ADDENDUM NO. 3

BID # 16016-3830

RICHLAND CREEK DAM AND RESERVOIR

PAULDING COUNTY BOARD OF COMMISSIONERS
DALLAS, GEORGIA

Bid Date & Time:	Friday, June 24, 2016 at 2:00 pm
Bid Location:	240 Constitution Boulevard, Dallas, Georgia 30132 Board of Commissioners Meeting Room

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The following hereby amends and/or modifies the Bid Documents issued for this project by Arcadis. All bidders are subject to the provisions of this Addendum. Bidders shall acknowledge receipt of this Addendum on the Bid Proposal form.

RESPONSES TO QUESTIONS RECEIVED FROM MAY 21, 2016 THROUGH JUNE 20, 2016

1. Technical Specification 2.020 PRINCIPAL OUTLET STRUCTURE BRIDGE, defines the scope of work to include drilled piers. However, there is a separate bid item for drilled piers (2.019 DRILLED PIERS). Please clarify which bid item should be used for construction of the drilled piers.
   Answer: See revised Measurement and Payment Section

2. Article 6 of the General Conditions, Paragraph 6.02 B which states *"that all work at the site shall be performed during regular working hours. Contractor will not permit the performance of working on Saturday, Sunday, or any legal Holidays without Owners written consent given after prior written notice to Engineer."* Also noted in the Supplementary Conditions: SC-6.02.B.1 states that *"Except where otherwise prohibited by Laws or Regulations, regular working hours at the Site are defined as up to eight hours per day, beginning no earlier than 7:00 a.m. and ending no later than 6:00 p.m."* Can SC-6.02.B.1 please be removed?
   a. SC-6.02.B.1 has been revised.

3. Section 03700 Mass Concrete, Part 1, 1.03 'Classification of Mass Concrete' defines mass concrete as: *"Class "M" concrete is mass concrete placed in members with an overall smallest dimension of three feet or greater.* Please consider changing this to *"Class "M" concrete is mass concrete placed in members with an overall smallest dimension of greater than 48 inches." Pursuant to an approved thermal control plan.*

Answer: The requirement of 3'-0" thickness or greater can be relaxed to greater than 4'-0" thickness. Therefore the class M Concrete requirements only apply to the concrete elements greater than 4'-0" in thickness, provided the concrete temperature is monitored as per specification requirements for thicknesses greater than 3'-0".

4. In the specification for the inclinometer casing borings it states that the minimum borehole diameter will be 6 inches. The specs also say that percussed air drilling methods will not be allowed. This means that the portion of the hole in bedrock will have to be cored. The specified inclinometer casing is 70mm (2.75 inches). Would a HQ cored hole be acceptable for the portion of the casing to be set in rock? Hole diameter is 3.830".
   Answer: Yes, an HQ Cored Hole is acceptable.

5. Reference the Type 2 Foundation Monitor Chart on Plan Sheet 2-C35:
   a. Is the 760 elevation for the FM2-15 to FM2-21 accurate?
      Answer: No
   b. If not, please provide elevation.
      Answer: The elevation is 860 ft.
   c. Please provide the depth of these monitors (3' offset of center) to be installed below the chimney drain if an elevation cannot be provided.
      Answer: See answer to 5b

6. Please provide location for the Reservoir Boxes for the Foundation Monitors and provide narrative on how these are to be mounted.
   Answer: Intention is to allow contractor to select locations that do not interfere with their work plan; both location and routing of tubes must be preapproved by ENGINEER.

7. Reference Note 3.2 under "Pollution Controls" on sheet 4-ESC01: This note states that no concrete trucks are allowed to be washed out on the project site and all trucks/concrete waste must return to the concrete plant for disposal. Please confirm of clarify if this note can be deleted in its entirety.
   Answer: Note 3.2 under "Pollution Controls" on Sheet 4-ESC01 has been replaced with the following note: "Washout of concrete drums at the construction site is prohibited. Contractor is to select locations on the site for concrete washout that meet the conditions of the 404 permit and NPDES Stand Alone permit. Concrete wash down area should be outside of the area that is marked for excavation and can be left behind following construction. Contractor shall select an EPA recommended washout BMP to be used and submit washout locations and selected BMP for Engineer's approval."

8. Reference Principle Outlet Structure Detail on sheet 2-S04: Can a cold joint be allowed for the bottom of the PO structure prior to the 830 elevation? How about

other cold joints at locations not shown? Are there any specific locations/elevations where cold joints cannot be placed?

Answer: The joints shown are at required location, the other locations are allowed and additional locations shall meet the Construction Joints as specified in the Specifications 03310 Cast-in-Place Concrete. The Typical details shown on Sheet 2S-19 for Construction Joint is applicable in addition to the Requirement specified in Specification 03310. Construction joints and Pour sequence will required to be part of the submittal for approval. Joints will not be recommended areas around the openings.

9. Construction Schedule on Sheet 4-ESC01 indicates 38 month duration; 24 months for site construction and additional 14 months for Erosion Control, Vegetation and Mulching. Section 02486, Grassing, Part 3.09 indicates that the Contractor shall provide service and maintenance of seeded areas for eighteen months from Date of Substantial Completion including mow grass at regular intervals, watering, control of weeds, reseed of bare spots, repair of erosion gullies and other task requirements. Please consider adding a separate Unit Price Bid Item for Service and Maintenance of Grassing.

   Answer: No additional pay item will be added. Limits of seeded areas that the Contractor is required to service and maintain as defined in specification Section 02486 have been added to sheets 4-ESC-18, 4-ESC-19, and 4-ESC-20.

10. Erosion Control Note 3 on Sheet 4-ESC01 indicates that Disturbed Areas are to be Mulched Daily and Note 11 indicates that Mulch or Temp Seed if exposed for period greater than 14 days. Furthermore Sheet 4-ESC02, Checklist Item 21 also indicates "Any disturbed area left exposed for period greater than 14 days shall be stabilized with mulch or temporary seeding." Please clarify as to whether or not daily stabilization of disturbed areas with mulch (which seems impractical for a million CY (+) earthwork project) will be required.

    Answer: Note 3 under “Erosion Control” on Sheet 4-ESC01 will read as follows: “Permanent vegetation shall be placed at all areas graded to final grade as soon as possible upon completion. When hand planting, mulch (hay or straw) should be uniformly spread over seeded area within 24 hours of seeding. During unsuitable growing seasons, mulch will be used as a temporary cover (DS1). On slopes that are 2:1 or steeper, mulch will be anchored.”

11. Erosion Control Note 3 on Sheet 4-ESC01 indicates that in concentrated areas of flow, all slopes steeper than 2.5:1 and with the height of 10 feet or greater, and cuts and fills within Stream Buffer, shall be stabilized with EC Blanket or Matting. Sheet 4-ESC02, Appendix 1 - Four Additional BMPs, Item m. indicates to apply GDOT approved EC matting and blankets or bonded fiber matrix to all slopes steeper than 3:1. All graphical illustrations must be included on the Plan.

Please clarify what the slope requirement is for EC blankets and matting; 2.5H:1V or 3H:1V which seems significant since all slopes on appear to be flatter than 2.5:1 and many are 3:1 including requirements for borrow areas.

Answer: Appendix 1, Note "m" will be removed from the plans.

12. Sheet 4-ESC02 NPDES COMPLIANCE (1 OF 2) indicates that a Hydrology Study and Design Report with Summary of Peak Discharge is available for the project. Item 43 HYDRO Y Refer to RCR Design Report [RE: Hydrology Study and Maps of Drainage Basins for both Pre- and Post- Developed Conditions]. Item 44 HYDRO Y Refer to RCR Design Report, Summary of Peak Discharge Flows are located in Table 1 and 2 [RE: Estimate of runoff coefficient or peak discharge flow at site Pre- and Post- construction activities]. Would it be possible to provide copies of these hydrology and hydrologic reports and studies to assist with the design of Water Control features?

    Answer: See engineering report, attached.

13. Erosion Control Note 10 on Sheet 4-ESC01 indicates that If full implementation of the approved plan does not provide effective EC, additional E&SC measures shall be implemented to control or treat the source. How is the Contractor compensated for additional erosion control measures that are not shown on the plans?

    Answer: This will be addressed as needed during construction.

14. Does the Transition Elbow and Barrel Segment 1 as shown on Sheets 2-S03, S04, S05 and S06 have to be poured monolithically or can horizontal joints be added to the structure? Can the circular floor section be poured-in-place as an invert section or does the circular floor section have to be formed and poured monolithically along with the with lower section of the structure?

    Answer: Yes, the transition elbow and barrel segment 1 can be poured separately provided requirements of Construction Joints are followed as specified in the Specification Section 03310 Cast-in-Place Concrete. The typical details shown on Sheet 2S-19 for Construction Joint are applicable in addition to the requirement specified in Specification 03310.

15. Sheet 2-S03 appears to indicate 4 Ea, 24" x 59" BM and Sheet 2-S10 appears to indicate these same beams may be 24" x 3.5' per Section 4/2-S10. Please clarify.

    Answer: Sheet 2-S03 provides overall beam depth which includes 18'' top slab. Sheet 2-S10 and section 4/2-S10 shows beam depth below the top slab. Overall beam depth from top of slab is 59''.

16. With regard to the Spigot Wall Piece Joint Detail shown on Sheet 2-S05; (1.) is this piece available through PCCP pipe suppliers or is this a custom fabricated piece? (2.) What is the Material labeled solely as "Material" at the recess for the pipe section? (3.) What is the shaded area that appears to be some sort of lining inside the Steel Cylinder? (4.) Where does the 3/4" expansion joint material

shown on Principal Outlet Piping Connection Detail (2-S05) go with respect to the Spigot Detail?

Answer: Wall spigot to be provided by pipe manufacturer. See updated drawings.

17. With regard to Pipe Support Detail, STAINLESS, shown on Sheet 2-S16, please provide the number of pipe supports and installation locations.

    Answer: Pipe Support Detail shown on Sheet 2-S16 is a typical detail for telescoping valves and other pipes at exterior of Principal Outlet structure. Location of the pipe support required to be coordinated with Valve Manufacturer.

18. With regard to Equipment Support Pad Detail as shown on Sheet 2-S16, please indicate where this detail is used on the project.

    Answer: Does not apply to this project.

19. With regard to Typical Anchor Bolt Detail as shown on Sheet 2-S18, please indicate where this detail is used on the project.

    Answer: Does not apply to this project.

20. Can the Top Slab for the Baffle Chute as shown on Sheet 3-S01 be precast in the field and subsequently set as opposed to cast-in-place?

    Answer: Yes, the top slab of the baffle chute can be a pre-cast slab. Pre-cast slab details and attachment to side wall will be required to be submitted prior to construction.

21. Reference Section 02010 Subsurface Conditions, Paragraph 10.01 B & C. The specification states, ….subsurface investigation information is offered as an aid in bidding only and is not a part of the Contract Documents." It goes on to say, "Contractors may make their own site and subsurface investigations to satisfy themselves with site and subsurface conditions." For reasons of schedule, environmental, monetary, etc., it is not feasible to visit the site and perform an additional subsurface investigation. To estimate the COW and especially grouting work that has no bid schedule quantities to control risks, can reconsider be given to making the subsurface investigation be made a part of the Contract Documents?

    Answer: No, the geotechnical report is not part of the contract documents. Released for information only.

22. Reference Table 00 41 13-A, Bid Schedule. Section 01 22 13. Bid Schedule Item 13 Grout Curtain is paid per square foot for all work covering primary and secondary holes. It is not typical from a risk perspective for the grouting to be unquantified with respect to material quantities, pumping hours required per stage, and the number of setups per hole required dependent on downstage grouting verus upstage. Can pay items be established to cover this risk, i.e., mobilization/demobilization for grouting per LS, overburden drilling, rock drilling and redrilling per LF, setups for grouting per EA, grout materials per CF or GAL, water testing per HR, grout pumping per HR, etc.?

Answer: See Addendum 1

23. Reference Table 00 41 13-A, Bid Schedule. For Bid Schedule Item 14 Additional Grout Holes. Same question as above, can this pay item be broken down into more detail and be established as B items? Broken down A items could cover presumed quantities or just primary and secondary holes, and B items could cover additional work required over and above presumed quantity, if needed.

    Answer: See Addendum 1

24. Reference Section 01 22 33, Section 02212 Pressure Grouting. Paragraph 2.013 references 684 grout holes to be covered in the SF price for the grouting. We count 648 holes for 100% primary/secondary, 33% tertiary and 15% quarternary. Are the extra holes to account for the possibility of the blanket grouting referenced in Paragraph 1.04 I. and 3.04 M of the Pressure Grouting specification, or, are this extra holes for Verification holes?

    Answer: In order to construct a complete grout curtain between stations 2+00 and 23+00 using angled holes, we estimate the actual inplace grout line length will be +/- 2,120 feet adding an additional set of grout holes plus one Primary per line, ie example upstream line extends from 1+80 to 23+00 and downstream line extends from 2+00 to 23+20. We have estimated 214 Primary, 214 Secondary, 128 Tertiary (30%) and 128 Quaternary (15%).

25. Reference 02212 Pressure Grouting. Paragraph 3.03 C.5. implies that the cased holes will be drilling with temporary steel casing, PVC installed within the casing and grouted in place, then temporary steel casing pulled. After grout sets, rock drilling can be accessed down the center of the PVC that would be left in place and backfilled in the center with additional grout. This is normal practice. C.6. goes on to request that the inner casing be pulled 3 feet above rock. It is not possible to pull up the grouting PVC, please clarify what the intent is?

    Answer: See Addendum 1

26. Reference 02212 Pressure Grouting, Paragraph 3.04 D.2.(i). This paragraph says, "Overburden holes shall be properly abandoned and backfilled using low permeability/high strain materials, not cement grout." Please explain why cement grout can't be used to grout the annuls of the PVC installed through overburden? Likewise, once PVC is in place, why it can't be backfilled with cement grout?

    Answer: Contractor must comply with the specification.

27. Reference 02212 Pressure Grouting, Paragraph 3.04 B. This section implies all holes will be downstage grouted? Will upstage grouting be instituted where downstage grouting is not required?

    Answer: See Addendum 1

28. Reference 02960 Cutoff Wall, Paragraph 1.06 A.2 (d). This section says, "The equipment shall be designed to maintain the minimum width and capable of making excavations to at lelast 20 feet deeper than the depth shown……" Please clarify that the equipment must be able to go 20 feet further through overburden and weathered rock materials and not 20 feet further into groutable rock.

    Answer: Correct

29. Reference 02960 Cutoff Wall, Paragraph 1.05 B. This section says the verification holes can range between 50 feet and 100 feet along centerline. This in a considerable difference in cost that is incidental to the cutoff wall. Can a more specific quantity be determined for bidding purposes?

    Answer: See Addendum 1

30. Reference 02961 Verification Drilling and Testing, Paragraph 3.010 Payment. This section references payment for "Added Verification Drilling and Testing". There is no reference on the Bid Schedule for this work, please clarify.

    Answer: See Addendum 1

31. Technical Specifications, Section 02212, Part 2, Paragraph 2.04: "…If on-site water is to be used in the grouting program, the contractor is responsible for performing water quality testing to determine its suitability and treatment as needed."

    a. Has there been any work done to estimate the volume of the on-site water so that contractors can determine the feasibility of the water source?
    Answer: No

    b. Can samples be collected at any time during the bidding process to evaluate the chemistry of the water source?
    Answer: Yes

32. Technical Specifications, Section 02212, Part 3, Section 3.02, Paragraph A: "…Site preparation activities will also include the construction of a concrete Grout Cap where sound (groutable) rock is exposed at grade…"

    a. Please define "sound (groutable)" rock.
    Answer: To be determined at the time of construction by the geotechnical engineer.

33. Technical Specifications, Section 02212, Part 3,Section 3.03, Part C, Line 6: "After the rock section of the hole has been grouted to refusal, the inner casing should be pulled to approximately 3 feet …"

    a. Please define refusal for this operation
    Answer: See Addendum 1.

34. Do prevailing wages apply to this project? If so, can those requirements be provided to bidders?

    Answer: No prevailing wages.

35. Technical Specifications, Section 02212, Part 3, Section 3.04, Paragraph D, Section 2, line G: "…Where conditions are encountered at the scheduled bottom of hole depth that would indicate grout takes are likely, then the drilling shall continue until the hole penetrates a minimum of 5 feet of good rock where minimal grout takes are anticipated, or until cessation of drilling is recommended by Geotechnical Engineer"

    a. Who decides if the hole needs to be continued when design bottom of hole is reached?
    Answer: The geotechnical engineer

    b. Is the contractor compensated by item 14, 2.014 "Additional Grout Holes" for the additional linear feet drilled as a result of this item?
    Answer: No, see Pay Item 2.013

36. Technical Specifications, Section 02212, Part 3, Section 3.04, Paragraph I, Section 2, paragraph a: "Apply an air/water mixture proportioned 50/50 percent by volume by surging pressure to one hole at a time. Set packers to isolate the stage being flushed and pressure tested…"

a. Introducing air into the formation may cause significant damage, especially if applied below an inflated packer. Has there been any consideration to a revised washing plan?

Answer: The washing plan may be revised based on actual field conditions. The intent of the program is not to further damage or flush out suitable rock materials

37. Technical Specifications, Section 02212, Part 3, Section 3.04, Paragraph M, Section 1: "It is anticipated that some shallow hole blanket grouting may be required where the near surface rock is highly jointed and permeable…"
    a. If blanket grouting is required, how will the contractor be compensated for this scope of work?

    Answer: Blanket grouting is not anticipated. Necessity would be determined by the geotechnical engineer and would be dealt with from the contingency allowance.

38. Technical Specifications Section 02960 1.04 Definitions Part A states "excavated under slurry with long reach excavators, " implies that this type of equipment is acceptable. In Section 3.09 C Measurements Part 4. Excavation Width: The third sentence starts "If a panel method is used for barrier construction,"- this implies that other methods such as trenches done using long reach excavators may also be acceptable. Is it the owner's intent to accept a cutoff wall that is installed using long reach excavator type of equipment?
    Answer: No. Section 02960 has been revised to limit cutoff wall construction to panel methods only.

39. Technical Specifications 02960 Section 1.07 Performance Requirements Part 5. The minimum/maximum unconfined compressive strength (UCS)… shall be determined as a product of the mix design program… The design UCS will be a product of developing an engineered backfill material mix design of blend and proportion that produces a strain compatible mixture that closely emulates the surrounding soils that the Cutoff Wall is excavated through so that the backfill properties will compress and deform as the remaining embankment is raised from 860 feet to 925 feet without creating excessive internal stresses and internal fracturing at the interface between the Cutoff Wall and the surrounding soils.

    Answer: Not a question

40. Technical Specifications Section 02960 2.06 Cutoff Wall Backfill Materials Part A. The Cutoff Wall Backfill Material shall be designed by the Specialty Contractor through a mix design program and approved by the Geotechnical Engineer… The Specialty Contractor shall develop the backfill gradation and blend appropriate with the methodology selected to ensure a continuous and homogeneous backfill material meeting the in-place strength, strain compatibility and permeability requirements set forth in the specifications. The material shall be thoroughly mixed and shall achieve the standards specified in Plastic Concrete Backfill Mix Design and Test Report and shall address adjusting mix proportions to achieve required properties as subsurface conditions change laterally and vertically along the Cutoff Wall alignment.

    Answer: Not a question

41. Technical Specifications Section 02960 3.08 Part A. The Specialty Contractor shall develop the Plastic Concrete Backfill Material mix design prior to the start of the Cutoff Wall construction that exhibits strain compatibility with the surrounding residual materials ……..additives/admixtures, mix proportions (including plan for adjusting mix proportions to achieve required properties as subsurface conditions change laterally and vertically along the Cutoff Wall alignment), and..

    Answer: Not a question

42. Based on the various technical specifications sections highlighted in items 8-11 above, it is clear that the owner will require the Specialty Contractor to develop a mix design that has strain compatibility with the surrounding soils. This cutoff wall is anticipated to be excavated through three or more distinct soil profiles including rock. The following related questions are:
    a. The strain properties of soils is in most cases quite variable. The Geotechnical information in the bid documents does not show the "Strain" properties of the existing soils. Is this information available?
       Answer: Laboratory Consolidation and Triaxial Shear Tests results are available in the geotechnical reports. Based on our review of the available laboratory test data, it is our opinion the mix design should target a percent strain value of at least 5%.
    b. If the strain properties of a soil strata is made available then to what % conformance does the backfill have to match?

       Answer: Minimum 95%
    c. If the strain properties vary laterally and vertically then is it the owner's intention to have each excavated panel backfilled with three or more different mixes, one for overburden soils, and another for weathered rock and a third for hard rock?
       Answer: No. Design for controlling material. The undisturbed residual soils generally exhibit higher strain values under load.
    d. We are unaware of the strain properties of the existing soils prior to bid time - is there a specific strength backfill that contractors should use in their bid since there is no time to develop this backfill mix design prior to bid?
       Answer: It is our opinion to meet the strain requirements, the backfill compressive strength will likely need to be between 50 to 100 psi at 28 days.

43. Technical Specifications Section 02961 I 1 and 2 States the Geotechnical Engineer may require Hydraulic pressure testing of discrete intervals for the entire length of the verification core hole. In addition, selected core hole intervals shall be sealed off using a double packer system and tested under constant pressure of up to 40 PSI. Based on previous experience we believe that this pressure testing will damage the wall, especially if low strength backfills are used to meet the strain compatibility of surrounding soils.
    a. If the wall is damaged by doing this prescribed testing, what acceptable repair method would be required due to this testing method?
       Answer: This will be addressed in the field as necessary.
    b. If damage does occur due to this prescribed testing method then who is responsible for the associated costs?
    c. **Answer:** Core hole imaging survey and field permeability testing will be the primary means for acceptance. The methods of testing will be determined by the Geotechnical Engineer based on field conditions.

d. Will this test be used as acceptance of the wall?
Answer: Yes

44. Technical Specifications Section 02961, 3.02 A1. States core holes drilled through barrier with its base foundation in the abutment (bedrock) shall be drilled to a depth of 5 feet below the base of the cutoff wall.
    a. Will this coring damage the wall?
    Answer: Coring techniques should be recommended by the Contractor and approved by the Engineer.
    b. Will the permeability test be required at the bedrock wall interface?
    Answer: Yes
    c. Will this test be used as acceptance of the wall?
    Answer: Yes
    What would be an acceptable repair to the wall caused by this coring?
    Answer: See answer to Question 44a.
45. The bid items for the initial grout curtain are limited, will additional bid items be added to provide more insight to the Engineers estimated quantities for drilling and grouting?
    Answer: No

46. Can the bid proposal due date be extended?
    Answer: See Addendum 1

47. Specification Section 02961, 3.02 CORE DRILLING A. 1. requires “cores holes [to be] drilled through barrier with its base founded in the abutment (bedrock) shall be drilling to a depth of 5 feet below the base of the cutoff.” In addition, Section 3.04 FIELD PERMEABILITY TESTING A. states that “The Contractor shall test each hole to determine the effective permeability of the cutoff wall in the presence of the Geotechnical Engineer.”

    In its understood that the purpose of the permeability tests to be performed in the verification holes is to confirm that the hydraulic conductivity of the cutoff wall is equal or lower than $1x10^{-6}$ cm/sec at 28 days when the field data is reduced by the Hvorslev Method.

    The permeability testing procedures described in the specifications, require the holes to pass through the cutoff wall and 5 feet into the rock and then perform a permeability tests in those holes. Consequently, the resulting permeability derived from this test will represent the permeability of both the cutoff and the rock and not the one of the cutoff wall.

    In the case of a failing permeability test, how is the Paulding County going to determining if the failure is due to the cutoff wall or the rock’s permeability?
    Answer: In the event of a failing test, the cutoff wall contractor will need to be able to isolate the bottom 5-10 feet of the verification hole and rerun the permeability test.

48. Specification Section 02961, 1.05 SEQUENCING AND SCHEDULING, B. 2. Requires that angled boring be drilled at 30 degrees from vertical.

Based on our recent experience at Bolivar Dam, performing televiewer imaginary as well as verticality measurements in verification holes inclined 30 degrees from the vertical is very problematic and many times impossible. At Bolivar Dam, we established that the maximum practicable angle for inclined holes should not exceed 22 degrees from the vertical so that all testing and camera surveying can be properly and efficiently performed. This procedure was agreed with the US Army Corps of Engineers and successfully utilized through the project.

Would the Paulding County allow angle verification holes be performed at a maximum of 22 degrees from the Vertical?

Answer: Yes

49. It is our understanding that the grades shown on sheet 2-C10 are designed to be at or near the solid rock elvation, in areas of the left abutment. There are very thick layers of partially weathered rock that will need to be removed to get to the design grades. If competent rock is found at elevations higher than the design grades, is the intent to stop excavation at the actual rock elevation, or to use "difficult excavation" techniques to get to the planned subgrade.

    Answer: The design intent is for the pressure grouting to occur from the top of competent rock and will depend on the actual conditions exposed. The profile is based on the available/interpreted subsurface data. The intent is not to remove competent rock to achieve grades depicted in the drawings unless shaping of the surface is more desirable. Removal of PWR and difficult excavation materials is anticipated and will be paid under the Contract Unit Price.

50. In the event that the competent rock surface causes the slope of the foundation excavation between stations 5+00 and 9+00 along the grout cap centerline to become steeper than the grout curtain subcontractor can install his work without special means and methods considerations. Will the owner pay for difficult excavation to get to reasonable working surface slopes or does the grout curtain subcontractor need to carry the risk associated with the final grades being different than those shown on the plans?

    Answer: The design intent is for steep grades/surfaces to be adjusted using the Grout Cap Profile, Sheet 2-C25. Excessively steep and/or irregular surfaces may also be adjusted by removal of competent rock or placement of dental concrete or slurry grout based on actual conditions and evaluation by the geotechnical engineer.

51. The limits of disturbance for the dam area appears to include borrow areas B, C, 1 and 2. Can you confirm whether the clearing & grubbing of these areas will be paid for under pay item 4 (stripping, clearing, grubbing of borrow areas) or if they need to be included in the base bid line item?

    Answer: Borrow Areas B and C are not within the limits of disturbance;

Borrow Areas 1 and 2 are. Therefor Borrow Areas 1 and 2 are part of the base bid, and Borrow Areas B and C are paid for by Item 4.

52. According to Addendum 1, Specification A1-6, borrow area "4" shown on the plans requires the contractor to obtain the design elevations as shown on the plans. It also appears that borrow areas 1 and 2 must be graded as shown on the plans due to them tieing into the dam grading. If blasting of rock is required to obtain design grades, will this be paid for as difficult excavation? We recommend that another line item be inserted into the bid form for blast rock in borrow areas, as the price for "difficult excavation" associated with the dam foundations plan will be at a much higher cost due to the method of removing that rock. If blasting of rock in the borrow areas is incidental to the base bid, then we will need to re-visit the site and perform extensive rock drilling in the borrow areas that must be graded to design elevations. Please specify whether all of the remaining borrow areas (B,C,1, 2,3) require the contractor to acheive the grades shown on the plans, or allow the contractor to modify grades to stay out of rock.

    Answer: Borrow Area 4 is the site of the reservoir intake and must be graded to the elevations shown. If rock is encountered, the unit price for difficult excavation will be utilized. The proximity of borrow areas 1 and 2 preclude any blasting or significant rock removal. Should rock be encountered it will have to be incorporated into the final grade of dam valley fill section. Borrow area 3 is to be graded below elevation 910 and will not require blasting for rock removal.

53. Technical Spec 02273 Seepage Drains, 3.05 - M, refers to drain outlet pipes being non-perforated ductile iron. The drain outlet headwall detail shown on sheet 2-C36 states 10' minimum length of ductile iron pipe. Please confirm that all chimney/blanket drain pipes are pvc, with the exception of the last 10' being ductile iron. If additional ductile iron is required, please specify the location where pvc transitions to ductile iron.

    Answer: Yes, they’re all PVC with the exception of the last 10 feet.

54. Please provide manufacturer and size information for the Air Release / Combination Air Valve on drawing 3-C02.

    Answer: Provide 4” Val Matic 201C Combination Air Valve, or equal.

55. Please provide structures and / or components where “Mass Concrete” specification section 03700 is applicable.

    Answer: As shown on Sheet 2-C37 Pipe Bedding Detail- Principal Outlet Pipe (Additional Depth) and Principal Outlet Structure

56. Please confirm if spray applied curing is acceptable for the vertical formed surfaces of structures following form removal. Reference specification section 3.07 part B states “method acceptable to Engineer”. However, part D “Membrane Curing” notes for interior and exterior slabs.

    Answer: Walls may be cured by leaving the forms tied in place and keeping the forms and all exposed surfaces of the concrete continually and visibly

wet for the duration of the curing period as specified in section 3.07.C. Water Curing. Continuous water-fog spray curing is acceptable. Refer to additional requirements as noted in specifications for Cast in Place concrete and mass concrete.

57. Drawing 3-S01, ISO Notes 54" Effluent. Should this be 48" Effluent?
    Answer: See Addendum 1.

58. Bid schedule Item 16, Principal Outlet Pipe. Estimated quantity is 1 and unit is LF. Should unit be LS?
    Answer: Yes, should be LS. See revised Table A, attached.

59. Bid schedule Item 19, and Bid Item 2.019 "Drilled Piers" is a separate item. However, specification section 01 22 13 Measurement and Payment, page 9 Part 2.020 "Principal Outlet Structure and Bridge", Item A lists drilled piers to be included in item 2.020. Please clarify which item the Drilled Piers are to be included and paid under.
    Answer: See revised Measurement and Payment Spec

60. Drawing 2-S06, Section 1 shows the 2'-0" bottom and 22'-0" wall section poured monolithic which is a constructability issue. Please provide acceptable construction joint detail for this area. Additional horizontal wall joints in barrel sections are recommended as formwork and concrete placements for 40' wall heights are a constructability issue also.
    Answer: Contractor may propose additional locations for construction joints.

61. Concrete slump, Section 03310, Part 2.08, B. Please provide acceptable slumps using plasticizer admixtures.
    Answer: Slump shall not exceed four inches prior to adding high-range water reducer and shall not exceed eight inches, measured at point of placement, after adding high-range water reducer. Water-reducing admixture shall conform to ASTM C494.

62. Specification section 03310, page 22, item 3.012 "Watertightness", can you please provide additional clarification on structures this will be required.
    Answer: Reservoir Principal Outlet Structure is required to be water tight. However due to difficulties associated with Testing Water tightness of the structure, the testing requirements are not applicable. However it is contractor's responsibility to provide a guarantee against defective or deficient workmanship and materials. Refer to specification 03310, section 1.07.A (page 6 of 24).

63. Article 6.02 of the general conditions states "Contractor will not permit the performance of work on Saturday, Sunday or any legal holiday without Owner's written consent". It further states that requests to work on these days will not be unreasonably withheld. Special Conditions section 12.03, provides the anticipated

lost work days for this contract that will not be subject to schedule extensions. There is a total of 85 days per year (170 total days for the contract). The contract schedule is for 730 consecutive calendar days. There are 208 weekend days in the 730 day schedule. If we encounter the maximum lost work days, the workable day schedule could be reduced to 352 days.

There are also liquidated damages associated with this contract. Can you confirm that no restrictions for Saturday / Sunday work will be made until it is evident that the overall schedule is not in jeopardy. Can you also confirm that the Owner's hired subs (testing, engineering, etc.) are aware of this and that NO cost will be passed onto the Contractor for weekend / overtime work associated with this project.

Answer: The Owner will pay all inspection fees throughout the Contract Time including excusable delays granted during the course of the contract.

64. The various geotechnical reports and remaining contract documents mention several times, how to handle the disposal of unsuitable materials. Specifically as listed below:

    Section 02116 (Stripping 3.03)
    Section 02200 (Earthwork 3.09)

    Can you confirm that adequate areas will be designated on site to handle the wasting of excess topsoil / unsuitable soils and that no haul off will be required?

    Answer: No haul off required.

65. Earthwork section 02200, subsection 2.01 Select Earthfill states that only the top 1 to 3 feet of material in isolated areas of the borrow pit may be suitable for use as "select fill". Subsection 3.03 C, states that "wherever the placement of fill requires material not available at the site or in excess of the material available from the authorized excavations, that the required materials will be obtained from other sources. It is virtually impossible to predict the amount of "select fill" that will be approved by the geotechnical engineer from the onsite soils. Can you confirm that it is the intent of this contract to use the "best available material from onsite borrow pits" in the select fill areas. If not would it be possible to add a unit price line item for import of "select fill"?

    Answer: Yes, all select fill will come from onsite borrow pits.

66. Specification section 11202, 3.7, A, notes "with no restrained joints". Drawing 3-C01 Notes 48" RJ DIP Class 150. Please clarify if restrained joints are required for the Raw Water Line.

    Answer: Restrained joints are required for the Raw Water Line as shown on 3-C01.

67. Will the owner / owner's rep require a job trailer that is supplied and maintained by the contractor?

    Answer: No.

68. The Grading for the "future dam access road" is shown on plan sheets C-204 and C-205 to run through areas designated as potential borrow pits as needed. Can you clarify if the cut shown in the areas of the dam access road, can be used as part of the

borrow material, or does this cut need to remain in place, thereby limiting us to only obtaining borrow material from the areas shown outside of the roadway grading? Would it be possible to get the cad file for the future dam access road, to assist us in grading out for additional borrow pits?

Answer: See Addendum 1

69. The cad file that was provided to us by Arcadis, does not appear to show the as-built topo as shown on the plans at the dam location. Can we please get the cad file of the existing topo that matches the plans? Thanks.

    Answer: See Addendum 1

70. Can we use Horizontal Rails on the Bridge? This is a cheaper alternative.

    Answer: See Specification Section 02850.

71. Can we use Weathering Steel on the bridge? I believe the plans indicate painted steel and weathering steel, weathering steel is cheaper.

    Answer: See Specification Section 02850.

72. What is the pipe size that the bridge will carry and type of material and weight per foot? Specs say use 62.4pcf for liquid but does not include weight of pipe.

    Answer: Bridge will not carry a pipe.

73. Will pipe be supported in middle of bridge or off to one side? Please provide drawing?

    Answer: Bridge will not carry a pipe

74. Can galvanized grating be used on a weathering steel bridge?

    Answer: Weather steel bar grating will be required for weather steel bridge. For painted bridges, the grating shall be galvanized in lieu of weathering steel and attached using grating clips or bolts as required by the grating manufacturer. Refer to Specification 02850 section 2.03.B.3. (Page 6 of 10)

75. Specification Section 01 22 13 Measurement and Payment Paragraph 2.01 BASE BID states the price is to include "… placement of all fill material related to the construction of the dam and appurtenances to the lines and grades shown on the drawings…". If the quantities of any of Bid Items 2.05 Under Cut, 2.06 Left Abutment Excavation, 2.07 Right Abutment Excavation, 2.08 Difficult Excavation increase, how will the Contractor be compensated for replacing this additional volume of embankment?

    Answer: See Addendum 1

76. Similar to question 1 above, how will increases in quantities of Chimney Drain and Blanket Drain materials be compensated for because of increases in excavation quantities?

    Answer: See Addendum 1

77. Specification Section 01 11 13 Summary Of Work Section 1.2.B Paragraph 4 states that “Phase 4 - Erosion and Sediment Control for the work associated with Phase 2 & 3…”. Please clarify if the erosion and sediment control scope of work for this contract includes all erosion and sediment control required on the Phase 4 – Erosion and Sediment Control drawings including features such as the reservoir clearing, dam access road, water treatment plant footprint, reservoir intake access driveway, reservoir pump station all of which are not a part of Phases 2 or 3.

    Answer: See Addendum 1

78. Specification Section 02273 Underdrains and Filters Paragraph 2.01.C Fine Filter requires the use of ASTM C-33 Natural Concrete Sand for this filter. Please provide the ASTM (or other standard) testing program/criteria and relative density requirements to meet the vertical coefficient of permeability after compaction value (0.2 feet/minute after compaction).

    Answer: We are targeting 95% compaction, which is a relative density of approximately 50%. Testing criteria is ASTM D-2434 for granular materials.

79. Specification Section 02200 Earthwork Paragraph 3.012.A states “The Contractor shall be responsible for all settlement of… embankments which may occur within one (1) year after final acceptance of the work by the Owner.” However, no provision for crest overbuild or camber to accommodate settlement has been included in the bid documents. Please provide the overbuild height of the dam necessary to accommodate the Engineer’s design criteria for the expected embankment settlement.

    Answer: See Sheets 2-C13 and 2-C14.

80. Specification Section 02200 Earthwork Paragraph 3.012.A states “The Contractor shall be responsible for all settlement of… embankments which may occur within one (1) year after final acceptance of the work by the Owner.” The section of the dam between Station 11+00 and 28+50 is constructed on a soil foundation. Please provide the overbuild height of the dam necessary to accommodate the Engineer’s design criteria for the expected foundation compression in this section of the dam embankment.

    Answer: See Sheets 2-C13 and 2-C14.

81. The detail captioned ‘Grout Cap Profile’ on Drawing 2-C25 depicts 1.5:1 slopes on the foundation grout cap. Please confirm that this is the maximum slope that will be required to be constructed as this is relevant top concrete placement requirements and drilling equipment requirements.

    Answer: Yes, this is the maximum slope.

82. Specification Section 02168 Diversion, Dewatering, and Care of Water Paragraph 3.02.A requires the Contractor to design the diversion to handle an undetermined recurrence period for a flood event. Please consider limiting the diversion design

requirement to a 10-year (or some other reasonable flood) flood recurrence to receive reasonable bids for this project.

Answer: We considered, but no.

83. Specification Section 02168 Diversion, Dewatering, and Care of Water Paragraph 3.03.N requires compliance with all regulatory permits. Please confirm that treatment of the discharge water will not be required.

    Answer: Treatment of the water may be required; contractor must meet all regulatory requirements.

84. Does Specification Section 03700 Mass Concrete apply to only concrete designated on the drawings as Class M or all concrete that meets the criteria stated in Paragraph 1.03.A Classification of Mass Concrete (overall smallest dimension of 3 feet or greater)?

    Answer: Yes, the spec applies to all concrete that meets the criteria stated in the Spec; however, the smallest dimension has been changed from 3' to 4'.

85. Drawing 2-C08 references 3 stockpiles of materials (common, select fill, and topsoil) that are Not in Contract (NIC). These stockpiles are in a designated Borrow Area for the Phase 2/3 contract. Please clarify if stockpiled material is for use by the Phase 2/3 Contractor, and if so, please identify the quantity of each for inclusion in our bid. If these stockpiles are not for use in the Phase 2/3 contract, how will that Contractor be able to use the in-situ material under the stockpile locations?

    Answer: The common and select fill stockpiles are for use by the Phase 2/3 (Dam) Contractor. The topsoil is reserved for the construction of the Water Treatment Plant. The stockpiles are currently being placed so final measurement is not possible. Estimated volume of the combined common and select stockpiles is approximately 200,000 cubic yards.

86. Drawing 2-S-11 states "Pre-fabricated Bridge (by others)." Please clarify if the Pre-fabricated Bridge is to be supplied and installed by this Prime Contractor under this Contract.

    Answer: Yes, it's to be furnished and installed by the Prime Contractor under this contract.

87. Drawing 3-C03 shows a cross section of a riprap lined channel but appears to make no mention of the thickness requirement for the riprap.; Please provide the thickness of the riprap in this channel.

    Answer: See Addendum 1.

88. We do not see anywhere where the Class of concrete is specified for the drilled piers. Please provide.

    Answer: See Drilled Pier Spec Section 02380

89. Specification Section 03310 Cast-In-Place Concrete Section 2.02 Materials paragraph C states all concrete is to have air entraining admixture. Is this a requirement of the drilled pier concrete also?

    Answer: No, air entraining admixture is not a requirement.

90. Drawing 2-S13 states "Pier Tip 50' Estimated Below Exist. Grade" This is a Lump Sum Bid Item. If the Contractor is required to drill deeper for these pier tips, than the stated 50', additional compensation may be required. We suggest, since the required depth is unknown at this time, making this a unit price bid item based on vertical foot of drill depth per hole and actual total drill depth.

    Answer: See Revised Measurement and Payment spec

91. Please provide a one-week extension on the bid deadline.

    Answer: See Addendum 2.

92. Bid Item #19, Drilled Piers represents 480 LF of drilled piers. Measurement and Payment Section states that this is a Unit Priced Bid Item per linear foot of completed pier. However, Bid Item #20, Principle Outlet Structure Bridge says the Drilled Piers are to be paid for under this Lump Sum Bid Item. We only see Drilled Piers under the two bridge supports. We believe, that since the bottom of these drilled piers (as detailed) is unknown, they will be paid for by the Unit Price in Bid Item #19. Please clarify which Bid Item the Drilled Piers are to be paid.

    Answer: See revised Specification Section 012213 – Measurement and Payment.

93. Pursuant to Question #92 above, the quantity of Drilled Piers is currently 480 LF. The detail shown on drawing 2-S13 states that the tip will be approximately 50' below existing grade but the quantity of 480 LF would lead one to believe that they are only 40' below existing grade. There are 12 each drilled piers so we think the quantity would be closer to 600 LF. Please verify.

    Answer: Payment item based on depth range of approximately 30'-50', so an average depth of 40' was used.

94. We are interested to review the answers to our questions submitted on May 23rd. If we do not receive answers to these questions before the revised question deadline of June 3, will we be able to ask questions concerning the responses to these questions after the June 3 question deadline?

    No Answer

95. The drawings do not clearly show the limits of work for clearing, grubbing, stripping and grassing of the entire project. Therefore, the areas of Bid Item #1 Base Bid lump sum work in relation to various Unit Price Bid Item unit price work cannot be determined. Are there any drawings available that will allow us to accurately identify the lump sum work and thus the relationship between the Project's lump sum areas and unit price work areas?

    Answer: See answer to question numbers 51, 112, 113, and 200.

96. Addendum #1, Question #22 concerning changes to the Verification Drilling and Testing states the addition of a bid item (2.015C) in the revised bid form for Additional Verification Holes. We do not see that item included in the revised bid form. Please include this in a future revised bid form.

Answer: See Revised Table A.

97. The Base Bid Item #1 Measurement and Payment states that all areas not Restored under other Bid Items (namely Restoration of Borrow Areas) will be grassed under this Lump Sum Pay Item. Is it the intent of this item that all disturbed areas will be restored, including areas that will be underwater in the reservoir?

Answer: Contractor must comply with NPDES Permit.

98. Addendum #1 Reissued drawing 2-C06 which shows Borrow Area A as needed. Elsewhere in Addendum #1 it states that Area A will be available as a borrow area. Please clarify that Area A is available as a borrow area at the Contractor's discretion.

Answer: All of Borrow Areas A, B, and C are available.

99. Specification Section 02273 Section 2.01C states the fine filter will be "natural C-33 concrete sand". Please consider the use of a manufactured sand to help reduce costs to the Owner.

Answer: No

100. Drawing 2-C24 detail Blanket Drain at Principal Outlet Pipe shows the "approved residual subgrade" as a rough surface. Can the Contractor install dental concrete under this sand to lessen the impact of the rough subgrade?

Answer: No

101. Concerning #9 above, if the Contractor is not allowed to install dental concrete in this area, will a Unit Price pay item be added for the additional fine drain filter (natural C-33 concrete sand) that will be required due to the irregularity of the rock surface?

Answer: No

102. Please provide the amount of embankment settlement that is anticipated in the design since this volume is included in a lump sum bid item.

Answer: See Sheets 2-C013 and 2-C014 and Report of Geotechnical Engineering Calculations, Volume 4 of 4

103. Addendum #1 modified and outlined the current allowable borrow areas. If the Contractor's assessment of the current allowable borrow areas does not provide us with the required amount of embankment material, where will the additional material come from and who is responsible to secure that material?

Answer: It is anticipated that all required material will come from the site.

104. Does the 40’ distance between construction joints in the concrete apply to both vertical and horizontal joint spacing?

Answer: No joints in the base slab, see previous answers regarding vertical construction joints.

105. Recent developments in the industry have eliminated one of the valve manufacturers shown in the specifications. Will the Engineer consider other valve manufacturers not listed in the specifications?

Answer: Hydro Gate has been added to the specification.

106. Sheet 4-ESCO6 references “Reservoir Limits of Disturbance.” Are these the limits required to be cleared and restored under the Phase 2 work?

Answer: Refer to dam clearing limits shown on Sheets 2-C010, 2-C011, and 2-C012.

107. Bid Item 2.026 references a Type C silt fence and details on Sheet 4-ESC29 reference a Type Sensitive and a Type Non-sensitive. Please detail the differences between these two types of silt fence applications.

Answer: All silt fence is Type Sensitive.

108. Does the quantity of 30,000 LF in Bid Item 2.2026 reflect the silt fence required at all borrow areas 1-4 and A-C?

Answer: Yes

109. Sheet 4-ESC20 contains a reference to the Dam Access Road (Phase 1) scope, but no “Not in Contract” notes. Please confirm this work is not a part of the Phase 2 scope.

Answer: Phase 1 is not in contract.

110. General Note 2 references Orange Barrier Fence with the silt fence. Is the Orange Barrier Fence to be installed parallel to all silt fence and paid for under the silt fence item? Please provide a detail or quantity?

Answer: No orange construction fencing is required with the silt fence.

111. Given the extensive amount of project information provided in Construction Drawings, Specifications and Appendices, it seems reasonable to believe that it will be challenging at best for bidding contractors to completely review and thoroughly comprehend all relevant project details within the limited time period available for bid preparation. Furthermore considering the overall complexities of the project work including preliminary design requirements for dewatering and supplemental erosion control systems, preliminary scheduling and sequencing of phased work, coordination of subcontractors and suppliers, and other construction considerations related to determining the best value ($) price for the project owner; we respectfully request that the project owner consider issuing a time extension to prepare bids of no less than three (3)

additional weeks.

Answer: Answered in Addendum No. 2

112. Based on comments at the pre-bid meeting, it is our understanding that the scope and limits of work for clearing and erosion control will be clarified in in 1st addendum. We further understand that the provided EC plans, Sheets 4-ESC01 thru 4-ESC31, encompass measures for three (3) different projects to be performed by different contractors; (1.) Dam Construction Contract, (2.) Reservoir Clearing Contract, (3.) Dam Access Road Contract. Please confirm that "Dam Clearing Limits" included in Bid Item 2.01 BASE BID (Section 01 22 13) include only Borrow Area 1 and Borrow Area 2, and please confirm that all other Borrow Areas including Borrow Areas 3, Borrow Area 4 and those Borrow Areas designated to be "as needed" (8 total) are all outside the Clearing Limits for the Dam Project.

Answer: All but Borrow Area 1 and 2 are outside the clearing limits.

113. Please confirm that Borrow Areas 1 and 2 are not included in Bid Item 2.04 STRIPPING, CLEARING AND GRUBBING– BORROW AREAS as described Section 01 22 13, Measurement and Payment. Please confirm that this Bid Item does include only Borrow Areas outside the Clearing Limits for the Dam Project including Borrow Area 3, Borrow Area 4 and those Borrow Areas (8 total) designated to be "as needed" as shown on plans.

Answer: Yes.

114. Please clarify which Borrow Areas are included in Bid Item 2.023 BORROW AREA RESTORATION as described Section 01 22 13, Measurement and Payment. Does this item include Borrow Areas 1 and 2 along with the Borrow Areas outside the Clearing Limits for the Dam Project including Borrow Area 3, Borrow Area 4 and those Borrow Areas (8 total) designated to be "as needed" as shown on plans?

Answer: Borrow Areas 1,2, and 3 are to be graded below elevation 910 and left as shown for final grade and do not require restoration. All others are included in Item 2.023.

115. GSWCC 2016 Edition, Page 6-138, Brush Barrier (Only during timber clearing operations) indicates limitations associated with Brush Barriers, and if greater filtering capacity is required, a commercially available sediment barrier may be placed on the side of the brush barrier receiving the sediment-laden runoff. Please confirm that Bid Item 2.026 SILT FENCE – TYPE C may be utilized at the discretion of the Engineer to supplement the effectiveness of proposed Brush Barriers. Please confirm that Contractor will not be required to supplement properly constructed but marginally effective Brush Barrier with Silt Fence at the Contractor's expense.

Answer: Type C silt fence will be paid at the contract unit price.

116. Are there any special Paulding Co. permits or license fees based on %

annual revenue [in Paulding Co.] that Contractor must obtain and/or pay in order to build the dam project?

Answer: The General Contractor will be required to have a Georgia Business License and a Georgia General Contractors License. Paulding County will not require additional licensing.

117. Is there a designated location or locations that must be utilized for Contractor's temporary office and/or storage complex?

Answer: No, as long as the location is in compliance with the requirements of the Section 404 permit.

118. What sources of water are available for use in construction? Please provide the location of connection points, as available.

Answer: A temporary water line will be available at the treatment plant site for filling water trucks or other equipment. The county has a water line along Highway 61 and may be contacted regarding any additional service.

119. What existing utilities are available for temporary connection to support field offices and construction works? Please provide the location for temporary utility connections including electrical, water, phone and cable, as available.

Answer: The Contractor may coordinate with the WTP Contractor in placing an office trailer on the west side of the WTP with parking for no more than six vehicles. This site has access to water, electricity and a common septic tank. The Owner will pay for water usage. The Contractor will pay for all connection fees and services other than water.

120. Please confirm that the 10 pages of what appear to be quantity take-offs, calculations and cost estimates that follow Bid Schedule, Table 00 41 13-A, in specifications are not relevant to the project work.

Answer: Yes, published in error.

121. GEOTECHNICAL NOTES, Sheet 2-G01, indicate No Stripping or Unauthorized Excavation will be allowed between Toe of Dam and Upstream Limit, see 2-C11. It seems like various work activities including much needed access to various features of work, staging, construction of diversion and dewatering features may likely need to encroach and/or cross through this restricted area at the upstream limit. Please clarify what work can be performed in this restricted area.

a. Will the Contractor be allowed to excavate and divert creek around POS foundation in this area?

   Answer: Yes, pending Dewatering, Diversion, Care of Water Submittal approval. All disturbed areas must be restored to pre-construction condition.

b. Will the Contractor be allowed to install dewatering features in this area?

Answer: Yes, pending Dewatering, Diversion, Care of Water Submittal approval. All disturbed areas must be restored to pre-construction condition.

c. Will the Contractor be allowed to establish construction access to Principal Outlet Structure (POS) and the POS access road in this restricted area?
Answer: Yes. Excavation other than required for the POS should be minimized and must be restored to pre-construction condition or per plans

d. Are there any special clearing requirements for this restricted area such as Zone A and Zone B reservoir clearing restrictions?
Answer: There are no special clearing requirements. No unauthorized digging is allowed in restricted areas. All areas must be restored to pre-construction condition.

122. GEOTECHNICAL NOTES, Sheet 2-G01, indicate Undercut may be spoiled only in designated areas as approved by Geotechnical Engineer. Please provide the location of designated spoil areas so that haul routes and other access planning can be estimated.

a. **Answer:** Undercut materials may be spoiled in the Valley Fill Area provided their placement does not impact the construction of the storm drains, borrow, dam embankment. Undercut materials may also be spoiled in depleted Borrow Areas.

123. GEOTECHNICAL NOTES, Sheet 2-G01, indicate All Existing Fill or Cultivated Material removed from beneath the dam foot print as approved by Geotechnical Engineer. Where does the Engineer anticipate encountering Existing Fill or Cultivated Material beneath the dam?

Answer: Existing fills are associated with drill rig access platforms and access roads for drilling and timbering. Possible cultivated soils and terracing observed on the right abutment.

124. Sheet 2-C08, BORROW AREA SHEET 6 indicates existing Stockpile Area #1 (Common Fill), #2 (Select Fill) and #3 (Topsoil) within the limits of an "as needed" Borrow Area. Will these existing stockpiled materials be available for use in the dam project?

Answer: Stockpile # 3 is designated for use on the plant site; Stockpiles #1 & 2 may be incorporated in the dam.

125. Will the Contractor be allowed to design and construct various Additional Stream Crossings as part of Water Control Plan and as necessary [but not currently shown on Erosion Plans] in order to access work? Please confirm that Contractor will be allowed to construct both Access Roads and Stream Crossings [as needed but not necessarily within limits of new dam construction] throughout the limits of clearing for dam construction as well as other areas around the reservoir in order to access work and suitable borrow. Please confirm that Contractor will be allowed to add necessary Stream

Crossings over Richland Creek and the various tributaries within the limits of dam work in order to access and build project. Please confirm that Contractor will be allowed to establish a route of access through the restricted area (Sheet 2-C11) at the upstream limit of the dam to the drilled pier and other foundation work at POS access road.

Answer: Additional crossings may be constructed within the footprint of the reservoir in compliance with the Georgia Manual for Erosion and Sediment Control. Excavations of natural materials should be limited and must be restored to pre-construction condition and approved by the geotechnical engineer. Contractor may establish route of access.

126. Is there any alternative access to the left abutment such as possible access via utility pipeline easements or local property owners? If so, would it be possible to provide any contact information, as available, for alternative access to left abutment.

Answer: Property ownership information is available on Paulding County website; contractor is permitted to contact property owners.

127. The Units and Quantity for Principal Outlet Pipe as shown in Section 00 41 13, Bid Form are not consistent with Bid Item 2.016 as described in Section 01 22 13, Measurement and Payment. It seems like this should be a Lump Sum item or the quantity should be changed to the estimated number of feet of pipe; please advise.

Answer: See revised Bid Form.

128. Bid Item 2.017 in Section 00 41 13, Bid Form appears to provide a significant quantity of additional pipe bedding beyond that which is covered in the pipe items. Please confirm that horizontal construction joints will be allowed in additional pipe bedding for 60" PCCP.

Answer: Yes, as requested and approved by the geotechnical engineer.

129. Please confirm that horizontal joints and potentially tie-down anchors and straps will be allowed in Concrete Pipe Bedding for HPPP in Storm Drain A in order to control floatation.

Answer: Tie down straps will be allowed.

130. Notes on Sheet 2-C29 and C30 indicate that pipe bedding requirements for HPPP Storm Drain B1 and B2 can be found on GDOT STD 1030D; however, we cannot find any reference to HPPP pipe in GDOT 1030D. While it would appear that Pipe Bedding, GDOT Foundation Backfill Material Type I or II soils may be acceptable, it should also be noted that this seems inappropriate for plastic pipe. Please clarify the type and depth(s) of pipe bedding materials that are required for Storm Drains B1 and B2.

Answer: Tie down straps will be allowed.

131. Notes on Sheet 2-C29 and C30 indicate that pipe bedding requirements for HPPP Storm Drain B1 and B2 can be found on GDOT STD 1030D; however, we cannot find any reference to HPPP pipe in GDOT 1030D. While it would appear that Pipe Bedding, GDOT Foundation Backfill Material Type I or II soils may be acceptable, it should also be noted that this seems inappropriate for plastic pipe. Please clarify the type and depth(s) of pipe bedding materials that are required for Storm Drains B1 and B2.

Answer: Contractor should use pipe bedding requirements for Smooth Lined PE Pipe found in GDOT STD 1030p.

132. Please provide the location or locations for Data Logger Station(s) to be used in connection with Foundation Monitors - Type 1 so that preliminary routing of data cable trenches may be estimated in accordance with Detail and Notes on Sheet 2-C35.

Answer: The locations of the Data Logger Stations has been intentionally not shown and will be field determined by the contractor in conjunction with the Geotechnical Engineer based on actual field conditions and the contractors sequencing and staging operations.

133. Please provide the location or locations for Remote Readout Station to be used in connection with Foundation Monitors - Type 2 so that preliminary routing of Liquid Filled Tubes and Vented Signal Cable trenches may be estimated in accordance with Details on Sheet 2-C35.

Answer: See answer to Question 131.

134. There does not appear to be any details for Slope Inclinometers, SI-1 thru SI-5, 2-C32/C33 and/or any related data cable trenches, 2-C34/C35; please clarify.

Answer: Specified slope inclinometer is wireless.

135. Toe Ditch Detail on Sheet 2-C36 appears to provide a substantial side apron of rip rap with filter fabric end wrap; however, there are no dimensions and the detail is N.T.S. Please clarify the dimensions of toe ditch end section and filter fabric end wrap.

Answer: 4'-6" horizontal.

136. Drainage Ditch Stabilization Detail shown on Sheet 2-C37 indicates that Design Velocity 2-ft/sec require Temp. Blankets, Mats or Similar Liners. Please provide the location and design velocity of various drainage ditches to receive Temp. Blankets, Mats or Similar Liners.

Answer: Note 1 for the Drainage Ditch Stabilization Detail has been deleted and replaced with the following note: "Refer to the Channel Stabilization (Ch) Detail provided on Sheet 4-ESC31 for channel/ditch lining requirements."

137. Drainage Ditch Stabilization Detail shown on Sheet 2-C37 indicates that Grass Lined Channels exceeding 6 ft/sec should include turf reinforcement mats. Please provide the location and design velocity of various drainage ditches to

receive turf reinforcement mats.

Answer: Note 2 for the Drainage Ditch Stabilization Detail has been deleted. Refer to the Channel Stabilization (Ch) Detail provided on Sheet 4-ESC31 for channel/ditch lining requirements.

138. Who is responsible for providing Special Inspections required on Sheet 2-S01? Are these Special Inspections owner-provided or Contractor provided?

Answer: Owner

139. Please confirm that the Access Road Contractor is responsible for the culvert at Rip Rap Channel as shown on Sheet 3-C01, and the Dam Contractor is not responsible for this culvert that is not detailed or shown in Bid Documents.

Answer: See Addendum No. 1

140. Typical Trench Section on Sheet 3-C02 appears to indicate that the entire 48" raw water line is encased in concrete. Please clarify the type and depth of bedding material to be used for the 48" raw water line as it appears to be encased entirely in concrete as shown in detail on Sheet 3-C02. What is the depth of "Select Materail Compacted" as shown abpove the pipe section in the same detail? What is the significance of the "Line of Narrow Trench Limit" since work is performed as part of Lump Sum Bid Item 2.024 RAW WATER PIPELINE?

Answer: See Addendum No. 1

141. With regard to Typical Standard Trench under Pavement as shown on Sheet 3-C02, where is this detail utilized?

Answer: See Addendum No. 1

142. With regard to Typical Concrete Encasement Detail as shown on Sheet 3-C02, where is this detail utilized?

Answer: See Addendum No. 1

143. With regard to Rip Rap Channel Section as shown on Sheet 3-C03, what is the required thickness of the 18" Diameter Rip Rap Section which seems to scale to approximately 1-ft thick?

Answer: See Addendum No. 1

144. With regard to Elevation Section 1/3-S01, it would appear that Underdrain Stone #57 extends down along the entire length of the Baffle Chute Section under the bottom chute slabs and between cut-off walls sections. Please confirm that #57 extends the entire length of the chute spillway and please provide the thickness of the #57 stone. If stone required, is there also a Filter Fabric required to separate the #57 from subgrade soils?

Answer: See Addendum No. 1

145. Section 4/3-S01 indicates #57 Stone (Washed), 1-ft Depth, 3-S02. What are the limits of fabric and underdrain #57 stone? Please clarify the underdrain section dimensions and limits for the entire chute spillway.

Answer: See Addendum No. 1

146. Please clarify the required type of pipe for the 6" Underdrain System as shown on Sheet 3-S01 including any wall pipe requirements such as DIP.

Answer: See Addendum No. 1

147. What is the width of the Cut-off Walls - Baffle Chute, 7 EA, as shown on Sheet 3-S01 which appear to be only 8' Wide per ISO view.

Answer: See Addendum No. 1

148. Can the Top Slab for the Baffle Chute as shown on Sheet 3-S01 be precast in the field and subsequently set as opposed to cast-in-place?

Answer: See Addendum No. 1

149. Top slab of the Baffle Chute can be a pre-cast slab. Pre-cast slab details and attachment to side wall will be required to be submitted prior to construction.

Answer: See Addendum No. 1

150. What is the width of the 48" Splash Inlet Pad, 4'L x 3'H x (?) Wide, as shown on Sheet 3-S01

Answer: See Addendum No. 1

151. Sheet 4-ESC02 NPDES COMPLIANCE (1 OF 2) indicates that a Hydrology Study and Design Report with Summary of Peak Discharge is available for the project. Item 43 HYDRO Y Refer to RCR Design Report [RE: Hydrology Study and Maps of Drainage Basins for both Pre- and Post- Developed Conditions]. Item 44 HYDRO Y Refer to RCR Design Report, Summary of Peak Discharge Flows are located in Table 1 and 2 [RE: Estimate of runoff coefficient or peak discharge flow at site Pre- and Post- construction activities]. Would it be possible to provide copies of these hydrology and hydrologic reports and studies to assist with the design of Water Control features?

Answer: See engineering report, attached.

152. Erosion Control Note 10 on Sheet 4-ESC01 indicates that If full implementation of the approved plan does not provide effective EC, additional E&SC measures shall be implemented to control or treat the source. How is the Contractor compensated for additional erosion control measures that are not shown on the plans?

Answer: See response to Question 121.

153. CONSTRUCTION SEQUENCE Note 1C shown on Sheet 4-ESC01 indicates that Contractor shall construct a cofferdam and divert stream flows to allow for the construction of the proposed RCR dam embankment. Please acknowledge that in addition to cofferdam an excavated diversion channel will be required to practically divert creek and other surface flow around work area. Please confirm that Contractor will be allowed to construct diversion and cofferdam systems within the restricted area at the upstream limits (2-C11), and please advise whether or not dewatering will be required for these temporary systems.

Answer: Yes, in accordance with approved Water Control Plan

154. POLLUTION CONTROLS Note 3.2 indicates that Concrete Washing Trucks - no wash-out onsite and all concrete waste shall be returned with each concrete truck for disposal at the concrete batch plant. Are local concrete companies aware of this requirement, and will there be any exceptions for engineered wash-out facilities which can be lined with impermeable material and maintained similar to formed concrete?

Answer: See answer to Question 7.

155. With regard to turbidity sampling and monitoring, what other sampling points will be established in connection with work performed by others upstream of the dam project including Dam Access Road, Treatment Plant, Intake Structure, and Reservoir Clearing? It seems like each of these projects will be discharging directly into receiving waters that run through the same monitoring point established on Sheet 4-ESC06 which could be problematic for Dam Contractor unless additional monitoring points are established for each sub-project. Is the Contractor required to perform supplemental monitoring of turbidity beyond that which is provided for in plans, Sheet 4-ESC06?

Answer: Monitoring points upstream are established for construction of the access road and water treatment plant.

156. Section 2 of the Bid Form indicates a Contingency Allowance of $1,500,000.00. Section 00 72 13, Part 11.02 appears to define two (2) types of allowances; Cash Allowance and Contingency Allowance. The General Conditions further indicate (11.02B) that Contractor agrees that the Cash Allowances include only the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes. Furthermore, Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the Cash Allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid. Additionally with regard to (11.02C) Contingency Allowance, Contractor agrees that a Contingency Allowance, if any, is for the sole use of Owner to cover unanticipated costs. (A.) Please clarify what costs, reimbursement and profits due the Contractor are included in the $1,500,000.00 Contingency Allowance, (B.) Please clarify what costs, reimbursement and profits due the Contractor in connection with the $1,500,000.00 Contingency Allowance that need to be included in Base Bid, and (C.) Does the Contractor need to add Overhead, Mark-up and Profits elsewhere in the bid?

Answer: The allowance is a Contingency Allowance. The Contractor should not carry any cost, overhead or profit related to the allowance in the Base Bid.

157. Section 00 52 13 Agreement indicates that (4.02A) the Work will be substantially completed within 730 calendar days after receipt of Notice to Proceed, and (4.03) if the Work is not substantially completed within the

specified time, then liquidated damages will be paid by Contractor. (4.04) In addition to the amount provided for liquidated damages, Contractor shall pay Owner the actual costs (Special Damages) reasonably incurred by Owner for engineering and inspection forces employed by Owner relative to the Work for each day that expires after Substantial Completion. Please provide a unit price rate schedule for engineering and inspection costs associated with the specified "Special Damages" indicated in Part 4.04.

Answer: Rates will be provided at the time of services (if required) based on required levels of inspection required.

158. Section 00 72 13, Part 6.02 indicates that all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer. Will the Contractor be required to pay for engineering and inspection services (e.g., Special Damages) in the event that work is performed on Saturdays?

Answer: The Owner will pay for inspection services.

159. Section 01 14 33 Work in Highway Rights-of-way appears to be missing. Based on the provided bid set of plans, there does not appear to be any work scheduled in public right-of-way; please confirm. Are there any intersection improvements scheduled for the intersection of Old Dallas Rd. and Cartersville Road which appears to be a generally unsafe intersection due to lack of site distance and turning radius?

Answer: Correct, and no improvements scheduled.

160. Section 01 57 33, Security indicates the Contractor shall employ watchmen as required to provide required security and prevent unauthorized entry. Costs for security required under this Section shall be paid by CONTRACTOR. Please clarify the Owner/engineer's expectation for the employment of security watchmen. Is a watchman mandatory and if so, during what hours or at what times?

Answer: The Contractor will determine the level of risk and provide any watchmen or other security that in the Contractor's opinion is required to protect his risk. The Owner will not require the provision of any security personnel.

161. Section 01 57 33, Security indicates to erect and maintain temporary fencing as shown and specified on the Drawings. (1.) Please clarify where temporary security fence will be required as there does not appear to be any shown on the drawings. (2.) Please provide a specification for the type of temporary security fence and other details (e.g., 6' chain-link, top rail requirements, 4' orange plastic barrier, post spacing, etc.) that will be required for use at the dam project site.

Answer: Rates will be provided at the time of services (if required) based on required levels of inspection required.

162. Section 01 61 00, Common Product Requirements indicates that Special Warranty

is written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by product manufacturer's warranty or to provide increased rights to OWNER. The specification also suggests that there are requirements for Special Warranties; however, special warranty terms and applicability is not clear. Please clarify exactly which products and/or equipment will require a Special Warranty and please provide details regarding the specific terms and special requirements.

Answer: Not applicable, see revised spec section.

163. Section 01 66 00, Product Storage and Handling Requirements indicates that Covered Storage (completely covered with covering impervious to water) is required for soil materials and granular materials such as aggregate. Please clarify the owner/engineers expectations with regard to covering of soil and aggregate stockpiles considering that there are literally hundreds of thousands of cubic yards of material.

Answer: Soil materials and granular materials such as aggregate do not required covered storage.

164. Part 3.2.A.4 of Section 01 71 33, Protection of the Work and Property indicates that Fires are not allowed. Please confirm that Contractor will be allowed to open burn clearing and natural wood debris onsite.

Answer: Subject to Metro-County Burn Ban.

165. Part 3.2 of Section 01 71 33, Protection of the Work and Property indicates to provide temporary fencing or barricades to protect trees and plants in areas subject to traffic. Please clarify where tree protection fence will be required, will it be required around entire perimeter of dam clearing limits, around perimeter of borrow areas, etc. What is specification for tree protection fence?

Answer: None required.

166. Section 02116 Stripping indicates that this specification section includes the careful removal of all topsoil, organic soil, soft soil, boulders, and all other soils or materials to a depth at which suitable subsoil is encountered from all areas which are to be cut to lower grades, to received fill, under structures, where required for the construction of the dam, as indicated on the Drawings, specified in these Specifications, or as recommended by the Geotechnical Engineer. Section 01 22 13, Measurement and Payment, Part 2.01 BASE BID includes all stripping of the dam area. (2.) It is not clear as to where "Base Bid" stripping stops and Part 2.05 UNDERCUT begins; please clarify. (2.) Please consider adding another Unit Price Item for Stripping so that there is not any confusion as to what is paid for as Stripping and what is paid for as Undercut.

Answer: Stripping will not be paid for areas to be undercut.

167. Section 02222, Excavation indicates that 3.07 A indicates that Excavation in the Floodplain will consist of removal of unsuitable materials (primarily alluvial in nature) and backfill with aggregate drain materials and/or Earthfill. Section 01 22

13, Measurement and Payment, Part 2.05 UNDERCUT indicates that the pay item is for Excavated Volume of undercut. How is the Contractor paid for backfilling the undercut area with the appropriate materials? Please note that the quantity of undercut and subsequent backfill is unknown so it will be unfair to all parties if backfill materials are included in the 2.01 Base Bid. Please consider adding Unit Price Items for Backfill of Undercut Areas with aggregate drain materials and Backfill of Undercut Areas with Earthfill, as appropriate.

Answer: See Addendum 1.

168. Section 02168, Diversion, Dewatering, and Care of Water, Part 3.03 I indicates that the Contractor must use wellpoints, cased wells and/or similar means of effectively dewatering the floodplain area. Shallow sumps and trenches will not provide adequate dewatering. Special allowances may be granted where competent rock is encountered. Please clarify as to whether or not these same dewatering methods will be required in order to excavate and construct various cofferdam and creek diversion systems through the floodplain. Will the criteria to lower groundwater 3-ft below subgrade be required in connection with excavation of diversion systems through the floodplain within the dam footprint and/or the restricted area upstream of the dam?

Answer: Excavations within the limits of the dam footprint must be dewatered in accordance with Diversion, Dewatering, and Care of Water.

169. Section 02168, Diversion, Dewatering, and Care of Water, Part 3.03 L indicates that Sedimentation and desilting basins shall be provided as necessary to prevent the entrance of excessive or injurious amounts of sand and silt from SURFACE RUNOFF or dewatering operations into storm drains or RECEIVING WATERS. The system used for desanding or desilting the water shall be a baffled structure and shall provide not less than five minutes detention time and shall be designed to have a "flow-through" velocity not exceeding 0.2 feet per second at the anticipated peak flow. Given that fact that there are no sediment basins shown on the approved Erosion Plans within the limits of dam clearing, and the only sediment basins shown on the erosion control plans, Sheets 4-ESC01 thru 4-ESC31, are at Borrow Area 3 and a single "as needed" Borrow Area at the Northside of the site; please confirm that the Contractor will be expected and required to design and build a number of additional sediment basins, as needed, to control sedimentation in connection with excavation of the dam footprint, excavation of various designated borrow areas and dam embankment construction. Please confirm that it is the intent of the erosion plan for supplemental sediment basins to be designed and constructed by Contractor as needed at no additional cost to owner to be included in Bid Item 2.025 EROSION & SEDIMENTATION CONTROL as described in Section 01 22 13, Measurement and Payment.

Answer: Yes and yes

170. Section 02200, Earthwork, Part 2.01 D indicates that Select Earthfill shall typically contain a higher clay content than the Common Earthfill Material and

generally fall within the requirements of Unified Soil Classification System (USCS) soil types CL, SC, the more plastic ML, possible CH, and certain of the MH soils. Select Earthfill is in limited availability within the project limits and is generally regarded as the upper 2 to 3 feet of the natural soil horizon immediately beneath the surficial topsoil layer in most borrow areas. Please confirm that there is sufficient Select Earthfill available for use within designated borrow areas in order to complete the project as contemplated without resorting to offsite borrow. Will the Contractor be expected to import any Select Earthfill from an offsite source in the event that there is not a sufficient Select Earthfill available from onsite sources, and who is responsible for the cost of importing Select Earthfill? Are there additional areas onsite that may possibly be utilized for borrow of Select Earthfill in the event that all designated Borrow Areas are exhausted?

Answer: All material come from on site. No other areas have been evaluated.

171. Section 02200, Earthwork, Part 3.03 H indicates that the costs for all work associated with the borrow areas including clearing, grubbing, stripping, final grading, and grassing shall be included in the base bid. Please clarify what work is included in Bid Items 2.04 and 2.023 as described in Section 01 22 13, Measurement and Payment.

Answer: See answer to Question number 114.

172. Section 02222, Excavation, Part 3.08 G indicates that should hard particles having maximum dimensions of more than 3 inches be found in otherwise approved Earthfill materials, they shall be removed by the Contractor either at the site of the excavation or after being transported to the area of fill placement, but before the materials are compacted. Does the Engineer envision the need for a crushing operation in order to generate sufficient earthfill and select fill from available borrow areas? Is there sufficient earthfill materials meeting the project specifications onsite without resorting to highly expensive crushing and processing operations?

Answer: Development of the earthfill to meet maximum particle size is incumbent on the contractor's means and methods.

173. Given the extensive amount of project information provided in plans, specifications and appendices, it seems reasonable to state that it is challenging for all bidding contractors to completely review and thoroughly comprehend all relevant project details within the limited time period available for bid preparation. With regard to Appendix A – Geotechnical Information, does the Geotechnical Engineer anticipate the need for blasting of trench rock along the 48" Raw Water Pipeline?

Answer: No. No geotechnical exploration has been performed within the limits of this project to evaluate the presence of rock along the Raw Water Pipeline.

174. Section 02229, Difficult Excavation, Part 3.01 D indicates to obtain a seismic survey prior to material excavation to determine maximum charges that can be used at different locations in area of excavation without damaging adjacent properties, other Work, or remaining foundation materials. Please provide detailed requirements and any evaluation criteria for the required seismic survey along with any qualification requirements that may be applicable.

Answer: No blasting is anticipated. Refer to Paragraph 3.03D.

175. Section 02273, Seepage Drains (Underdrains and Filters), Part 3.05 N indicates to install concrete trench plug along each Seepage Drain outlet as recommended by the Geotechnical Engineer. Sheet 2-C22 indicates four (4) trench plugs located on 3 blanket drain (BD) and 1 chimney drain (CD) line. Will concrete trench plugs be required on the remaining 4 CD lines or at any other locations?

Answer: No other trench plugs anticipated at this time.

176. Section 02486, Grassing indicates that Topsoil shall be dark organic weed free loam, free of muck and weeds; excavated from site. What are the owner/engineer's expectation with regard to screening of onsite materials? Will the Contractor be required to mechanically screen topsoil prior to respread or will it be satisfactory to remove objectionable materials with rakes, culling procedures during placement and spreading, and hand labor, as needed, to pick up and discard rocks, sticks and other objectionable materials?

Answer: Screening is not required provided rocks, sticks and other objectionable materials are satisfactorily removed by alternate methods.

177. Section 02486, Grassing, Part 3.09 indicates that the Contractor shall provide service and maintenance of seeded areas for eighteen (18) months from Date of Substantial Completion including mow grass at regular intervals, watering, control of weeds, reseed of bare spots, repair of erosion gullies and other task requirements. Please consider adding a separate Unit Price Bid Item for Service and Maintenance of Grassing.

Answer: No other bid item to be added. Limits of seeded areas that the Contractor is required to service and maintain as defined in specification Section 02486 have been added to sheets 4-ES-18, 4-ES-19, and 4-ES-20.

178. Section 02486, Grassing indicates …. 3.08 SEED PROTECTION, Cover seeded slopes where grade is 3:1 or greater with erosion fabric. Roll fabric onto slopes without stretching or pulling.

Answer: Not a question.

179. Section 2961, Verification Drilling and Testing, Part 3.010 B indicates that Measurement for performing verification drilling and testing added by the Geotechnical Engineer will be made by the linear foot. Payment for all costs in connection with furnishing all labor, materials, tools, supervision, equipment and

other incidentals necessary for added verification drilling and testing will be made at the contract unit price per linear foot for Added Verification Drilling and Testing, which price shall constitute full compensation for to complete the work in accordance with these specifications. However, there does not appear to be a Unit Price item for Added Verification Drilling and Testing; please clarify.

Answer: See revised Table A.

180. Section 03150, Concrete Accessories, Part 2.01 WATERSTOPS indicate several different systems for use on the project including (A.) Polyvinyl Chloride (PVC), (B.) Hydrophilic Waterstop Materials, and (C.) Injection Hose Waterstop System. However, it seems that only PVC waterstop is shown in the construction drawings. Please clarify where each of the specified systems are to be used on the dam project; (A.) Polyvinyl Chloride (PVC), (B.) Hydrophilic Waterstop Materials, and (C.) Injection Hose Waterstop System.

Answer: Only PVC waterstop is required.

181. The specification requirements for Polyvinyl Chloride (PVC) Waterstop provided in Section 03150, Concrete Accessories, Part 2.01 WATERSTOPS does not appear to be consistent with the requirements of Section 03252, Polyvinyl Chloride Waterstops with regard to material properties, fabrication/pre-fabrication of joint welds and other details. Please clarify as to which specification will govern the dam project work.

Answer: Comply with Part 2.01 of Section 03252.

182. Section 03310 Cast-in Place Concrete, Part 1.07G indicates all field sampling, field testing, making and curing of field test cylinders, and laboratory testing performed during concreting operations for the purpose of determining if the requirements of this specification section are being satisfied shall be conducted by an independent testing laboratory selected by the Owner and paid for directly by the Owner and not as a part of this Contract. However 1.07H indicates that the Contractor shall furnish any barrows, shovels, mixing boards, shaded area for preparing test cylinders, and similar equipment required by the testing laboratory representative for securing samples, making test cylinders, and conducting field tests. Are these things not provided by the owner's independent test laboratory in connection with the owner provided testing services as indicated in 1.07G?

Answer: The testing agency will provide all needed materials and equipment for sampling, preparing test specimens and testing.

183. Section 03310 Cast-in Place Concrete, Part 3.06 Finishing indicates that all permanently exposed surfaces and two (2) feet below high water elevation shall be expected to be smooth and of uniform texture and appearance. Please clarify whether or not the Contractor will be required to treat with damp cement mortar and/or rub finish the top (exposed roof) of the Baffle Chute.

Answer: Not required.

184. Section 03310 Cast-in Place Concrete, Part 3.012 Watertightness indicates that all structures for holding or carrying water shall be watertight, and watertightness testing may be required by the Engineer. Please clarify whether or

not the Contractor will be required to fill and test the (A.) Principal Outlet Structure and (B.) Baffle Chute for watertightness.

Answer: No testing will be required.

185. Section 03600 Grouting indicates that the Contractor shall provide all curing and necessary cube storage as specified in Section 14528, On-Site Facilities for Testing Laboratory. However, the referenced specification section is not included in the bid documents. Please clarify.

Answer: The testing agency will provide all needed material and equipment for sampling, preparing test specimens and testing.

186. Section 03700 Mass Concrete indicates that monitoring and controlling mass concrete temperature will be required on the project, and Contractor is directed to retain services of a consultant experienced in mass concrete mix designs and temperature control system designs. Please clarify as to where Class M concrete, as described in Section 03700, is used on the dam project, and please clarify the specific concrete elements that will require temperature control and monitoring systems as described in Section 03700.

Answer: Malin to compile and confirm Adarsh's answers.

187. Will Stainless Steel Flange Bolts be required for flange connections at valves and above ground DIP pipe at the POS?

Answer: Yes.

188. Section 11202, Buried Piping Installation indicates that where ENGINEER deems existing bedding material unsuitable, remove and replace existing bedding with approved granular material furnished, placed, and compacted in accordance with Section 02200, Excavation and Fill. Payment for additional excavation and providing granular material will be made under the unit price payment items in the Contract. Please confirm that additional excavation will be paid under pay item 2.05 Undercut, and please clarify which unit price items will be used for payment of the replacement granular material.

Answer: Pay item 2.05, Undercut, includes replacement of suitable material.

189. Section 11202, Buried Piping Installation indicates to test all piping, except as exempted in the Buried Piping Schedule in this Section. The specification also references the Buried Piping Schedule in this Section for type of test required and required test pressure, and it states to use test pressures listed in Buried Piping Schedule in this Section. If test pressure is not listed in Buried Piping Schedule, or if test is required for piping not listed in the Buried Piping Schedule, test pressure will be determined by ENGINEER based on maximum anticipated sustained operating pressure and methods described in applicable ANSI/AWWA manual or standard that applies to the piping system. However, the Buried Piping Schedule does not appear to be included in the specification. (1.) Please provide a specific and comprehensive list of the types of required pipe tests (e.g., air, hydrostatic, bacteriological, etc.) and test pressure requirements for All Pipe Systems including

(a.) 60" PCCP

Answer: Covered under primary outlet structure specification.

(b.) 48" Raw Water

Answer: 48" Raw water pipeline will not require testing.

(c.) 6" Above Ground Flanged DIP at valves for POS

Answer: 6" exposed DIP will not require testing.

(d.) PVC Underdrain Piping, if any.

Answer: PVC Underdrains will not require testing.

190. Based on our volumetric take-off of available borrow and required fill, it would appear that the dam embankment will require every bit of available soil from Left Right Abutment Excavations, Emergency Spillway, Ditches, Borrow Areas 1, 2, 3, 4, B, C, and A with not much room for waste and processing of weathered rock meterials seems inevitable to meet project specifications. Please confirm that additional borrow area(s) will be made available for Dam Contractor in order to complete project and the intent of this work is to complete project with onsite materials only without import of suitable soils (Earthfill) at dam Contractor's sole expense.

Answer: All material come from on site.

191. 15900 Instrumentation – What is the frequency of required for instrumentation readings (not limited to foundation monitors, slope indicators foundation monitors, observation wells) as required each sequence such as for example earthwork operations, embankment settlement and/or reservoir filling phases that the contractor is responsible for?

Answer: Contractor is only responsible for installing and conducting initial readings and calibrations.

192. Confirm elevation of settlement sensors FM2-15 thru FM2-21 sheet 2-C35? Detail shows placement 12in min below embankment subgrade whereas table indicates some elevation 760 feet. Please clarify as additional excavation and additional tubes and cable materials may be required?

Answer: Elevation should be 860, not 760.

193. Bid documents 01 31 19.13 para L.5 notes *prevailing wage rates;* is there a specific standard or non-standard to utilize (i.e. davis bacon GA86, or other)

Answer: No prevailing wage rates.

194. With regard to Pre-bid meeting (slide) presentation; Planned Reservoir Contractor Access to Borrow Areas as shown in picture below (Addendum 1 – Page 75 of 89);

a. What are the surface materials requirements (e.g., stone, geotextile, etc.) and who is responsible for maintenance of the WTP access road shown in "RED" below from Hwy 61 to Borrow Area A during dam construction which we understand occurs simultaneous at certain points in time with several other construction contracts by others such as Phase 1 Access Road, WTP contract, Reservoir Clearing, Raw Water Intake?

Answer: Surface material will be stone. Water Treatment Plant contractor is responsible for maintenance of road to Borrow Area A.

b. What are the surface materials requirements such as type of stone, depth of stone, width of stone, etc. and who is responsible for the construction and maintenance of the Raw Water Intake access road shown in "RED" below from Borrow Area A to Raw Water Intake?

   Answer: Dam contractor is responsible; surface materials are as needed for contractor to meet dam contractor requirements

c. Please clarify the intent of the Crossings 3a, 3b and 4 as shown on Sheet 4-ESC13 (revised 5/23/2016) which are not consistent with access routes shown in "ORANGE" below. Why are Crossings 3a, 3b and 4 there? Additionally, Crossing 2 on Sheet 4-ESC13 (revised 5/23/2016) is designated as Sr-B suggesting a Bridge crossing as opposed to Sr-C at other locations. The table provided in Addendum #1 suggests all culverts; is there any expectation or requirement that Dam Contractor must construct a temporary bridge crossing at this location? It may be needed?

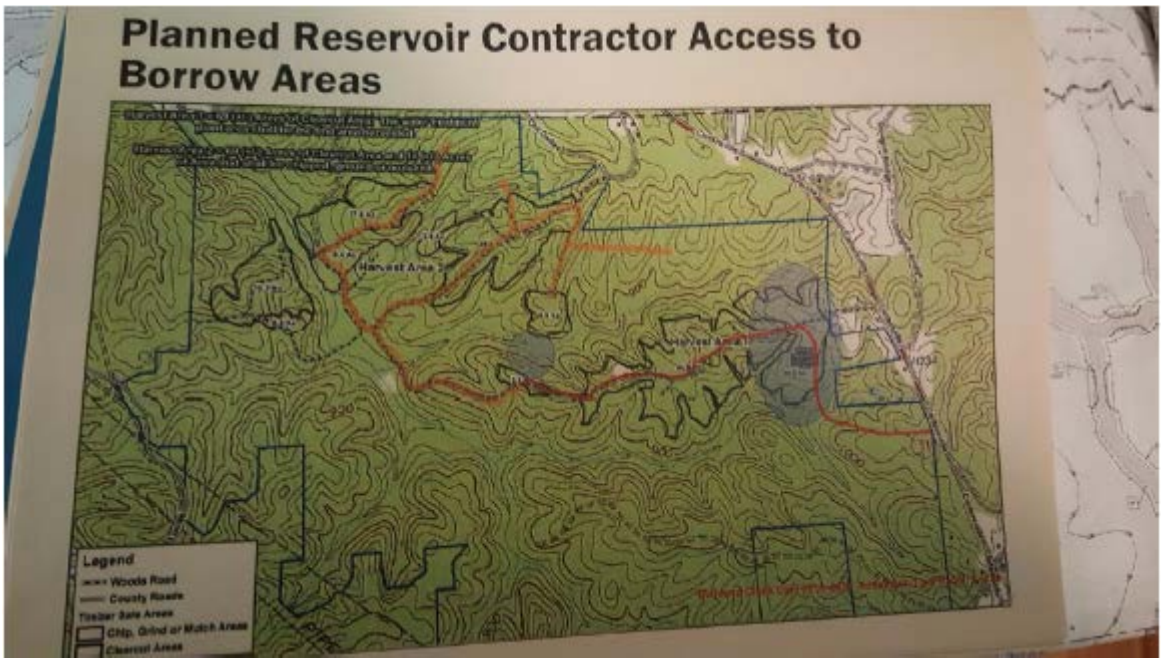
   Answer: Crossings are there to facilitate future reservoir clearing and are not in contract. No, there is not an expectation of a temporary bridge crossing at this location. Crossings are there to facilitate future reservoir clearing and are not in contract.

d. Please confirm that Dam Contractor will have ability to place fill and grade for access road construction to dam and borrow areas approximately (+/-) along "ORANGE" route below; and

   Answer: Yes except for Orange leg through Borrow Areas E, F, and G

e. Please confirm that Dam Contractor will have ability to place fill for access road construction and will have access to left abutment along "Woods Road" routes shown as "black/white" shaded-dash lines below.

   Answer: Within the designated boundary, the contractor will have that ability. Outside of the boundary, contractor would have to receive permission from local landowners.



195. Sheet 4-ESC06 (revised 5/23/2016) issued in Add#1 now indicates "Dam Construction Limits of Disturbance" which appears to differ from "Dam Clearing Limits" as shown on Sheet 2-C10. Additionally, the limits shown on Sheet 4-ESC06 (revised 5/23/2016) and Sheet 2-C10 appear to differ from the "Dam Clearing & Grubbing Limits" as shown in USACOE Permit SAS-2007-01410, Appendix 2 - Page 17 of 69.
    a. Please clarify in words (i.e., includes or excludes Borrow Area 1, 2, B, C, etc.) and delineate on drawings the limits of Clearing & Grubbing work that Dam Contractor must include as Part 2.01 BASE BID of Section 01 22 13 Measurement and Payment (i.e., The Base Bid includes but is not limited to all clearing, grubbing, stripping of the Dam Area).
    Answer: See answer to question numbers 51, 112, 113, and 200.

196. Engineer's response to Question 7 in Addendum #1 indicates that the limits of timber harvest are indicated on the drawings. While we see limits for timber harvest on the map provided with Site Access Request Form and (slide) presentation map in above picture, it should be noted that we are unable to find this information in the project drawings.
    a. Please clarify which drawing sheet(s) show the limits of timber harvest activities or please delineate the limits of timber harvest activities [with respect to Dam Clearing & Grubbing for BASE BID and BORROW AREAS] on bid set of construction drawings so that take-offs can be completed;
        Answer: Timber harvesting will have been completed within clearing limits for the dam and borrow areas A and 4.
    b. Who is responsible for tree removal within Stream Buffers along Richland Creek and its tributaries within Dam Limits of Disturbance and/or Dam Clearing & Grubbing?

Answer: Dam Contractor

c. What E&SC measures will be installed by the timber harvest contractor; brush barrier, silt fence, stream crossings, etc.?

Answer: Timber harvest contractor will comply with timber harvest BMPs

d. Who is responsible for Reservoir Clearing outside Dam Limits of Disturbance? Please confirm that it is not the Dam Contractor and by others.

Answer: By others

197. Note 4 on Sheet 2-C08 (revised 5/23/2016) indicates E&SC for Dam Access Road is not in contract (NIC), and Engineer's response to Question 3 in Addendum #1 indicates that Borrow Areas D, E, F, G and H are not available for use or NIC. It is somewhat confusing that Add#1 includes a couple of revised Sheets 4-ESC21 and 4-ESC11 since proposed E&SC work as shown on these sheets is understood to not be in contract, NIC.

a. Please clarify and/or confirm that Dam Contractor is not responsible for any proposed E&SC work along access road and borrow areas as shown on Sheets 4-ESC21 and 4-ESC11 (revised 5/23/2016);

Answer: Confirmed

b. Please confirm that Dam Contractor is not responsible for any maintenance of E&SC measures along access road and borrow areas as shown on Sheets 4-ESC21 and 4-ESC11 (revised 5/23/2016);

Answer: Confirmed

c. Please confirm that Dam Contractor is not responsible for any Grassing (Section 02486) or 18-month maintenance (Part 3.09, 02486) along access road and borrow areas as shown on Sheets 4-ESC21 and 4-ESC11 (revised 5/23/2016); and

Answer: Confirmed

d. Please specify and clarify the exact work that Dam Contractor will be responsible for on Sheets 4-ESC21 and 4-ESC11 (revised 5/23/2016).

Answer: All work not labeled with “Not in Contract”.

198. Special Condition 21 of USACOE Permit SAS-2007-01410 and Water Quality Certification (Appendix 2 - Page 67 of 69) condition 3 indicates that a stream Buffer Variance may be required by the Georgia EPD. Based on the temporary site access, stockpiling, staging and diversion requirements in waters upstream of the dam embankment within limits of the reservoir pool and the location of existing stockpiles for common fill and topsoil in Borrow Area A by WTP access road contractor within the 50’/50’ buffer at uppermost reach of natural watercourse as shown on Sheet 2-C08 (revised 5/23/2016), it would appear that a Buffer Variance may be required or has already been granted.

a. Please clarify the status of a Buffer Variance with Georgia EPD, and please clarify whether or not a Buffer Variance is required and/or has been granted for temporary work associated with site access, stockpiling, staging and diversion requirements by Dam Contractor in waters upstream of the dam

embankment within limits of reservoir pool.

Answer: No buffer variance required

199. USACOE Permit SAS-2007-01410 indicates that the construction of the earth embankment dam will involve discharge of approximately 3.0 million cubic yards of fill material and will impact 50,127 linear feet of perennial and intermittent streams and 1.34-acres of wetlands.
    a. What is the origin of the 3.0 million cubic yards of fill which appears to be more than the dam embankment?

        Answer: permitting estimate
    b. Does the 3 million CY consider stockpiled materials, staging and access road fills to be placed within reservoir below EL. 910 and upstream of the dam? And

        Answer: No
    c. Please confirm that Permit authorizes Contractor to work responsibly (i.e., in compliance with requirements of the GA Manual for Erosion and Sediment Control) in the waters upstream of the dam embankment.

        Answer: The contractor is to meet the conditions of the US Army Corps of Engineers permit and any other applicable state and local requirements.

200. Special Condition 7 of USACOE Permit SAS-2007-01410 refers to waters authorized to be impacted and waters not authorized to be impacted which are located downstream of the authorized dam construction site.
    a. Please clarify and/or confirm that upstream waters (i.e., perennial and intermittent streams and wetlands) between Borrow Area 4 and the Dam Embankment/Borrow Area 1/Borrow Area 2 are waters authorized to be impacted and discharge of fill material is authorized in connection with site access roads, stockpiling of materials and other measures required for the temporary diversion of water;

        Answer: Yes within the conditions of the permit.
    b. Please clarify and/or confirm that upstream waters (i.e., perennial and intermittent streams) between Borrow Area 1 and the Dam Embankment are authorized to be impacted and discharge of fill material is authorized in connection with site access roads, stockpiling of materials and other measures required for the temporary staging of work; and

        Answer: Yes within the conditions of the permit.
    c. Please clarify and/or confirm that waters of Richland Creek between Borrow Area 4 and the Dam Embankment are authorized to be impacted and discharge of fill material is authorized in connection with temporary diversion of water and site access road to left abutment.

        Answer: Yes within the conditions of the permit.

201. Special Condition 10 of USACOE Permit SAS-2007-01410 indicates that unless authorized by this Permit, stockpiling of fill material is prohibited within 200 feet of streams. Based on the location of existing stockpiles for common fill and topsoil

in Borrow Area A by WTP access road contractor within the 50'/50' buffer at uppermost reach of natural watercourse as shown on Sheet 2-C08 (revised 5/23/2016), it would appear that stockpiling of fill materials in waters upstream of the dam is authorized under the Permit.

a. Please confirm that Permit authorizes Contractor to stockpile materials responsibly (i.e., in compliance with requirements of the GA Manual for Erosion and Sediment Control) in the waters upstream of the dam embankment within limits of reservoir pool.

Answer: Yes within the conditions of the permit.

202. With regard to removal of temporary access roads, staging and stockpile areas:

a. What are the requirements for the removal of access roads, stockpiles and final grades for staging areas upstream of dam within reservoir?

Answer: Must be returned to pre-construction conditions.

b. Will the Dam Contractor be allowed to leave access roads in-place upstream of the dam embankment within limits of reservoir pool?

Answer: Must be returned to pre-construction conditions.

c. Will the Dam Contractor be required to restore reservoir bottom to original grades or will Contractor be allowed to leave excess natural rock and soil materials in reservoir bottom?

Answer: Must be returned to pre-construction conditions.

203. Special Condition 5 of USACOE Permit SAS-2007-01410 indicates all earthen fill material used for dam construction shall come from within the limits of lands purchased for construction of the reservoir, and it further indicates that a Plan Submittal for Corps approval is required in the event that off-site borrow material is necessary. Considering the apparent scarcity of Select Earthfill available at the project site (e.g., CL, SC, the more plastic ML, possible CH, and certain of the MH soils per Section 02200 Earthwork), it seems reasonable to think that imported clay borrow may be required to complete the dam project.

a. What are the Plan Submittal requirements for the USACOE in the event that imported clay borrow is required, and what is the turn-around time for Corps approval?

Answer: It is anticipated that all required material will come from the site

204. Section 02222 Excavation, Part 3.07A indicates that Excavation in the Floodplain will consist of removal of unsuitable materials (primarily alluvial in nature) and backfill with aggregate drain materials and/or Earthfill.

a. Please clarify the type of Earthfill that will be used to backfill floodplain, Select Earthfill or Common Earthfill, as described in Part 2.01 and 2.02 of Section 02200 Earthwork;

Answer: See Sheets 2-C016 and 2-C017.

b. Please clarify the type of Earthfill will be used to backfill undercut area at (+/-) Station 24+00 to 25+00, Select or Common; and

Answer: Common

c. While the 10-ft thick x 75-ft wide section of Select Earthfill from Stations 2+00 to 9+00 over grout cap and Stations 15+00 to 23+00 at cut-off wall appear to be clear, it should be noted that the limits of Select Earthfill between Station 9+00 and 15+00 are not clear. Is there any other Select Earthfill required other than the 4' Blanket that extends upstream of the Chimney Drain between Station 9+00 and 15+00?

Answer: Select fill should also extend from 15' downstream from the chimney to a minimum of 100' upstream of the chimney.

d. Please clarify the extent of Select Fill between Station 9+00 and 15+00, if any (excluding 4-ft x 100-ft upstream blanket extension).

Answer: Select fill should also extend from 15' downstream from the chimney to a minimum of 100' upstream of the chimney.

205. Special Condition 29f of USACOE Permit SAS-2007-01410 indicates to the maximum extent practicable, land clearing and construction activities shall be limited to times outside the spawning period of the Cherokee darter (April 1 to June 15).

a. Is the Dam Contractor expected to shut the project down for 2.5 months per year in 2017 and 2018 or approximately five (5) months total during this construction contract?

Answer: No

b. Was this 5-month shut-down period over contract duration considered when determining contract duration of 730 days? If not, will the Project Owner/Engineer consider extending contract duration an additional 5-months which may still not be enough time considering access requirements, diversion requirements and complex sequencing requirements.

Answer: See answer to 209a

c. Considering endangered species requirements, access requirements, diversion requirements and complex sequencing requirements, the contract duration of 730 days appears to be inadequate by approximately ten (10) months. Did Project Owner/Engineer utilize logic-based scheduling software utilized to determine project duration and if so, would it be possible to provide prospective bidders with a copy of that Project Schedule utilized to establish contract duration of 730 days?

Answer: See answer to 209a

d. Will the Project Owner/Engineer consider extending contract duration an additional 10-months to allow for accommodation of endangered species requirements, access requirements, diversion requirements and complex sequencing requirements?

Answer: See answer to 209a

206. With regard to Phase 3 construction;

a. When can Phase 3 be started by Dam Contractor?

Answers: Upon Notice to Proceed

b. It is our understanding that 48" RW will be stubbed-out under Old Dallas Rd. by others for connection by Contractor during Phase 3 on the reservoir

side of Old Dallas Road. When will this stub-out be in-place, and when will it be charged with water?

Answer: Approximately August 2019

c. Will Dam Contractor be allowed to make a temporary water connection to the Phase 3 stub-out under Old Dallas Road by others and will Dam Contractor be allowed to utilized Raw Water for Grouting and other aspects of construction?

Answer: No

207. Bid documents indicate that Ditch No. 1 must be constructed prior to constructing Valley Fills at the NE quadrant of the site:

a. Are there any restrictions preventing construction of Ditch No. 1 at the onset of work, as soon as practical?

Answer: No

b. Are there any restrictions preventing Dam Contractor from discharging fill in the lower segment of that same natural watercourse down to Richland Creek but upstream of the dam embankment following completion of Valley Fills provided the requirements of GA Manual for Erosion Control are adhered to? Is Stream Buffer variance required or would this be authorized under existing USACOE permit and related impacts?

Answer: No, there is no stream buffer variance required and contractor must comply with USACOE permit.

208. Section 01 22 13 Measurement and Payment, Part 2.01 Base Bid indicates that "stripping of the dam area" is included in the Base Bid. However, Parts 2.06B and 2.07B, Left and Right Abutment Excavation indicates the depth of excavation is taken from natural ground surface to bottom of excavation. Similarly, Part 2.05 Undercut also indicates the depth of excavation is taken from natural ground surface to bottom of excavation.

a. Based on our volumetric take-offs of dirt quantities and Section 01 22 13 Measurement and Payment, it would appear that stripping of topsoil from Left Abutment and Right Abutment is paid for in the Abutment Excavation items and topsoil (stripping) volumes are included in the Engineer's provided quantities of 234,000 CY and 291,000 CY respectfully. Please confirm that topsoil (stripping) is paid under those abutment excavation items for the abutment areas.

Answer: No, clearing, grubbing, and removal of topsoil is in the base bid for all areas.

b. Based on our volumetric take-offs of dirt quantities and Section 01 22 13 Measurement and Payment, it would appear that stripping of topsoil from Undercut Area is paid for in the Undercut Excavation items and topsoil (stripping) volumes are included in the Engineer's provided quantity of 86,500 CY. Please confirm that topsoil (stripping) is paid under the Undercut item in the floodplain and other undercut area at (+/-) Station 24+00.

Answer: Yes

c. While our volumetric take-off quantities for Left Abutment Excavation and Undercut are generally consistent with the Engineer's quantities assuming Engineer's quantities include topsoil, it should also be noted that our take-off quantity of excavation for the right abutment appears to be significantly different from the 291,100 CY quantity provided by the Engineer. It would appear that the Engineer's quantity for right abutment excavation includes the volume of Undercut as well as topsoil. Please double-check the provided quantity of 291,100 CY for Item 2.07 to be sure that Undercut volume was not accidentally included suggesting possibly an approximate 86,500 CY under-run of right abutment excavation at completion.

Answer: Unit price governs.

209. Drawing 2-C35 shows the Foundation Monitor-Type 1 as being Geokon 4500S sensor. Specification Section 15900; Part 2.03 says Geokon 4500HD sensors. The 4500HD use a heavy duty cable that is significantly more expensive than that which is required for the 4500S sensors and will result in a significant price increase. Please clarify whether 4500HD or 4500S sensors are required.

Answer: Specification will govern.

210. Please consider clarifying timber harvest activities in next addendum such as limits of harvest activities on bid drawings, timber cutting criteria (e.g., stumps remain, stream buffer not harvested, extent of optional harvest), timber debris removal criteria (e.g., availability of debris for brush barriers, existing trash and garbage onsite, etc.) and any other information (e.g., stream crossings installed by logging contractor, etc.) so that bidding contractor's for dam have better understanding of what they are going to encounter when site is turned-over to dam contractor following harvest activities. In general, it should be noted that we are struggling to understand work not in dam contract and to be performed by others. Detailed, comprehensive clarification of work not in contract (NIC) in future addenda would be greatly appreciated.

Answer: See answer to Question 196.

211. Drawing 2-S13 has a detail named Bridge Bearing Detail. This detail has no references as to where this detail goes. It does not appear to match up with the plan on drawing 2- S11 Bridge End Abutment. Please clarify the location of the Bridge Bearing Detail.

Answer: The Bridge Bearing detail is for the Bridge Bearing at Principal Outlet Structure Tower. Refer to section 3/2-S10 on Drawing 2-S10 for the location where bridge bearing is applicable.

212. Please confirm the width of the pedestal cap shown in detail in Section 2, drawing 2-S13 is the same width as the pedestal itself - 12' 6".

Answer: Since there is no detail 2 on sheet 2-S13, the engineer assumes that the contractor is referring to detail 2 on sheet 2-S12, in which case the answer is, the pedestal cap is larger than pedestal itself. Refer to Upper Plan View for Bridge Intermediate Support Detail 2 on Sheet 2-S11.

213. Sheet 4-ESC06 references a table-Sediment Storage. Where is Pond 1B?
Answer: Ignore reference to Pond 1B, it is not part of this project.

214. Sheet 4-ESC28 references Temp Stream Crossings. Stream crossing's 1, 2, 3, and 4 are not mentioned. Please confirm. Are all crossings to be included in the lump sum of erosion control?
Answer: Crossings are there to facilitate future reservoir clearing and are not in contract.

BIDDING REQUIREMENTS

A3-1 Section 00 41 13- Bid Form
Replace Table A with the attached Table A (Addendum No. 3)

SPECIFICATIONS

A3-2 Section 00 73 01 – Supplementary Conditions

Paragraph SC-6.02.B.1:

Delete Paragraph SC-6.02.B.1 and replace with the following:

SC-6.02.B.1. Except where otherwise prohibited by Laws or Regulations, regular working hours at the Site are defined as beginning no earlier than 7:00 a.m. and ending no later than 6:00 p.m. Work outside these hours will require prior approval by the Owner.

A3-2 Section 01 22 13 Measurement and Payment

Add the following Paragraph 2.015C:

2.015C ADDITIONAL VERIFICATION HOLES

A. Additional Verification Drilling and Testing

1. This item will include all work related to performing verification drilling and testing added by the Geotechnical Engineer. This item will include all Work related to performing added verification drilling and testing for furnishing all labor, materials, tools, supervision, equipment and other incidentals necessary to complete the work in accordance with these specifications.

2. This item will be measured and paid to the nearest linear foot.

A3-3 Section 01 22 13 Measurement and Payment

Paragraph 1.04.A: Replace Paragraph 1.04.A with the following:

B. Cutoff Wall (Seepage Reduction Barrier): A continuous, narrow, vertical-walled trench constructed through the weathered overburden materials (embankment and foundation materials) and keyed into sound (groutable) rock from a prepared platform grade of specified minimum width; excavated in panels under slurry with clamshell, chisels and/or hydro-mill equipment; and, replaced with engineered materials of controlled properties. The control measures and the testing procedures used to demonstrate that the Cutoff Wall is installed in accordance with the requirements of the specification and the design intent shall include but not be limited to the following performance criteria:

1. Geometry – Position, Depth/Embedment (Key), Width, Length, and Verticality

2. Material Properties – Unconfined Compression Strength, Strain Compatibility, Deformability/Compressibility, Unit Weight, and Permeability

Paragraph 1.07.A.1: Replace Paragraph 1.07.A.1 with the following:

Paragraph 1.07.A.1: The Cutoff Wall shall be a minimum of 30-inches wide through the entire length and depth of the trench including at the overlap between panels. A minimum of two independent methods shall be used by the Specialty Contractor for verifying trench width and depth measurements. These measurement methods shall be industry standard methods, utilizing real-time monitoring equipment, for construction verification.

Paragraph 1.08.A.1: Replace Paragraph 1.08.A.1 with the following:

Paragraph 1.08.A.1: The Specialty Contractor shall submit a daily Excavation and Placement Log to the Geotechnical Engineer. At a minimum, these logs shall contain the following information: dates, times, excavation rates, elevations of material types encountered during excavation and profile showing the limits of each shift of excavation; key-in depth, notes including items such as down time, difficulties during excavation or placement, slurry loss (as applicable to method), and other pertinent information. In addition, the log shall show limits of each batch panel, section or column of completed Cutoff Wall, as applicable, for its entire length and depth shall be delineated as placed. Reports should also document items such as verticality measurements, bentonite exchanging, joint and base cleaning, deviation from tolerances, corrective actions, etc. The measurements shall be used to generate an As-Built Profile of the Cutoff Wall, as constructed. Daily reports shall be submitted by noon of the day following the date of the report. Laboratory test results shall be submitted within 2 days of receipt of the report from the laboratory.

Paragraph 1.08.C.1: Replace Paragraph 1.08.C.1 with the following:

Paragraph 1.08.C.1: An As-Built Profile shall be continuously maintained at the project site for reference and shall be included as part of the record documents. This profile shall indicate the extent of excavation at the end of each workday and after each backfill batch is placed in the as determined from soundings or approved alternate methods consistent with Cutoff Wall construction, and a description of the materials encountered in the each during excavation in conjunction with provided and obtained geologic data from subsurface explorations. The backfill batch numbers shall appear on the profile with the limits of each batch of material delineated as placed.

Paragraph 3.07.A: Replace Paragraph 3.07.A with the following:

Paragraph 3.07.A: The Specialty Contractor shall be responsible for ensuring and maintaining the stability of any excavated trench, panel or column at all times for its full length and depth. The Cutoff Wall Work Plan, the excavation techniques and evaluation of trench stability should consider the placement of the previously installed Chimney Drain/Foundation Drain below the Elevation 860 pad level and Curtain Grouting operations below the Elevation 850 pad level. The Specialty Contractor shall make regular observations of excavations to determine if tension crack formation or other signs of distress/deformation are occurring The slurry level within the trench, panel, etc., shall be maintained, at all times, within 2 feet of the working surface level. In addition, the Contractor shall not have more than 6 panels open or partially open at the same time and shall limit the maximum length of any open trench/panel to 20 feet. Maximum open trench/panel length shall be evaluated during construction and is subject to change by the Geotechnical Engineer if trench conditions warrant. Once excavation has begun for any panel, no excavation shall be accomplished within 25 feet of that panel until backfill placement operations in that panel have been completed for 36 hours.

Paragraph 3.09.C.4: Replace Paragraph 3.09.C.4 with the following:

Paragraph 3.09.C.4: Excavation Width: The excavated trench width shall be determined by measurements at least at both ends of the primary panel not to exceed 10 feet between measurements and in each closure panel. These measurements shall be recorded by station and depth and submitted as part of the Excavation and Placement Log and recorded on the As-Built Profile.

Paragraph 3.010.A.1: Replace Paragraph 3.010.A.1 with the following:

Paragraph 3.010.A.1: One bulk sample of the backfill materials shall be taken at least once per 24-hour day. Each sample shall be taken randomly from different batches (morning, afternoon, evening, etc.). The bulk samples shall be taken

from within the trench location soon after placement, or otherwise appropriate for the method as described in the Cutoff Wall Work Plan, and used for quality control testing indicated in Table 1 at the end of this section. As a minimum one bulk sample of backfill material shall be taken from each panel placement.

Paragraph 3.014.B: Replace Paragraph 3.014.B with the following:

Paragraph 3.014.B: Bentonite slurry shall be sampled a minimum of 2 times each shift, near the beginning and end of each shift. The samples shall be collected at two depths, approximately 2 feet below the slurry surface and approximately 2 feet above the bottom of the trench.

A3-5 Section 11203 Sluice Gates
Revise Paragraph 2.01.B. to say "Sluice gates shall be as manufactured by Rodney Hunt, Waterman, Hydro Gate, or approved equal."

A3-6 Section 02486 Grassing
Revise Paragraph 3.08.A. to say: "Cover seeded slopes where grade is 2.1 or greater with erosion fabric. Roll fabric onto slopes without stretching or pulling."

DRAWINGS

A3-7 Drawings reissued:
2-S05, 2-S06, 2-C37, 4-ESC01, 4-ESC02, 4-ESC18, 4-ESC19, and 4-ESC20

ARCADIS U.S., Inc.
By: John C. Dean, PE
Title: Project Manager

+ + END OF SECTION + +