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Solicitation Addendum

Addendum No.: 4
Solicitation No.: 21-TA003823CD
Project No.: 6108870
Solicitation Title: Phase II Repairs to Lake Manatee Dam
Addendum Date: September 24, 2021
Procurement Contact: Chris Daley, CPPO, CPPB - Procurement Project Manager

IFBC No. 21-TA003823CD is amended as set forth herein. Responses to questions posed by prospective bidders are provided below. This Addendum is hereby incorporated in and made a part of IFBC No. 21-TA003823CD

REPLACE:

APPENDIX L, BID PRICING FORM, BID PRICING FORM PAGES APPENDIX L-1 THROUGH L-8

Replace Bid Pricing form pages Appendix L-1 through L-8 with the Revised bid Pricing Form pages Appendix L-1 through L-9 that are issued with this Addendum 4.

Replace:

ELECTRONIC BID PRICING FORM

Replace the Electronic Bid Pricing Form with the Revised Electronic Bid Pricing Form issued with this Addendum 4.

REPLACE:

BID ATTACHMENT 2, TECHNICAL SPECIFICATIONS, SPECIFICATION SECTIONS 01 20 00, 31 23 19, 31 32 24, 31 32 25, 31 41 16, AND 31 62 16.13

Replace Specification Sections 01 20 00, 31 23 19, 31 32 24, 31 32 25, 31 41 16, and 31 62 16.13, the attached Specification Sections 01 20 00, 31 23 19, 31 32 24, 31 32 25, 31 41 16, and 31 62 16.13, revised with this Addendum 4.

ADD:

BID ATTACHMENT 2, TECHNICAL SPECIFICATIONS, SPECIFICATION SECTIONS 02 56 13.13, 32 11 13, 35 31 19, AND 35 31 19.20

Add Specification Sections 02 56 13.13, 32 11 13, 35 31 19, and 35 31 19.20 that are attached to this Addendum 4, to Bid Attachment 2.

REPLACE:

BID ATTACHMENT 3, PLANT SET/DRAWING, DRAWINGS G-004, G-005, C-001, CU-110, CU-111, CU-113, CU-114, CR-403, CR-501, SC-301, AND SD-501

Replace Drawings G-004, G-005, C-001, CU-110, CU-111, CU-113, CU-114, CR-403, CR-501, SC-301, and SD-501 with the Revised Drawings Specification G-004, G-005, C-001, CU-110, CU-111, CU-113, CU-114, CR-403, CR-501, SC-301, and SD-501, issued with this Addendum 4.

ADD:

The following items are issued with this Addendum 4 for informational purposes:

1. Emergency Spillway Construction Plan- 1983 (uploaded as a separate file)
2. Laboratory Test Results for On-Site Borrow Materials

QUESTIONS AND RESPONSES:

Q1. On CU114 (sheet 16 of 79) note 3 states “Bore 1” Holes in Pipe and...”. Are these holes (and any other holes that must be drilled) to be drilled with an underwater Mag Drill or can these holes be burned with a torch?

R1. This note is found on sheet 26 of 79; not 16 of 79 as indicated in the question. The approach to creating the holes is left to the Contractor’s means and methods and is to be described in the associated submittal that will be reviewed and approved by the Engineer.

Q2. Please clarify the note on D-101 (Sheet 9 of 79), “Note: Extent of Debris and Organics Not Known” How will contractors bid this item if the extent is not known? Will there be an owner allowance for this work?

R2. The Contractor is to bid this item as the cost of excavation within the limits shown in the project documents (including the 3-D model). The intent of the note is to make the Contractor aware that miscellaneous construction debris and organics (tree limbs, roots, logs, and similar items) may be encountered within the limits of the excavation as shown in the project documents (including the 3-D model). Also note that the hatched area on Drawing D-101 is the approximate limits of the existing soil cement to be removed. The extent of the excavation is larger than the hatched area and provided in the project documents. A unit price item has been added to the Bid Pricing and is not included in the Total Base Bid “A” for removing construction debris and organics outside the limits of the excavation zone shown in the project documents and after approval by the County and the Engineer-of-Record. A unit price item has also been added for placing engineered fill through the water column to replace the construction debris and organics that are removed either in the designed limits of the excavation or outside of these limits.

Q3. For the Sheet pile retaining walls on sheet 36 of 79, Please confirm the size of sheet pile to be used for the North and South sheet pile retaining walls. There is no detail indicating the size. Is the contractor to design these walls?

R3. Yes, Contractor is to design these walls. They have both a temporary and permanent function. The Contractor’s design is to be performed by a qualified PE registered in the State of Florida and to be approved by the Engineer.

Q4. On CU113 (sheet 25 of 79), please clarify the “Continuous Impervious Liner Material Draped over Sheet Pile (Typ)”. What are the specifications of this material and how is it connected to the existing concrete cap/wall?

R4. The intent of the impervious liner is to provide a permanent added layer of seepage protection at the interface between the existing concrete, new concrete, and the new and existing sheet piling. A continuous concrete cap will be placed over the impervious liner for protection purposes and the serve as a secondary cap for the seepage barrier seal. Additional information on the impervious liner material are forthcoming in the form of a technical specification section pertaining to geomembranes along with enhanced details to the plan set. Sheet CU113 is being reissued showing a continuous protective concrete “lip” extending over the top of the cut edge of sheet piling along the approach walls where the liner material is to be draped. The liner material will be similar to material used in the landfill industry and is specified as 60 mil PVC. See revised Specification 02 56 13.13.

Q5. Please clarify Detail B3 on CU114 (sheet 26 of 79). Is the reinforcing steel to be installed underwater? Are dowels to be installed into the approach slab/new reinforced concrete slab (underwater) prior to pouring the concrete secondary seal (underwater)?

R5. Detail B3 on CU114 is drawn along the axis of the reinforced concrete cap that runs on top of the combi-wall and is immediately upstream of the approach slab/new reinforced concrete slab. The concrete secondary seal will be installed underwater following the installation of the new topping slab over the existing approach channel slab and after the combi-wall has been cutoff. The reinforcing steel shown in Detail B3 is for the secondary seal. The hook bars shown will be interlocked into the combi-wall pipe sections and tied into the reinforcing steel in the secondary cap. No doweling is required into the new approach slab. The secondary concrete cap will be continuous along the combi-wall and placed underwater. The riprap shown will serve as armouring for the transition at the approach channel to secondary seal interface. A revision to this detail is being prepared for clarity and sheet CU114 will be reissued.

Q6. On the General Notes page of the plans (sheet 6 of 79), Note 58 states “Contractor Responsible for Providing All Additional Facilities...”. Please define what those “additional facilities” are so their associated costs can be accounted for.

R6. This note is under the section DOCK FACILITIES. Suitable docking means and structures required for access and loading barges, materials, heavy equipment, etc. is considered to be a part of the Contractor’s means and methods. “All Additional Facilities” in this section refers to laydown area preparations, access roads, and associated temporary infrastructure the Contractor deems necessary to facilitate the necessary infrastructure to accomplish the work. These additional facilities will be provided, installed, removed, and the site restored to pre-construction conditions at no additional cost to the County. See revisions to Drawing Sheet G-004.

Q7. On the General Notes page of the plans (sheet 6 of 79), Note 4 states “All work shall be in based on these drawings and Specifications (Proof of Concept Only)...”. Please elaborate on “Proof of Concept Only”.

R7. The design included in the project documents are proof-of-concept; meaning they demonstrate how the Engineer of Record would propose to meet the design requirements and objectives of the project. The Contractor is encouraged to value engineer and innovate so long as the design requirements and objectives are met. Changes to the project documents

must be performed by a qualified PE registered in the State of Florida and formally submitted for review and approval by the County and the Engineer of Record.

Q8. On the General Notes page of the plans (sheet 6 of 79), Note 41 states “The use of construction equipment shall be restricted to....”. Is this a noise restriction? Will the contractor be able to run pumps outside of those hours and on weekends for processes such as dewatering?

R8. Yes, this is a noise restriction. Pumps can be used outside of those hours for critical processes such as dewatering. The Contractor can use construction equipment outside these hours with prior approval by the County. Equipment with internal combustion engines must be in good working order with adequate muffler systems.

Q9. On the General Notes page of the plans (sheet 6 of 79), Note 45 references “undesirable soil”. Please confirm the definition of undesirable soil and who makes the determination of what soil is undesirable.

R9. Undesirable soils are “Unsatisfactory Materials” as defined in Specifications Section 31 00 00 Earthwork. The determination of undesirable soil will be made in accordance with those specifications by using the referenced ASTM standards.

Q10. The Design of the temporary sheet pile cofferdam is the responsibility of the contractor, please confirm that the tips and top of sheets identified on sheet 20 are not required to be met.

R10. The design of the temporary/permanent sheet pile cofferdam system from a means and methods perspective is the responsibility of the Contractor. It is important to note that the sheet pile cofferdam system has two functions: one short-term and the other long-term. The short-term function is to temporarily allow dewatering of the approach channel to facilitate the indicated repairs. The long-term function is to be a part of the seepage cutoff wall system that will completely encapsulate the subsurface portion of the spillway structure. The tip elevation of the sheet piling noted in the project documents is essential for the long-term seepage control function and must be achieved. The top of the sheet piling elevation was selected to allow for a bracing system to extend over the top of the Approach Walls to provide lateral support without applying any additional forces on the walls.

The design of the cofferdam system can be modified by the Contractor so long as the resulting design provides adequate structural capacity for full dewatering, no external forces are applied to the Approach Walls, and the El -20 ft tip elevation is achieved. Any modifications to the project documents will need to be performed by a qualified PE registered in the State of Florida and will be reviewed and approved by the Engineer.

Boring information for the area around the Service Spillway that both predates and postdates the geotechnical subsurface exploration information from the Phase I repairs (Bid Attachment 6) was provided in Bid Attachment 8 – Boring Locations and Boring Logs. See also revised Specifications 31 41 16 and 31 62 16.13.

Q11. The drawings provided are Stamped/Signed/Sealed by an engineer. Please specifically delineate the scopes of work that the contractor must design for this project.

R11. Contractor-required designs are specifically called out in the plans.

One example is found in the General Notes Section of C-100 Groundwater Pressure Relief Wall Location Plan stating:

“7) CONTRACTOR RESPONSIBLE FOR DESIGNING AND INSTALLING PRESSURE RELIEF SYSTEM”.

Another example of a potential Contractor design are the construction steps for the upstream spillway repairs provided on drawings CU105 through CU113 that includes the repairs to the approach slab. These represent the Engineer’s design for the sequencing of construction that could be used on the upstream side of the dam.

Contractor is expected to use internal means and methods to accomplish the upstream spillway repairs and should employ a qualified PE in the State of Florida to evaluate the specific means and methods to assess their safety and adequacy for meeting the project requirements and objectives. These will need to be reviewed and approved by the Engineer as a part of the submittal process.

Another example of Contractor-required design is found in Item 11 of the GENERAL REQUIREMENTS section on Drawing S-001. It states that:

“ENGINEER IS NOT RESPONSIBLE FOR THE DESIGN OF TEMPORARY WORK PLATFORMS, SHORING, BRACKING, LIFTING PROCEDURES, LIFTING DEVICES, OR OTHER RELATED ITEMS THAT MAY BE REQUIRED TO ACCOMPLISH THE WORK OR OTHER SYSTEMS NOT SHOWN IN THE STRUCTURAL DOCUMENTS. THE DESIGN OF SUCH SYSTEMS, MATERIALS, AND INSTALLATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR” Thus, the Contractor’s Engineer is responsible for the above scope, not the Engineer of Record.

Contractor is responsible for identifying all scopes of work in the project documents that require Contractor’s design and for providing a qualified PE registered in the State of Florida to perform these designs.

Q12. Article 12-Miscellaneous (p. 19 of 20) in 00 73 00 - Supplemental Conditions states “Drawings are intended to serve as proof of concept only. Contractor shall engage the services of Professional Engineers in the State of Florida to develop final construction drawings for review and acceptance by the Owner”. It is our understanding that this project is a LOW BID, BID-BUILD project where the contractor is responsible for the final design of the cofferdam only. The above excerpt is contrary to that understanding and suggests the contractor is responsible for the final design for the ENTIRE project. Is this paragraph’s intent and the intent of the County for the contractor to fully design the following:

- a. **Void Filling**
- b. **All downstream channel repairs to include: site prep, apron slab improvements, stairs, stilling basin repairs, training wall repairs, and ogee repairs**
- c. **The Downstream Pressure Relief System**
- d. **Spillway Encasement with Seepage Barrier to include: grading, sheet piling, DEEP SOIL MIXING, JET GROUTING, concrete slabs, and restoration**

- e. **Approach Channel Repairs to include: combi-wall and cofferdam, demolition, dewatering, approach slab and approach wall repairs, final sheet pile cutoff elevations, and slabs on grade**
- f. **Stoplog Guide and Tainter Gate Rehabilitation**
- g. **Upstream Soil Cement Refurbishment**
- h. **Mechanical Upgrades**
- i. **Miscellaneous Improvements**
- j. **Demobilization activities requiring a design**

R12. This is a Low-Bid, Bid-Build project. The Contractor is not expected to produce a final design for the ENTIRE project but is only required to design portions of the work specifically noted in the plans.

The signed and sealed plans represent the Engineer of Record's approach to meet the design requirements and objectives of the project. The Contractor is encouraged to innovate and value-engineer if this can result in a more easily constructible and/or reliable design that meets the project requirements and objectives. Accordingly, the plans are Proof-of-Concept.

If the Contractor chooses to innovate or value-engineer various portions of the project, design drawings and supporting calculations must be prepared under the direction of a qualified PE registered in the State of Florida and formally submitted for review and approval by the County and the County's Engineer for compliance with the project requirements and objectives.

Q13. Section 01 11 00 – Summary of Work Part 1.2.1 Description of Lake Manatee Dam in paragraph 4 mentions the stilling basin floor slab being 3.5 ft – 5 ft thick with reinforcement. In the Void Filling specification for the Stilling Basing (Section 31 32 25), there is no mention of X-Ray or GPR to locate and identify the reinforcement and/or to avoid coring through the reinforcement. Is a survey or geophysical instrumentation required to locate the reinforcement and, thus, avoid coring through the reinforcement?

R13. No geophysical instrumentation or survey is presently anticipated to locate the steel reinforcement in the Stilling Basin floor slab. The proposed diameter and spacing of the core holes included in the project documents should have minimal impact to the structural integrity of the Stilling Basin.

If during work in the void filling demonstration area, the required core hole spacing is found to be significantly closer than originally planned, the Contractor will work with the Engineer of Record to reassess the need for locating the existing reinforcing steel by GPR or other suitable methods to locate and avoid during the coring operation. An Alternative Bid Item has been added to the list for locating reinforcing steel during construction.

Q14. Specification Section 31 32 24 – Void Filling Part 3.1.C.ii. states “Sand Polymer Slurry shall be pumped into the voids at a target minimum equivalent dry unit weight of 115 lb/ft³ based on a 3-point moving average with not less than 110 lb/ft³ for any one sample.” What testing method(s) will be used to determine this density since it is not possible to achieve this density in a sand slurry mixture?

R14. The method for testing the density of the Sand/Polymer Slurry will be developed in the demonstration area. Revisions to Specification Section 31 32 24 Void Filling Downstream Apron and to Section 31 32 25 Void Filling - Stilling Basin are being presented to indicate the method of development and to provide the purposes for managing the slurry density.

Q15. Specification Section 31 32 24 – Void Filling – Downstream Apron Demonstration and Production Areas section 3.1.C.ix indicates the following. “Upon completion of void filling, core holes downstream of the Seepage Cutoff Wall shall be filled with non-shrinking neat grout. The core holes upstream of the Seepage Cutoff Wall shall be left open for observation during construction to determine which of them will be fitted with passive pressure relief wells. This decision will be made by the Engineer once the contractor has completely encapsulated the downstream portion of the spillway with a jet grout/soil mixed seepage cutoff wall.” Section 3.1.C.viii of Specification Section 32 32 25 – Void Filling Stilling Basin contains the same language. Both these specification sections indicate that the entire void filling scope will be completed prior to the completion of the Seepage Cutoff Wall. Please confirm that this is the intended sequence.

R15. Yes, the void filling operations are intended to be completed before the Downstream Seepage Cutoff Wall is installed. Some of the existing voids extend under the Downstream Training Wall foundations and it is the designer’s intent to fill them with high-permeability sand injected from inside the Stilling Basin and from the Downstream Apron. The Engineer expects some of these voids (closer to the heel of the Training Walls) will remain open during the void filling process. We anticipate these will be subsequently filled by either the jet grouting or the soil mixing operations, depending upon their location. The jet grout and soil mix columns are laid out immediately adjacent to the Training Wall foundations to facilitate this final step of void filling and should be installed after the sand/polymer void filling is completed.

Q16. Can water from Lake Manatee be utilized to fabricate material required for the Jet Grouting and Deep Soil Mixing? Is there any available data on the quality of the water contained within the lake?

R16. The water used to fabricate the material required for Jet Grouting and Deep Soil Mixing for the 2014 Phase I Emergency Repairs can be obtained from a fire hydrant on site through a permit obtained by the Contractor from Manatee County. We recommend the same process be implemented for the Phase II repairs.

Q17. It was stated at the Information Conference that sand suitable for the void filling scope under the concrete apron and stilling basin was onsite. Is this material contained in the Borrow Area shown on Drawing G-002? Were any soil borings conducted in the location of the Borrow Area?

R17. The borrow area for the void filling scope is located on site immediately south of the Emergency Spillway and downstream of the northern portion of the original embankment. This material was excavated from the Emergency Spillway and placed in its current location during the 1983 construction. The material was subsequently used in 2014 to temporarily widen the crest of the dam for the emergency installation of a deep seepage cutoff wall. A file is provided with this response which includes the laboratory testing data from those emergency repairs and with the original boring logs for the Emergency Spillway construction in 1983.

Q18. The Tech Specs in several locations (for example 31 32 24 Void Filling) list Nicholson Construction as Specialty Geotechnical Contractor suitable to perform the necessary work. The Spec does not read that they must be used as a Subcontractor for the work. Not that we have a reason to not use Nicholson, must they be used for this work, or is the mention of their name just a suggested contact?

R18. Nicholson Construction does not need to be the Specialty Geotechnical Contractor that performs the void filling work. They are a specialty contractor identified by the design team with the requisite experience in pumping high-permeability sand without a binder and have been provided as a possible resource. The Engineer recognizes that experience with this portion of the work is not common among the geotechnical specialty contractors surveyed.

The Contractor can use another specialty geotechnical contractor provided they can demonstrate the requisite experience noted in the Minimum Qualifications section of the bidding documents.

Q19. Please confirm where all material excavated from around the approach walls is to be stockpiled. Will this material be stockpiled underwater, or must it be removed from the water? What should be done with the excess material that is excavated but not used as backfill?

R19. Materials to be excavated from around the approach walls are expected to consist of originally-placed embankment dam shell materials (behind the walls), jet grout spoils (in the approach channel), riprap (may be present near the front of the approach walls) and construction debris, organic debris, etc. (behind the approach walls). Only the originally-placed embankment dam shell materials (generally consisting of sands SP and SP-SM) and the riprap should be stockpiled underwater. All other materials should be removed from the site. Additional sands SP and SP-SM materials may be necessary to achieve final construction grades. These materials are available as on-site borrow. The riprap present near the front of the approach walls can be reused if it meets the size and gradation requirements as specified in the project documents.

Q20. Article 12-Miscellaneous (p. 20 of 22) in the Supplemental Conditions makes reference to “Vibration and Displacement Monitoring”. We are unable to find the details of what must be monitored and when. Please provide clarification on the Vibration and Displacement Monitoring, if required, and also provide a specification to follow.

R20. Refer to Specification Section 31 62 16.13 Steel Pipe Piles, Paragraph 3.6 Construction Instrumentation and Monitoring Program for details regarding the Vibration and Displacement Monitoring program.

Q21. Sheet 66 of 79, Detail 19 please confirm this is only at 6 locations. Also, that this is a 72” long weld from the top of the pipe plie / sheet connection.

R21. Correct. Detail 19 on sheet SC-402 occurs at a total of 6 locations (3 locations on the north embankment and 3 locations on the south embankment). The 72” vertical weld is correct and will be considered permanent extending downward from top of combi-wall system at each location.

Q22. Sheet 65 of 79 Detail 1 states “Taper Last sheet pile to align with approach wall taper”. Please elaborate on taper, the sheet pile will need to remain plumb as it is tied into the adjacent sheet. Also please provide detail for tie in with approach wall footings, as tip el is -20 vs approach wall top of footing is at El 13.

R22. Tip elevation of portions of sheet piling located in plan above the approach wall footings/pile caps are at top of footing elevation near elevation 13’-0”. Taper portions of the sheet piling that interfere with the approach wall prior to driving. The intent is to create a full height enclosure with grout to provide a sealed vertical barrier adjacent to the approach walls designed to facilitate the excavation for the tremmie seal/grout plug. This tapered sheetpile will be adhered to the jet grout column and attached to the adjacent sheet pile section.

Q23. Sheet 64 of 79 Detail 5 & 6 states that the detail may be omitted with site investigation confirming existing sheet pile wall is not in conflict. Please confirm the reference is to the elimination of the 5 pairs on the “bumpout” on either side. Is it known that the existing sheet pile wall is exposed above the mudline, and is just under water?

R23. Correct. The 5 pairs of the sheet pile along with the associated structural framing to facilitate the “bump out”. Existing sheet pile was reportedly cutoff at the mudline. No additional information available.

Q24. Sheet 64 of 79, Detail 3 & 4, the jet grout column tie ins will about the existing TRD cut off wall / existing jet grout cut off wall, and will not overlap, please confirm this intent.

R24. The intent of the jet grout column in the above referenced details is to provide a transition between the new sheet pile cutoff wall and the face of the existing TRD wall to facilitate the cutoff wall seal.

Q25. Sheet 62 of 79 states “(*) INDICATES THAT MEMBER AND CONNECTION(S) SHALL BE HOT DIPPED GALVANIZED.” Only 1 W 14 X 61 Beam, no other support steel, and no connections are identified to be hot dipped galvanized, please confirm.

R25. The W14x61 and the associated connections located along the north embankment cutoff wall and the south embankment cutoff wall will be permanent members requiring the hot dipped galvanizing as shown on sheets SC-401 and SC-402.

Q26. Sheet 56 of 79, how do we know extent of repairs to spillway bridge, and the ogee, and how should the contractor price these repair items without any details of what must be done?

R26. Spillway bridge concrete deck repairs identified on the above referenced sheet include two locations readily visible. Each location is less than 1 square foot (SF) in area. One of these locations includes exposed reinforcing steel requiring a surface repair. The other item noted on the project documents will require a full depth concrete repair (< 1 SF) located at a corner of the deck at the opening for the stop log. The Lake Manatee Dam 2020 Annual Inspection Report can be used as a reference for these items.

Ogee, associated pier, and abutment components repair items to generally include localized repairs of deteriorated grout pockets at form ties from the original construction, construction joints, expansion joints, and other isolated surface discontinuities that may be identified during the field work. Following the localized repairs, the entire surface area of the ogee, piers, and abutments with evidence of surface erosion (i.e. exposed to water flow) to be skim coated per the project documents.

Suggest using the original construction drawings to establish quantities for skim coating, expansion joints, construction joints, etc., for pricing purposes.

Q27. Sheet 52 of 79, Various Sections show a “Joint Sealant” to be applied at the waterstop joints. Please provide detail for the expansion joints & joint sealant.

R27. New details are provided on revised drawing sheet SD501.

Q28. Sheet 52 of 79, Section D8, please confirm that the #6 dowel into soil mix cell is to be drilled after the installation of the soil mix cell, and not a “wet stuck” dowel.

R28. Dowels to be placed in soil mix and jet grout cells will need to be “wet stuck” due to the depth of penetration required to effectively develop the strength of the bar. The dowels in the

soil mix cells along the apron shown in Section D8 on sheet SD501 should be a minimum of 10 feet in length with the hook directions alternated 180 degrees. Dowels required in soil mix cells and jet grout cells can be a minimum of 5 feet in length.

Q29. Sheet 46 of 79, Note 12 states “. ALL STRUCTURAL WELDS SHALL BE CERTIFIED BY A TESTING AGENCY ACCEPTABLE TO THE ENGINEER OF RECORD. CERTIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD.” Please confirm this is for permanent work, and not for any of the temporary works. Also please confirm this is for field welds only and does not apply to shop welds.

R29. The referenced note pertains to the permanent welds. Providing structural welds for temporary work are the Contractor’s responsibility and will need to be addressed as an action item in the safety plan that is to be provided.

Q30. Sheet 45 of 79 Anchors Note 7 states “CONTRACTOR TO PROVIDE HILTI REPRESENTATIVE ON SITE TO PROVIDE CONTINUOUS INSPECTION DURING INSTALLATION OF EPOXIED REINFORCING BARS AND ANCHORS.” This is not typical, please define required continuous inspection. Will it be permissible for Hilti to train/certify the crew/employees to install bars and anchors without having Hilti representatives on site?

R30. Hilti representative can be mobilized to the site at strategic times to train/certify contractor personnel for bar and anchor installation according to the application (i.e. existing concrete, newly placed concrete, soil mix cells, jet grout cells, etc.). Contractor will be responsible to ensure that the installed bars and anchors perform as designed.

Q31. Sheet 45 of 79, Note 13 requires cylinder quantities and test age. Please confirm these are 4 x 8” cylinders, and not 6 x 12” cylinders. ACI also recommends averages of cylinders, vs. 1 test at 3 and 1 test at 7, etc.

R31. 4” x 8” cylinders are acceptable. The 3-day and 7-day cylinder tests are for tracking purposes. The acceptance criteria will be based on the average of two cylinders at 28 days.

Q32. Sheet 32 of 79, Legend Note states “Preliminary Locations for Pressure Relief wells with backflow preventor... Location and quantity to be determined by the Geotechnical engineer after void filling.” How does the contractor accurately price if these are going to change?

R32. Specifications 31 32 24 – Void Filling Downstream Apron and 31 32 25 – Void Filling Stilling Basin each specify up to 12 pressure relief wells with backflow preventors.

Q33. Please confirm that the sheetpile/combi-wall piles can be cut with a torch.

R33. Yes

Q34. Please clarify the thickness of the tremie seal that must be placed behind the cofferdam.

R34. Tremie seal (identified as grout plug on the project documents) needs to extend the full depth of the approach wall footing/pile cap as shown on the project documents. Extend the tremie seal/grout plug a minimum of 4 feet below the top of wall footing for wall footing locations encountered that are less than 4 feet thick. The tremie seal/grout plug along the front edge of the approach slab needs to extend a minimum of 4 feet below the top of the existing approach slab.

Q35. How does the combi-wall/sheet pile cofferdam get installed through the current footing of the approach slab (specifically the grout that looks to have been installed on top of the approach slab)?

R35. The location of the combi-wall is immediately upstream of the existing approach channel slab and associated footing. The grout identified in the approach channel on the project documents is primarily grout spoil from the 2014 jet grouting operation through the existing approach slab. The material should be relatively soft with minimal impact on the excavation and the combi-wall installation.

Q36. Please clarify how the jet grout columns penetrate through the approach wall footings.

R36. The jet grout columns located directly above the approach wall footings (i.e. pile caps) and the training wall footings terminate above the top of wall footings.

Q37. Would it be possible to extend the Q/A Deadline from today to, say, next Wednesday, 9/15? a bid date extension of 2 weeks is also requested.

R37. See Addendum 3.

Q38. We see the top of the cofferdam / combi wall listed at Elev 47'-0" in several places. In the dewatering section of the Specs 31 23 19 B.3, it states:

3. Construct a bypass system consisting of cofferdams/bladder dams, pumps, and associated piping and appurtenances to conduct bypass flow and dewater the work area before and during excavation and backfilling activities.

We understand the need to dewater the work area inside of the cofferdam as necessary. But, in mentioning the need to "conduct bypass flow" infers the main flow of the reservoir will need to be pumped or siphoned around the work area. Is it not the intent to install the cofferdam and that would force the water out thru the Auxillary Spillway? We see the Elevation of the cofferdam is at 47'-0". Could you verify the Elevation of the crest of the Auxillary Spillway and that that is the intent?

R38. The Dewatering Specification 31 23 19 has been revised to provide additional information regarding the main flow of the reservoir that will be handled by the County using the Emergency Spillway.

The top of the cofferdam is at El 47 ft. Selected sheet pile sections in the combi-wall portion immediately in front of the Approach Channel Slab are lowered by 5 ft to El 42 ft in order to automatically flood the cofferdam in the event of a high water event that cannot pass through the emergency spillway and maintain the water level (static plus wave action) at the Cofferdam below El 42 ft. Refer to the project documents for the locations of the sheet pile sections with the top elevation at 42 ft. See revised Drawing Sheet SC-301 and revised Specification 01 20 00 Price and Payment Procedures.

The sill elevation of the Emergency Spillway is at El 38 ft. Design drawings for 1983 Emergency Spillway Construction are being provided as an Addendum to the bidding documents.

Q39. Could you also tell us what inspections will be required per said permits?

R39. A copy of the permit and its requirements will be provided upon availability. Since permits will not be available prior to bid, please prepare to do turbidity monitoring and inspection of Sediment and Erosion Controls weekly and after each rainfall event.

Q40. Drawing #6 of 79, General Note #8 states :

8. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS EXCEPT FOR SPECIFIED PERMITS SECURED BY MANATEE COUNTY OR THE ENGINEER.

9. CONTRACTOR SHALL KEEP PERMITS ON-SITE AND COMPLY WITH ALL PROVISIONS OF THE PERMITS AND PROVIDE A COPY TO THE ENGINEER AND OWNER PRIOR TO BEGINNING WORK. CONTRACTOR SHALL ARRANGE AND SCHEDULE ALL INSPECTIONS AND OBTAIN PERMIT APPROVALS.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMIT RELATED INSPECTIONS.

Could please list all of the permits that the contractor is responsible to procure?

R40. County will provide the following two permits: 1) United States Army Corps of Engineers, Department of the Army permit, including Section 404 and Section 10 authorization; and, 2) a Florida Department of Environmental Protection, Environmental Resource Permit including confirmation that State-Owned Submerged Lands Authorization is not applicable. Engineer will also provide the Contractor with the NPDES permit application for signature.

Q41. The training wall monitoring plan requires real-time lateral displacement and rotational measurements. Can we assume production may continue if the displacement is less than ¼ inch? What corrective measures are required if a displacement of ¼ inch or more is confirmed?

R41. Production may continue if the displacement is less than ¼ inch. If a displacement of ¼ inch or more is confirmed, the Contractor shall temporarily discontinue work at that location and provide the County and the Engineer of Record with construction alternatives to limit the amount of additional displacement for approval prior to resuming work at the initial location.

Q42. How deep are the monitoring wells?

R42. Multiple monitoring wells are present in and around the construction area. The estimated depths of each of the monitoring wells are based on available boring logs/records and are included in Bid Attachment 6- Lake Manatee Dam Emergency Geotechnical Subsurface Investigation Data Report dated May 2015 and in Bid Attachment 8 – Boring Locations and Boring Logs. Field verify select monitoring well depths if necessary.

Q43. How thick is concrete?

R43. The thickness of the concrete in the Downstream Apron is highly variable. A contour map of the approximate thickness was presented in the Bid Documents as Attachment 10 based on specific boring locations. Multiple concrete and gravel overlays have been placed in the Apron area over the years and these were not uniform, hence the non-uniform and highly variable material thickness.

Q44. From Demolition Plan Sheet

Approximately how many steel anchors?

R44. The total number of steel anchors from the abandoned baffle systems are unknown. No as-built drawings are available. Additional miscellaneous steel embed items not exposed at the surface may also be present in the existing apron concrete. Some of the exposed steel items may be visible via Google Earth. Only the steel anchors/embed items impacting the installation of the soil mix cutoff wall and/or the proposed structural concrete topping slab will need to be removed or otherwise modified.

Q45. If we are to install a bypass siphon / pump system to convey water around the cofferdam, do you have an expected flow rate of water thru the area?

R45. The only water the Contractor will convey from the upstream to the downstream will be from the passive pressure relief system inside the Cofferdam to aid in the dewatering process. The existing Emergency Spillway on the north end of the dam will handle the water flows entering the Lake. The 31 23 19 Dewatering Specification has been revised to clarify that the only water the Contractor will handle from the upstream side of the dam is coming from the Cofferdam. The water that will bypass the Service Spillway during construction will be directed through the Emergency Spillway.

Q46. As all of the bid items are lump sum, could you please release any quantities you have for this project? Even if they are estimates- they still would help. Some of the items are rather vague – for example, on Drawing C-000, for the Stilling Basin and Apron Basin Area, the note reads “Fill voids under apron basin by injecting with high-permeability sand/polymer slurry”. It would be nice to know roughly what kind of quantity we are dealing with.

R46. Quantity take-offs can be estimated from the CAD files provided to the Bidders in 21-TA003823CD- Addendum 1 Cad Files.zip.

Void volumes under the Stilling Basin and Apron are dynamic and change as embankment materials are carried through and flushed out downstream. The Void Contours provided in Bid Attachment 9 can assist in estimating the total volume to be filled and were drawn from coring studies performed at multiple times between 2013 and 2017. There are also voids under the Downstream Training Walls. However, the total volume of these voids is unknown. Some of the voids are expected to be filled by the sand/polymer void filling operation and the remainder of the voids are expected to be filled subsequently by the jet grout / soil mix operation along the back side of the Training walls.

Assume a total volume of 310 cu.yds. of voids to be filled with the sand/polymer slurry under the Downstream Apron, Stilling Basin, and Downstream Training Walls.

Q47. Please clarify what size Uniform Section Mat (USM) the job is calling for?

R47. Specification Section 32 11 13, Section 35 31 19, and Section 35 31 19.20 have been included for upstream dam face alternatives. Clarification also provided for other alternative upstream slope test sections. See revisions to Drawing Sheet CR-501.

Q48. Bid Section 01 20 00, Bid Pricing Section 1.7.11.1 Item 1101 – Full Depth Asphalt Milling and Asphalt Pavement: Will this include the entire road along the crest of the dam, or just the areas where we installed the temporary Layby's? Also, will the Temp turnouts and Laybys be removed at the completion of the job, or are they to stay in place?

R48. The temporary turnouts and laybys will remain in place at the completion of the job.

A “Roadway Restoration” section has been added to the General Notes plan sheet G-005 to further explain the referenced Bid Pricing Item. A pre-construction condition assessment is being required. A post-construction full-depth milling with repairs to damaged base materials and installation of a 2-inch asphalt concrete friction course is being required on specific roadways and on additional roadways that are damaged during construction. See revised Drawing Sheet CR-403.

Q49. Dwg #CU107 – Step 2C... depicts the excavation on either side of the upstream Approach Walls. In the next step, Dwg CU108, step 3A & 3B depicts installation of the sheetpile and combi wall systems. Please confirm it is the intention to make the excavation around the walls in step 2 in the wet before the areas are dewatered

R49. Confirmed.

Q50. Dwg #S-101: Can the installation of the Jet Grout Cutoff wall be constructed prior to completion of the upstream cofferdam work shown on dwgs #C100 – CU113, Steps 1-8B?

R50. Yes.

Q51. Dwgs CU109 Step 4 to Dwg CU110 Step 5. The only change we see here is the water level being lowered inside of the cofferdam to level 23'. Yet, there is a note out to the right “Containment Structure Designed to be Fully Dewatered if Required.” This is conflicting information. Could you please explain why the water level is to be lowered down to 23, but yet, it is to be designed to handle full dewatering?

R51. The El 23 ft water level allows repairs to be performed in the dry to the Tainter Gates and to the upper two Slide Gates on the Coarse Screen Chamber. The County requested a design for a partial dewatering with the option to fully-dewater, if required, based on conditions observed during an initial fully-dewatered inspection. The “Proof of Concept” design for the cofferdam system in the project documents was designed to be fully-dewatered.

Base Bid Item #609 is for “Fully Dewater for Pre-Construction Inspection” and Base Bid Item #612 is for “Fully Dewater for Approach Slab Repairs Inspection”. Item #612 has been removed and Item #609 has been changed to “Fully Dewater Cofferdam for Minimum of 30 Consecutive Days”.

Notes on Drawings CU-110 and CU-111 previously saying “CONTAINMENT STRUCTURE DESIGNED TO BE FULLY DEWATERED IF REQUIRED” has been changed to “CONTAINMENT TO BE FULLY DEWATERED FOR A MINIMUM OF 30 CONSECUTIVE DAYS”.

Q52, Is the contractor fully responsible for the cofferdam design? What if we choose to provide the cofferdam exactly as shown starting on Dwg #SC-101? May we change the design of the cofferdam if we are responsible for its design? Are used, sound materials acceptable, or must all materials be new? If indeed the cofferdam is to be designed so it may be fully dewatered, may we keep the area fully dewatered for the entire duration of the work necessary? Or, is there some kind of restraint on having it fully dewatered only for a certain amount of time?

R52. Contractor to be fully responsible for the cofferdam design, construction, operation, along with other project requirements. The design shown in the project documents is for “Proof of Concept” purposes and will need to be supplemented and/or value engineered by the successful bidder. Alterations to the “Proof of Concept” design are encouraged to improve the existing

design with the understanding that the continuous seepage cutoff barrier system from TRD wall to TRD wall is maintained to elevation –20 feet and no external loads are applied to the existing Approach Walls. Alternative designs will need to be performed by Florida Registered Professional Engineers and submitted for approval by the County and Engineer-of-Record.

Material for the cofferdam shall be unused, in new condition, with the appropriate material properties and tracking information as required in the project documents. Reference Question No. 3 above regarding the required minimum dewatering period. An extended dewatering period is at the contractor's discretion at no additional cost to the County.

Q53. Is there any available information on the depth of water out in front of the approach to the spillway area? Is that depth consistent all the way over to the barge load out area?

R53. Yes, limited information on the depth of the water is available. Multiple drawings in the project documents (e.g. V-101) provide bathymetric information immediately surrounding the Service Spillway. The bathymetry of the western end of the lake was presented in Bid Attachment 5 – Lake Manatee Dam 2013 Supplemental Inspection Report and can be downloaded from the USGS website at the following location:

<https://pubs.usgs.gov/sim/3112/pdf/sim3112.pdf>

Q54. The bid form for the Lake Manatee Dam Phase II Repairs solicitation (ITB No. 21-TA003283CD) includes rows for itemized bid items within the subtotals and columns to separate material and labor cost. The additional time to populate these cells on bid day will require final quotes be received earlier than if just the subtotal line items were to be populated. This could result in quotes being turned away if received while the contractor closes their bid and populates the bid form. To ensure the best possible pricing is included within the bid, please advise if it is permissible to submit the bid form with the subtotal line items populated and follow up with the entire bid form populated within 24 hours of the bid due date/time.

R54. The Bid Form has been revised to allow lump sum bids for each line item without providing a breakdown of materials and labor. The awarded Contractor shall provide a breakdown of each line item with their schedule of values in accordance with Specification Section 01 20 00.

NOTE:

Deleted items will be ~~struck through~~, added or modified items will be underlined. All other terms and conditions remain as stated in the IFBC.

INSTRUCTIONS:

Receipt of this Addendum must be acknowledged as instructed in the solicitation document. Failure to acknowledge receipt of this Addendum may result in the response being deemed non-responsive.

END OF ADDENDUM

AUTHORIZED FOR RELEASE

BID FORM
PHASE II REAPIRS TO LAKE MANATEE DAM
BID "A" BASED ON COMPLETION TIME OF 600 CALENDAR DAYS

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
100 Mobilization					
101	Pre-Mobilization Activities (Construction Submittals....)	1	LS		
102	Utility Locates	1	LS		
103	Laydown and Setup	1	LS		
104	Office Set-Up, Maintenance and Operation	1	LS		
105	Erosion and Sediment Control Best Management Practices	1	LS		
106	Temporary Downstream Access Road	1	LS		
107	Temporary Boat/Barge Dock	1	LS		
108	General Conditions	1	LS		
109	Permits, Bonding, etc.	1	LS		
MOBILIZATION SUBTOTAL=					
200 Void Filling					
201	Demonstration Project	1	LS		
202	Production – Downstream Apron	1	LS		

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
203	Production – Stilling Basin	1	LS		
VOID FILLING SUBTOTAL=					
300	Downstream Channel Repairs				
301	Site Preparation (rip rap removal, excavation, engineered fill)	1	LS		
302	Existing Apron Slab Preparation	1	LS		
303	Reinforcement, Miscellaneous Metals, Expansion Joints, Sealant and Waterstop	1	LS		
304	Form, Pour and Cure Downstream Concrete Apron Overlay	1	LS		
305	Cast-in-Place Concrete Stairs	1	LS		
306	Concrete Stilling Basin Repairs (Skim Coat on End sill)	1	LS		
307	Training Wall Repairs	1	LS		
308	Demolition and Abandonment of Miscellaneous Metals and Drains	1	LS		
309	Ogee Repairs (Downstream and Upstream)	1	LS		
DOWNSTREAM CHANNEL REPAIRS SUBTOTAL=					
400	Downstream Pressure Relief System				
401	Vertical Relief Wells	1	LS		
402	End Sill Relief Wells	1	LS		

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
DOWNSTREAM PRESSURE RELIEF SYSTEM SUBTOTAL=					
500 Encase Spillway with Seepage Barrier					
501	Construction Grading	1	LS		
502	Sheet Piling Including Concrete Cap and Handrail Installation	1	LS		
503	Deep Soil Mixing (Test Sections, Final Design Approval, F&I), Assume 10% Portland Cement and 5% Bentonite by Weight	1	LS		
504	Jet Grouting (Test Sections, Final Design Approval, F&I), Assume 10% Portland Cement and 5% Bentonite by Weight	1	LS		
505	Concrete Slab on Grade Installation	1	LS		
506	Final Grading and Restoration	1	LS		
ENCASE SPILLWAY WITH SEEPAGE BARRIER SUBTOTAL=					
600 Approach Channel Repairs					
601	Installation of Combi-Wall North and South Embankments	1	LS		
602	Complete Demolition and Removal of Slope Paving and Soldier Pile Wall and Lagging	1	LS		
603	Removal, Abandonment and Grouting of Monitoring Wells and Drains	1	LS		
604	Excavation of Embankments North and South of the Spillway and in Approach Channel Including Removal of Jet Grout Spoils, Organics and Other Debris	1	LS		

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
605	Removal of Grout Spoils from Approach Slab and Approach Wall Footings	1	LS		
606	Install Sheet Pile and Combi-Wall System with Structural Bracing for Containment Area (Cofferdam)	1	LS		
607	Install Dewatering Wells and Grout Plugs in Containment Area (Cofferdam)	1	LS		
608	Partial Dewater of Containment Area (Cofferdam). Contractor May Fully Dewater at Their Discretion.	1	LS		
609	Fully Dewater Containment Area (Cofferdam) for Minimum 30 Consecutive Days	1	LS		
610	Complete Approach Slab Repairs	1	LS		
611	Complete Approach Wall Repairs	1	LS		
612	Flood Containment Area and Cut Sheet Pile Along Approach Walls and Combi-Wall Along Approach Slab	1	LS		
613	Install Secondary Seal on Approach Wall Footings and Concrete Cap on Combi-Wall Along Approach Slab	1	LS		
614	Backfill Around Approach Walls with Engineered Fill to Achieve Final Grades	1	LS		
615	Install Continuous Reinforced Concrete Cap on Combi-Wall along North and South Embankments and Restore Grade and Slope Paving	1	LS		

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
616	Install Riprap to Final Grade	1	LS		
617	Placement of Watertight Slab on Grade on Embankment	1	LS		
618	Install Handrail	1	LS		
APPROACH CHANNEL REPAIRS SUBTOTAL=					
700	Stoplog Guide and Tainter Gate Rehabilitation				
701	Stoplog Guide Repairs	1	LS		
702	Tainter Gate Repairs	1	LS		
703	Threshold Replacement	1	LS		
704	Course Screen Chamber - Concrete Repairs	1	LS		
705	Course Screen Chamber Miscellaneous Metal Removal/Refurbishment/Coating	1	LS		
706	48" Pipe Inspection	1	LS		
STOPLOG GUIDE AND TAITER GATE REHABILITATION SUBTOTAL=					
800	Upstream Soil Cement Refurbishment				
801	Uniform Section Mat Test Section	1	LS		
802	Concrete Slope Pavement Test Section	1	LS		
803	Spot Repair Test Section	1	LS		

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
804	Full Depth Soil Cement Test Section	1	LS		
805	Spot Repair at End of Flume	1	LS		
UPSTREAM SOIL CEMENT REFURBISHMENT SUBTOTAL=					
900 Mechanical Upgrade					
901	Replace Electric Motors	1	LS		
902	Replace Gear Boxes	1	LS		
903	Replace Instrumentation and Controls	1	LS		
MECHANICAL UPGRADE SUBTOTAL=					
1000 Miscellaneous Improvements					
1001	Laybys	1	LS		
1002	Concrete Deck Repairs	1	LS		
1003	New Deck Paint: Sand Blast, Remove Rust, Primer and Paint	1	LS		
1004	Add Safety Ladders	1	LS		
1005	Add/Replace Handrails	1	LS		
1006	Skim Coat Over Piers	1	LS		
1007	Boat Launch Improvements	1	LS		

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
1008	Bridge Repairs	1	LS		
MISCELLANEOUS IMPROVEMENTS SUBTOTAL=					
1100	Demobilization				
1101	Full Depth Asphalt Milling and Asphalt Pavement	1	LS		
1102	Punchlist Inspection	1	LS		
1103	Restoration of Laydowns	1	LS		
1104	Final Cleanup	1	LS		
1105	Closeout Manuals / Submittals	1	LS		
1106	Red-Line Construction Drawings	1	LS		
1107	Borrow Area Reclamation	1	LS		
DEMOBILIZATION SUBTOTAL=					
	TOTAL BASE BID "A"- Based on Completion Time of 600 Calendar Days				
	CONTRACT CONTINGENCY WORK (USED ONLY WITH COUNTY APPROVAL)			10%	
	Contingent- Vased on Completion Time of <u>600</u> Calendar Days				

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
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THE FOLLOWING PAY ITEMS ARE INTENDED TO ESTABLISH UNIT RATES FOR UNFORESEEN CIRCUMSTANCES DURING THE CONTRACT PERIOD, AND WILL NOT BE UTILIZED TO DETERMINE CONTRACT AWARD. UNIT PRICES SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED.

1200					
Task Number	Description	Estimated Quantity A	Unit	Total Unit Price	Total Bid Price
1	Standby Rate				
	a. Unmanned Equipment Rates	1	Hour		
	b. Earthwork Equipment Rates	1	Hour		
	c. Jet Grout Column Equipment Rates	1	Hour		
	d. Soil-Mixed Column Equipment Rates	1	Hour		
	e. Cofferdam Equipment Rates	1	Hour		
	f. Dive Team	1	Hour		
	g. Void Filling Equipment Rates	1	Hour		
2	Emergency Demobilization				
	a. Demobilization	1	LS		
	b. Site Monitoring	5	Day		
	c. Standby rate	5	Day		
	d. Mobilization	1	LS		
3	Full Dewatering for Upstream Inspection	1	LS		
4	Installation of new Monitoring Wells and Instrumentation and Controls	1	LS		
5	48-inch Pipe Repair (In Situ-Form or equal)	1	LS		
6	Extra Jet Grout Columns (4-ft diameter), per length of wall	1	LF		
7	Extra Jet Grout Columns (8-ft diameter) per length of wall	1	LF		
8	Extra Combi-Wall (Choose the total length of 1 pipe pile and sheet pile section)	1	LF		
9	Extra Concrete Surface Repairs	1	SF		

Bidder Name: _____

Authorized Signature: _____

Task Pay Item Number	Description	Estimated Quantity	Unit	UNIT PRICE	TOTAL BID PRICE
10	Extra Sheet Pile Wall	1	SF		
11	Extra Deep Soil Mix Columns (3-ft diameter), per length of wall	1	LF		
12	Placing Select Engineered Fill (in-the-dry)	1	CYD		
13	Placing Select Engineered Fill (through the water column)	1	CYD		
14	Expansion Joint Replacement	1	LF		
15	Excavation and Disposal of Unsuitable Material	1	CYD		
16	Reinforcing steel locating services (GPR or similar)	1	Day		

Bidder Name: _____

Authorized Signature: _____

Laboratory Test Results for On-Site Borrow Materials



SUMMARY OF LABORATORY TEST RESULTS

For: Moisture Content, Wet Sieve Analyses

ASTM D2216, D4643, C117, D1140

Client: Carollo
 Address: _____
 Project: Manatee County Dam
 Location: Manatee County, FL

Project #: 300472x2.****.10
 Requested By: NJD/G. Andersen
 Tested By: Ingersoll
 Checked By: N. Depin

Test Date	Location # Sample ID & Depth (ft)	Solids Content (%)	Moisture Content (%)	% Finer #200 Sieve (%)	USCS Classification
4/3/14	North Borrow; 140328-WP-NB-01	91.5	9.3	5.3	SP-SM
4/3/14	North Borrow; 140328-WP-NB-02	95.0	5.3	3.9	SP
4/3/14	North Borrow; 140328-WP-NB-03	95.8	4.4	3.6	SP
4/3/14	Offsite Borrow; 140328-WP-SB-01	91.5	9.3	8.4	SP-SC
4/3/14	Offsite Borrow; 140328-WP-SB-02	89.7	11.5	8.7	SP-SC
4/16/14	Offsite Borrow; 140415L-WP-SB-01	85.1	17.5	13.9	SC

This borrow area is the same as proposed for Phase II repairs and is the materials excavated from the Emergency Spillway Channel

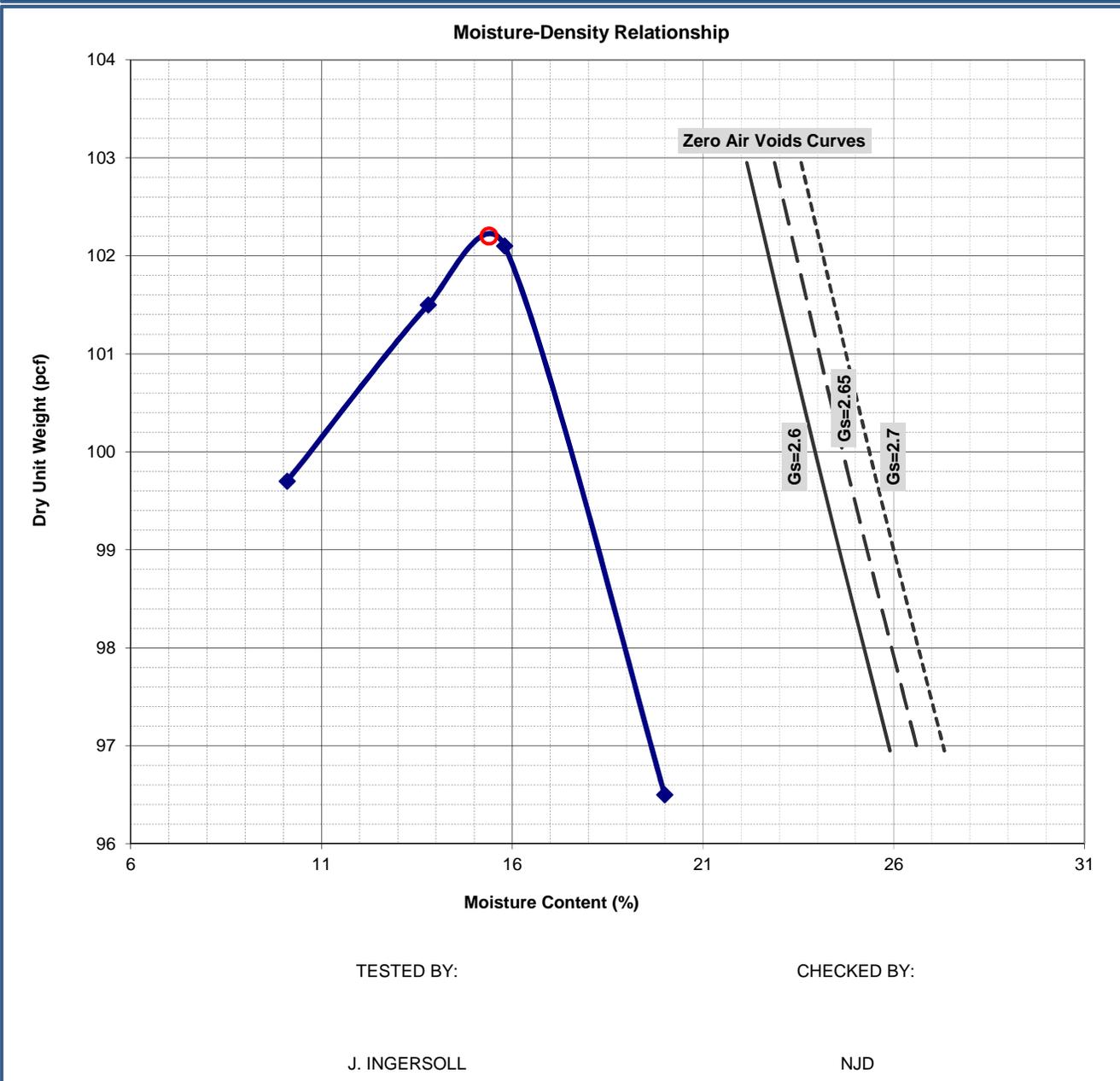
**STANDARD PROCTOR TEST
MOLD VOLUME 1/30 CF; AASHTO T-99**



Client: Carollo
 Address: _____
 Project: Manatee County Dam
 Location: Manatee County, FL

Project #: 300472x2.****.10
 Requested: NJD/G. Andersen

Location #	<u>North Borrow</u>	Sample ID	<u>140328-WP-NB-01</u>	Depth (ft)	<u>5.0</u>
Date Compacted	<u>3/31/14</u>	Maximum Density (psf)	<u>102.2</u>	Optimum Moisture (%)	<u>15.4</u>
REC #:	<u>1</u>	MATERIAL DESC:	<u>Brown, light brown, Sand with Silt (SP-SM)</u>		



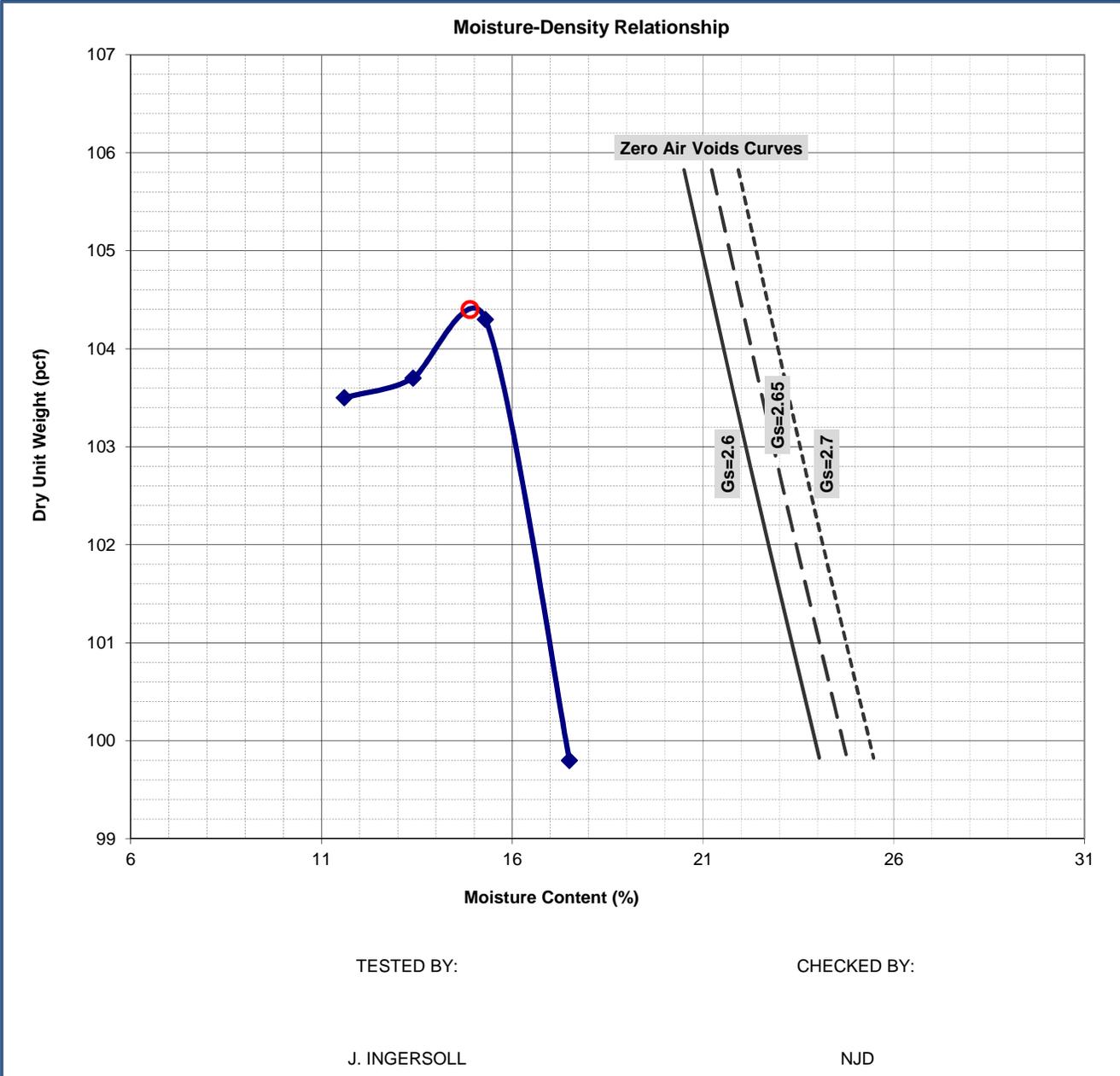
**STANDARD PROCTOR TEST
MOLD VOLUME 1/30 CF; AASHTO T-99**



Client: Carollo
 Address: _____
 Project: Manatee County Dam
 Location: Manatee County, FL

Project #: 300472x2.****.10
 Requested: NJD/G. Andersen

Location #	<u>North Borrow</u>	Sample ID	<u>140328-WP-NB-02</u>	Depth (ft)	<u>5.0</u>
Date Compacted	<u>3/31/14</u>	Maximum Density (pcf)	<u>104.4</u>	Optimum Moisture (%)	<u>14.9</u>
REC #:	<u>2</u>	MATERIAL DESC:	<u>Brown, gray, Sand with trace Silt (SP)</u>		



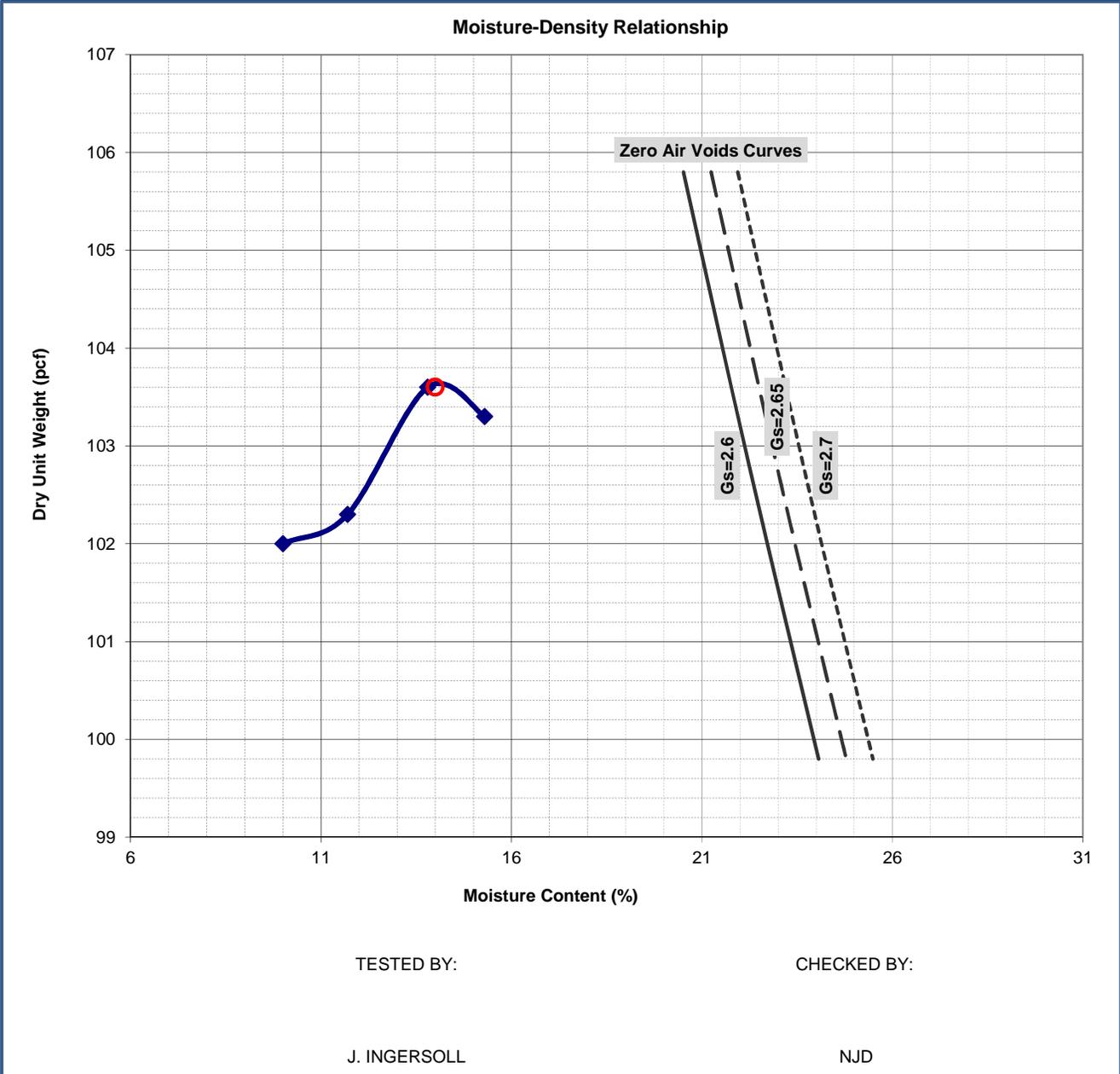
**STANDARD PROCTOR TEST
MOLD VOLUME 1/30 CF; AASHTO T-99**



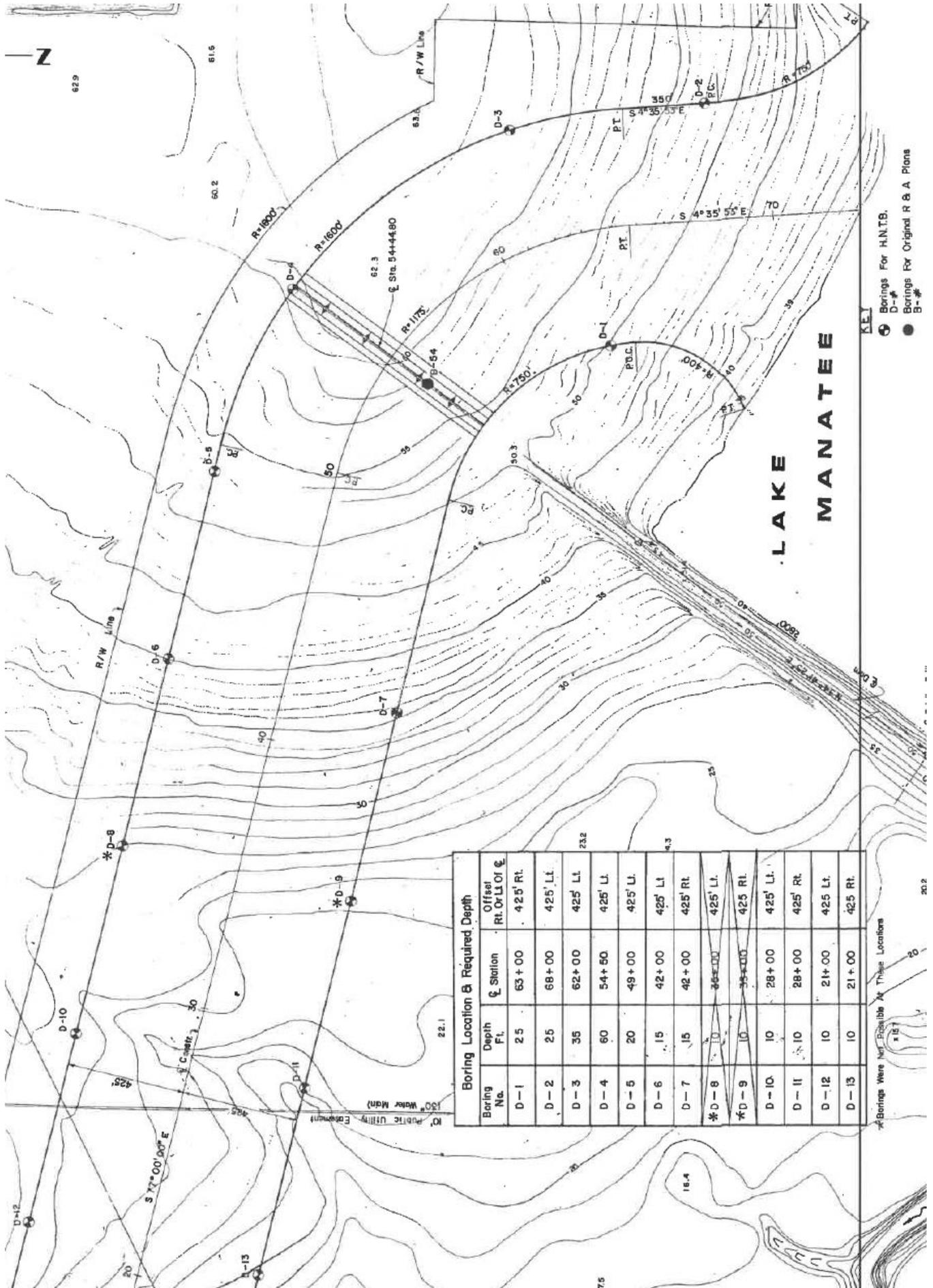
Client: Carollo
 Address: _____
 Project: Manatee County Dam
 Location: Manatee County, FL

Project #: 300472x2.****.10
 Requested: NJD/G. Andersen

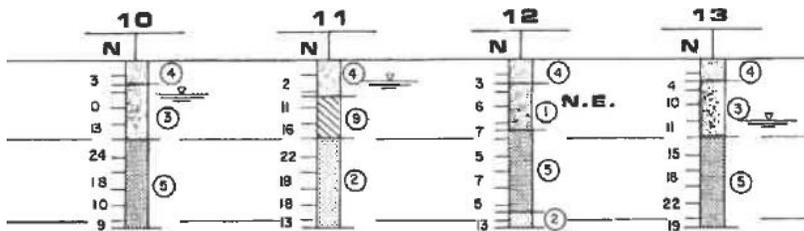
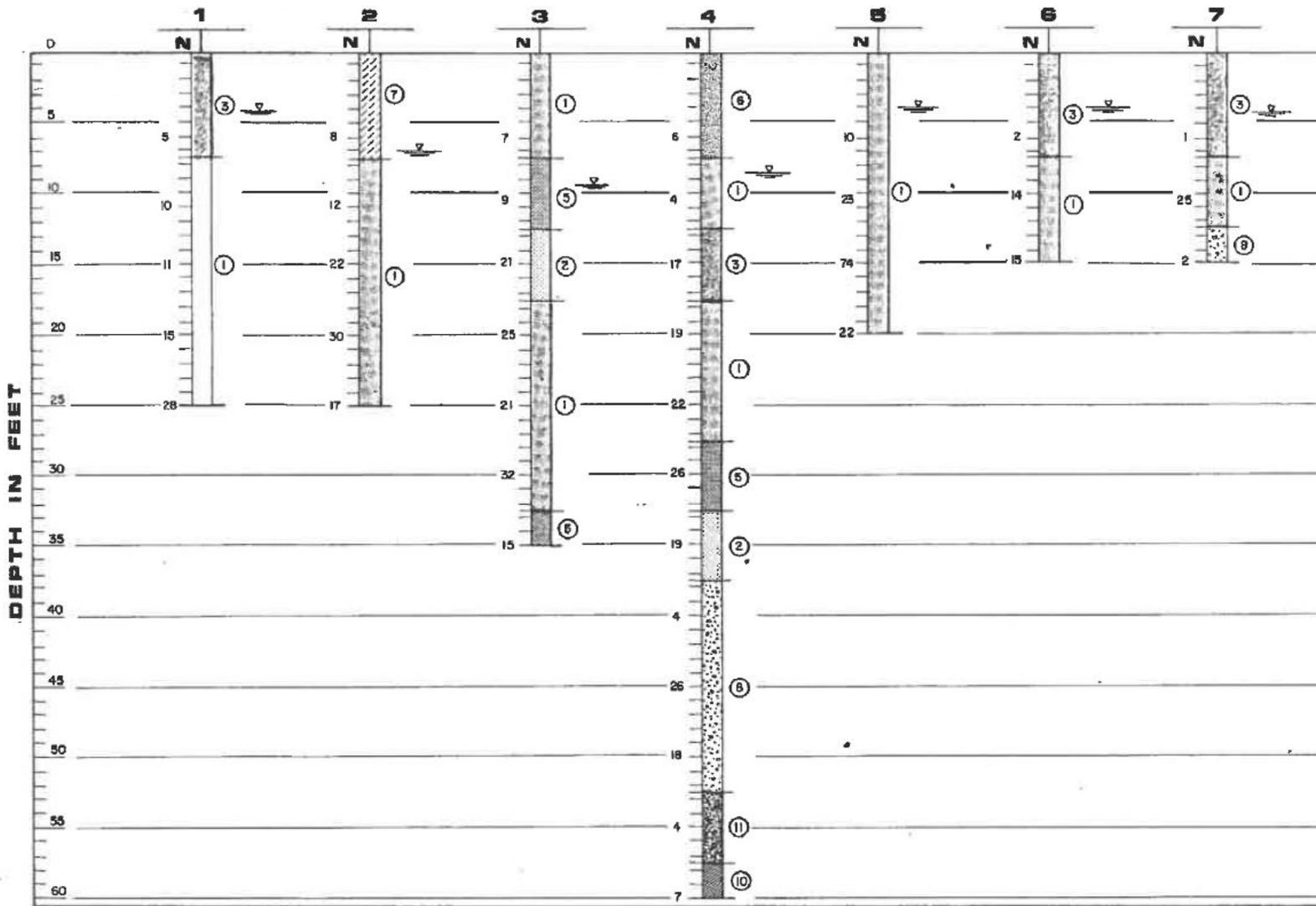
Location #	<u>North Borrow</u>	Sample ID	<u>140328-WP-NB-03</u>	Depth (ft)	<u>5.0</u>
Date Compacted	<u>3/31/14</u>	Maximum Density (psf)	<u>103.6</u>	Optimum Moisture (%)	<u>14.0</u>
REC #:	<u>3</u>	MATERIAL DESC:	<u>Brown, light yellow, Sand with trace Silt (SP)</u>		



Boring Locations for Emergency Spillway Construction (1983)



Boring Logs From Emergency Spillway Design (1983)



SOIL LEGEND

- | | | |
|---|---|---|
| ① | Brown Fine Sand | Rotary Washed |
| ② | Gray Fine Sand | Ground Water Level On April 26, 1982 |
| ③ | Brown Fine Sand W/Roots | N Standard Penetration Resistance Blows Per Foot |
| ④ | Gray Fine Sand W/Roots | N.E. Ground Water Level Not Encountered |
| ⑤ | Gray To Brown Fine Sand | |
| ⑥ | Gray To Brown Fine Sand W/Roots | |
| ⑦ | Gray To Brown Fine Sand W/Trace Of Clay | |
| ⑧ | Gray Slightly Silty Fine Sand | |
| ⑨ | Gray Clay Fine Sand W/Roots | |
| ⑩ | Gray To Green Clay | |
| ⑪ | Gray To Green Sandy Clay | |