-the-line successful projects at the highest quality standards.**

A. The County does not consider requests for substitution during bidding. The selected Contractor may submit a request for a product substitution as a submittal after Notice of Award, in accordance with the General Conditions.

6. **Q. Please clarify that the Owner accepts generator status of all known and unknown pre-existing hazardous material and will sign transportation manifests as such whether shown in the documents or not, to be removed under this contract.**

A. The Owner will accept generator status in accordance with the U.S. Comprehensive Environmental Response, Compensation & Liability Act (CERCLA), Title 42, Subsection 96.01, et al.

7. **Q. Please confirm a mutual waiver of consequential damages, will be inserted into the contract documents which would state: “In no event shall any Indemnified Party or the Contractor be liable to the other for any indirect, special or consequential damages (including, but not limited to, loss of profits, interest, earnings or loss of use) whether arising in contract, tort or otherwise.”**
- A. The Indemnification Provision shall be in accordance with Article 8- Bonds, Insurance, and Indemnification. There will be no change to this provision.
8. **Q. Please confirm that Liquidated Damages will be the sole and exclusive remedy for delay.**
- A. The County will not provide legal interpretation of potential remedies in response to the question asked. Remedies are as set forth in the Invitation for Bids document.
9. **Q. Please provide As-built documents for the plant.**
- A. Available information for these structures include the 1973 Old IPS Drawings and 1988 CDM Drawings. These drawings are attached to this addendum. The Bidders should not assume these documents are as-built or record drawings. All Bidders are required per Part C – INSTRUCTION TO BIDDERS, 2. (k), to carefully examine the site of the proposed work and make all necessary investigation to inform themselves thoroughly as to all difficulties involved in the completion of all work required pursuant to the mandates and requirement of this bid package.
10. **Q. Under Specification Section 01410 - Quality Control, 02220 – Excavation & Backfill, 03300 – CIP Concrete & in Article 16 F-31 all state that an independent material testing laboratory will be retain and pay for by the County. But in the last paragraph of Article 16 F-31 states that the Contractor will perform and pay all material testing and as stated in paragraph a. through e. above. Please clarify who is pays for the testing laboratory services.**
- A. Reference Part B SPECIFICATIONS of this addendum for clarification of testing payment responsibilities.
11. **Q. Please confirm the IPS foundation mat slab, @ elevation 54.00, requires only the two (2) construction joints that are indicated in the lateral (north to south) axis as shown on S06 and in section 1/S07. Plan view S06 does not indicate CJ’s in the longitudinal axis (east to west) and section 3/S09 supports there are no CJ’s running east to west, however, section 2/S08 does indicate slab CJ’s sectioning the slab.**

A. Yes, slab construction joints are only required in the north-south direction. The joints shown in the slab on Section 2/S08 should be disregarded.

12. **Q. Section 03510 MVRA 1.02 A indicates “High Performance Moisture Vapor Reducing Admixture (MVRA) for all new concrete slabs, including concrete slab-on-grade and concrete beams”. Section 03510 2.02 A indicates “Concrete moisture vapor reduction admixture (MVRA) for all interior slab (on ground and elevated) and structural roof deck construction.....). However, Section 03300 2.01 G 10 (page 10) indicates: HIGH PERFORMANCE CONCRETE MOISTURE VAPOR REDUCING ADMIXTURE “This admixture shall be applied to all concrete in the Electrical Building. See section 03510. Please advise if the MVRA Admixture is required in all project slabs (on-grade, mat foundation slabs and structural suspended slabs) or is the admixture only required in the on-grade slab of the Electrical Building.**

A. MVRA admixture is only required for the electrical building slab.

13. **Q. Section 03480 PRECAST CONCRETE BUILDING 1.01 A indicates “A factory-build precast building shall be supplied for the Electrical Building and Pump Metering Enclosure in accordance with project plans and specifications.” The only Electrical Building indicated within the documents is the IPS Electrical Building which is clearly shown on both Architectural and Structural drawings to be of concrete and masonry constructions. Further, we have not located a drawing indicating a Pump Metering Enclosure. Please advise and provide necessary documents for the specified precast building.**

A. There are no precast structures on this project, delete Specification Section 03480 Precast Concrete Building from the project specifications.

14. **Q. The IPS has multiple large fillet constructions including the two lift rectangular fillets, the pump base blocks, the fillet base blocks and the tapering fillets all within the zone of the foundation mat and wall construction joints. Please advise if the construction joints need to be formed within the fillets or if the joints are not required in these fillets.**

A. Yes, the vertical construction joints shown on S05 shall be included on the concrete fillets. The horizontal joints shall be per the Contractor and shall include at a minimum one joint matching the location of the perimeter wall joint which is shown on S09.

15. **Q. Article 17 – Delays and Extension of Time, paragraph 4 - Utility Conflicts, Relocation and Adjustments. This paragraph states that the Contractor is solely responsible for the coordination and resolution of all utility conflicts,**

relocation and adjustments. Delays related to these utilities will not be considered as bases of granting a change in contract amount or time. But the County has supplied documents “as-builts” that show size and location of existing pipes. The Contractor can only price conflict as shown on the contract documents. Because there is likely hood that there will be additional pipes or other items, not shown on these documents, that will need to be addressed during construction. We are requesting that the County to consider adding an unforeseen condition paragraph to this Article 17, to give the contractor the ability to request a change order for items not shown on the supplied documents. Please consider this request.

A. Article 7, Reference Points, Article 12- Changes in Work, and Article 13, Change in Contract Time and Amount, address unforeseen conditions and the process for change orders. There will be no changes to these articles.

16. **Q. Section 03300 2.01 G 9 (page 10) prescribes a crystalline waterproofing admixture to be “used in walls and slabs of water retaining structures ....”. Given the Max Water Level of the IPS is 77.50 and the underside of the top deck is 92.00 +/-, please advise if the deck and associated beams will require the crystalline waterproofing admixture.**

A. The crystalline waterproofing admixture shall be used for all concrete poured in water bearing structures even in concrete above given water lines.

17. **Q. Section 03300 2.01 G 9 (page 10) prescribes a crystalline waterproofing admixture to be “used in walls and slabs of water retaining structures ....”. Please advise if the secondary pour fillets of the IPS, typical of the rectangular fillets, the pump base fillets, the fillet base blocks and the tapered fillets, are considered wall constructions and as such require the crystalline waterproof admixture. Moreover, please also consider Concrete General Note #7 on drawing S01 indicates the waterproofing admixture is required in all concrete in contact with water.**

A. Yes, the concrete fillets will also require the admixture.

18. **Q. Specification Section 13210 (Physical Hydraulic Modeling) requires the Contractor to arrange for and pay for all costs associated with Physical Hydraulic Modeling for the Influent Pumping Station. Paragraph 1.01-B goes on to state that the results from this modeling may result in changes to the shape and depth of the structure or changes to the pump intake cones. The Contractor’s bid price is based on the drawings and specifications provided. If the Physical Hydraulic Modeling determines changes are necessary from the bid documents, will the Owner pay for these required structure and pump changes (material costs, design costs, etc.) and also compensate for any**

**schedule delays required to incorporate these changes?**

A. Refer to Article 12, Changes in Work and Article 13, Change of Contract Amount and Contract Time.

**19. Q. With reference to the new Outlet Box adjacent the existing IPS, sections 1/S16 and 1/S18 both indicate a new wall above the new opening provided in the 2 line wall. Other than the reinforcement note on S18, no other construction information is provided, such as:**

**a. Is this wall doveled into the existing perimeter wall and if so at what spacing and embedment.**

A. No, the only mechanical attachment to the existing structure is at the base slab and at wall lines A and B as shown on the Base Slab Plan on S17.

**b. If the wall is not mechanically attached to the existing, is it then placed directly against the exiting exterior wall or is an expansion joint material required.**

A. No expansion joint material is necessary between the wall pour and the existing.

**20. Q. The stainless steel slide gate schedule (Table 11201-1) at the end of specification section 11201 lists gates SG-16, 17, 26, 27, 28 as EMF (Embedded Frame, Sides and Bottom). These gates are shown at the existing Influent Pump Station on drawings M12 and M13 to be installed in existing concrete walls. Please confirm that saw-cutting and chipping out the existing concrete walls and floor will be required to install these gate frames, or if wall mounted frames can be supplied to be installed on the face of the existing concrete walls.**

A. The stainless steel gate schedule has been revised to address installation requirements.

**21. Q. Specification Section 02050 (Demolition of Existing Structures); Paragraph 1.06-A states that all salvageable equipment to be retained by the County shall be shown on the Drawings or specified herein. Neither Section 02050 nor the drawings indicate any material to be retained by the County. Please confirm that the County will not retain any equipment or please provide a list of items to be retained.**

A. The County will not retain any equipment.

**22. Q. Regarding the Old Influent Pump Station demolition shown on drawing M02, please address the following items:**

**a. Note 1 on drawing M02 states to “See information for bidders in appendix for additional information.” Appendices A thru D provided with the bid documents do not address the demolition of the OLD IPS. Please clarify.**

A. See Appendix E attached and added to the specifications.

**b. Note 1 also states that incidental items not shown are to be removed. Can you please clarify what constitutes “incidental items”?**

A. Incidental items are limited to small conduits, supports and wires attached to the structure walls, that are deeper than 10 feet from final finished grade that will not interfere with placement and compaction of the fill material.

**c. Does all of the existing piping need to be removed?**

A. Yes, all the existing piping needs to be removed.

**23. Q. Please add Eaton to the approved list of suppliers for the following products:**

**a. 16260- Variable Frequency Drives**

**b. 16361- Low Voltage Switchgear**

**c. 16920- Motor Control Centers**

A. Eaton will be added to the list of approved suppliers for Section 16361: Low Voltage Switchgear only. There will be no other changes to specifications 16260 and 16920.

**24. Q. Detail ‘D’ on M17 shows stainless steel anti-rotation baffle. However, we cannot determine where this detail applies. Please advise.**

A. Drawing M09 shows location of anti-rotation baffle.

**25. Q. Regarding the Electrical Bldg, the architectural drawings show the parapet wall to be concrete. However, the structural drawings show the parapet wall as masonry. Please advise which is correct.**

A. The Structural Drawings, Parapet wall to be masonry is correct.

**26. Q. Spec 03480: Precast Concrete Building calls for the Electrical Bldg and Pump Metering Enclosure to be precast structures. However, the contract drawings show the Electrical Bldg as masonry. Please clarify. We cannot locate the Pump Metering Enclosure. Please advise.**

A. Specification Section 03480 Precast Concrete Building has been deleted from the project specifications.

**27. Q. Reference drawing I-04 & 13300 2.02 H: Please identify any software licenses that may be required in the new operator workstation located at the new IPS. Currently there isn't any software specified for this computer.**

A. The following software shall be furnished and installed by the Contractor on the new operator workstation located at the new IPS:

- Weospace – This is the existing SCADA network communication system used by the Owner at SWRF. The software to be installed on this workstation will allow this workstation to communicate with the existing Weospace server at SWRF.
- iCLient – This is a standard GE software product that allows the PC to communicate with the existing Weospace server at SWRF.
- Microsoft ISS (Internet Information Server) – This is a standard Microsoft product.

The Contractor shall provide one license for each software to the owner. At the time of installation the Contractor shall coordinate with the owner to ensure the software versions supplied are compatible with the software versions in use at SWRF Information Server).

**28. Q. Reference drawing I-04 & 13300 2.02 I: Since the Weospace PC Panel is not a mobile device please confirm that Weospace is the preferred solution for accessing the plant SCADA system.**

A. While Weospace can be used for mobile communication, at SWRF Weospace is the existing SCADA network communication method used by the Owner for onsite HMIs. The Contractor shall ensure the Weospace PC panel is fully functional within the existing Weospace environment.

**29. Q. Please provide an Abatement Survey for both the Old IPS and the Existing IPS Structures to be either demo or remodel.**

A. The Asbestos and Lead Paint Surveys are attached to this addendum and are



provided for information purposes. The asbestos and lead-based paint identified in the report will be remediated by the County prior to issuance of the Notice to Proceed.

- 30. Q. New Electrical Building Architectural drawings indicate cast in place concrete beams at bearing ends and cast in place parapet walls above the hollow core roof deck whereas all Structural drawings indicate CMU masonry bearing details and masonry parapet details. Please confirm the structural masonry details are intended for hollow core bearing and parapet wall constructions.**

A. Construction will be according to the Structural Drawings.

- 31. Q. Note 4 on drawing M05 (Existing IPS) states to “see Information for Bidders in Appendix for Photos”, but the appendices provided do not provide this. Please clarify.**

A. The referenced photos are included in this Addendum under Section B, Specifications.

- 32. Q. Drawing C05 notes the demolition of the existing 12’ diameter chemical tank. Will the Contractor be required to remove and dispose of any chemicals inside this tank?**

A. All chemicals will be removed from the tank by OCU. The contractor shall verify that the tank is empty and take appropriate and required safety measures prior to demolition and/or removal of the tank from the project site.

- 33. Q. Drawing M-09 has a note to provide “Tap blind flange near bottom with 2” steel pipe and 2” plug valve. Drain to wetwell (Type x2)” Is this required to have a hard pipe connection to the wetwell? If so, what is the discharge elevation?**

A. Drawing M-09 has been revised to clarify construction requirements and is included in Section C of this addendum.

- 34. Q. Callouts on Drawings M-06, M-09 and Notes 1 on Drawings M-06, M07 refer to detail H/M-18 for 63” connection to Outlet Box and Isolation Box. However, Note 2 on M-06 refers to detail C/M-17. Which detail shall be used?**

A. Note 2 on M-06 has been clarified in Section C of this addendum.

**35. Q. Because we have not received an Addendum addressing the first round of questions, we are requesting that a postponement be granted on the Bid Date, so that when received, they can compete a competitive bid. Please consider.**

A. The bid due date has been extended to March 15, 2018.

**36. Q. Contract requirements on Partial Utilization Milestone has the contractor constructing, testing and placing in operation the New IPS completing with all the major items relating to the IPS in an 18-month period and with a damage clause of \$1200/day for everyday beyond that date. In reviewing the documents, this does not look like enough time to complete this phase of the project. We are requesting that duration be extended to 660 days. (22months) Please consider this request.**

A. The Partial Utilization Milestone duration has not been changed.

**37. Q. Section 01400, 1.04, C. calls for all products to be manufactured in the United States of America except where the manufacturer is specified. Please confirm that import products will be acceptable to quote for bidding purposes.**

A. Section 01400 is deleted. See Specification section of this addendum.

**38. Q. Please confirm that the Owner is responsible for all pre-existing hazardous materials on site.**

A. The Owner will accept generator status in accordance with the U.S. Comprehensive Environmental Response, Compensation & Liability Act (CERCLA), Title 42, Subsection 96.01, et al.

**39. Q. With respect to termination for Owner convenience in General Conditions – Article 19 – please confirm that Contractor will be paid for all costs to settle Subcontractors and Suppliers, including any work in process.**

A. Article 19 – SUSPENSION OF WORK AND TERMINATION, defines how Termination for Convenience is executed. In any termination for convenience, the Contractor shall be paid for Work completed by the Contractor, Subcontractors and Suppliers at the time of termination provided the Work has been inspected and accepted by the County.

**40. Q. With respect to termination for Cause by Owner in General Conditions – Article 19 – please confirm that Contractor and Surety will have a cure period during which Contractor can submit an acceptable cure plan prior to termination for cause.**

A. Refer to Article 16, Notice to Cure that outlines the process for a notice to cure.

**41. Q. Please confirm that the M/WBE goal is 18.75% per item 3 in the Instruction to Bidders and not 25% as noted in General Conditions – Article 21.**

A. The M/WBE goal for this project is 18.75% as written on page C-4. The goal was reduced from 25% (as defined in the Ordinance on page F-43) to 18.75%. Refer to Part D of this addendum for the revision to Article 21 of the General Conditions.

**42. Q. We request the CADD files for this project.**

A. CADD files will not be provided for bidding.

**43. Q. We request the AS-Built Drawings for OLD IPS Building and the Current Screening / IPS Building.**

A. Available information for these structures include the 1973 Old IPS Drawings and 1988 CDM Drawings. These drawings are attached to this addendum. The Bidders should not assume these documents are as-built or record drawings. All Bidders are required per Part C – INSTRUCTION TO BIDDERS, 2. (k), to carefully examine the site of the proposed work and make all necessary investigation to inform themselves thoroughly as to all difficulties involved in the completion of all work required pursuant to the mandates and requirement of this bid package.

**44. Q. Please confirm no federal funding on this project.**

A. There is no federal funding on this project.

**45. Q. Confirm last day for pre-bid questions is (10) calendar days before bid date. Feb. 12.**

A. The last day for prebid questions is 10 calendar days prior to the bid due date, which has been extended to March 15, 2018.

**46. Q. There is a substantial amount of excavated soil that will need to be stockpiled before backfill. The area identified on drawing C01 is not large enough to stockpile excavated soil. Hauling excavated material to offsite stockpile area and hauling material back to the site for backfill will be extremely expensive. Please confirm if an area on the plant site can be used to temporarily stockpile excavated material before needed for backfill.**

A. An area on the plant site will be provided to temporarily stockpile excavated material.

- 47. Q. Per drawing C18 and C05 Fiber Optic Duct Bank that is in conflict with new structures will be relocated by others. Please confirm when the Fiber Optic Duct Bank will be relocated. Per C18 the relocated Fiber Optic Duct bank is directly above 12" RWM line that will be installed by contractor early in the construction schedule. If needed please consider moving 12" RWM line to the south.**

A. The Fiber Optic Duct Bank will be relocated by others prior to the issuance of the Notice to Proceed.

- 48. Q. Per specification 01740 a (1) year Contractor's warranty period will be submitted. Per specification 01600 a (5) year manufacturer's warranty for the submersible pumps, variable frequency drives, metering manholes, switchgears, and other major pieces of material will per provided. Please confirm what will be considered other major pieces of material that will be included in (5) year warranty requirement.**

A. Per Specification 01740, No other major piece of material will require the 5 Year Warranty.

- 49. Q. Per note on drawing M-13: "Remove existing gates and construct new wall. See structural drawings for details." We were unable to find structural details for this wall. Please confirm or provide details for new wall.**

A. See revised drawing M-13 and gate schedule for details.

- 50. Q. Per note #14 on drawing M-13: "Channels to be cleaned and wastewater debris removed." It is common to find grit, sludge and debris in this area of the plant process. The amount of this material is not going to be quantified at the time of bid. Please consider adding a cost allowance item for removal of all girt, sludge and debris found in the existing channels.**

A. Bidder shall include the costs to remove and dispose of all material from the channel in their lump sum bid. No allowance or additional compensations will be provide for this work item.

- 51. Q. Per drawing C-07 the bottom elevation of the Proposed Influent Pump Station in elevation 71'. Per drawing G-08 and mechanical and structural drawings indicate bottom of pump station at elevation 54' respectively. Please confirm.**

A. Refer to structural drawings for pump station elevations.

- 52. Q. Per specification 01014.1.01A.3a : “provide access to the Existing Influent Pumping Station screening bays for daily removal of screening dumpsters.” The screening bays will be adjacent to the excavation for yard pipe installation. Please provide required access size for owner removal of screening dumpsters. Please confirm this is a daily need.**

A. The screening dumpsters are 20 yard dumpsters and a minimum of two dumpsters are operating at all times. The contractor shall determine means and methods for removal of screening material and required access to accomplish this daily requirement.

- 53. The 48” temporary bypass line at the Influent PS; does this need to be domestic, P401 lined DIP or other material.**

A. The temporary by-pass shall be P401, DIP.

- 54. Drawing C17 has tables for Valves, Fittings, and Manholes. These tables to not provide any Easting, Northing, or Elevation Information. Can we get that information completed in the Tables?**

A. The table on C17 is an As-Built Coordinate Asset Table and will be completed by the contractor as the assets are installed and surveyed and included in the final as-built drawings.

## **B. SPECIFICATIONS**

- 1. In PART F, GENERAL CONDITIONS - Delete the final paragraph in ARTICLE 16 WARRANTY AND GUARENTEE, ACCEPTANCE OF DEFECTIVE WORK, and replace with:**

“The Contractor will perform and pay for all other material testing and other testing specified in the Contract Documents and as stated in paragraphs a. through f. above. The purpose of performing these tests is to verify compliance with the specifications as set forth in the Contract Documents”

- 2. Deleted Section 01400 from the project specifications.**

**2. Section 01410 revised as follows:**

**a. Section 1.01, A, 1:**

1.01 DESCRIPTION

A. Scope of Work:

1. ~~County will employ and pay for services of an Independent Testing Laboratory to perform Testing specifically indicated on the Contract Documents or specified in the Specifications and may at any other time elect to have materials and equipment tested for conformity with the Contract Documents. Testing by Independent Laboratory shall be paid as indicated in the table in Section 1.02, G.~~

**b. Section 1.02, G, Table Column for Concrete:**

Concrete	Slump test each delivery, cylinders every <del>20</del> 50 CY per Section 03300	County
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3. **Attached Specification “Section 02012 – Geotechnical Instrumentation Guide” added to the project specifications.**
4. **Attached “FDEP Notification/Application For Constructing A Domestic Wastewater Collection/Transmission System” Permit added to Appendix C of the specifications.**
5. **Attached “FDEP Permit Revision – Influent Lift Station Replacement/Upgrade” added to Appendix C of the specifications.**
6. **Attached Appendix E - Information for Bidders, to the specifications.**

**C. DRAWINGS**

1. **Drawing S02 to be deleted in its entirety and replaced with the attached Revised S02 drawing.**
2. **Drawing S03 be deleted in its entirety and replaced with the attached Revised S03 drawing.**
3. **Drawing S17 to be deleted in its entirety and replaced with the attached Revised drawings S17 and S17A.**

4. Drawing S18 be deleted in its entirety and replaced with the attached Revised S18 drawing.
5. Drawing M06 – Delete note 2 in its entirety and replace with “2. PIPES THROUGH CONCRETE WALLS PER PIPE PENETRATION DETAIL C ON SHEET M-17.”
6. Drawing M07 to be deleted in its entirety and replaced with the attached Revised M07 drawing.
7. Drawing M08 to be deleted in its entirety and replaced with the attached Revised M08 drawing.
8. Drawing M09 be deleted in its entirety and replaced with the attached Revised M09 drawing.
9. Drawing M15 be deleted in its entirety and replaced with the attached Revised M15 drawing.
10. Drawing M16 to be deleted in its entirety and replaced with the attached Revised M16 drawing.

**D. Attachments:**

The following attachments are included in this addendum:

1. 1973 OLD IPS Drawings
2. 1988 CDM Drawings
3. Asbestos and Lead Surveys

**E. ARTICLE 21 is deleted in its entirety and replaced with the following:**

**ARTICLE 21 - MINORITY/WOMEN OWNED BUSINESS ENTERPRISE REQUIREMENTS AND SMALL BUSINESS PROVISIONS**

The Contractor will comply with all requirements of Orange County's Minority/Women Owned Business Enterprise Ordinance No. 94-01, as amended by Ordinance No. 2009-21. In summary, the ordinances establish a goal of 25% of the County's annual monetary value of contracts be awarded to minority/women owned business enterprises meeting Contract

specifications. For purposes of this bid, the goal was reduced from 25% to 18.75% due to lack of M/WBE availability to provide many specialty items included in the project scope of work.

The goals for work force employment levels are 18% minority and 6% women. Other provisions of the Ordinance as it pertains to construction projects may be found in Part C of this document.

**F. Bid Opening Date is hereby modified from ~~February 22, 2018~~ to March 15, 2018.**

**G. ACKNOWLEDGEMENT OF ADDENDA**

- a. The Proposer shall acknowledge receipt of this addendum by completing the applicable section in the solicitation or by completion of the acknowledgement information on the addendum. Either form of acknowledgement must be completed and returned not later than the date and time for receipt of proposal.
- b. All other terms, conditions and specifications remain the same.

Receipt acknowledged by:

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

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

\_\_\_\_\_  
Title

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



**SECTION 02012  
GEOTECHNICAL INSTRUMENTATION**

**PART 1 - GENERAL**

1.01 SUMMARY

- A. The purpose of geotechnical instrumentation is to provide data to the Contractor to control operations, and to monitor ground movement in the vicinity of excavations, the control of water levels and pressures in aquifers affected by the work, and protection of adjacent property during trenchless utility construction operations. The instrumentation program specified herein is not intended to be used to ensure the safety of the work.
- B. The Contractor shall be responsible for monitoring ground conditions as necessary to conform to the requirements of the Work.
- C. Vibration producing activities (such as pile driving, vibratory compaction, pavement breaking or operation of heavy construction equipment may be required for construction of this Project. The Contractor is advised that structures are located close to the proposed work and that construction activities shall be conducted so as to preclude damage to same. The Contractor shall be responsible for any damage caused by his activities.
- D. Scope of Work:
  - 1. The work specified in this Section includes, but is not limited to, furnishing, installing, maintaining, reading and reporting the geotechnical instrumentation specified herein and protecting instrumentation from damage. Instruments damaged or destroyed during the Work shall be repaired or replaced.
  - 2. Monitor ground and facility movements and groundwater conditions within, around, and above the trenchless utility alignment.
  - 3. Monitor horizontal deflections of temporary excavation support wall systems for jacking shafts, receiving shafts, and open-cut excavations, as appropriate for the construction.
  - 4. Perform a pre-construction survey and monitor ground vibrations as appropriate to the construction location and equipment.
- E. At a minimum, the Contractor shall install the instrumentation as necessary to control operations, monitor ground conditions, and ground response to achieve specified Project requirements and to prevent damage to existing structures and facilities.
- F. Unless otherwise noted or instructed by the Engineer, the Contractor shall abandon all instruments upon completion of the work and restore the ground surface to pre-existing conditions.

## 1.02 SYSTEM DESCRIPTION

- A. The purpose of the geotechnical instrumentation program is to provide supplemental pre-construction baseline data for comparison with construction and post-construction data.
1. Monitor ground surface movement, and existing facilities during construction, to determine whether they have been affected by construction activity and forewarn of unforeseen conditions that may require remedial or precautionary measures.

## 1.03 SUBMITTALS

- A. Geotechnical Instrumentation: Submittals listed below shall be prepared by a qualified instrumentation specialist.
1. Instrumentation shop drawings detailing locations, depths based on general information shown on the Drawings, type, details, and other pertinent information showing the installation details for each type of instrumentation required. Submittal shall include proposed locations of construction phase monitoring wells.
  2. Drawing that indicates the locations of control points and benchmarks associated with surveys for monitoring geotechnical instrumentation. Location of monitoring points, settlement points, vibration monitoring points, and offset lines and other geotechnical instrumentation.
  3. Description of methods for installing and protecting all instruments.
  4. Construction details including materials, sizes, dimensions, connections and methods and sequence of installation and removal of geotechnical instrumentation.
  5. Schedule of instrument installation related to significant activities or milestones in the overall Project.
  6. At least 30 days prior to the start of such work, the Contractor shall provide a vibration monitoring plan to the Engineer, which shall include, but not be limited to the following: proposed construction method(s) that may induce vibrations, vibration monitoring plans (including the format for reporting the vibration readings), identify buildings or sensitive receptors within 400 feet of vibration creating construction activities, anticipated vibration levels at identified buildings, preconstruction Condition Survey format, and proposed public relations activities. A copy of all reports shall be provided to the Engineer.
  7. Following installation of the instruments and prior to the start of underground construction, submit as-built Shop Drawings showing the exact installed location, the instrument identification number, the instrument type, the installation date and time, the heading station or shaft excavation depth on the installation date, when applicable, and the anchor or tip elevation and instrument length, when applicable, and installed locations of control points

and benchmarks associated with surveys for monitoring geotechnical instrumentation. Include details of installed instruments, accessories, and protective measures including all dimensions and materials used.

B. Product Data:

1. Utility monitoring points
2. Ground surface monitoring points
3. Structure monitoring points
4. Monitoring wells
5. Vibration monitoring equipment

C. Quality Control Submittals:

1. Monitoring Plan: Submit a geotechnical instrumentation monitoring plan showing proposed means and methods for monitoring horizontal deflections of earth support wall systems and settlement or earth movement around trenchless utility construction operations. The plan shall include the required frequency of monitoring to ensure settlement is identified and reported in a timely manner to allow corrective measures to be implemented and further settlement controlled. Monitoring plan shall include:
  - a. Onsite observation of the excavation support system performance, to be performed by the Contractor.
  - b. Position (survey) measurement of geotechnical instrumentation, to be performed by the Contractor's Surveyor.
  - c. Review of position measurements to assess ground movement, to be performed by the Contractor.
2. Monitoring Data Submittals: Submit monitoring data within one (1) day of data collection from monitoring points and observation wells. Data submitted shall include:
  - a. Accuracy of readings.
  - b. Horizontal and vertical movements of monitoring points and observation well groundwater level readings since previous readings.
  - c. Cumulative movements and readings over time since the initial readings of the geotechnical instruments.
  - d. Comparison of current instrumentation readings to previous readings.
  - e. Ground deformation readings versus time plots.
  - f. Weekly summary of instrumentation data in both tabular and graphic form at the end of each week along with a weekly summary of significant work performed or other events that may have affected the excavation support system performance.

1.04 QUALITY ASSURANCE

A. Personnel Qualifications:

1. Qualified technicians for installation and monitoring of geotechnical monitoring points shall be a Professional Land Surveyor licensed in the State of Florida with a minimum of 3 years of experience in similar activities.
  2. Monitoring wells shall be installed by technicians employed by a professional geotechnical engineering firm. The technicians shall have 5 years of experience in the installation of monitoring wells and shall be supervised by a Professional Engineer licensed in the State of Florida.
- B. The Contractor shall notify the Engineer and the County's Inspector at least 48 hours prior to all instrumentation installation operations so that the installation work may be monitored.

#### 1.05 INSTALLATION TOLERANCES

- A. Ground Surface Monitoring Points (GMPs) shall be installed within 12 inches of the horizontal locations indicated on the approved Shop Drawings.
- B. Should actual field conditions prohibit installation at the locations and elevations indicated on the approved Shop Drawings, prior acceptance shall be obtained from the Engineer for new instrument locations and elevations.

#### 1.06 PROJECT/SITE CONDITIONS

- A. Existing Subsurface Conditions: Contractor shall review the relevant Geotechnical Engineering Reports.
- B. Obtain necessary permits for the installation of groundwater monitoring systems from the St Johns River Water Management District and/or FDEP.
- C. All groundwater monitoring wells shall be protected from vandalism or accidental damage during construction activities.
- D. Field Measurements: The Contractor shall employ a Professional Land Surveyor registered in the State of Florida to monitor utility monitoring points, ground surface monitoring points and groundwater monitoring wells.

### **PART 2 - PRODUCTS**

#### 2.01 MATERIALS

- A. Monitoring Point Protection Boxes: Monitoring point protection boxes for all instruments located in paved traffic areas or areas where the instrument collar must be at or below grade shall be a traffic rated Tyler Union Model 6850 two piece screw-type valve box, 5-1/4-inch shaft, or an equal approved by the Engineer. Monitoring point protection boxes shall be provided with plain 5-1/4 inch locking lids.
- B. Utility Monitoring Points:
  1. Utility monitoring points (UMPs) will be used to monitor vertical deformation of existing utilities crossed by the trenchless pipe installation as shown on the Drawings.

2. Provide steel pipe flange, 1-inch-diameter, ASTM A403, machined to fit within 3-1/2 inch extra strong steel sleeve.
  3. Provide 3-1/2-inch extra strong steel sleeve pipe, threaded and coupled, ASTM A53 Grade B.
  4. Provide 1-inch extra strong steel riser pipe, threaded and coupled, ASTM A53 Grade B.
  5. Provide PVC centralizers. Centralizers shall consist of a Schedule 40 PVC pipe conforming to ASTM D1785, sized to provide a tight fit on the riser pipe, and spring-formed to a larger diameter to provide a loose fit in the sleeve pipe.
  6. Provide 12-inch x 12-inch x 1/4-inch steel plate with 4-1/4-inch-diameter central hole.
  7. Provide steel pipe clamp to fit 3-1/2-inch extra strong steel pipe. Steel plate and pipe clamp assembly shall be capable of transferring the total weight of the 3-1/2-inch extra strong pipe to the soil underlying the steel plate. The assembly shall also be capable of maintaining its position on the 1-inch extra strong steel pipe over time.
  8. Provide 1-inch pipe cap with 1/4-inch-diameter round head stainless steel bolt set securely in cap.
- C. Ground Surface Monitoring Points:
1. Ground surface monitoring points (GMPs) will be used to monitor vertical deformation of the ground at locations indicated on the approved Shop Drawings.
  2. GMPs are stakes, rods, or nails installed in unpaved or paved areas at predetermined locations to measure vertical (elevation) changes of the ground surface.
  3. GMPs shall consist of a 4-foot long, 3/4-inch diameter steel rod and a monitoring point protection box. The top of the rod shall be rounded and punch marked at its center.
- D. Structure Monitoring Points:
1. Structure monitoring points (SMPs) will be used to monitor vertical deformation of the structures at locations indicated on the approved Shop Drawings.
  2. SMPs are nails installed in key structures at predetermined locations to measure vertical (elevation) changes of the structure.
- E. Construction Phase Groundwater Monitoring Wells: A monitoring well is constructed in a borehole using a riser pipe section near the ground surface and a specially slotted pipe section (well screen) above the bottom of the well. The well screen length and position normally extends from several feet above to several feet below the anticipated water table range.

1. Provide a groundwater monitoring well with machine-slotted pipe, bottom caps and vented top caps as indicated on the Plans. The slotted pipe shall be 10-feet long, 2-inch, Schedule 80 PVC pipe with 3 rows of 0.01-inch wide slots on 120° centers, with a slot length to leave 0.25 inch between rows. The riser pipe shall be 2-inch, Schedule 80 flush joint PVC pipe.
  2. Filter sand shall conform to ASTM C778, Standard Specification for Standard Sand.
    - a. Coarse Sand: Sand for filter pack and sand backfill shall be clean natural silica sand; graded such that all of the material passes the No. 4 sieve and is retained on the No. 30 sieve.
    - b. Fine Sand: Sand for filter pack seals shall be clean natural silica sand; graded such that all of the material passes the No. 10 sieve and is retained on the No. 40 sieve.
  3. Granular bentonite shall be used to seal the annular space between the bore hole and the well casing above the filter pack or to plug the well at abandonment. The granular bentonite shall be either: Enviroplug Medium, as manufactured by Wyo-Ben, Inc., Billings, MT; Holeplug, as manufactured by Baroid Division, Petroleum Services, Inc., Houston, TX; Pure Gold Chips, as manufactured by CETCO, Arlington Heights, IL; or Bentonite Plug (3/8") as manufactured by Black Hills Bentonite, LLC, Mills, WY.
  4. Provide one groundwater observation well adjacent to each jack and bore jacking or receiving shaft (minimum two each per each jack and bore crossing). Monitoring wells are not required for trenchless utility crossings for which dewatering is not conducted, i.e. HDD utility crossings.
- F. Vibration Monitoring Equipment: The vibration monitoring equipment shall be capable of continuously recording the peak particle velocity and providing a permanent record of the entire vibration event.

### **PART 3 - EXECUTION**

#### **3.01 GENERAL**

- A. Instrumentation shall be installed at the locations indicated on the approved Shop Drawings.
- B. Locate conduits and underground utilities in all areas where borings are to be drilled and instruments installed. Instrument locations shall be modified to avoid interference with the existing conduits and utilities. Repair any damage to existing utilities resulting from instrument installations.
- C. All instruments shall be clearly marked, permanently labeled, and protected to avoid being obstructed or otherwise damaged by construction operations or the general public.

- D. Geotechnical instrumentation shall be installed and baseline surveys or initial readings completed prior to commencing any excavation work for shafts for jack and bore installations.
  - 1. Elevations shall be recorded to a precision of 0.005 of a foot. Horizontal survey accuracy shall be at least 0.01 feet.
- E. Location Surveying: Promptly following installation, the Contractor shall survey and provide horizontal coordinates and vertical elevations of the ground surface and top of all instruments. All coordinates shall be geographically registered in the Florida State Plane Coordinate System using the contract drawings control points for horizontal and vertical controls.
- F. Drilling from the Ground Surface: Contractor shall obtain any permits that may be required for boreholes drilled from the ground surface that are not already covered in the FDEP permit obtained for the project. Obtain necessary permits for each such instrument and conform to the permit requirements during drilling and installation.

### 3.02 INSTALLATION

#### A. General

- 1. The Contractor shall notify the Engineer and the County at least 48 hours prior to installing each monitoring point.
- 2. The Contractor shall install, monitor, and interpret data from instrumentation, in addition to that specified herein, that the Contractor deems necessary to ensure performance of the work in accordance with the approved Shop Drawings, and the safety of personnel, property and the Work.
- 3. The method of installation shall be the Contractor's option; however, the marker shall be rigidly affixed so as not to move relative to the surface to which it is attached.
- 4. Install and protect monitoring point protection boxes installed over each monitoring point or groundwater monitoring well.

#### B. Utility Monitoring Points (UMPs)

- 1. UMPs shall be installed on utilities crossed by trenchless pipe installations at the locations shown on the Plans.
- 2. The location of the utility on the plan shall be determined and the borehole advanced to the top of the utility using vacuum excavation methods. The Contractor shall be responsible for any damage to the utility during installation of the utility monitoring point. Drill casing may be used during the installation.
- 3. After completion of installation, the as-built location in horizontal position shall be determined to accuracy of  $\pm 0.01$  foot and in elevation to accuracy of  $\pm 0.005$  feet.

#### C. Ground Surface Monitoring Points (GMPs)

1. GMPs shall be installed adjacent to all excavations with a minimum of four monitoring points located in accordance with the approved Contractor's geotechnical instrumentation program. GMPs shall be installed at distances of 25 feet and 50 feet of the entry and exit locations for all Horizontal Directional Drilling (HDD) crossings.
  2. All GMPs shall have the horizontal as-built location determined to an accuracy of  $\pm 0.01$  feet and the elevation to an accuracy of  $\pm 0.005$  feet.
- D. Structure Monitoring Points (SMPs)
1. SMPs shall be installed on structures adjacent to all excavations with a minimum of two monitoring points located in accordance with the approved Contractor's geotechnical instrumentation program.
  2. All SMPs shall have the horizontal as-built location determined to an accuracy of  $\pm 0.01$  feet and an elevation determined to an accuracy of  $\pm 0.005$  feet.
- E. Groundwater Monitoring Wells
1. Install one construction phase Groundwater Monitoring Well within 10 feet of each structure excavation, each jack and bore jacking shaft/pit and each jack and bore receiving shaft/pit. Groundwater Monitoring Wells are not required for trenchless crossings that do not involve dewatering, i.e. HDD crossings.
  2. Do not use bentonite drilling mud for installation of construction phase Groundwater Monitoring Wells. A split-spoon soil sample shall be taken at the bottom of the borehole, and submitted to the Geotechnical Engineer for a soil analysis with a split portion of the soil sample submitted to the County within 24 hours.
  3. Place a filter sand pack between the bore hole and the monitoring well point slotted pipe. Filter sand shall be placed from the bottom of the bore hole to a level at least 2 feet above the top of the well point slots.
  4. Seal the sand pack by placing granular bentonite from the top of the sand pack to a level at least 2 feet above the top of the sand pack. Cement grout the monitoring well from the top of the bentonite layer to the ground surface.
  5. Install construction phase Groundwater Monitoring Wells at least 30 days prior to initial operation of dewatering systems.
  6. Maintain each construction phase Groundwater Monitoring Well until adjacent structures and pipelines are completed and backfilled. Clean out or replace any Groundwater Monitoring Well that ceases to be operable before adjacent work is completed.
  7. During construction, maintain construction phase Groundwater Monitoring Wells, as well as existing monitoring wells shown on the Drawings installed by others prior to construction, and repair or replace them if damaged by the Contractor's operations.



- F. Temporary Excavation Support Walls: Monitor horizontal deflections of temporary excavation support wall systems. Measure deflections at the mid-span (in plan view) of the walls parallel to the long axis of the excavation. Measure deflections vertically at the top, mid-span, and bottom of the excavation. The method of measurement shall be at the option of the Contractor.
- G. Instrumentation Protection: Flag and protect all geotechnical instrumentation locations. Exercise care during construction so as to avoid damage to instrumentation. Repair or replace instrumentation that is damaged as a result of the Contractor's operations.
- H. Vibration Monitoring and Preconstruction Condition Survey:
1. The Contractor shall employ a qualified vibration specialist to establish a safe vibration level for buildings within 400 feet of vibration producing construction. This specialist shall also supervise the Contractor's vibration-monitoring program. During all vibration producing activities, the Contractor shall monitor vibration levels at the identified buildings, and shall not exceed the safe level established to preclude damage to the structures.
  2. The vibration monitoring equipment shall be capable of continuously recording the peak particle velocity and providing a permanent record of the entire vibration event. Copies of all vibration records and associated construction activities (pile driving, pavement breaking, etc.) data shall be provided to the Engineer in a format approved by the Engineer.
  3. A preconstruction building Condition Survey shall be conducted by the Contractor on the identified buildings, prior to the commencement of any vibration producing activity. The survey will include documentation of interior sub-grade and above grade accessible walls, ceilings, floors, roof and visible exterior as viewed from the grade level. It will detail (by engineering sketches, video tape, photographs, and/or notes) any existing structural, cosmetic, plumbing or electrical damage. The survey will be conducted by a Professional Engineer, licensed in the State of Florida.
  4. A report shall be issued that will summarize the pre-construction condition of the building(s) and will identify areas of concern, including potential personnel hazards (falling debris) and structural elements that may require support or repair. Crack displacement monitoring gages will be installed as appropriate across any significant existing cracks to help verify any additional building distress if it should develop. The appropriate location, number, and type of gages will be established by the Contractor and/or the Engineer. The gages will be read prior to vibration producing activities, as well as during these activities. Data shall be obtained on a weekly basis for as long as vibration-producing activities are being conducted. A report shall be submitted which summarizes the data. The Engineer shall be alerted if any significant movement is detected by the monitoring.

### 3.03 MONITORING APPLICATION

- A. The Contractor shall implement as specified herein a settlement control plan acceptable to the County to protect existing facilities, structures, utilities, roadways, streets, and other improvements from damage due to settlement resulting from dewatering, excavation or trenchless utility construction. The plan shall include the specific methods that will be used to minimize loss of ground and procedures for monitoring for loss of ground as specified herein.
- B. Monitoring Procedures and Schedule:
  - 1. Monitor the geotechnical instrumentation installed in accordance with the Monitoring Schedule in Table 02012-1. Begin monitoring when underground construction, ground improvement, excavation or dewatering activity begins, whichever comes first. Record data on field data records, which shall include at least the following: instrument type and number, reading date and time, observer name, readings, remarks, visual observations other casual data including weather, temperature, and construction activities. Data shall be recorded in U.S. Customary Units, for example, feet and inches. The data shall be summarized in tabular format and submitted to the Engineer and the County's Inspector on a weekly basis.
  - 2. Use a procedure for reading and recording geotechnical instrumentation data that compares the current reading to the last reading during data collection to eliminate spurious readings.
  - 3. Plot the observed ground deformation readings versus time. Annotate the plots with construction loading and excavation events having an impact on the readings. Evaluate plots by means of secondary rate-of-change plots to provide early warning of accelerating ground movements.
  - 4. The accuracy of elevation readings for Ground Monitoring Points shall be  $\pm 0.01$  feet. The accuracy of elevation readings for Utility Monitoring Points shall be  $\pm 0.005$  feet. The accuracy of elevation readings for Structure Monitoring Points shall be  $\pm 0.005$  feet. The accuracy of Monitoring Well readings shall be  $\pm 0.01$  feet.
  - 5. Notify the Engineer immediately of any Geotechnical instrumentation readings that are outside of specified limits.

TABLE 02012-1 MONITORING SCHEDULE	
INSTRUMENT	SCHEDULE
All instruments	One reading within one work day after installation and two additional initial readings within one week of the initial reading.  One reading at the conclusion of construction.
Observation Wells	Weekly until the conclusion of construction
Utility Monitoring Points Ground Surface Monitoring Points Structure Monitoring Points	Daily when cut-and-cover excavation, pipe jacking and boring or HDD construction is occurring within 100 feet of instrument.
Horizontal Deflections of Excavation Support	Daily during excavation, weekly thereafter until excavation is backfilled.
Vibration Monitoring	Weekly while vibration producing construction is occurring

C. Actions to Mitigate Excessive Ground Movements:

1. The Contractor shall use whatever means and methods are necessary to limit ground movements, settlements and damage of utilities, structures and other facilities.
2. If displacement exceeds limits acceptable to the County, repairs shall be completed to the full satisfaction of the County.
3. The cost of actions required for complying with displacement limits and to repair any damage to adjacent facilities shall be borne by the Contractor.

D. Control Locations:

1. Horizontal and vertical control locations shall be established a minimum of 200 feet away from the actual Work locations.

3.04 DISCLOSURE OF DATA

- A. The Contractor shall not disclose any instrumentation data to third parties and shall not publish data without prior approval and written consent of the Engineer and the County.

3.05 ABANDONMENT OF INSTRUMENTATION POINTS

- A. At the completion of the Work, remove instrumentation or ground monitoring point markers. Grout the full depth of casings and pipes for monitoring points from the bottom of the casing excavation to the ground surface. Grout the full depth of monitoring well slotted pipe well point and well casings from the bottom of the monitoring well to the ground surface. Grout shall consist of cement and water, with

the minimum amount of water necessary to allow pumping. Remove guard casings and valve boxes, and patch holes with materials and to durability consistent with the existing surrounding surface.

**END OF SECTION**



# Florida Department of Environmental Protection

Central District  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Ryan E. Matthews  
Interim Secretary

In the Matter of an  
Application for Permit by:

**PERMITTEE:**

Mr. Troy Layton  
Manager, Field Services  
Orange County Utilities  
9150 Curry Ford Road  
Orlando FL 32825  
[troy.layton@ocfl.net](mailto:troy.layton@ocfl.net)

**PERMIT NUMBER:** 0133232-113-DWC/CM

**COUNTY:** Orange

**PROJECT NAME:** OCUD South WRF Influent  
Pump Station (IPS)

**WASTEWATER TREATMENT:** OCUD  
South WRF

**FACILITY ID:** FLA107972

## NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number 0133232-113-DWC/CM to construct a domestic wastewater collection/transmission system, issued pursuant to Section 403.087(1), Florida Statutes.

The Department's proposed agency action shall become final unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, Florida Statutes, within fourteen days of receipt of notice. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Under Rule 62-110.106(4), Florida Administrative Code, a person may request an extension of the time for filing a petition for an administrative hearing. The request must be filed (received by the Clerk) in the Office of General Counsel before the end of the time period for filing a petition for an administrative hearing.

Petitions by the applicant or any of the persons listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), Florida Statutes, must be filed within fourteen days of publication of the notice or within fourteen days of receipt of the written notice, whichever occurs first. Section 120.60(3), Florida Statutes, however, also allows that any person who has asked the Department in writing for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition or request for extension of time within fourteen days of receipt of notice shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, Florida Statutes. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information, as indicated in Rule 28-106.201, Florida Administrative Code:

- (a) The name and address of each agency affected, each agency's file or identification number, if known, and the county in which the project is located;
- (b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any; which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the determination;
- (c) A statement of when and how the petitioner received notice of the Department's decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the Department's proposed action;
- (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the Department's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Department's proposed action.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation under Section 120.573, Florida Statutes, is not available for this proceeding.

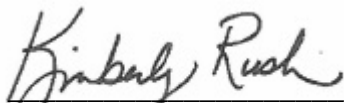
This permit action is final on the date filed with the Clerk of the Department unless a petition (or request for extension of time) is filed in accordance with the above. Upon the timely filing of a petition (or request for an extension of time), this permit will not be effective until further order of the Department.

Any party to the permit has the right to seek judicial review of the permit action under Section 120.68, Florida Statutes, by the filing of a notice of appeal under 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, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when this permit action is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



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Kimberly Rush, P.E.  
Permitting and Waste Cleanup  
Program Administrator

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

Copies furnished to:

Michael J. Hudkins, PE, OCUD, [michael.hudkins@ocfl.net](mailto:michael.hudkins@ocfl.net)

Stefano Ceriana, PE, Reiss Engineering, Inc, [sceriana@reisseng.com](mailto:sceriana@reisseng.com)

Charles LeGros, DEP, [Charles.LeGros@dep.state.fl.us](mailto:Charles.LeGros@dep.state.fl.us)

Willie E. Thoms, PE, Barnes Ferland and Associates, Inc, [thomas@bfaenvironmental.com](mailto:thomas@bfaenvironmental.com)

Mark Pellish, PE, AECOM, [mark.pellish@aecom.com](mailto:mark.pellish@aecom.com)

**FILING AND ACKNOWLEDGMENT**

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



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Clerk

April 21, 2017

Date



# Florida Department of Environmental Protection

Central District  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Ryan E. Matthews  
Interim Secretary

## STATE OF FLORIDA DOMESTIC WASTEWATER COLLECTION/TRANSMISSION INDIVIDUAL PERMIT

### PERMITTEE:

Mr. Troy Layton  
Manager, Field Services  
Orange County Utilities  
9150 Curry Ford Road  
Orlando FL 32825  
[troy.layton@ocfl.net](mailto:troy.layton@ocfl.net)

**PERMIT NUMBER:** 0133232-113-DWC/CM

**ISSUANCE DATE:** April 21, 2017

**EXPIRATION DATE:** April 20, 2022

**COUNTY:** Orange

**PROJECT NAME:** OCUD South WRF Influent  
Pump Station (IPS)

**WASTEWATER TREATMENT:** OCUD  
South WRF

**FACILITY ID:** FLA107972

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4 and 62-604, Florida Administrative Code (F.A.C.).

The above-named permittee is hereby authorized to construct the facilities shown on the application and other documents on file with the Department and made a part hereof and specifically described as follows:

### DESCRIPTION OF PROJECT:

Construction of a sewage collection/transmission infrastructure project consisting of a new replacement influent pump station.

The sewage collection/transmission system shall consist of: A) one new influent pump station (IPS) operating at 21,400 gpm at 64 FT head with six (6) pumps and future capacity two (2) additional pumps for total of eight (8) pumps, B) two (2) 64-inch discharge pipes each approximately 200 LF, C) 160 LF of 36 inch gravity main, D) 138 LF of 12 inch gravity main, and E) associated manholes, valves and appurtenances.

### LOCATION OF PROJECT:

The project is located at the OCUD South WRF.

**IN ACCORDANCE WITH:** The limitations, requirements and other conditions set forth in pages 1 through 3 of this permit.



**PROJECT NAME:** OCUD South WRF Influent Pump Station (IPS)

**PERMIT NUMBER:** 0133232-113-DWC/CM

**PERMIT CONDITIONS:**

1. This permit is subject to the general conditions of Rule 62-4.160, F.A.C., as applicable. This rule is available at the Department's Internet site at:  
<http://www.dep.state.fl.us/legal/Rules/shared/62-4/62-4.pdf> [62-4.160]
2. Upon completion of construction of the collection/transmission system project, and before placing the facilities into operation for any purpose other than testing for leaks or testing equipment operation, the permittee shall submit to the Department's Central District Office Form 62-604.300(8)(b), Request for Approval to Place a Domestic Wastewater Collection/Transmission System into Operation. This form is available at the Department's Internet site at:  
<http://www.dep.state.fl.us/water/wastewater/dom/dw-forms.htm> [62-604.700(2)]

**Please submit the entire clearance document package in electronic format to**

**[DEP\\_CD@dep.state.fl.us](mailto:DEP_CD@dep.state.fl.us), with a copy to [Charles.LeGros@dep.state.fl.us](mailto:Charles.LeGros@dep.state.fl.us).** If the file is very large, you may post it to the Wastewater Electronic Applications folder on the following ftp site at:

<ftp://ftp.dep.state.fl.us/pub/wastewater/>

After posting the document, send an e-mail to [DEP\\_CD@dep.state.fl.us](mailto:DEP_CD@dep.state.fl.us), with a copy to [Charles.LeGros@dep.state.fl.us](mailto:Charles.LeGros@dep.state.fl.us), alerting us that it has been posted. Any submitted drawings (should be sized 11" x 17") and the engineer of record's signed seal and dates on the required document must be legible for acceptance.

For further clarification contact:  
Charles LeGros, (407) 897-4158  
3319 Maguire Blvd, Suite 232  
Orlando, Florida 32803-3767

3. The new or modified collection/transmission facilities shall not be placed into service until the Department clears the project for use. [62-604.700(3)]
4. Permit revisions shall only be made in accordance with Rule 62-4.050(4)(s), F.A.C. Request for revisions shall be made to the Department in writing and shall include the appropriate fee. Revisions not covered under Rule 62-4.050(4)(s), F.A.C., shall require a new permit. [62-604.600(8)]

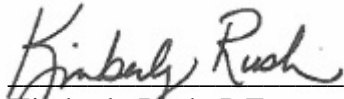
**PROJECT NAME:** OCUD South WRF Influent Pump Station (IPS)

**PERMIT NUMBER:** 0133232-113-DWC/CM

5. Abnormal events shall be reported to the Department's Central District Office in accordance with Rule 62-604.550, F.A.C. For unauthorized spills of wastewater in excess of 1000 gallons per incident, or where information indicates that public health or the environment may be endangered, oral reports shall be provided to the STATE WATCH OFFICE TOLL FREE NUMBER, (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee or other designee becomes aware of the circumstances. Unauthorized releases or spills less than 1000 gallons per incident are to be reported orally to the Department's Central District Office within 24 hours from the time the permittee, or other designee becomes aware of the circumstances. [62-604.550]

Executed in Orlando, Florida

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



---

Kimberly Rush, P.E.  
Permitting and Waste Cleanup  
Program Administrator

DATE: April 21, 2017

## **Appendix E**

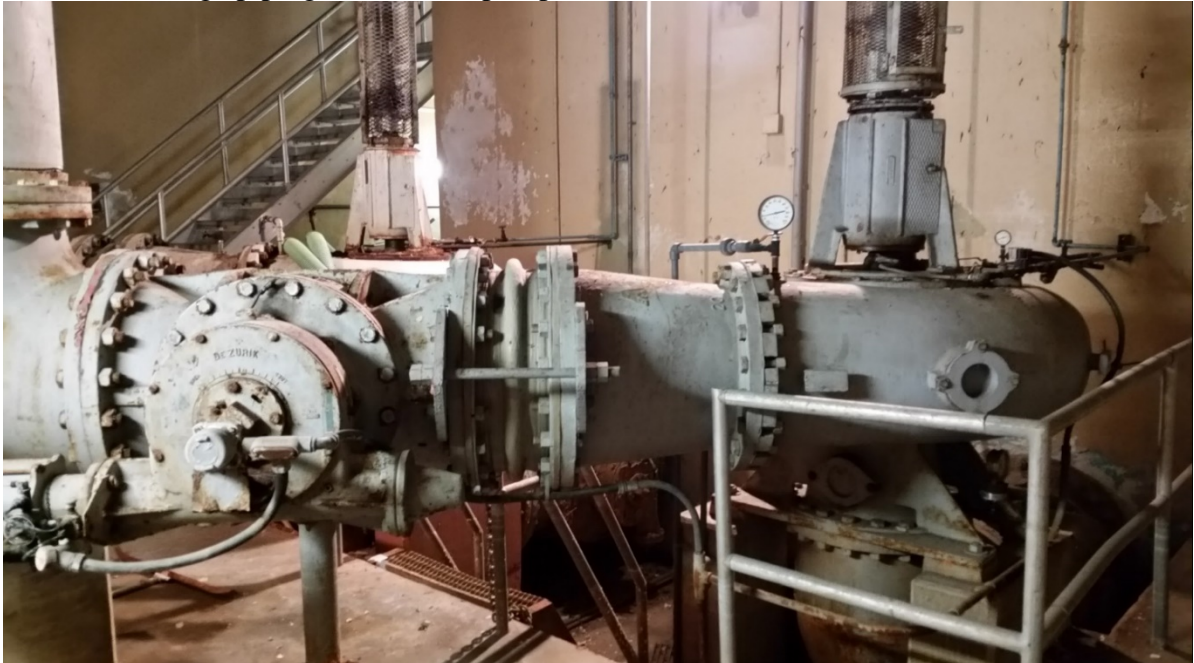
### Information for Bidders

The following graphic information corresponds to Drawing sheet M02.

1. Pumps and risers in the north pump room.

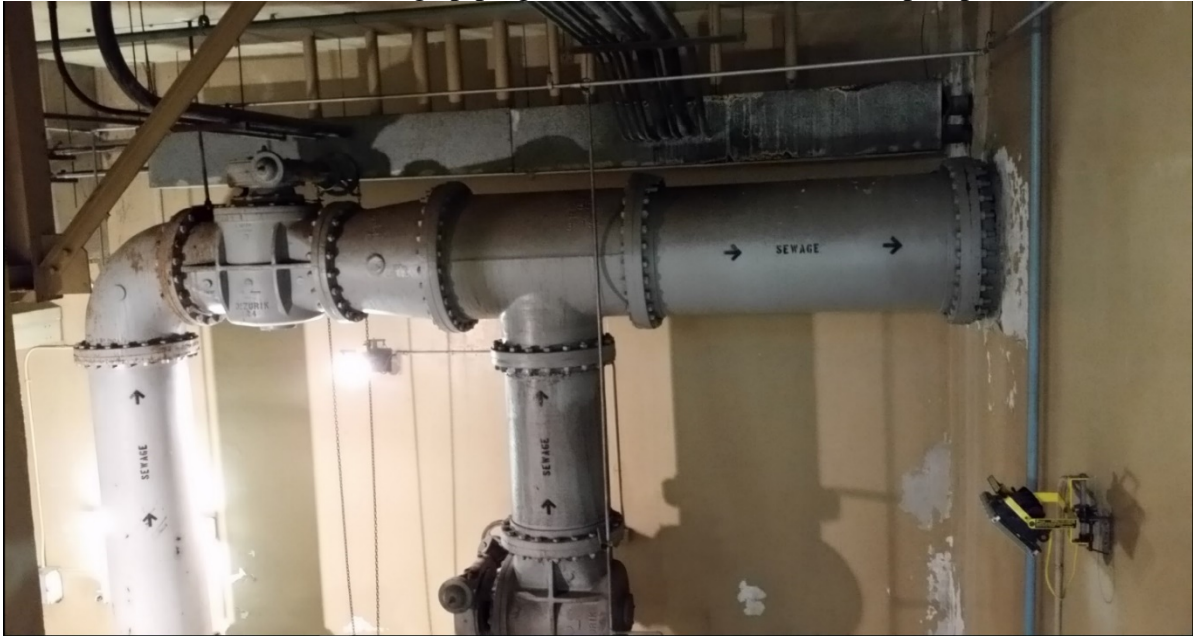


2. Discharge piping in the north pump room





3. Risers, overhead discharge piping, and duckbanks in the north pump room



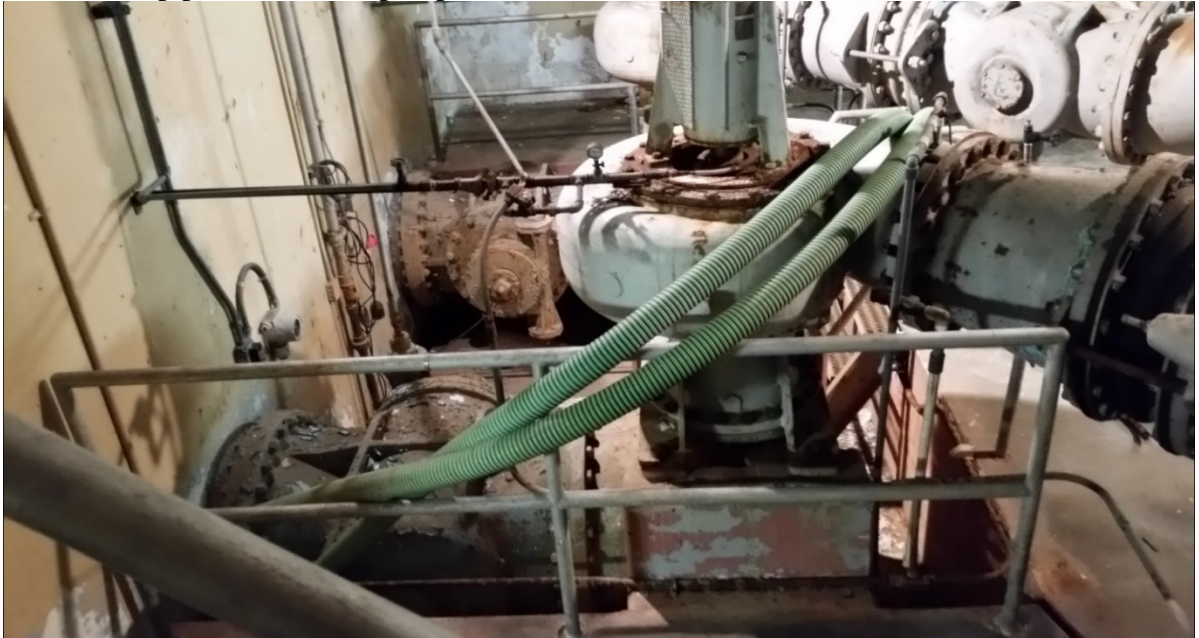
4. Elevated view in the north pump room







5. Pump pit in the north pump room





6. North pump room looking west





7. Looking south from the east side of the north pump room







8. Upper level of screen structure





9. Middle level of screen structure



10 Middle level of screen structure





## Interoffice Memorandum

Orange County Risk Management  
109 East Church Street, Suite 200  
Orlando, Florida 32802-1393  
Phone: (407) 836-9640 Fax: (407) 836-9630

DATE: Monday, September 14, 2015

TO: Alan Gay, Senior Engineer, Utilities Engineering

FROM: Joel Howard, Environmental Loss Prevention Analyst  
Risk Management Division

SUBJECT: **Report of Pre-Demolition NESHAP Asbestos Survey  
South Water Reclamation Facility  
Old and New Influent Pump Stations  
4760 West Sand Lake Road  
Orange County, Florida**

Risk Management has reviewed and accepted the Pre-Demolition Asbestos Survey conducted by GLE, dated September 11, 2015.

Laboratory results indicated that 1 of the 13 suspect materials was found to contain asbestos fibers including black roof flashing.

The black roof flashing is considered a Category I Non-Friable asbestos containing material (ACM). GLE states that the material may remain in-place during demolition provided the demolition contractor is qualified as an asbestos-abatement contractor; uses qualified workers; and does not cut sand, grind or abrade. Risk Management recommends that the material be removed prior to demolition in an effort to maximize recyclable materials.

Risk Management requires that the demolition and abatement contractor follow GLE's recommendations. Supply the demolition and abatement contractor with the enclosed report. Risk Management requests that the demolition be conducted using wet methods. Risk Management approves the Pre-Demolition Asbestos Survey Report and will retain a copy of the report for future reference.

If you have any questions, please do not hesitate to contact me at (407) 836-9679.

Thank you,

Joel Howard, CIE, RPIH

Enclosure (1)

cc: Tisha Pence, Environmental Loss Prevention Coordinator, Risk Management

# **PRE-DEMOLITION ASBESTOS SURVEY REPORT**

**South Water Reclamation Facility  
4260 West Sand Lake  
Orlando, Florida**

**GLE Project No.: 15270-00063**

**Prepared for:**

**Orange County Risk Management  
109 E. Church Street, Suite 200  
Orlando, Florida 32802**

**September 2015**

**Prepared by:**



**8659 Baypine Road, Suite 306, Jacksonville, FL 32256  
904-296-1880 • Toll Free 800-398-7613 • Fax 904-296-1860**





September 11, 2015

Mr. Joel Howard  
Orange County Risk Management  
109 E. Church Street, Suite 200  
Orlando, FL, 32802

**RE: Pre-Demolition Asbestos Survey Report  
South Water Reclamation Facility  
4260 West Sand Lake Road  
Orlando, Florida**

GLE Project No.: **15270-00063**

Dear Mr. Howard:

GLE Associates, Inc. (GLE) performed a pre-demolition survey for asbestos-containing materials (ACM) on August 28, 2015, at the South Water Reclamation Facility located at 4260 West Sand Lake Road, in Orlando, Florida. The survey was performed by Mr. Brent Tyner and Ms. Noelle Bruno with GLE. This report outlines the sampling and testing procedures, and presents the results along with our conclusions and recommendations.

GLE appreciates the opportunity to serve as your consultant on this project. If you should have any questions, or if we can be of further service, please do not hesitate to call.

Sincerely,  
GLE Associates, Inc.

Brent Tyner  
Industrial Hygiene Technician

Robert B. Greene, PE, PG, CIH  
Asbestos Consultant, EA 0000009

BT/RBG/MBC/lr

M:\Work\Asb\15270-OCRM\00063-4760 W. Sand Lake Road Water Reclamation Facility\Asbestos\rv01.doc

GLE Associates, Inc.

8659 Baypine Rd., Suite 306 | Jacksonville, Florida 32256 | 904-296-1880 | Fax: 904-296-1860  
Jacksonville | Orlando | Ft. Lauderdale | Miami | Gainesville | Atlanta | Houston | Nashville  
Architecture AA 0002369 • Engineer CA 5483 • Asbestos ZA 0000034 • Geology GB 0000297

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## 1.0 INTRODUCTION

### 1.1 INTRODUCTION

The purpose of this pre-demolition survey was to identify accessible asbestos-containing materials (ACMs) and their general locations within South Water Reclamation Facility, located at 4260 West Sand Lake in Orlando, Florida. **Note, the roof of the new influent pump station (Building 2) was not sampled due to not being in scope.** The survey was conducted pursuant to National Emission Standards for Hazardous Air Pollutants (NESHAP, 40 CFR 61) requirements, associated with the scheduled demolition plans. The survey was performed on August 28, 2015 by Mr. Brent Tyner and Ms. Noelle Bruno, Environmental Protection Agency/Asbestos Hazard Emergency Response Act (EPA/AHERA) accredited inspectors. The scope of this survey did not include demolition of any building components, evaluation of architectural plans, or the quantification of materials for abatement purposes, or removal cost estimating.

### 1.2 FACILITY DESCRIPTION

A summary of the facility investigated is outlined in the table below.

Facility Type:	Water Reclamation Facility (Old) – Building 1
Construction Date:	Unknown
Number of Floors:	1
<b>Structural</b>	
Foundation:	Concrete Slab on Grade
Wall Support:	Concrete Block
Exterior Finish:	Paint, Brick
Roof Support:	Concrete
Roof System Type:	Built Up Roofing
<b>Mechanical/Plumbing</b>	
HVAC Type:	Split System
Duct Type:	Metal, Flex
Pipe Insulation:	None Observed
<b>Interior</b>	
Wall Substrate:	CMU
Wall Finishes:	Paint
Floor Substrate:	Concrete
Floor Finishes:	Paint
Ceiling System:	Suspended Ceiling System
Ceiling Finishes:	Suspended Ceiling Tiles

Facility Type:	Water Reclamation Facility (New) – Building 2
Construction Date:	Unknown
Number of Floors:	1
<b>Structural</b>	
Foundation:	Concrete Slab on Grade
Wall Support:	Concrete Block, Poured Concrete
Exterior Finish:	Paint
Roof Support:	Concrete
Roof System Type:	Not in Scope
<b>Mechanical/Plumbing</b>	
HVAC Type:	Split System
Duct Type:	Flex
Pipe Insulation:	None Observed
<b>Interior</b>	
Wall Substrate:	CMU
Wall Finishes:	Paint, Cove Base
Floor Substrate:	Concrete
Floor Finishes:	Paint
Ceiling System:	Suspended Ceiling System
Ceiling Finishes:	Paint, Suspended Ceiling Tiles

## 2.0 RESULTS

### 2.1 ASBESTOS SURVEY PROCEDURES

The limited survey was performed by visually observing accessible areas of the building. EPA/AHERA accredited inspectors performed the visual observations (refer to Appendix B for personnel qualifications).

After the overall visual survey was completed, representative sampling areas were determined. The surveyors delineated homogeneous areas of suspect materials and samples of each material were obtained, in general accordance with regulations as established by the Occupational Safety and Health Administration (OSHA) and NESHAP. The field surveyors determined sample locations based on previous experience. Both friable and non-friable materials were sampled. A friable material is one that can be crushed when dry by normal hand pressure. This survey did not include the demolition of building components to access suspect material.

After completion of the fieldwork, the samples were delivered to GLE's National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory for analysis. The samples were analyzed by Polarized Light Microscopy (PLM) coupled with dispersion staining, in general accordance with EPA-600/R-93/116. Utilizing this procedure, the various asbestos minerals (chrysotile, amosite, crocidolite, actinolite, tremolite, and anthophyllite) can be determined. The percentages of asbestos minerals in the samples were visually determined by



the microscopist. Please note that the EPA designates all materials containing greater than 1% asbestos as an “asbestos-containing material” (ACM).

Regulated Asbestos-Containing Material (RACM) is defined as (a) Friable asbestos materials, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Category I and Category II non-friable ACM, as defined by the EPA:

- Category I non-friable ACM means asbestos containing packings, gaskets, resilient floor covering, asphalt roofing products, and pliable sealants and mastics that are in good condition and not friable, containing more than 1 percent asbestos, as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, PLM.
- Category II non-friable ACM means any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos as determined using the methods specified in Appendix E, Subpart E, 40 CFR Part 763 Section 1, PLM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

## **2.2 IDENTIFIED SUSPECT ASBESTOS-CONTAINING MATERIALS**

A total of 39 samples of suspect building materials were collected from the facility during the survey, representing 13 different homogeneous areas. The results of the laboratory analyses are included in Appendix A.

A summary of the homogenous sampling areas of suspect ACM determined to be present is outlined in the following table:

TABLE 2.2-1: SUMMARY OF HOMOGENEOUS SAMPLING AREAS SOUTH WATER RECLAMATION FACILITY - ORLANDO, FLORIDA							
HA #	HOMOGENEOUS MATERIAL DESCRIPTION	HOMOGENEOUS MATERIAL LOCATION	FRIABILITY (F/NF)	% ASBESTOS*	# OF SAMPLES COLLECTED	APPROXIMATE QUANTITY	ACM CATEGORY
M-01	Concrete	Building 2 - Floor Ceiling Walls, Pillars, Roof	NF	ND	3	NIS	NA
RBU-01	Built Up Roofing	Building 1 - Roof	NF	ND	3	NIS	NA
RF-01	Black Flashing	Building 1 Roof Penetrations	NF	10% C	3	20 LF	CAT I
M-02	Black Edge Wrap	Building 1 Roof Penetrations and Edges	NF	ND	3	NIS	NA
M-03	Concrete	Building 1 - Floors, Ceiling, Beams	NF	ND	3	NIS	NA
M-04	CMU	Building 1 - Walls	NF	ND	3	NIS	NA
M-05	Dark Gray Caulk	Building 1 - Doors and Interior Windows	NF	ND	3	NIS	NA
CT-01	2x4 White Ceiling Tile	Building 1 - AHU Room	F	ND	3	NIS	NA
MAS-01	Gray Mastic	Building 1 - AHU 1 & 2	NF	ND	3	NIS	NA
M-06	Light Gray Caulk	Building 1 - West Double Doors	NF	ND	3	NIS	NA
CT-02	2x4 White Ceiling Tile	Building 2 - Control Room	F	ND	3	NIS	NA
MAS-02	White Duet Mastic	Building 2 - HVAC and Control Room	NF	ND	3	NIS	NA
VB-01	Black Vinyl Cove Base with Yellow Mastic	Building 2 - Control Room	NF	ND	3	NIS	NA

* = The facility owner has the option of point-counting by polarized light microscopy (PLM) those RACM whose asbestos content is less than 10% in order to more accurately determine the asbestos content therein.			
PC = Results based on Point-Count analysis			
ASBESTOS CONTENT Expressed as percent			
FRIABILITY	F = Friable Material	NF = Non-Friable Material	
ACM CATEGORY	RACM = Regulated ACM	CAT I = Category I non-friable ACM	CAT II = Category II non-friable ACM
ABBREVIATIONS:	NA = Not Applicable	ND = None Detected	NIS = Not in Scope
	HA = Homogeneous Area	SF = Square Feet	LF = Linear Feet
			CF = Cubic Feet

## **3.0 CONCLUSIONS AND RECOMMENDATIONS**

### **3.1 GENERAL**

**Asbestos-containing materials (ACMs) were identified in the scope of this survey. General and specific conclusions and recommendations are provided below.**

The EPA, OSHA and the State of Florida have promulgated regulations dealing with asbestos. For commercial building owners, the EPA NESHAP (40 CFR 61) regulations require removal of RACM, prior to conducting activities which might disturb the material. They also deal with notification, handling and disposal of asbestos.

No homogenous areas of suspect RACM were determined to contain less than 10% asbestos by PLM analysis. According to the NESHAP, when the asbestos content of a bulk sample of suspect RACM is determined to be less than 10% by PLM visual estimation, you may:

1. Assume the amount to be greater than 1% and treat the material as asbestos-containing; or
2. Conduct confirmatory verification by point-counting. Note, the results obtained by point-counting are considered the definitive analytical result.

The EPA recommends that an Operations and Maintenance (O&M) Program be developed for any facilities with ACM, and this Program should address all ACM (known and/or assumed) present. The O&M Program establishes notification and training requirements along with special procedures for working around the ACM. The O&M Program would remain in effect until all asbestos is removed.

Category I and Category II non-friable materials, as defined by the EPA, may remain within a facility during demolition with no potential cessation of work, provided they remain non-friable and the appropriate engineering controls (i.e., wet methods) are utilized, with the resulting waste disposed of as asbestos-containing waste. However, there is no guarantee that these materials will remain non-friable. If the materials become friable, then they are classified as RACM.

RACM, as defined by the EPA, must be removed prior to renovation or demolition activities that may disturb the materials.

The OSHA regulations deal with employee exposure to airborne asbestos fibers. The regulations restrict employee exposure, and require special monitoring, training and handling procedures when dealing with asbestos. Additionally, OSHA has regulations that may supersede the EPA regulations. In order to protect the worker, OSHA has established a permissible exposure limit (PEL), which limits employee exposure to airborne fiber concentrations. OSHA requires objective evidence that the PEL will not be exceeded, as justification that personal air monitoring and engineering controls will not be required. OSHA has also established rules requiring the containerization and labeling of asbestos waste.

The State regulations require that anyone involved in asbestos consulting activities be a licensed asbestos consultant and that anyone involved in asbestos abatement, with the exception of roofing materials, be a licensed asbestos abatement contractor.

### **3.2 SPECIFIC**

#### **Black Flashing associated with Building 1 Roof Penetrations**

This material is defined by the EPA as a Category I non-friable material. This material may remain within a facility during demolition with no potential stoppage of work provided it remains non-friable. However, there is no guarantee that it will remain non-friable. If a material becomes friable, then it is classified as RACM. RACM, as defined by the EPA, must be removed prior to renovation or demolition activities that may disturb the materials. Also, OSHA has additional requirements that may supersede the EPA rules. This material does not appear to present a significant issue, as observed, at the time of the survey. We recommend that the identified Category I material be maintained as part of an O&M Program and periodically monitored for any changes in condition prior to demolition. As discussed above, in order to protect the worker, OSHA has established a PEL which limits airborne fiber concentrations. Objective evidence that the PEL will not be exceeded is required by OSHA as justification that personal air monitoring and engineering controls will not be required. OSHA has also established rules requiring the containerization and labeling of asbestos waste.

Should prior abatement be desired, the work must be performed in accordance with Federal, State, and local regulations. In lieu of abatement, demolition utilizing the wet method is acceptable by a demolition contractor properly trained and certified to conduct Class II asbestos work, along with proper disposal and transport of the demolished materials to an approved landfill as asbestos-containing waste.

## **4.0 LIMITATIONS AND CONDITIONS**

As a result of previous renovations, there may be hidden materials, such as floor tile, sheet vinyl flooring, insulation, etc. These materials may be found in various areas hidden under existing flooring materials or in wall cavities. Any materials found during construction activities, either not addressed in this survey report, or similar to the ACM identified in this survey report should be assumed to be ACM until sampling and analysis documents otherwise.

Because of the hidden nature of many building components (i.e. within mechanical chases), it may be impossible to determine if all of the suspect building materials have been located and subsequently tested. Destructive testing in some instances is not a viable option. We cannot, therefore, guarantee that all potential ACM has been located. For the same reasons, estimates of quantities and/or conditions are subject to readily apparent situations, and our findings reflect this condition. We do warrant, however, that the investigations and methodology reflect our best efforts based upon the prevailing standard of care in the environmental industry.

The Florida Department of Environmental Protection (FDEP) has issued an interpretation regarding the testing of concrete flooring, walls and roofing materials, which states that “if concrete will be recycled or reused, the concrete must be sampled and analyzed for the presence of asbestos prior to the commencement of activities that may release asbestos fibers into the environment”, and that “all of the different layers or types of concrete in a sample must be analyzed, individually, using the method specified in Appendix E, subpart E, 40 CFR Part 763, Section 1, Polarized Light Microscopy, with point-counting”, as applicable.

The information contained in this report was prepared based upon specific parameters and regulations in force at the time of this report. The information herein is only for the specific use of the client and GLE. GLE accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, unless prior written authorization has been obtained from GLE.

**APPENDIX A**  
**Analytical Results and Chain of Custody**

## SUMMARY OF BULK SAMPLE ANALYSIS

### OCRM; 4260 W Sand Lake

15270-00063

Sample	Sample Type		Fiber Type
M-01A	Concrete	100%	Quartz, Calcite, Clay, Mica
M-01B	Concrete	100%	Quartz, Calcite, Clay, Mica
M-01C-QC	Concrete	100%	Quartz, Calcite, Clay, Mica
RBU-01A	Built-Up Roof	100%	Bitumen
RBU-01B	Built-Up Roof	100%	Bitumen
RBU-01C	Built-Up Roof	100%	Bitumen
RF-01A	Black Roof Flashing	10% 90%	Chrysotile Asbestos Bitumen
RF-01B	Black Roof Flashing	10% 90%	Chrysotile Asbestos Bitumen
RF-01C	Black Roof Flashing	10% 90%	Chrysotile Asbestos Bitumen
M-02A	Black Edge Wrap	100%	Bitumen, Quartz, Calcite, Mica
M-02B	Black Edge Wrap	100%	Bitumen, Quartz, Calcite, Mica
M-02C	Black Edge Wrap	100%	Bitumen, Quartz, Calcite, Mica
M-03A-QC	Concrete	100%	Quartz, Calcite, Clay, Mica
M-03B	Concrete	100%	Quartz, Calcite, Clay, Mica
M-03C	Concrete	100%	Quartz, Calcite, Clay, Mica

Analyst / Approved  
Signatory:



Darryl Neldner

\* Polarized Light Microscopy coupled with dispersion is the technique used for identification in accordance with EPA 600/M4-82-020, EPA 600/R-93/116, and NIOSH Method 9002.

\*\* The percentage of each component is visually estimated. The result of this analysis relate only to the material tested. The report shall not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. (>1% greater than one percent, <1% less than one percent) QC - Sample reanalyzed for QA/QC.

\*\*\* This report shall not be reproduced except in full, without the written approval of the laboratory. GLE Report # 18943

Analysis performed by GLE Associates, Inc. NVLAP Code 102003-0, CO AL-17485, TX 30-0337

Feedback regarding laboratory performance should be addressed to lab@gleassociates.com.

Report Date: 9/1/2015

## SUMMARY OF BULK SAMPLE ANALYSIS

### OCRM; 4260 W Sand Lake

15270-00063

Sample	Sample Type		Fiber Type
M-04A	CMU	100%	Quartz, Calcite, Clay, Mica
M-04B	CMU	100%	Quartz, Calcite, Clay, Mica
M-04C	CMU	100%	Quartz, Calcite, Clay, Mica
M-05A	Dark Gray Caulk	100%	Polymer, Quartz, Calcite, Clay, Mica
M-05B	Dark Gray Caulk	100%	Polymer, Quartz, Calcite, Clay, Mica
M-05C	Dark Gray Caulk	100%	Polymer, Quartz, Calcite, Clay, Mica
M-06A	Light Gray Caulk	100%	Polymer, Quartz, Calcite, Clay, Mica
M-06B-QC	Light Gray Caulk	100%	Polymer, Quartz, Calcite, Clay, Mica
M-06C	Light Gray Caulk	100%	Polymer, Quartz, Calcite, Clay, Mica
CT-01A	2x4 White Ceiling Tile	70% 30%	Mineral Wool Perlite, Quartz, Calcite
CT-01B	2x4 White Ceiling Tile	70% 30%	Mineral Wool Perlite, Quartz, Calcite
CT-01C	2x4 White Ceiling Tile	70% 30%	Mineral Wool Perlite, Quartz, Calcite
MAS-01A	Gray Mastic	100%	Polymer, Quartz, Calcite, Clay, Mica
MAS-01B	Gray Mastic	100%	Polymer, Quartz, Calcite, Clay, Mica
MAS-01C	Gray Mastic	100%	Polymer, Quartz, Calcite, Clay, Mica

Analyst / Approved  
Signatory:



Darryl Neldner

\* Polarized Light Microscopy coupled with dispersion is the technique used for identification in accordance with EPA 600/M4-82-020, EPA 600/R-93/116, and NIOSH Method 9002.

\*\* The percentage of each component is visually estimated. The result of this analysis relate only to the material tested. The report shall not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. (>1% greater than one percent, <1% less than one percent) QC - Sample reanalyzed for QA/QC.

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Analysis performed by GLE Associates, Inc. NVLAP Code 102003-0, CO AL-17485, TX 30-0337

Feedback regarding laboratory performance should be addressed to lab@gleassociates.com.

Report Date: 9/1/2015

Page 2 of 3



# SUMMARY OF BULK SAMPLE ANALYSIS

OCRM; 4260 W Sand Lake

15270-00063

Sample	Sample Type	Fiber Type	
CT-02A	2x4 White Ceiling Tile	70%	Mineral Wool
		30%	Perlite, Quartz, Calcite
CT-02B	2x4 White Ceiling Tile	70%	Mineral Wool
		30%	Perlite, Quartz, Calcite
CT-02C-QC	2x4 White Ceiling Tile	70%	Mineral Wool
		30%	Perlite, Quartz, Calcite
MAS-02A	White Duct Mastic	100%	Polymer, Quartz, Calcite, Clay, Mica
MAS-02B	White Duct Mastic	100%	Polymer, Quartz, Calcite, Clay, Mica
MAS-02C	White Duct Mastic	100%	Polymer, Quartz, Calcite, Clay, Mica
VB-01A	Black Cove Base & Yellow Mastic	100%	Polymer
VB-01B	Black Cove Base & Yellow Mastic	100%	Polymer
VB-01C	Black Cove Base & Yellow Mastic	100%	Polymer

Analyst / Approved  
Signatory:



Darryl Neldner

\* Polarized Light Microscopy coupled with dispersion is the technique used for identification in accordance with EPA 600/M4-82-020, EPA 600/R-93/116, and NIOSH Method 9002.

\*\* The percentage of each component is visually estimated. The result of this analysis relate only to the material tested. The report shall not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. (>1% greater than one percent, <1% less than one percent) QC - Sample reanalyzed for QA/QC.

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Analysis performed by GLE Associates, Inc. NVLAP Code 102003-0, CO AL-17485, TX 30-0337

Feedback regarding laboratory performance should be addressed to lab@gleassociates.com.

Report Date: 9/1/2015

**CHAIN OF CUSTODY/SAMPLE TRANSMITTAL FORM**



GLE Associates, Inc.  
 1320 N. Semoran Blvd.  
 Suite 205  
 Orlando, FL 32807  
 PHONE: (407) 658-4151 FAX: (407) 658-4410

CLIENT: OCRM

PROJECT #: 15270-00063

PROJECT: 4260 W. SAND LAKE

LABORATORY SENT TO: Tampa

DATE: 8/24/15

**18913**

**SAMPLE INFORMATION**

SAMPLE #	DESCRIPTION/ LOCATION	SAMPLE #	DESCRIPTION/ LOCATION
M-01-A-C	CONCRETE (2)	MMS-02-A-C	White Duct MASTIC
RFV-01-A-C	Built up Roof	VB-01-A-C	Black COBC BASE w/ yellow adhesive
RF-01-A-C	Black roof flashing		
M-02-A-C	Black edge wrap		
M-03-A-C	CONCRETE (1)		
M-04-A-C	CMU		
M-05-A-C	DK GRAY CAULK		
M-06-A-C	LT. GRAY CAULK		
CT-01-A-C	2'x4' white ceiling tile (1)		
MMS-01-A-C	Gray MASTIC		
CT-02-A-C	2'x4' white ceiling tile (2)		
<b>IMPORTANT TOTAL NUMBER OF SAMPLES SUBMITTED:</b>		<b>39</b>	
<b>IMPORTANT POSITIVE STOP ANALYSIS:</b>		<b>NO</b>	
<b>IMPORTANT CODE TYPE:</b>		PLM 4	
<b>IMPORTANT E-MAIL RESULTS TO:</b>		Abruno jelliott	

**SAMPLE DUE DATE/TIME:** 9 | 1 | 15 10:30 AM PM

PACKAGED BY: Noelle Bruno	SAMPLES RECEIVED BY:
DATE PACKAGED: <u>8/28/15</u>	DATE:
METHOD OF TRANSMITTAL:	TIME:
TRANSMITTED BY: Fed Ex	Comments:
PACKAGED BY:	SAMPLES RECEIVED BY:
DATE PACKAGED:	DATE:
METHOD OF TRANSMITTAL:	TIME:
TRANSMITTED BY:	Comments:
PACKAGED BY:	SAMPLES RECEIVED BY:
DATE PACKAGED:	DATE:
METHOD OF TRANSMITTAL:	TIME:
TRANSMITTED BY:	Comments:

**OCRM**  
**8/28/15**  
**M.C.**

**APPENDIX B**  
**Personnel and Laboratory Certifications**



**STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

**ASBESTOS LICENSING UNIT  
1940 NORTH MONROE STREET  
TALLAHASSEE FL 32399-0783**

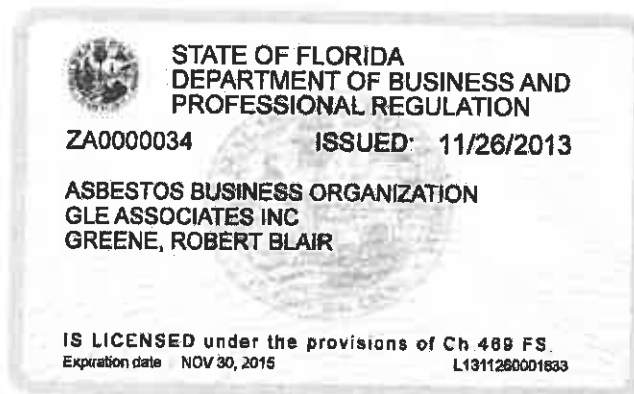
**(850) 487-1395**

**GLE ASSOCIATES INC  
GREENE, ROBERT BLAIR  
4300 WEST CYPRESS STREET  
SUITE 400  
TAMPA FL 33607**

**Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.**

**Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto [www.myfloridalicense.com](http://www.myfloridalicense.com). There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.**

**Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!**



**The Department of State is leading the commemoration of Florida's 500th anniversary in 2013. For more information, please go to [www.VivaFlorida.org](http://www.VivaFlorida.org).**

**DETACH HERE**

**RICK SCOTT, GOVERNOR**

**STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION  
ASBESTOS LICENSING UNIT**

**KEN LAWSON, SECRETARY**

<b>LICENSE NUMBER</b>	
ZA0000034	



**The ASBESTOS BUSINESS ORGANIZATION  
Named below IS LICENSED  
Under the provisions of Chapter 469 FS.  
Expiration date: NOV 30, 2015**

**GLE ASSOCIATES INC  
GREENE, ROBERT BLAIR  
4300 W CYPRESS STREET SUITE 400  
TAMPA FL 33607**



**ISSUED: 11/26/2013 SEQ # L1311260001833  
DISPLAY AS REQUIRED BY LAW**



**STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

**ASBESTOS LICENSING UNIT  
1940 NORTH MONROE STREET  
TALLAHASSEE FL 32399-0783**

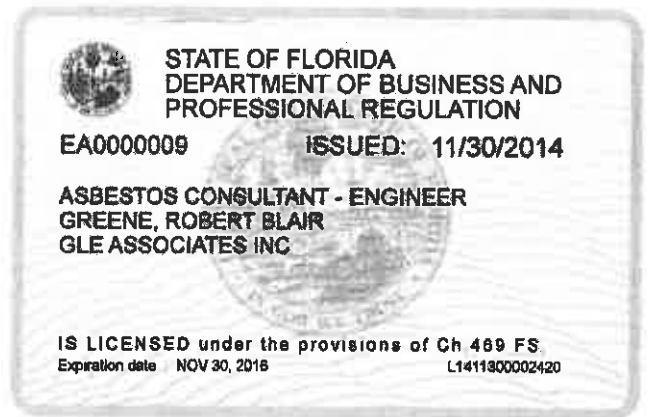
**(850) 487-1395**

**GREENE, ROBERT BLAIR  
GLE ASSOCIATES INC  
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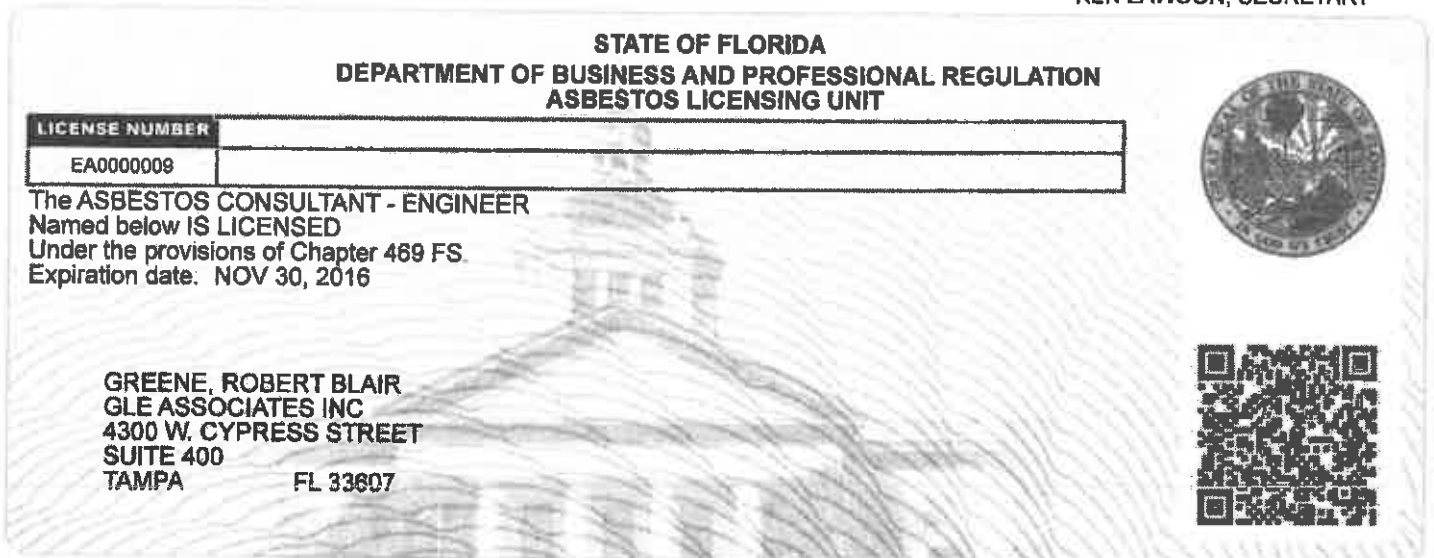
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DETACH HERE

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY



ISSUED: 11/30/2014

DISPLAY AS REQUIRED BY LAW

SEQ # L141130002420



**M·E·T·A**  
 Mayhew Environmental Training Associates  
 I N C O R P O R A T E D

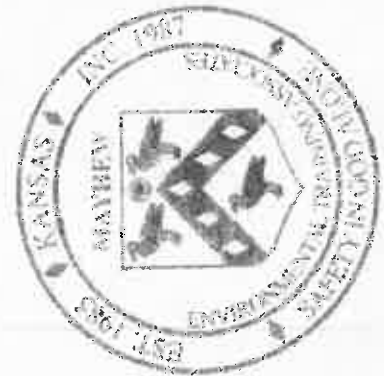
Certificate # ME12AEE656D6B2438

**Brent Tyner**

has on 3/18/2015 in Tampa, FL  
 completed the requirements for asbestos accreditation under Section 206 of TSCA Title II, 15 USC 2646

**3-day Asbestos Building Inspector Initial**

as approved by FL  
 and the US EPA under 40 CFR 763 (AHERA)  
 from 3/16/2015 to 3/18/2015 and passed the associated exam on 3/18/2015  
 with a score of at least 70%



*Robert W. Brooks*

Robert Brooks  
 Instructor

*Thomas Mayhew*

Thomas Mayhew  
 President

Training Provider # FL49-0001221  
 Course #: 150302ASBIIIFL234

SSN: XXX-XX-9359  
 Expiration: 3/18/2016

P.O. Box 4693 - Lawrence, KS. 66047 - 800.444.6382

[www.metaenvironmental.net](http://www.metaenvironmental.net)

Asbestos Online Training, LLC

13987 94<sup>th</sup> Avenue N Seminole, FL 33776

727-593-3067

Asbestos Survey & Mechanical (AHERA Building  
Inspector) Refresher Training

This is to certify that

Noelle Bruno

Training was in accordance with Title II of TSCA, 40 CFR  
Part 763. Appendix C to Subpart E as revised

Date of Course Examination 8/15/2015

Date of Course Completion 8/15/2015

Expiration Date 8/15/2016

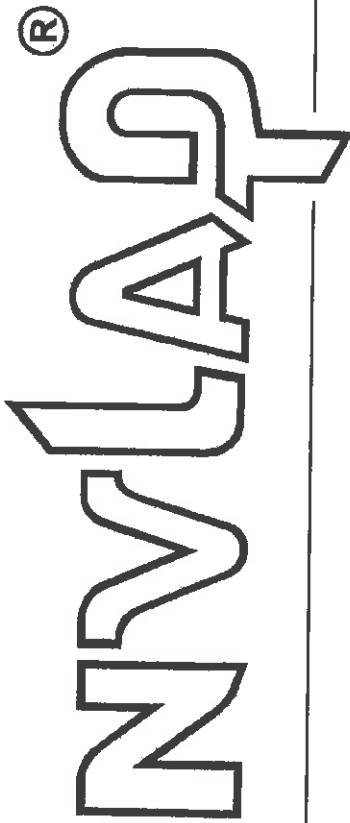
Certificate # 81515310

Course # FL-490006359 Provider # FL-490005406



INSTRUCTOR

United States Department of Commerce  
National Institute of Standards and Technology



---

## Certificate of Accreditation to ISO/IEC 17025:2005

---

NVLAP LAB CODE: 102003-0

**GLE Associates, Inc.**  
Tampa, FL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:

### **BULK ASBESTOS FIBER ANALYSIS**

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).*

2015-04-01 through 2016-03-31

*Effective dates*



A handwritten signature in black ink, appearing to read "R. M. L. Q.", enclosed within a rectangular box.

For the National Institute of Standards and Technology





# Florida Department of Environmental Protection

Central District  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Ryan E. Matthews  
Interim Secretary

May 5, 2017

Michael Hudkins, P.E., Manager – Water Reclamation Facility  
Orange County Utilities  
9150 Curry Ford Road  
Orlando FL 32825  
[Michael.hudkins@ocfl.net](mailto:Michael.hudkins@ocfl.net)

Orange County - DW  
OCUD South WRF  
File No. FLA107972-024-DW1/MR  
Permit Revision – Influent Lift Station Replacement/Upgrade

Dear Mr. Hudkins:

The Department is in receipt of your request to revise the conditions of the permit referenced above.

The permit is hereby revised to allow the construction of a new Influent Pump Station with up to eight (8) submersible pumps in two wet wells (4 pumps each) each capable of pumping 31 million gallons per day (mgd). The project will include demolition of the existing Influent Pump Station, a new electrical building, modification of the existing flow channels, and associated piping, appurtenances, and valves. The new Influent Pump Station replaces the Existing Influent Pump Station.

1. Prior to placing the new facilities into operation or any individual unit processes into operation, for any purpose other than testing for leaks and equipment operation, the permittee shall complete and submit to the Department DEP **Form 62-620.910(12), Notification of Completion of Construction for Domestic Wastewater Facilities.** [62-620.630(2)]
2. Within six months after a facility is placed in operation, the permittee shall provide written certification to the Department on **Form 62-620.910(13)** that record drawings pursuant to Chapter 62-600, F.A.C., and that an operation and maintenance manual pursuant to Chapters 62-600 and 62-610, F.A.C., as applicable, are available at the location specified on the form. [62-620.630(7)]
3. This permit does not cover any of the structural engineering aspects of this project.

This letter must be attached to Wastewater Permit No. FLA107972 and becomes a part of and subject to all conditions of that permit.

The Department's proposed agency action shall become final unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57 of the Florida Statutes before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Petitions by the applicant or any of the parties listed below must be filed within fourteen days of receipt of this written notice. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the notice or within fourteen days of receipt of the written notice, whichever occurs first.

Under Section 120.60(3) of the Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within fourteen days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 of the Florida Statutes. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name, address, and telephone number of each petitioner; the name, address, and telephone number of the petitioner's representative, if any; the Department permit identification number and the county in which the subject matter or activity is located;
- (b) A statement of how and when each petitioner received notice of the Department action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;
- (f) A concise statement of the ultimate facts alleged, as well as the Rules and statutes which entitle the petitioner to relief; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation under Section 120.573 of the Florida Statutes is not available for this proceeding.

This action is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above. Upon the timely filing of a petition this order will not be effective until further order of the Department.

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

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



Wanda Parker-Garvin  
Environmental Manager  
Permitting and Waste Cleanup Program - Wastewater

WPG/wgb


**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

Shabbir Rizvi, DEP ([shabbir.rizvi@dep.state.fl.us](mailto:shabbir.rizvi@dep.state.fl.us))  
Wilmott Brown, DEP, [wilmott.brown@dep.state.fl.us](mailto:wilmott.brown@dep.state.fl.us)  
Stefano Ceriana, P.E., Reiss Engineering, [stefano.ceriana@reisseng.com](mailto:stefano.ceriana@reisseng.com)  
Alan K. Gay, P.E., OCUD, [alan.gay@ocfl.net](mailto:alan.gay@ocfl.net)  
David Smicherko, DEP, [david.smicherko@dep.state.fl.us](mailto:david.smicherko@dep.state.fl.us)  
Sirena Davila, DEP, [sirena.davila@dep.state.fl.us](mailto:sirena.davila@dep.state.fl.us)

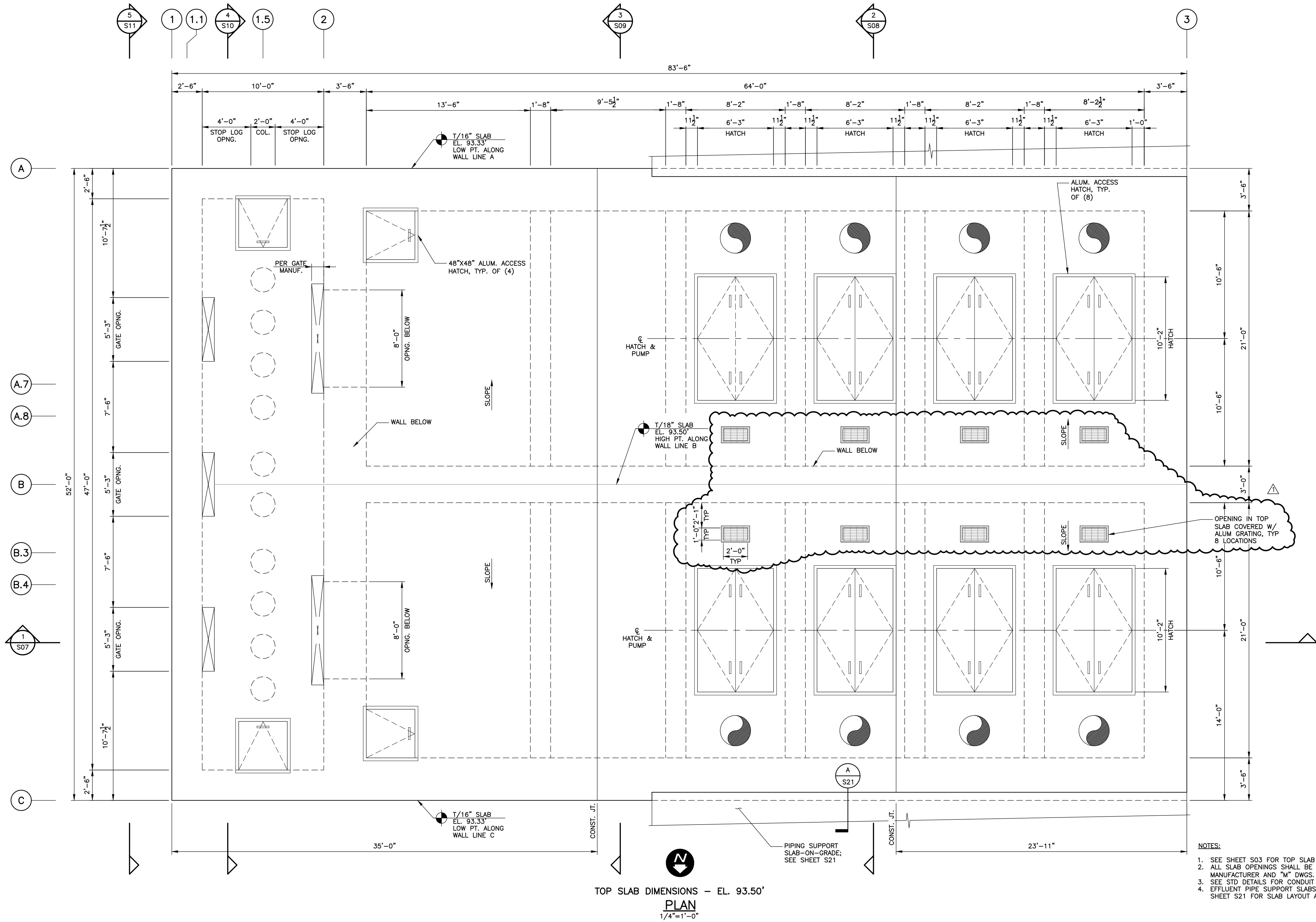
**FILING AND ACKNOWLEDGMENT**

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

  
Clerk

May 5, 2017  
Date

Rev on: 2/6/2018 11:20 AM Individual File Path: R:\PROJECTS\110031A - SOUTH WATER RECLAMATION FACILITY PUMP STATION (PH 2)\DRAWINGS\FINAL\DESIGN\S02-S11 IPS PLANS AND SECTIONS.DWG  
 Rev/Plot by: JAY MILLER  
 Parent Sheet Set: 110031A\_D01PS



TOP SLAB DIMENSIONS - EL. 93.50'  
**PLAN**  
 1/4"=1'-0"

- NOTES:**
- SEE SHEET S03 FOR TOP SLAB REINFORCEMENT.
  - ALL SLAB OPENINGS SHALL BE COORDINATED WITH EQUIPMENT MANUFACTURER AND "M" DWGS.
  - SEE STD DETAILS FOR CONDUIT PLACEMENT REQUIRED IN TOP SLAB.
  - EFFLUENT PIPE SUPPORT SLABS NOT SHOWN FOR CLARITY. SEE SHEET S21 FOR SLAB LAYOUT AND DETAILS.

REV	DATE	DESCRIPTION
A	02/2018	ADDENDUM #3
C	12/2017	ISSUED FOR BID
B	10/2017	100% FOR BID
A	02/2017	90% DRAWINGS

LINE IS 2 INCHES  
 AT FULL SIZE  
 (IF NOT SCALE ACCORDINGLY)

**ORANGE COUNTY**  
**UTILITIES DEPARTMENT**  
**ENGINEERING DIVISION**  
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

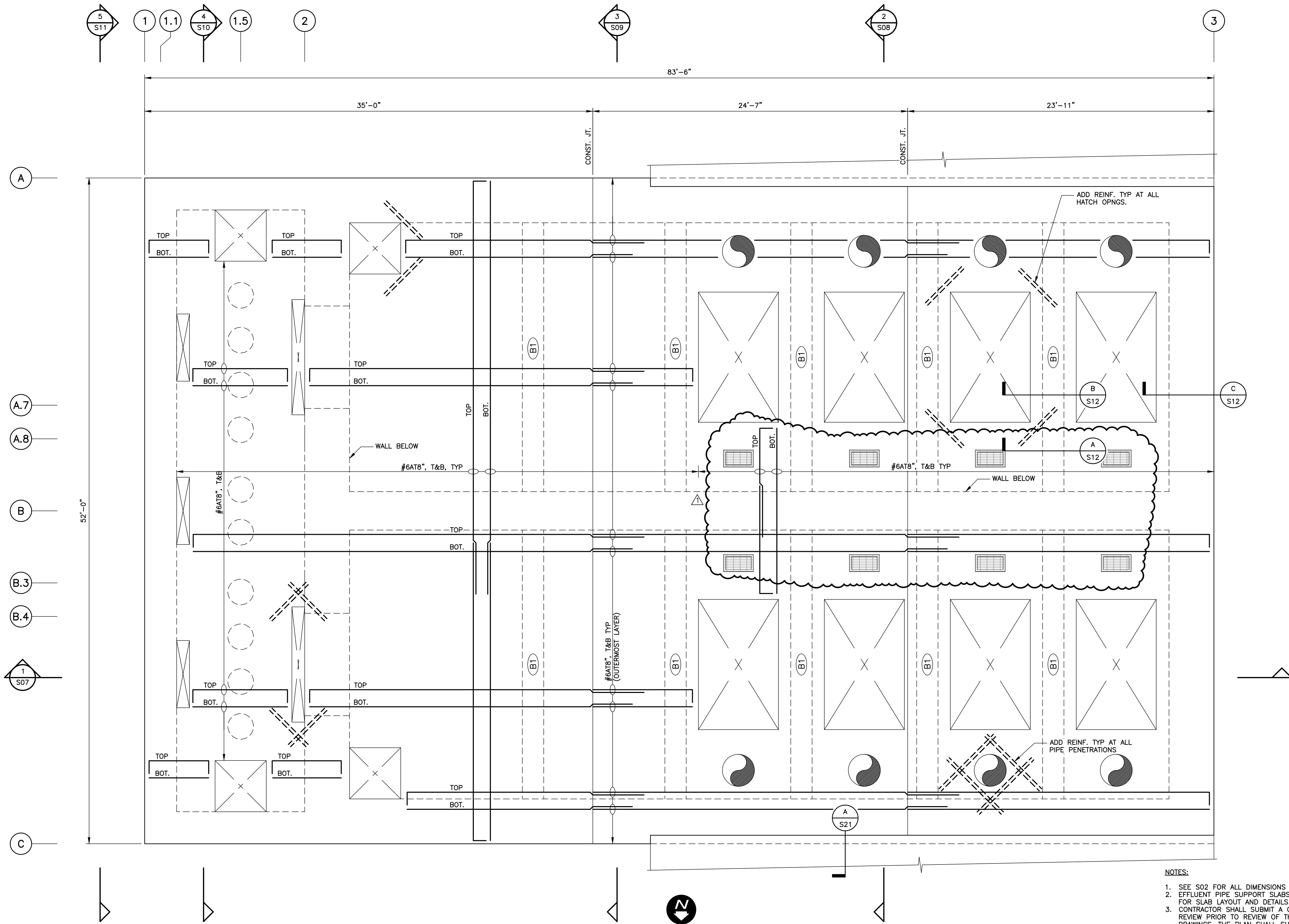
**RE**  
 REISS ENGINEERING, INC.  
 CERTIFICATE OF AUTHORIZATION No. 8181  
 1016 SPRING VILLAS PT  
 WINTER SPRINGS, FL 32708  
 (407) 679-5358  
 PROJECT NO. 110031A

ORANGE COUNTY  
 SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
 STRUCTURAL  
 TOP OF STRUCTURE PLAN

OCU FILE NO.: OCU #  
 DESIGNED BY: BE  
 DRAWN BY: BE  
 CHECKED BY: JVS  
 CADD FILE: S02.DWG  
 JOHN SOBCEK, P.E.  
 PROFESSIONAL ENGINEER  
 FLORIDA LICENSE # 71407

SCALE: NOTED  
 DRAWING NO.:  
**S02**  
 SHEET: 41 OF 123

Parent Sheet: S110031A.dwg  
 Rev on: 2/6/2018 11:20 AM  
 Rev/Plot by: JAY MILLER  
 Individual File Path: R:\PROJECTS\110031A - SOUTH WATER RECLAMATION FACILITY PUMP STATION (PH 2)\DESIGN\DRAWINGS\FINAL\DESIGN\S02-S11 IPS PLANS AND SECTIONS.DWG



**TOP SLAB REINFORCEMENT PLAN**  
 1/4"=1'-0"

- NOTES:**
- SEE S02 FOR ALL DIMENSIONS NOT SHOWN ON SLAB REINFORCEMENT PLAN.
  - EFFLUENT PIPE SUPPORT SLABS NOT SHOWN FOR CLARITY. SEE SHEET S20 FOR SLAB LAYOUT AND DETAILS.
  - CONTRACTOR SHALL SUBMIT A CONDUIT LAYOUT PLAN TO ENGINEER FOR REVIEW PRIOR TO REVIEW OF THE TOP SLAB REINFORCEMENT SHOP DRAWINGS. THE PLAN SHALL SHOW PROPOSED CONDUIT IN TOP SLAB.

**LEGEND:**

(BX) INDICATES BEAM TAG; SEE SHEET S12 FOR SCHEDULE AND DETAILS.

REV	DATE	DESCRIPTION
A	02/2017	90% DRAWINGS
B	10/2017	100% FOR BID
C	12/2017	ISSUED FOR BID
Δ	02/2018	ADDENDUM #3

LINE IS 2 INCHES  
 AT FULL SIZE  
 (IF NOT SCALE ACCORDINGLY)

**ORANGE COUNTY GOVERNMENT**  
**ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION**  
 9150 CURRY FORD ROAD ORLANDO, FL. 32825

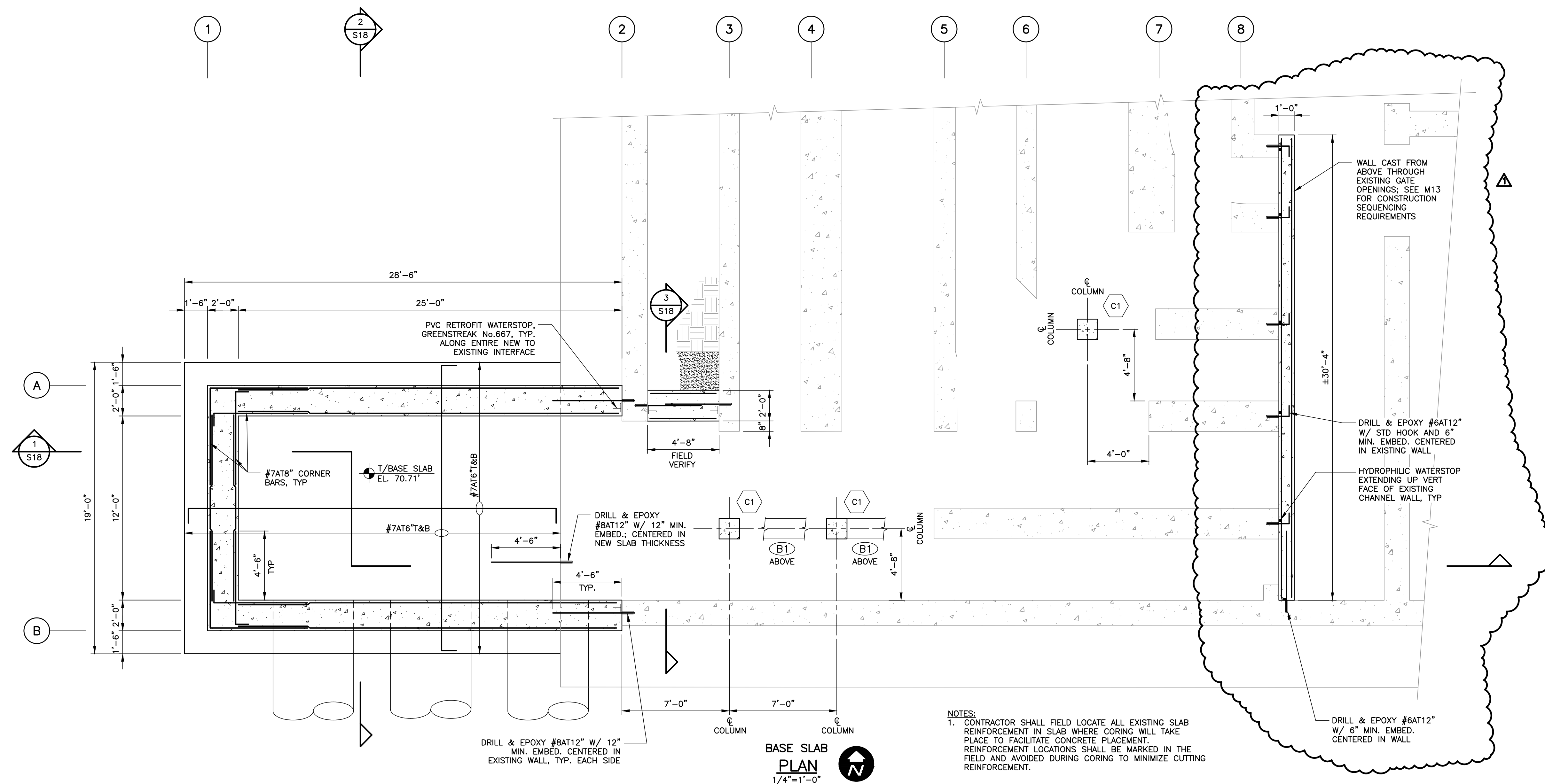
**RE**  
 REISS ENGINEERING, INC.  
 CERTIFICATE OF AUTHORIZATION No. 8181  
 1016 SPRING VILLAS PT  
 WINTER SPRINGS, FL 32708  
 (407) 679-5358  
 PROJECT NO. 110031A

ORANGE COUNTY  
 SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
 STRUCTURAL  
 TOP TAB REINFORCEMENT PLAN

JOHN SOBczAK, P.E.  
 PROFESSIONAL ENGINEER  
 FLORIDA LICENSE # 71407

OCU FILE NO.: OCU #  
 DESIGNED BY: BE  
 DRAWN BY: BE  
 CHECKED BY: JVS  
 CADD FILE: S03.DWG

SCALE: NOTED  
 DRAWING NO.: S03  
 SHEET: 42 OF 123



**BASE SLAB PLAN**  
1/4"=1'-0"

**NOTES:**  
1. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING SLAB REINFORCEMENT IN SLAB WHERE CORING WILL TAKE PLACE TO FACILITATE CONCRETE PLACEMENT. REINFORCEMENT LOCATIONS SHALL BE MARKED IN THE FIELD AND AVOIDED DURING CORING TO MINIMIZE CUTTING REINFORCEMENT.

REV	DATE	DESCRIPTION
Δ	02/2018	ADDENDUM #3
C	12/2017	ISSUED FOR BID
B	10/2017	100% FOR BID
A	02/2017	90% DRAWINGS

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AT FULL SIZE  
(IF NOT SCALE ACCORDINGLY)

**ORANGE COUNTY GOVERNMENT**  
**ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION**  
 9150 CURRY FORD ROAD ORLANDO, FL. 32825



REISS ENGINEERING, INC.  
 CERTIFICATE OF AUTHORIZATION No. 8181  
 1016 SPRING VILLAS PT  
 WINTER SPRINGS, FL 32708  
 (407) 679-5358  
 PROJECT NO. 110031A

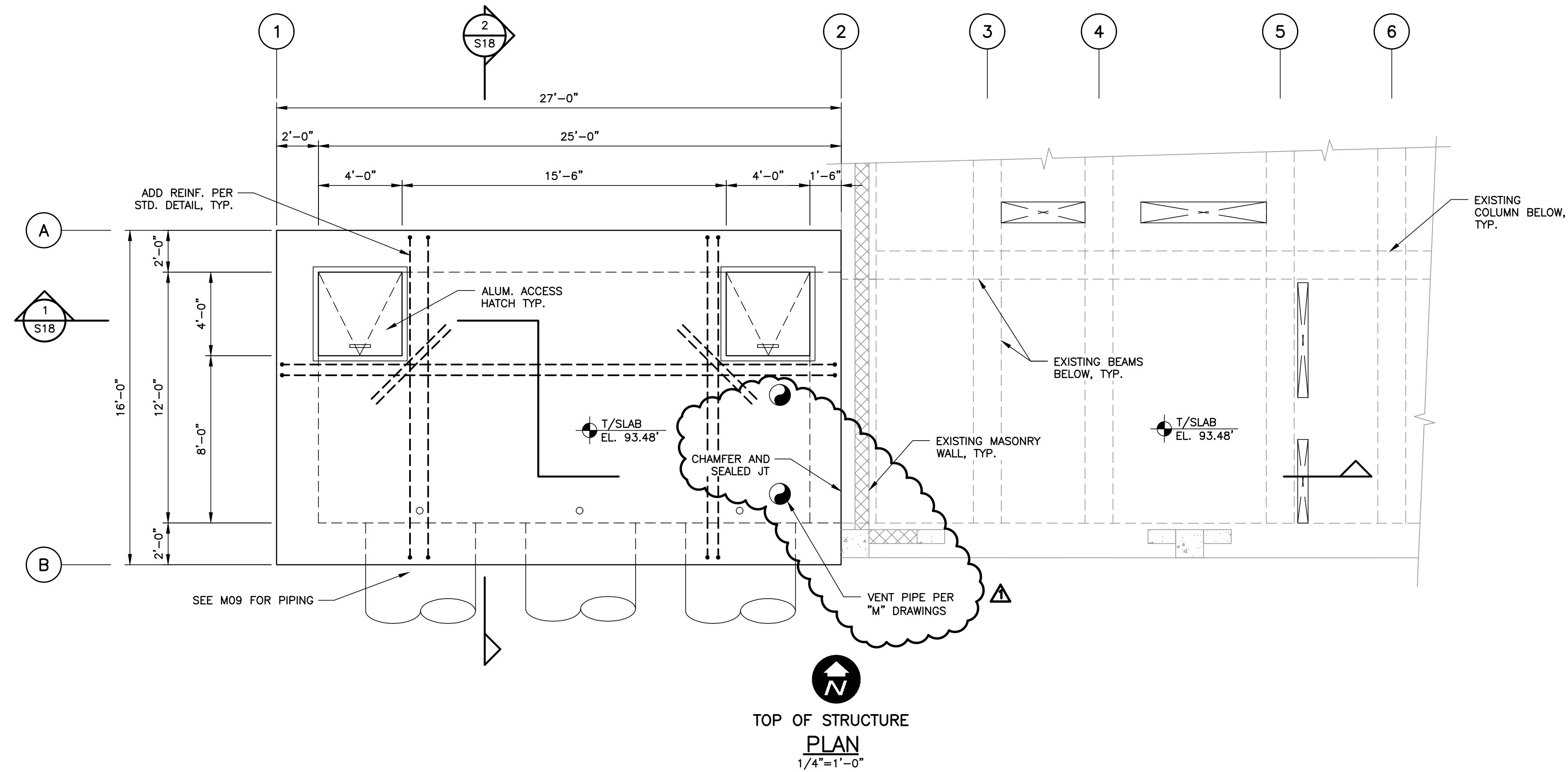
ORANGE COUNTY  
 SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
 STRUCTURAL  
 OUTLET BOX PLANS

JOHN SOBCEK, P.E.  
 PROFESSIONAL ENGINEER  
 FLORIDA LICENSE # 71407

OCU FILE NO.: OCU #
DESIGNED BY: BE
DRAWN BY: BE
CHECKED BY: JVS
CADD FILE: S17.DWG

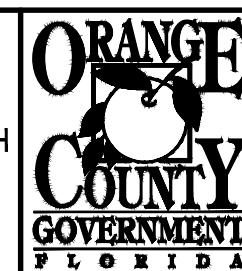
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DRAWING NO.: S17
SHEET: 56 OF 123

Parent Sheet: S110031A\_OCIPS Rev on: 2/6/2018 11:23 AM Individual File Path: R:\PROJECTS\110031A - SOUTH WATER RECLAMATION FACILITY PUMP STATION (PH 2)\DESIGN\DRAWINGS\FINAL\DESIGN\S13-S18 OUTLET BOX.DWG



REV	DATE	DESCRIPTION
A	02/2017	90% DRAWINGS
B	10/2017	100% FOR BID
C	12/2017	ISSUED FOR BID
	02/2018	ADDENDUM #3

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT SCALE ACCORDINGLY)



**ORANGE COUNTY**  
**UTILITIES DEPARTMENT**  
**ENGINEERING DIVISION**  
9150 CURRY FORD ROAD ORLANDO, FL. 32825



REISS ENGINEERING, INC.  
CERTIFICATE OF AUTHORIZATION No. 8181  
1016 SPRING VILLAS PT  
WINTER SPRINGS, FL 32708  
(407) 679-5358  
PROJECT NO. 110031A

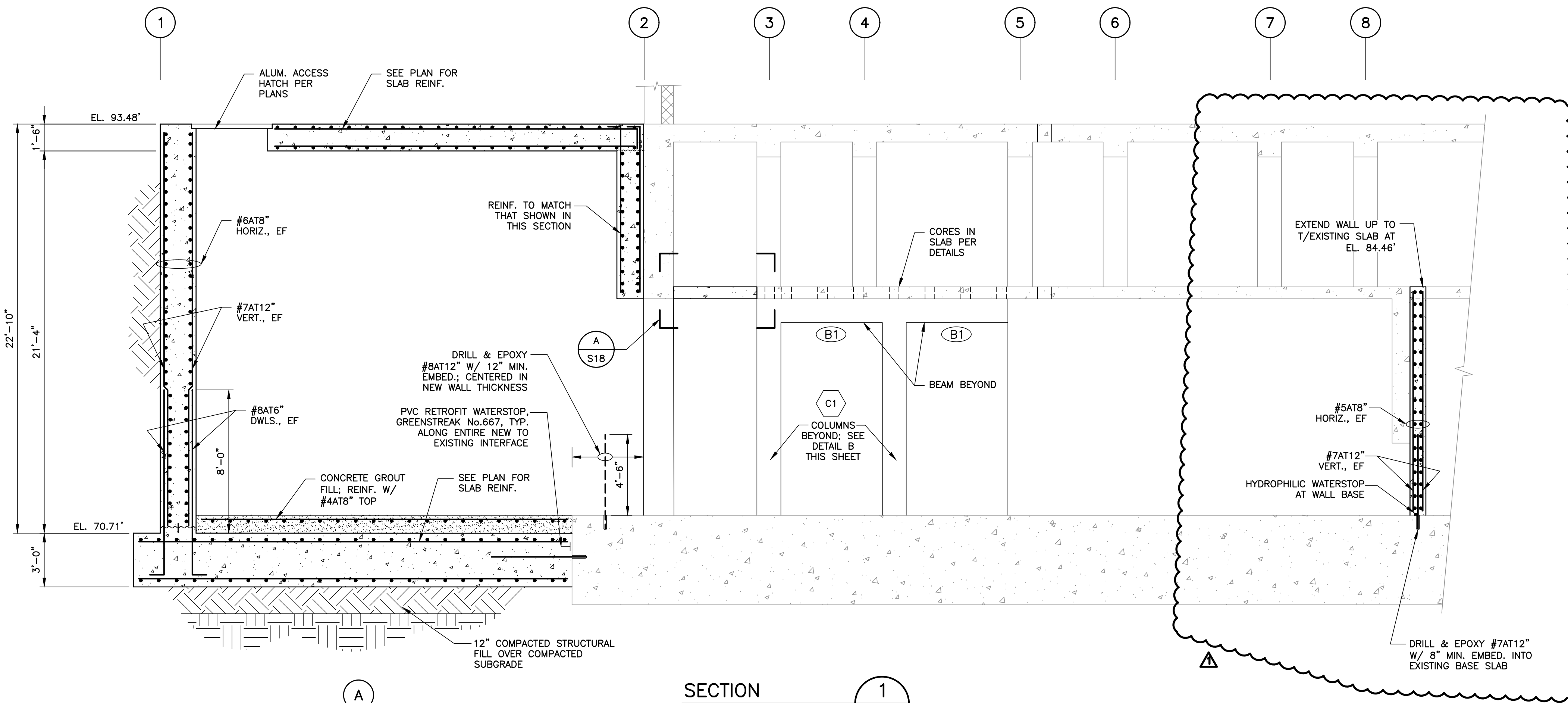
ORANGE COUNTY  
SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
STRUCTURAL  
OUTLET BOX PLANS

JOHN SOB CZAK, P.E.  
PROFESSIONAL ENGINEER  
FLORIDA LICENSE # 71407

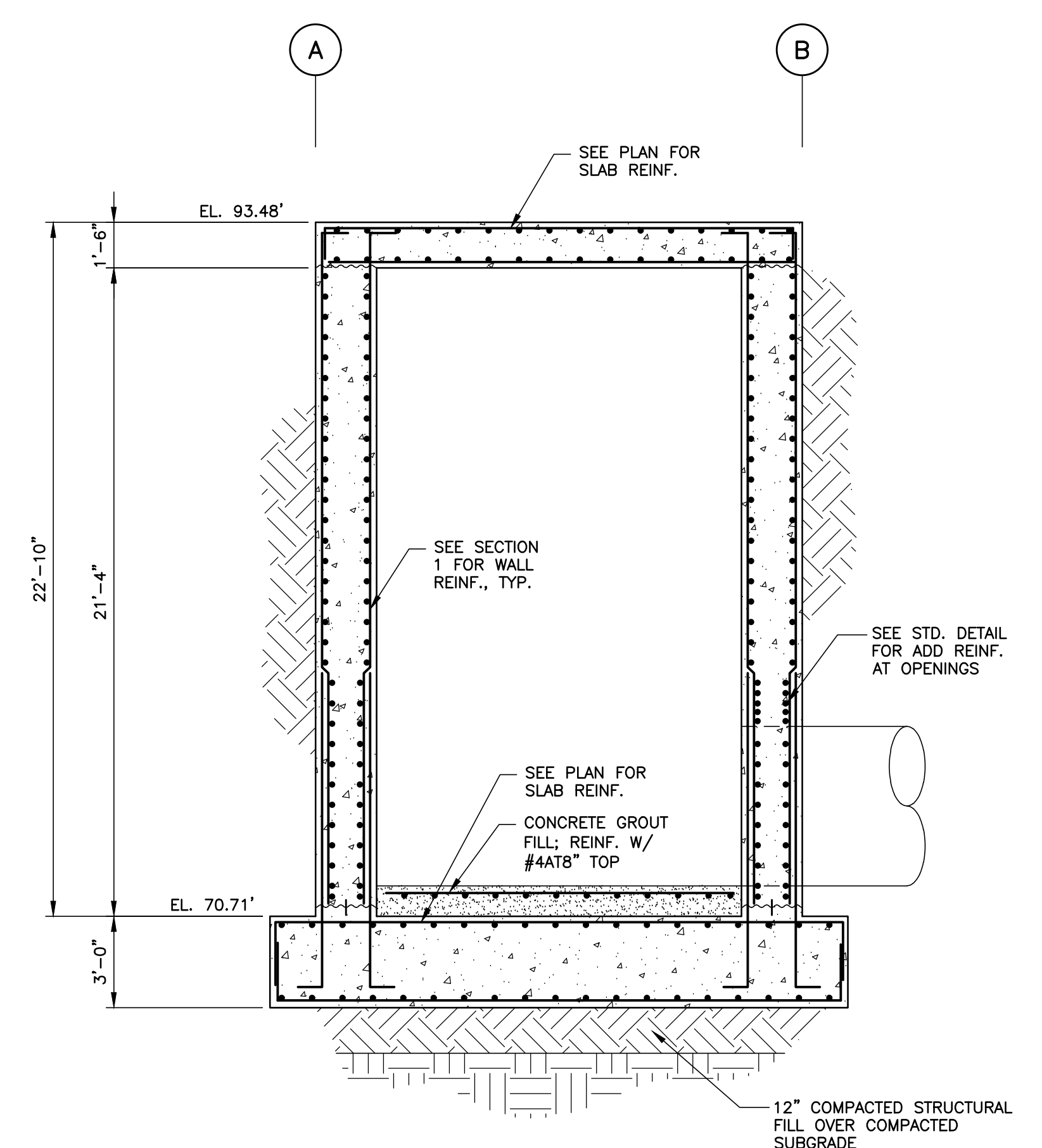
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DESIGNED BY: BE	DRAWING NO. :
DRAWN BY: BE	S17A
CHECKED BY: JVS	SHEET: 57 OF 123
CADD FILE: S17A.DWG	



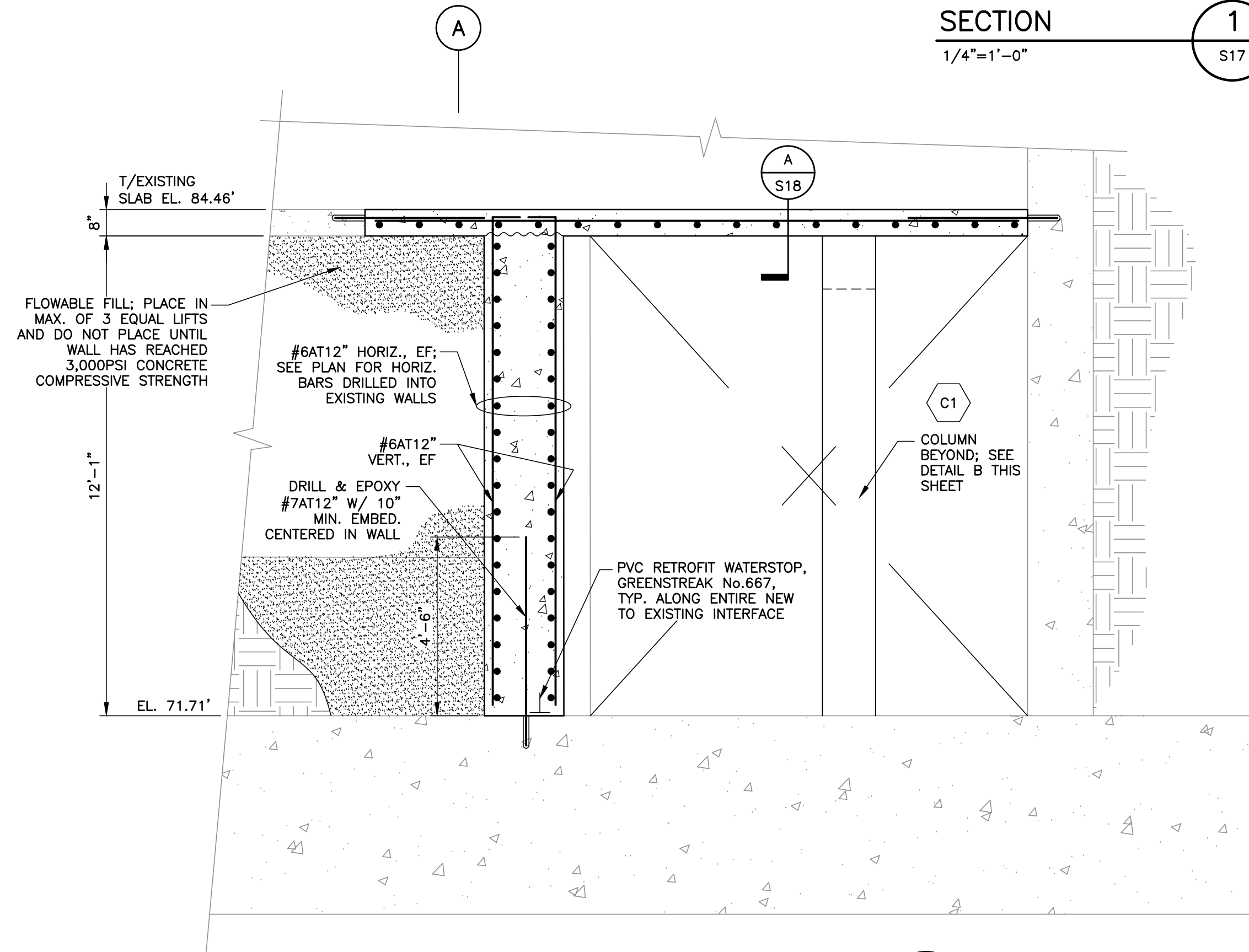
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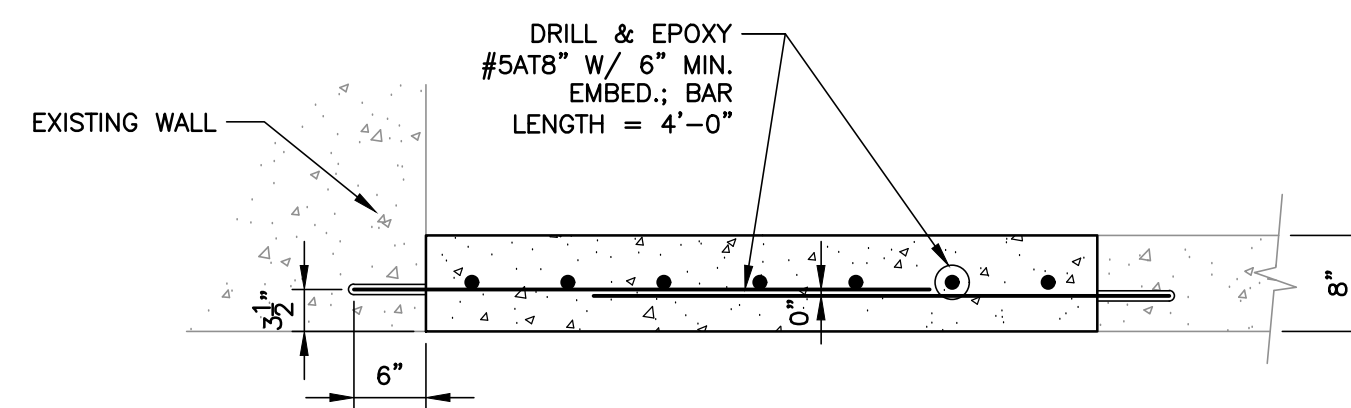
SECTION 1  
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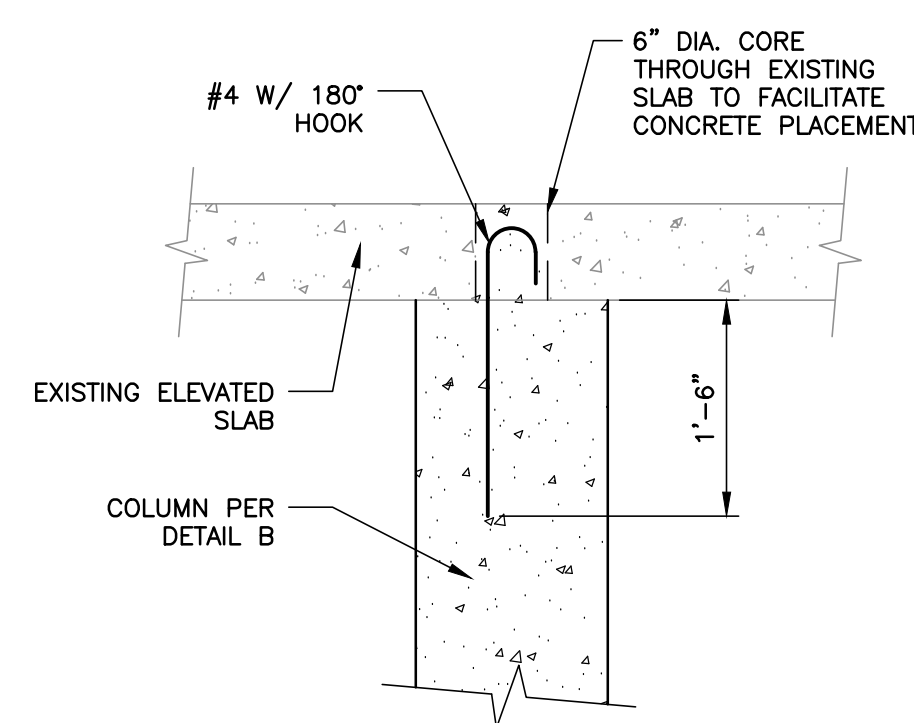
SECTION 2  
1/4"=1'-0"



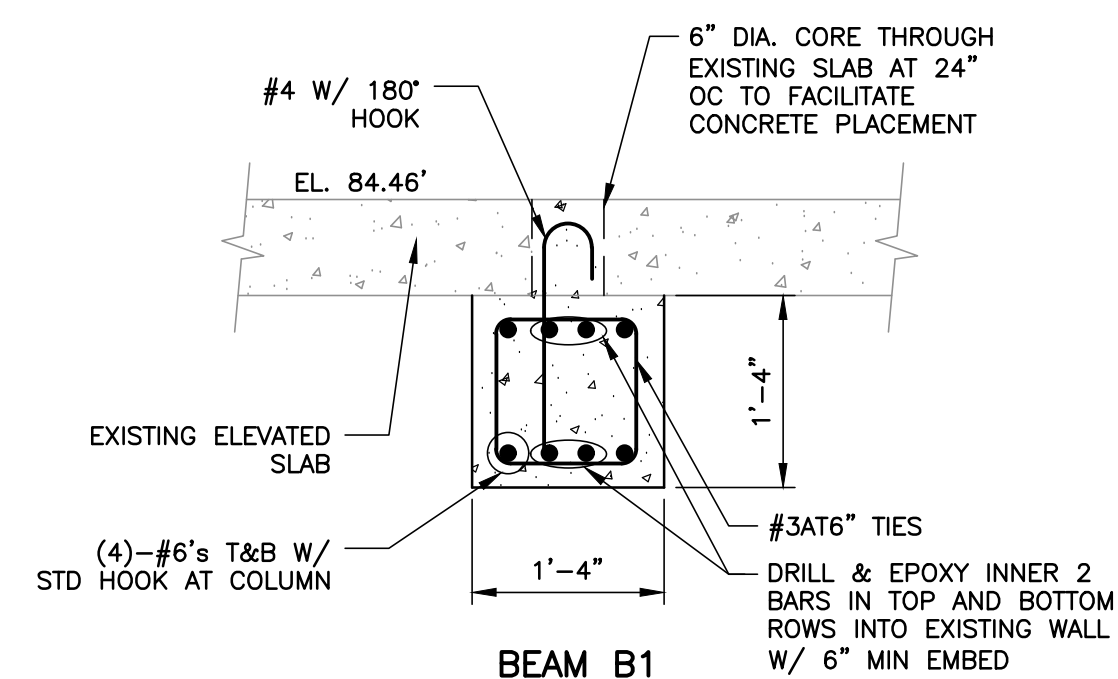
SECTION 3  
3/8"=1'-0"



ELEVATED SLAB DETAIL A  
3/4"=1'-0"

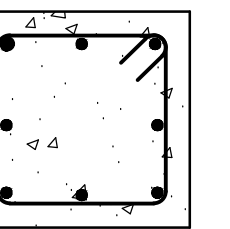


COLUMN TO EXISTING SLAB CONNECTION DETAIL C  
3/4"=1'-0"

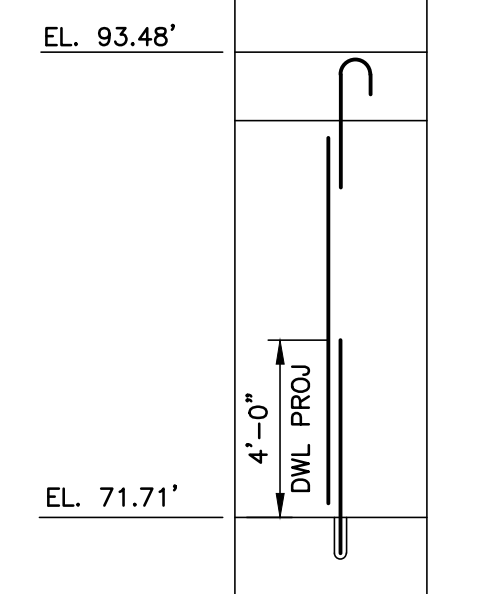


BEAM B1 DETAIL D  
3/4"=1'-0"

COLUMN SCHEDULE	
MARK	C1
SIZE	16"x16"
LONGITUDINAL REINF	(8) #6
TYPE	A
DOWELS	(8) #6
TIES	#4@12"
REMARKS	-



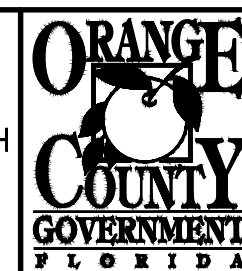
TYPE "A"



COLUMN DETAIL B  
N.T.S.

REV	DATE	DESCRIPTION
A	02/2018	ADDENDUM #3
C	12/2017	ISSUED FOR BID
B	10/2017	100% FOR BID
A	02/2017	90% DRAWINGS

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ORANGE COUNTY UTILITIES DEPARTMENT  
ENGINEERING DIVISION  
9150 CURRY FORD ROAD ORLANDO, FL. 32825



REISS ENGINEERING, INC.  
CERTIFICATE OF AUTHORIZATION No. 8181  
1016 SPRING VILLAS PT  
WINTER SPRINGS, FL 32708  
(407) 679-5358  
PROJECT NO. 110031A

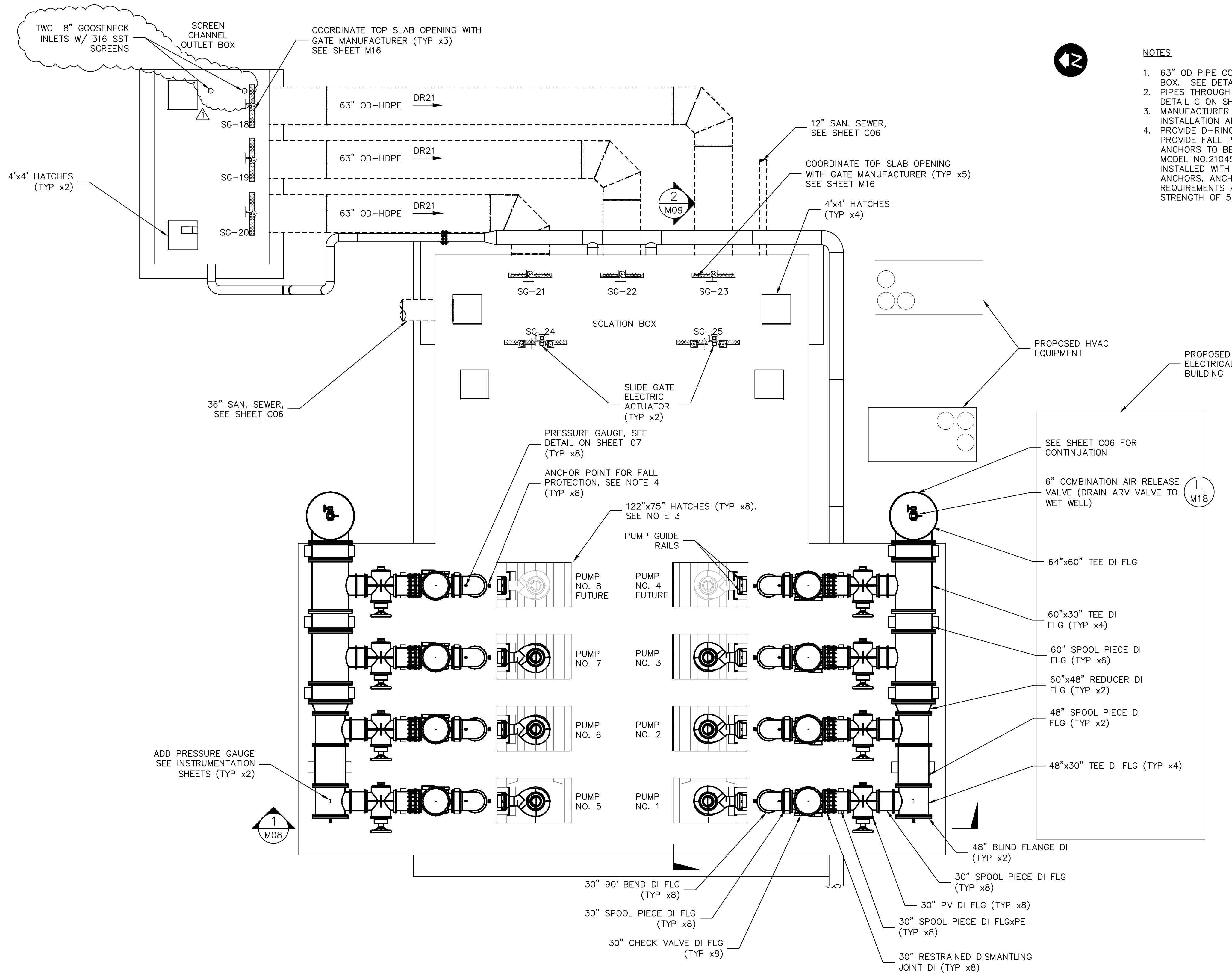
ORANGE COUNTY  
SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
STRUCTURAL  
OUTLET BOX SECTIONS AND DETAILS

JOHN SOBCHAK, P.E.  
PROFESSIONAL ENGINEER  
FLORIDA LICENSE # 71407

OCU FILE NO.: OCU #  
DESIGNED BY: BE  
DRAWN BY: BE  
CHECKED BY: JVS  
CADD FILE: S18.DWG

SCALE: NOTED  
DRAWING NO.:  
S18  
SHEET: 58 OF 123





- NOTES**
1. 63" OD PIPE CONNECTION TO OUTLET BOX AND ISOLATION BOX. SEE DETAIL H ON SHEET M18.
  2. PIPES THROUGH CONCRETE WALLS PER PIPE PENETRATION DETAIL C ON SHEET M17.
  3. MANUFACTURER TO CONFIRM HATCH SIZE FOR THE INSTALLATION AND REMOVAL OF THE PUMPS.
  4. PROVIDE FALL PROTECTION ANCHOR POINTS. D-RING ANCHORS TO BE CONCRETE D-RING ANCHOR BY DBI SALA MODEL NO.2104560 OR APPROVED EQUAL AND SHALL BE INSTALLED WITH STAINLESS STEEL CONCRETE WEDGE ANCHORS. ANCHOR POINT SHALL MEET OSHA 1926.502 REQUIREMENTS AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 5,000 POUNDS.

INFLUENT PUMP STATION - UPPER PLAN  
SCALE: 1/8" = 1'-0"

Parent Sheet Set: 110031A\_DCFPS  
 Rev on: 2/9/2018 6:45 AM  
 Rev/Plot by: JAY MILLER  
 Individual File Path: R:\PROJECTS\110031A - SOUTH WATER RECLAMATION FACILITY PUMP STATION (PH 2)\DESIGN\DRAWINGS\FINAL\DESIGN\M07.DWG

REV	DATE	DESCRIPTION
Δ	02/2018	ADDENDUM #3
C	12/2017	ISSUED FOR BID
B	10/2017	100% FOR BID
A	02/2017	90% DRAWINGS

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT SCALE ACCORDINGLY)


**ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION**  
 9150 CURRY FORD ROAD ORLANDO, FL. 32825



REISS ENGINEERING, INC.  
 CERTIFICATE OF AUTHORIZATION No. 8181  
 1016 SPRING VILLAS PT  
 WINTER SPRINGS, FL 32708  
 (407) 679-5358  
 PROJECT NO. 110031A

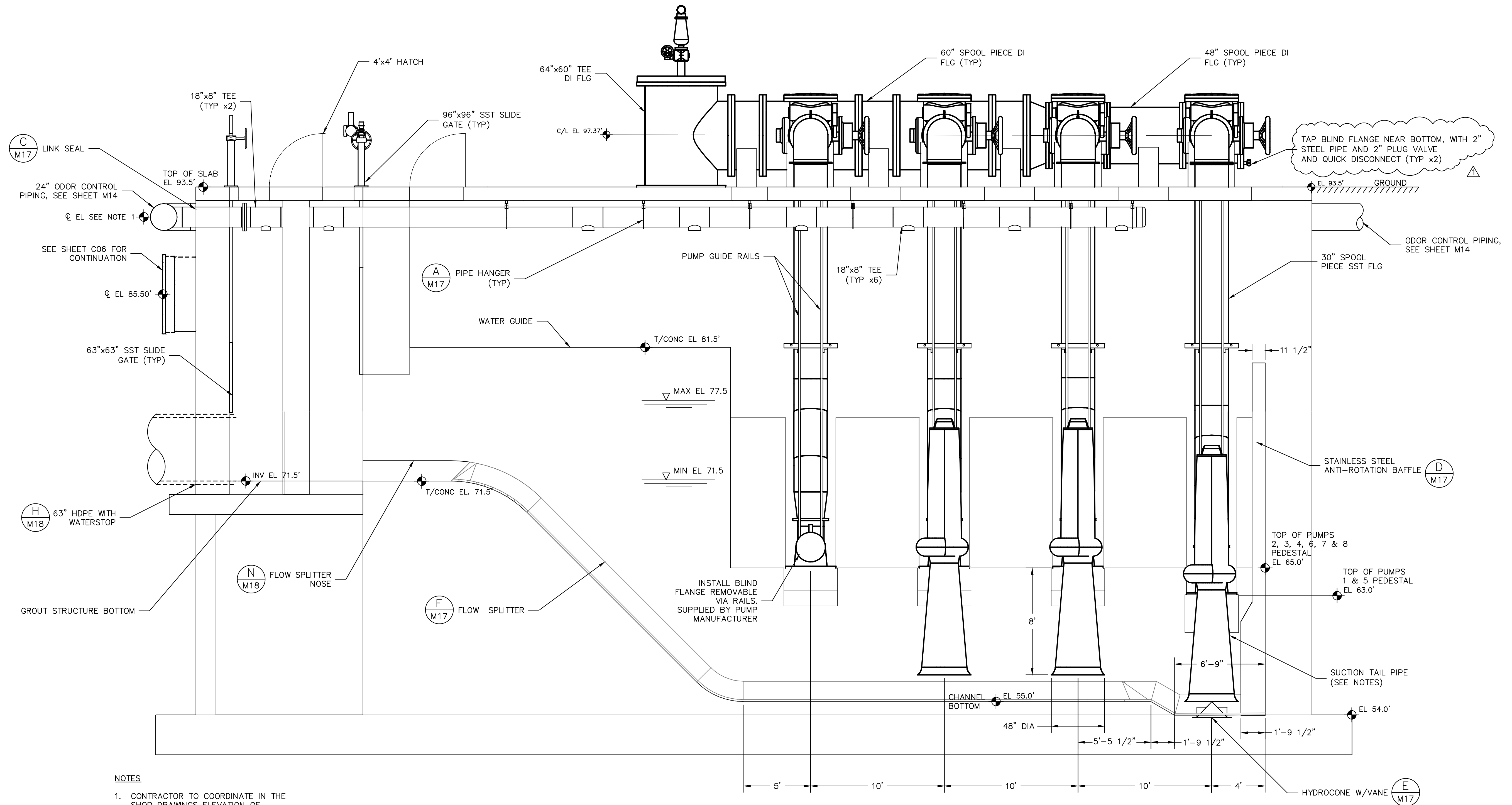
ORANGE COUNTY  
 SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
 MECHANICAL  
 INFLUENT PUMP STATION - UPPER PLAN

STEFANO CERIANA P.E.  
 PROFESSIONAL ENGINEER  
 FLORIDA LICENSE #66379

OCU FILE NO.: OCU #	SCALE: NOTED
DESIGNED BY: SC	DRAWING NO.:
DRAWN BY: CMR/DHG	M07
CHECKED BY: MDP	SHEET: 71 OF 123
CADD FILE: M07.DWG	



Parent Sheet Set: 110031A\_OCIPS  
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 Rev on: 1/26/2018 8:35 AM  
 Individual File Path: R:\PROJECTS\110031A - SOUTH WATER RECLAMATION FACILITY PUMP STATION (PH 2)\DRAWINGS\FINAL\DESIGN\M09.DWG



**NOTES**

- CONTRACTOR TO COORDINATE IN THE SHOP DRAWINGS ELEVATION OF DUCTWORK BASED ON ACTUAL PIPE HANGERS INSTALLED, PER DETAIL A ON M17.

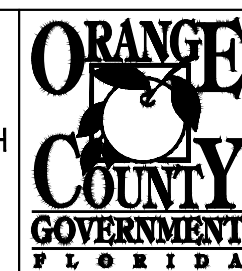
**SUCTION TAIL PIPE NOTES**

- INTAKE BELL DIAMETER SHALL BE 48".
- SUCTION TAIL PIPE TO BE FABRICATED OF 3/8" THICK TYPE 316 STAINLESS STEEL.
- TO INCLUDE 3 SOLID STRAIGHTENING VANES.
- TO BE PROVIDED BY PUMP MANUFACTURER. SEE PUMP SPECIFICATIONS.

2  
M06 OUTLET BOX AND WETWELL SECTION  
SCALE: 1/4" = 1'-0"

REV	DATE	DESCRIPTION
Δ	02/2018	ADDENDUM #3
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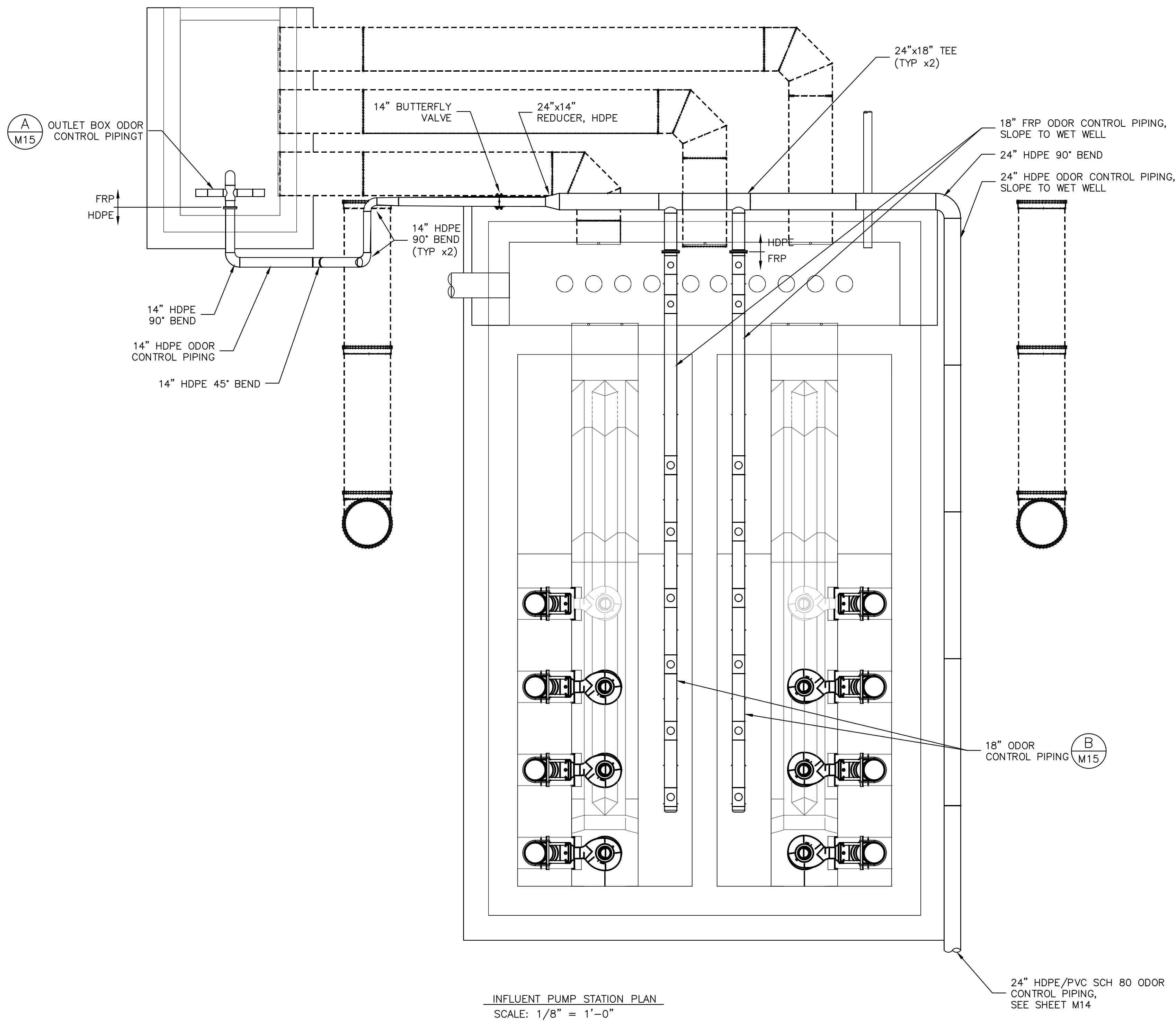
REISS ENGINEERING, INC.  
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ORANGE COUNTY  
 SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
 MECHANICAL  
 INFLUENT PUMP STATION SECTION

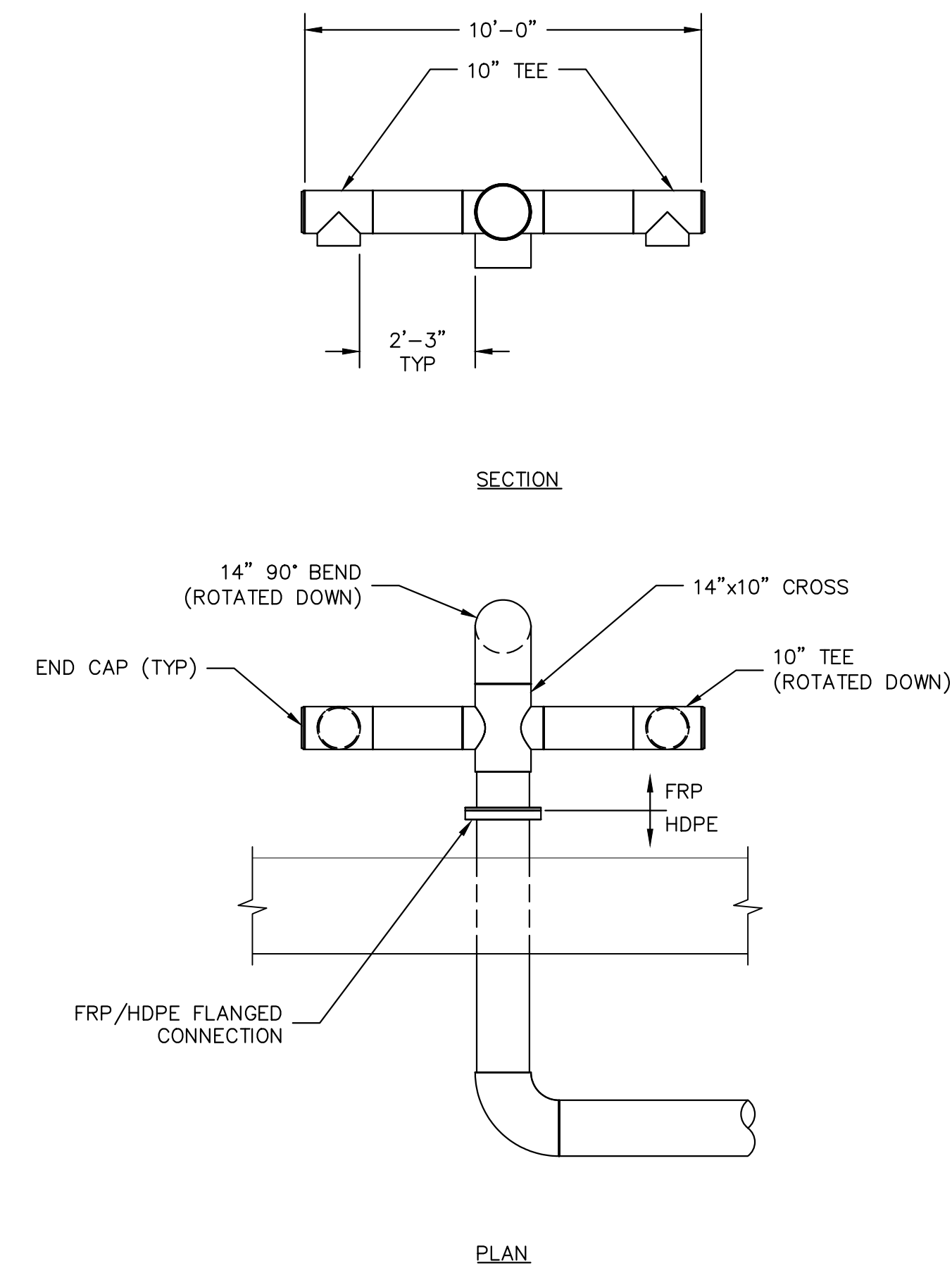
STEFANO CERIANA P.E.  
 PROFESSIONAL ENGINEER  
 FLORIDA LICENSE #66379

OCU FILE NO.: OCU #	SCALE: NOTED
DESIGNED BY: SC	DRAWING NO.:
DRAWN BY: CMR/DHG	M09
CHECKED BY: MDP	SHEET: 73 OF 123
CADD FILE: M09.DWG	

Parent Sheet Set: 110031A\_OCIFS  
 Rev/Plot by: JAY MILLER  
 Rev on: 2/6/2018 10:39 AM  
 Individual File Path: R:\PROJECTS\110031A - SOUTH WATER RECLAMATION FACILITY PUMP STATION (PH 2)\DRAWINGS\FINAL\DESIGN\M15.DWG



INFLUENT PUMP STATION PLAN  
 SCALE: 1/8" = 1'-0"

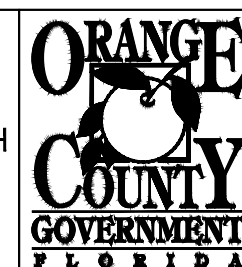


(A) OUTLET BOX ODOR CONTROL PIPING  
 SCALE: N.T.S.

(B) ODOR CONTROL PIPING AT WET WELL  
 SCALE: N.T.S.

REV	DATE	DESCRIPTION
△	02/2018	ADDENDUM #3
C	12/2017	ISSUED FOR BID
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REISS ENGINEERING, INC.  
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 WINTER SPRINGS, FL 32708  
 (407) 679-5358  
 PROJECT NO. 110031A

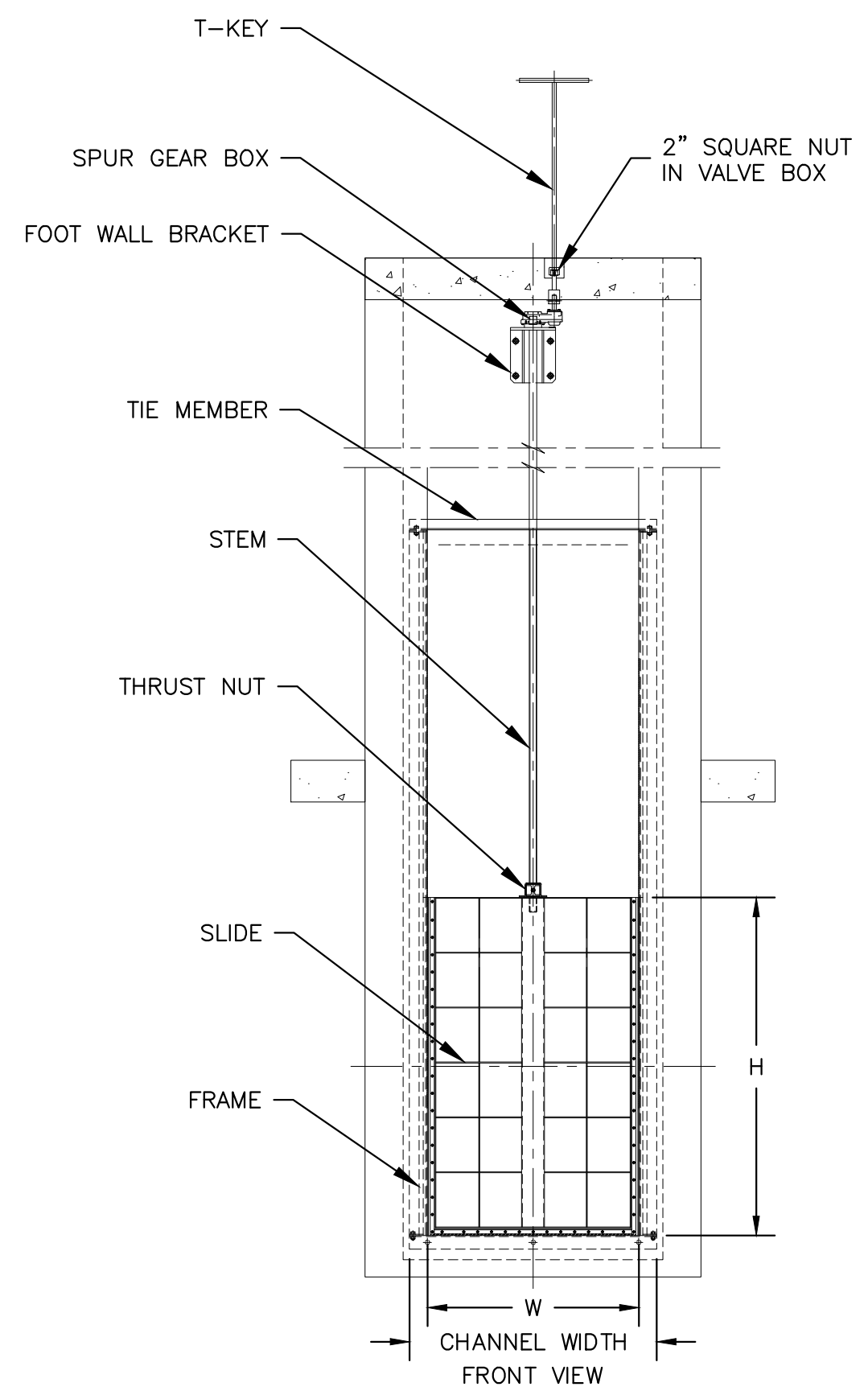
ORANGE COUNTY  
 SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION  
 MECHANICAL  
 ODOR CONTROL PIPING MODIFICATIONS 2 OF 2

STEFANO CERIANA P.E.  
 PROFESSIONAL ENGINEER  
 FLORIDA LICENSE #66379

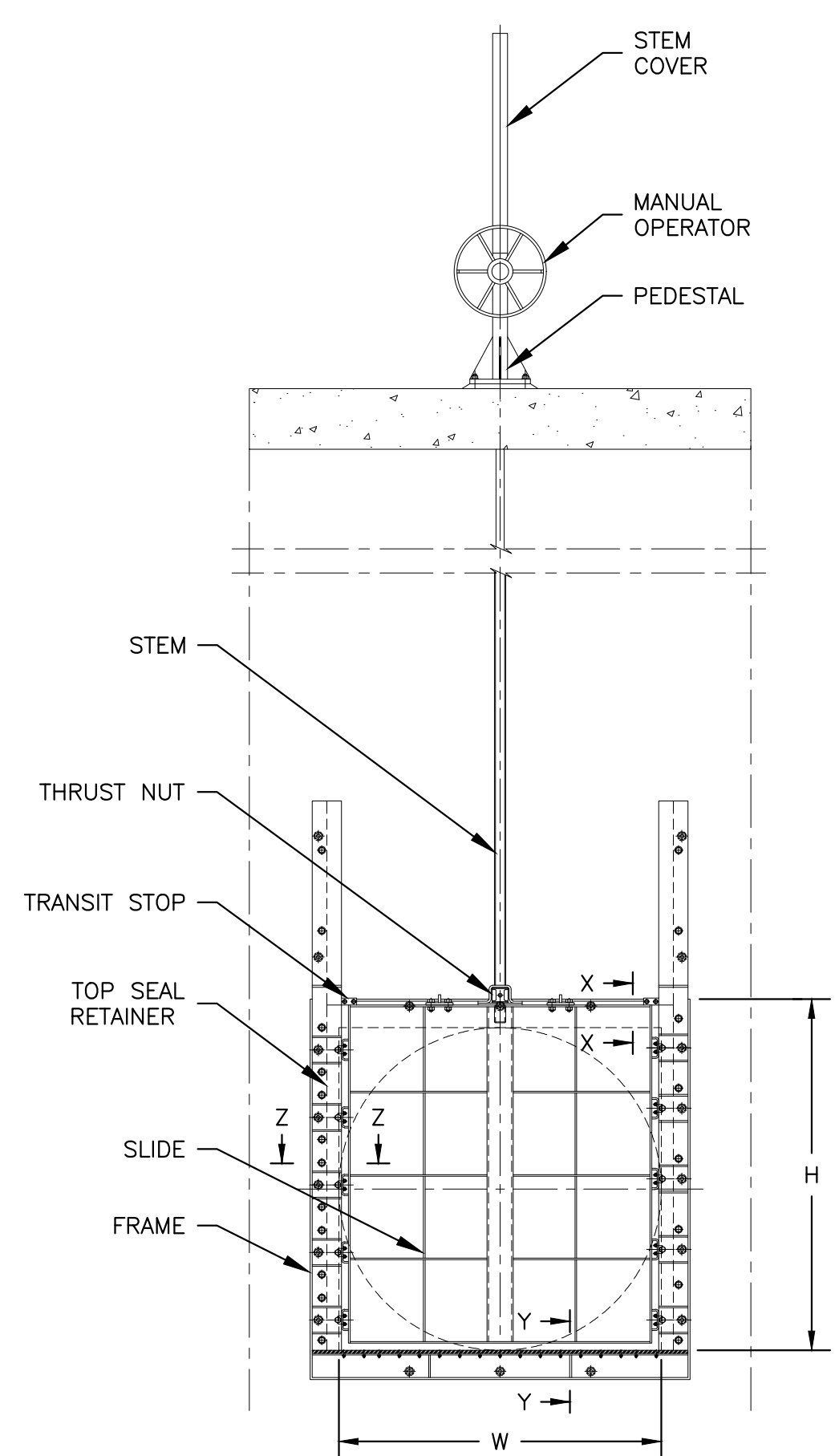
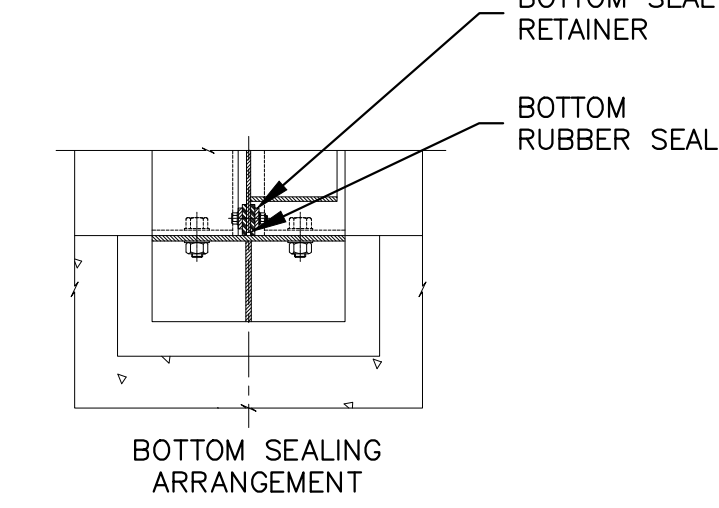
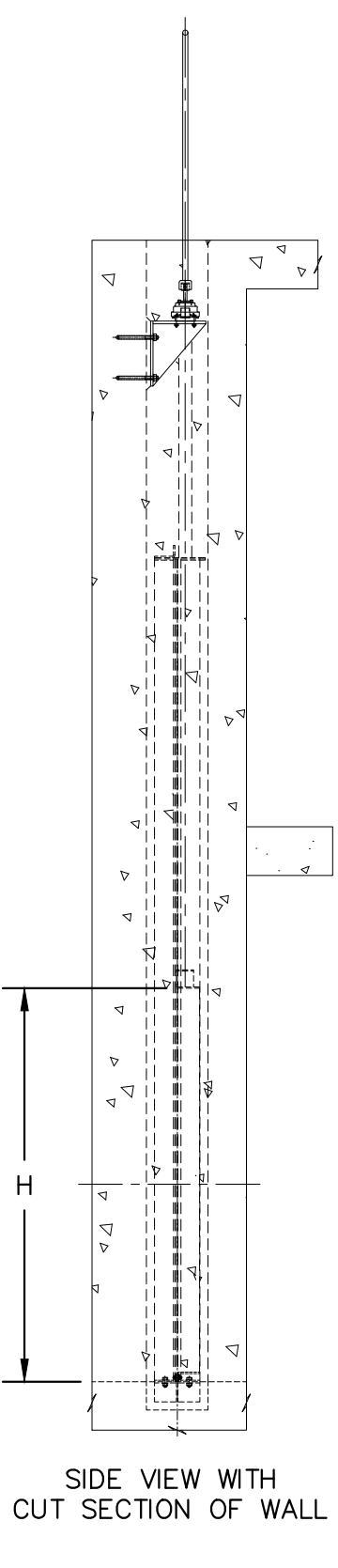
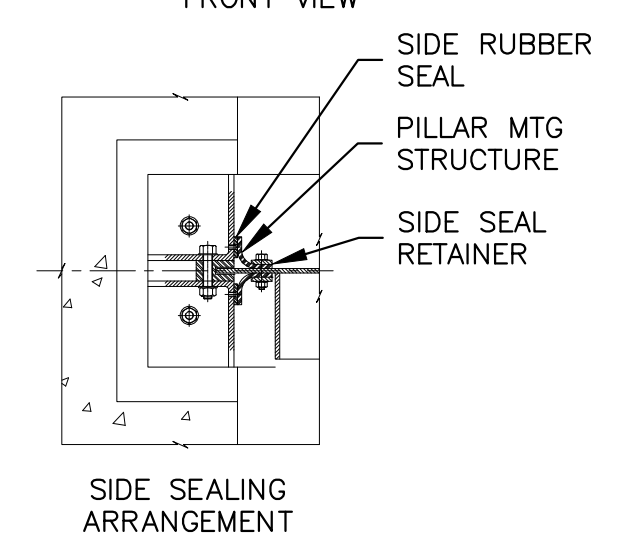
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DESIGNED BY: SC	DRAWING NO.:
DRAWN BY: CMR/DHG	M15
CHECKED BY: MDP	SHEET: 79 OF 123
CADD FILE: M15.DWG	



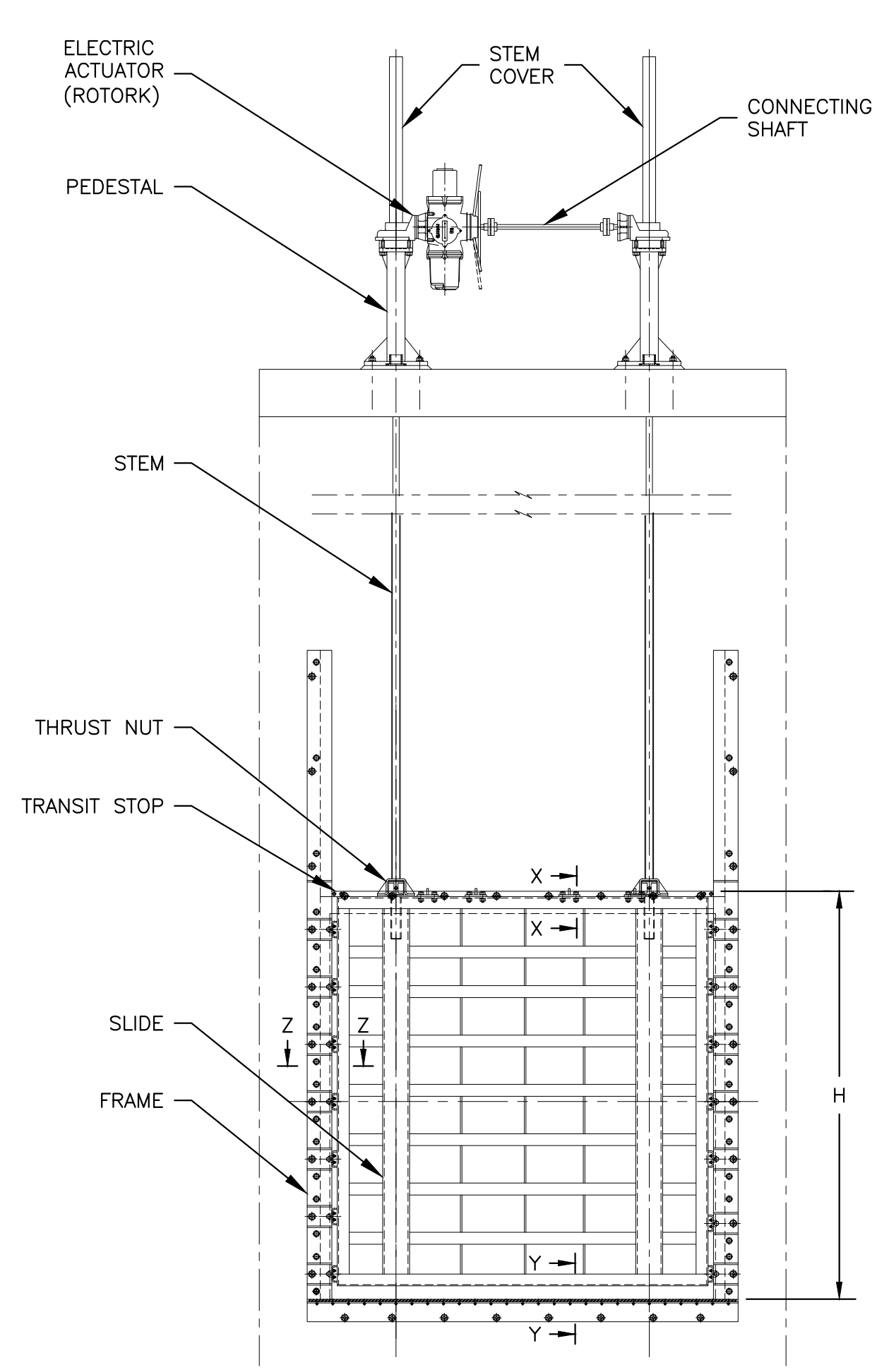
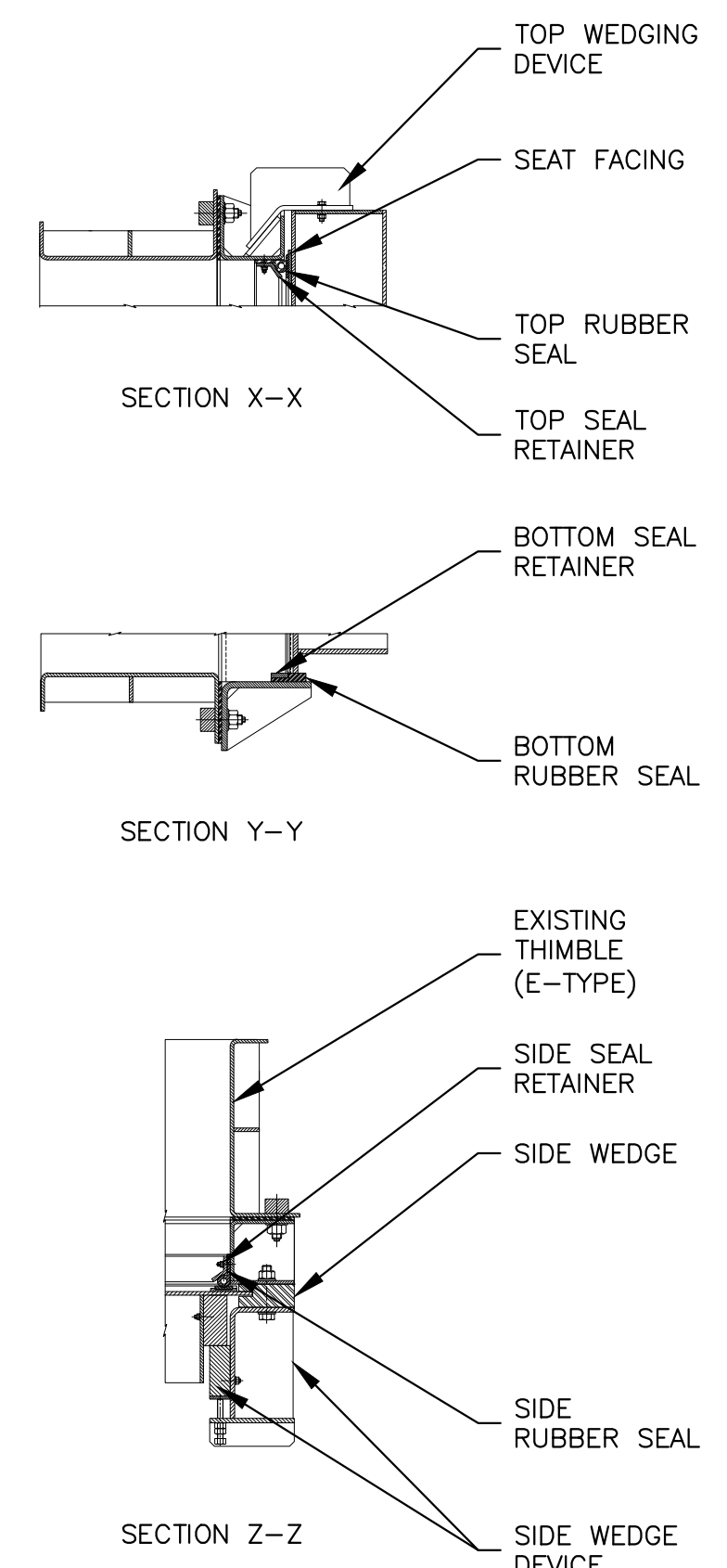
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 Rev on: 2/9/2018 6:50 AM  
 Rev/Plot by: JAY MILLER  
 Parent Sheet Set: 110031A\_D01FS



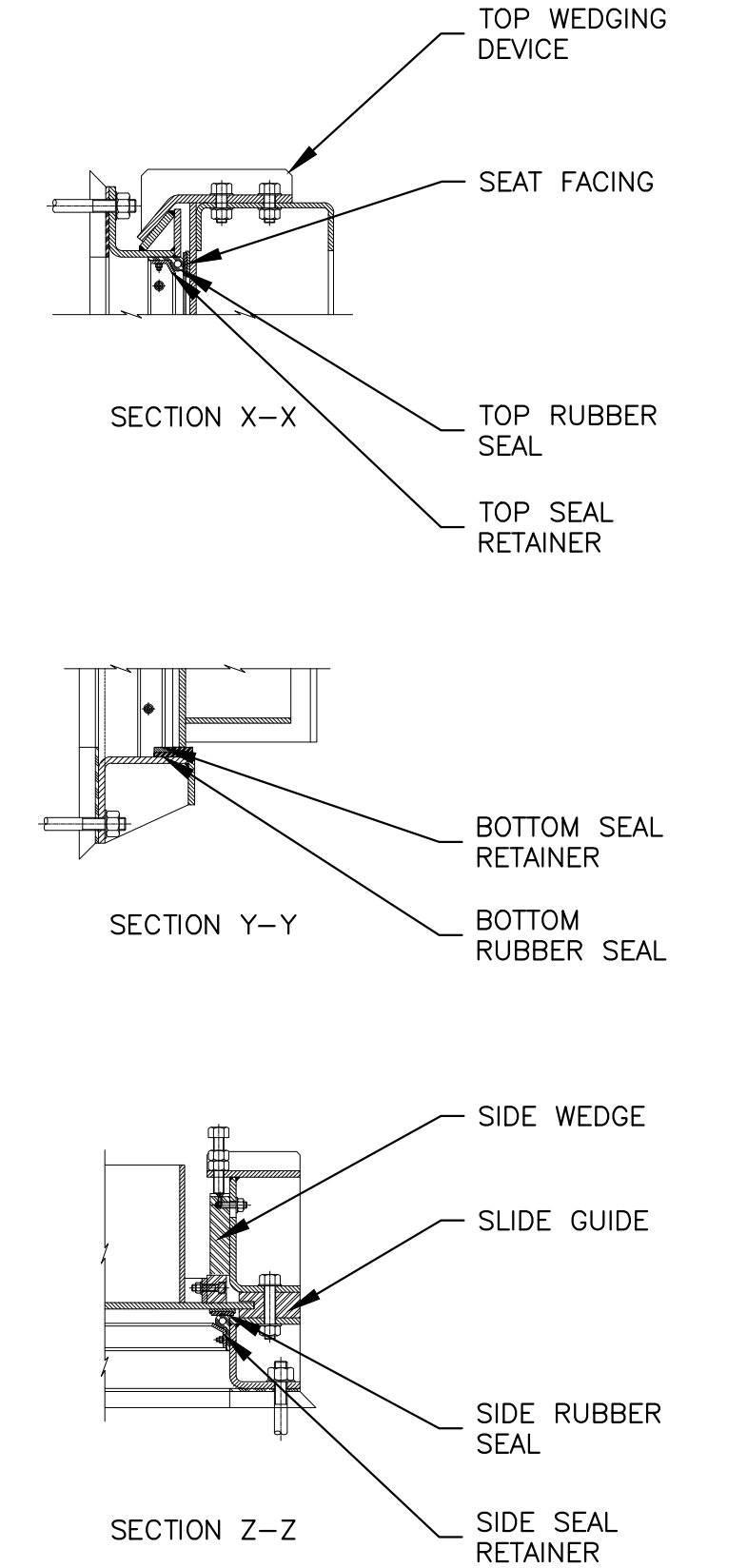
1 STAINLESS STEEL SLIDE GATES 16-17 & 26-28 WITH NON-RISING STEM  
SCALE: N.T.S.



2 STAINLESS STEEL SLIDE GATES 18-23 WITH RISING STEM  
SCALE: N.T.S.



3 STAINLESS STEEL SLIDE GATES 24-25  
SCALE: N.T.S.



STAINLESS STEEL SLIDE GATE SCHEDULE

Gate Tag No.	Location	Opening Direction	Size W x H, inches*	Operator Type	Elevation C.L. Gate	Elevation Operating Floor	Maximum Head, feet			Flow Control or Isolation	Top Seal Required Yes/No	Frame Type	Thimble Type
							Seat	Unseat	Operating				
SG-16	Screen Channel No. 1	Up	48-in by 96-in	G, NRS SQ NUT	75.71	93.48	4.00	3.50	7.80	Isolation	No	SC, FB, WMF	N/A
SG-17	Screen Channel No. 2	Up	72-in by 96-in	G, NRS SQ NUT	75.71	93.48	4.00	3.50	7.80	Isolation	No	SC, FB, WMF	N/A
SG-18	Screen Channel Outlet Box Discharge Pipe No. 1	Up	63-in by 63-in	G, RS, P, SM-HW	74.34	93.50	4.80	3.50	7.50	Isolation	Yes	FB, WMF	N/A
SG-19	Screen Channel Outlet Box Discharge Pipe No. 2	Up	63-in by 63-in	G, RS, P, SM-HW	74.34	93.50	4.80	3.50	7.50	Isolation	Yes	FB, WMF	N/A
SG-20	Screen Channel Outlet Box Discharge Pipe No. 3	Up	63-in by 63-in	G, RS, P, SM-HW	74.34	93.50	4.80	3.50	7.50	Isolation	Yes	FB, WMF	N/A
SG-21	Influent PS Isolation Box Influent Pipe No. 1	Up	63-in by 63-in	G, RS, P, SM-HW	74.13	93.50	3.70	5.00	6.25	Isolation	Yes	FB, WMF	N/A
SG-22	Influent PS Isolation Box Influent Pipe No. 2	Up	63-in by 63-in	G, RS, P, SM-HW	74.13	93.50	3.70	5.00	6.25	Isolation	Yes	FB, WMF	N/A
SG-23	Influent PS Isolation Box Influent Pipe No. 3	Up	63-in by 63-in	G, RS, P, SM-HW	74.13	93.50	3.70	5.00	6.25	Isolation	Yes	FB, WMF	N/A
SG-24	Influent PS Wetwell Channel No. 1	Up	96-in by 96-in	G, DOS, RS, MO	75.50	93.50	2.25	3.50	6.25	Isolation and flow control	No	FB, WMF	N/A
SG-25	Influent PS Wetwell Channel No. 2	Up	96-in by 96-in	G, DOS, RS, MO	75.50	93.50	2.25	3.50	6.25	Isolation and flow control	No	FB, WMF	N/A
SG-26	Screen Channel No. 3	Up	48-in by 96-in	G, NRS SQ NUT	75.71	93.48	4.00	3.50	7.80	Isolation	No	SC, FB, WMF	N/A
SG-27	Screen Channel No. 4	Up	72-in by 96-in	G, NRS SQ NUT	75.71	93.48	4.00	3.50	7.80	Isolation	No	SC, FB, WMF	N/A
SG-28	Screen Channel No. 5	Up	48-in by 96-in	G, NRS SQ NUT	75.71	93.48	4.00	3.50	7.80	Isolation	No	SC, FB, WMF	N/A

\* Operating or nominal size without allowance for frame  
C.L. = Centerline

**Frame Types**  
 FL = Flange Back  
 FT = Flat Back, Surface-Mounted (See Drawings for Bottom)  
 SC = Self Contained  
 FB = Flush Bottom  
 EMF = Embedded Frame, Sides and Bottom  
 WMF = Wall Mounted Frame

**Thimble Type**  
 ETR = Rectangular E-Section Thimble  
 FTS-PB = F-Section, Square to Pipe Bell Thimble  
 FTS-R = F-Section, Square to Round Thimble  
 FTW = Weir F-Section Thimble

**Gate Types**  
 SG = Slide Gate  
 WG = Weir Gate

**Operator Types**  
 SM-HW = Side-Mounted Handwheel Operator  
 CR = Crank Operated, Side-Mounted

G = Geared  
 P = Pedestal Operator  
 NG = Non-Geared  
 HW = Top-Mounted Handwheel Operator  
 MO = Motor Operated  
 SQ NUT = 2" Square Nut Operator

**Stem Operation**  
 RS = Rising Stem  
 NRS = Non-Rising Stem  
 DOS = Dual Operating Stems

- NOTES:
- "Seat" under "Maximum Head (feet)" in the Gate Schedule shall be defined as feet of water as measured from the approximate gate disc centerline to water surface that exerts a seating pressure of gate disc onto seals or seats.
  - "Unseat" under "Maximum Head (feet)" in the Gate Schedule
  - "Operating" under "Maximum Head (feet)" in the Gate Schedule shall be defined as feet of water under which the gate must be opened or closed.
  - The information shown within the Gate Schedule does not substitute or relieve the manufacturer from examining the Drawings for fit and/or interferences with size of the manufacturer's structural gate frames and members that the manufacturer shall use.

REV	DATE	DESCRIPTION
A	02/2017	90% DRAWINGS
B	10/2017	100% FOR BID
C	12/2017	ISSUED FOR BID
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 (407) 679-5358  
 PROJECT NO. 110031A

ORANGE COUNTY SOUTH WATER RECLAMATION FACILITY INFLUENT PUMP STATION MECHANICAL GATE SCHEDULE AND DETAILS

OCU FILE NO.: OCU #  
 DESIGNED BY: SC  
 DRAWN BY: DHG  
 CHECKED BY: MDP  
 CADD FILE: M16.DWG

SCALE: NOTED  
 DRAWING NO.: M16  
 SHEET: 80 OF 123