## AGREEMENTS FOR ENGINEERING SERVICES (Publicly Funded Project)

THIS Agreement, made this <u>31st</u> day of <u>July</u> 20<u>19</u> (effective date) by and between <u>the</u> <u>Incorporated County of Los Alamos</u> hereinafter referred to as the OWNER, and <u>Bohannan</u> <u>Huston, Inc.</u> hereinafter referred to as the ENGINEER. This contract expires on <u>March 31,2022</u>.

The OWNER intends to construct a Project consisting of the design and construction of improvements to the Los Alamos County White Rock Wastewater Facility

in <u>Los Alamos</u> County, State of New Mexico, which may be paid for in part with financial assistance from the United States of America acting through the United States Department of Agriculture – Rural Development, hereinafter referred to as USDA-RD; and/or through the United States Environmental Protection Agency, hereinafter referred to as EPA; and/or the New Mexico Environment Department, hereinafter referred to as NMED; and/or the New Mexico Finance Authority, hereinafter referred to as NMFA; and/or the New Mexico Department of Finance, hereinafter referred to as DFA; all collectively referred to as the Funding Agency. Neither the United States or the State of New Mexico nor any of its departments, agencies, or employees is or will be a party to this Agreement or any subagreement. The ENGINEER agrees to perform the various professional engineering services for the planning, design, and construction of said Project in accordance with the provisions of this Agreement.

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- Attachment II Engineering Services During the Planning Phase Authorization to proceed date: This \_\_\_\_\_ day of \_\_\_\_, 20\_\_\_\_ Contract Time shall be <u>Not Applicable</u> calendar days from Authorization to proceed date. This phase expires on \_\_\_\_.
- Attachment III Engineering Services During the Design Phase Authorization to proceed date: This <u>31st</u> day of <u>July</u>, 20<u>19</u> Contract Time shall be <u>408</u> calendar days from Authorization to proceed date.
   This phase expires on <u>September 30, 2020</u>.

Attachment IV - Engineering Services During the Construction Phase Authorization to proceed date: This <u>1st</u> day of <u>October</u>, 20<u>20</u>

Contract Time shall be <u>548</u> calendar days from Authorization to proceed date. This phase expires on <u>March 31, 2022</u>.

- Attachment V Engineering Services During the Operation Phase Authorization to proceed date: This \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ Contract Time shall be \_\_\_\_\_ calendar days from Authorization to proceed date. This phase expires on \_\_\_\_\_.
- Attachment VI Amendments to Agreements for Engineering Services Authorization to proceed date: This \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ Contract Time shall be \_\_\_\_\_ calendar days from Authorization to proceed date.

This phase expires on \_\_\_\_\_.

## **SECTION A – GENERAL PROVISIONS**

## 1. General

(a) This Agreement represents the entire and integrated Agreement between the OWNER and the ENGINEER for the Project and supersedes all prior negotiations, representations or agreements, either written or oral. In the event, any provisions of this Agreement or any subsequent amendment shall be held to be invalid and unenforceable, the remaining provisions shall be valid and binding upon the parties. One or more waivers by either party of any provision, term, condition or covenant shall not be construed by the other party as a waiver of a subsequent breach of the same by the other party. The General provisions of this Agreement supersede any conflicting SPECIAL PROVISIONS.

(b) The OWNER and the ENGINEER each is bound and the partners, successors, executors, administrators and legal representatives of the OWNER and the ENGINEER are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives of such other party, in respect to all covenants, agreements, and obligations of the Agreement. Neither the OWNER nor the ENGINEER may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may be become due) in the Agreement without written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent of an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Unless expressly provided otherwise in this Agreement:

(1) Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by the OWNER or the ENGINEER to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them; and

(2) All duties and responsibilities undertaken pursuant to this Agreement will be for sole and exclusive benefit of the OWNER and the ENGINEER and not for the benefit of any other party.

(c) The ENGINEER will work closely with the OWNER to confirm all Funding Agency requirements are met.

(d) The ENGINEER will attend conferences and public hearings with the OWNER, at which representatives of the Funding Agency and interested parties will also be in attendance, and provide assistance in connection with such undertakings as provided for in the scope of work detailed in the Attachments.

#### 2. Approvals

(a) This Agreement shall not become effective until reviewed and approved by the Funding Agency. Such approval shall be evidenced by the signature of a duly authorized representative of the Funding Agency in the space provided in the Attachments to this Agreement. The approval shall in no way commit the Funding Agency to render financial assistance to the OWNER. The Funding Agency is without liability for any payment hereunder, but in the event such assistance is provided, the approval shall signify that the provisions of this Agreement are consistent with the requirements of the Funding Agency.

(b) Review or approval of documents by or for the Funding Agency under this Agreement is

for administrative purposes only and does not relieve the ENGINEER or OWNER of their responsibilities to design, construct and operate the Project as required under law, regulations, permits and good management practices.

## 3. Responsibilities of the ENGINEER

(a) The ENGINEER shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of design drawings, specifications, reports, and other services furnished by the ENGINEER under this Agreement. If this Agreement involves environmental measures or data generation, the ENGINEER shall comply with EPA quality assurance requirements that can be found on their website at

<u>http://www.epa.gov/quality/index.html</u>. The ENGINEER shall keep the OWNER informed of the performance of the ENGINEER'S duties under this Agreement. The ENGINEER shall, promptly and without additional compensation, correct or revise errors or omissions in the design drawings, specifications, reports, and other services provided by ENGINEER under terms of this Agreement.

(b) The ENGINEER shall perform the professional services necessary to accomplish the work specified in this Agreement, in accordance with this Agreement and applicable Funding Agency requirements in effect on the date of execution of any assistance agreement for this Project.

(c) The OWNER or Funding Agency review or approval of design drawings, specifications, reports, and other services furnished hereunder shall not in any way relieve the ENGINEER of responsibility for the technical adequacy of the work. Neither the OWNER nor Funding Agency review, approval or acceptance of, nor payment for any of the services shall be construed as a waiver of action arising out to the performance of this Agreement.

(d) The ENGINEER shall be, and shall remain, liable to the proportionate extent, in accordance with applicable law, for damages to the OWNER caused by the ENGINEER's negligent performance of any of the services furnished under this Agreement, except for errors, omissions or other deficiencies to the extent attributable to the OWNER or OWNER-furnished data. The ENGINEER shall not be responsible for any time delays in the Project caused by circumstances beyond the ENGINEER'S control.

(e) The ENGINEER'S opinions of probable Construction Cost are to be made on the basis of the ENGINEER'S experience and qualifications and represent ENGINEER'S best judgment as an experienced and qualified professional generally familiar with the construction industry. However, since the ENGINEER has no control over the cost of labor, materials, equipment, or services furnished by others, or over Contractor's methods of determining prices, or over competitive bidding or market conditions, the ENGINEER cannot and does not guarantee that proposals, bids, or actual Construction Cost and project schedules will not vary from opinions of probable Construction Cost prepared by the ENGINEER. If the OWNER wishes greater assurance as to probable Construction Cost, the OWNER shall employ and independent cost estimator.

(f) During the Construction Phase, the ENGINEER shall not at any time supervise, direct, or have control over the Contractor's work, nor shall the ENGINEER have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by the Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, nor for any failure of the Contractor to

comply with Laws and Regulations applicable to the Contractor's furnishing and performing the Work.

(g) The standard of care of all professional engineering and related services performed or furnished by the ENGINEER under this Agreement will be the care and skill ordinarily used by members of subject profession practicing under similar circumstances at the same time and in the same locality. The ENGINEER makes no warranties, expressed or implied, under this Agreement or otherwise, in connection with the ENGINEER'S services.

(h) The ENGINEER's obligations under this clause are in addition to the ENGINEER's other express or implied assurances under this Agreement or State law and in no way diminish any other rights that the OWNER may have against the ENGINEER for faulty materials, equipment, or work.

## 4. Responsibilities of the OWNER

(a) The OWNER shall designate in writing a person authorized to act as the OWNER's representative. The OWNER or its representative shall receive and examine documents submitted by the ENGINEER, interpret and define the OWNER's policies and render decisions and authorizations promptly in writing.

(b) The OWNER shall be responsible for, and the ENGINEER may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by the OWNER to the ENGINEER pursuant to this Agreement. The ENGINEER may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement without responsibility for verifying accuracy of the OWNER furnished data and information.

(c) The OWNER shall provide to the ENGINEER full and free access to enter upon all property required for the performance of the ENGINEER's services under this Agreement.

(d) The OWNER may make and retain copies of documents for information and reference in connection with use on the Project by the OWNER. Such documents are not intended or represented to be suitable for reuse by the OWNER or others on extensions of the Project or on any other project. Any such reuse or modification without written verification or adaptation by the ENGINEER will be at the OWNER's sole risk and without liability or legal exposure to the ENGINEER. Any verification or adaptation as stated above, will entitle the ENGINEER to further compensation at rates to be agreed upon by the OWNER and the ENGINEER.

## 5. Changes

(a) The OWNER and the ENGINEER may, at any time, with prior approval of the Funding Agency, make changes within the general scope of this Agreement in the services or work to be performed. Any such change must be in writing and approved by both parties to this Agreement. If such changes cause an increase or decrease in the ENGINEER's cost or time required to perform any services under this Agreement, whether or not changed by any order, the OWNER shall make an equitable adjustment and modify this Agreement in writing. The ENGINEER must assert any claim for adjustment under this clause in writing within thirty (30) calendar days from the date it receives the OWNER's notification of change, unless the OWNER grants additional time before the date of final payment.

(b) No services for which the ENGINEER will charge an additional compensation shall be furnished without the written authorization of the OWNER.

(c) All changes to the scope, cost or time of this Agreement and services described in the Attachments must be in writing and documented in Attachment VI – Amendment to Agreements for Engineering Services.

## 6. Termination of Contract

(a) This Agreement may be terminated in whole or in part by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party. Any termination must be in writing. No such termination may be effected unless the other party is given: 1) not less than fourteen (14) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate; and 2) an opportunity to cure the default with the terminating party before termination.

(b) This Agreement may be terminated in whole or in part in writing by the OWNER for its convenience, provided that the ENGINEER is given: 1) not less than fourteen (14) calendar days written notice (delivered by certified, return receipt requested) of intent to terminate; and 2) an opportunity for consultation with the OWNER prior to termination.

(c) If termination for default is effected by the OWNER, an equitable adjustment in the price provided for in this agreement shall be made, but: 1) no amount shall be allowed for anticipated profit on unperformed services or other work; and 2) any payment due to the ENGINEER at the time of termination may be adjusted to cover any additional costs to the OWNER because of the ENGINEER's default. If the ENGINEER effects termination for default, or if the OWNER effects termination for convenience, the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to the ENGINEER for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by the ENGINEER relating to commitments which had become firm prior to the termination.

(d) Upon receipt of a termination action under paragraphs (a) or (b) above, the ENGINEER shall: 1) promptly discontinue all affected work (unless the notice directs otherwise); and 2) deliver or otherwise make available to the OWNER within fourteen (14) calendar days copies of all data, design drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the ENGINEER in performing this Agreement, whether completed or in process.

(e) Upon termination under paragraphs (a) or (b) above, the OWNER may take over the work and may award another party an Agreement to complete the work under this Agreement.

(f) If, after termination for failure of the ENGINEER to fulfill contractual obligations, it is determined that the ENGINEER had not failed to fulfill contractual obligations, the termination shall be deemed to have been for the convenience of the OWNER. In such event, adjustment of the Agreement price shall be made as provided in paragraph 6(c) of this clause.

## 7. Payment

(a) The ENGINEER will submit to the OWNER for services rendered an itemized bill showing charges for such services accompanied by any additional documentation requested by the OWNER. Such invoices are limited to no more than one per month. Compensation will be based on the lump sum or standard hourly rate with a maximum method of payment as detailed

in the Attachments.

(b) The OWNER shall pay the ENGINEER applicable gross receipt taxes and reimbursable expenses at the rates set forth in the appropriate Attachment. The amounts payable to the ENGINEER for reimbursable expenses will be the project-related internal expenses, such as reproduction, and all invoiced external reimbursable expenses allocatable to the project, including consultants, multiplied by a factor of <u>1.1 (1.1 MAXIMUM)</u>. Mileage will be reimbursed at the current federally approved IRS rate. Mileage and per diem will not be multiplied by a factor. Reimbursable expenses shall not exceed the estimate in the Attachments without prior written approval of the OWNER, with Funding Agency concurrence. Copies of invoices from consultants, mileage logs, and receipts for which the ENGINEER is requesting reimbursement must accompany the ENGINEER'S invoice.

(c) The OWNER shall notify the ENGINEER of any disputed amounts in the invoices within fourteen (14) calendar days of receipt. If the OWNER contests an invoice, the OWNER may withhold only that portion so contested, and must pay the undisputed portion.

(d) Final Payment under this Agreement, or settlement upon termination of this Agreement, shall not constitute a waiver of the OWNER's claims against the ENGINEER under this Agreement.

(e) If the OWNER fails to make any payment due to the ENGINEER within forty-five (45) calendar days after the OWNER's receipt of the ENGINEER's invoice, the amount due to the ENGINEER shall be increased at the rate of 1.5% per month from said forty-fifth day. Any payment of interest under this contract is not reimbursable from grant or loan funds. In addition, after ten (10) calendar days' prior written notice, the ENGINEER may suspend services under this Agreement until the ENGINEER is paid in full. The OWNER waives any and all claims against the ENGINEER for any such suspension.

## 8. Time

## (a) PROGRESS AND COMPLETION

- 1. The ENGINEER has prepared and the OWNER has approved a schedule for the performance of the ENGINEER's services. This schedule is reflected in the contract time(s) as detailed in the Attachment(s) and represents reasonable times in which to complete the services. The schedule includes reasonable times required for the OWNER and other applicable parties to the agreement to provide necessary information, provide any applicable services not included in the ENGINEER's Scope of Work and make decisions necessary for completion of the work. The schedule also includes reasonable allowances for review and approval times required by the OWNER and by public authorities having jurisdiction over the Project. The schedule shall be equitably adjusted as the Project progresses, allowing for changes in scope, character or size of the Project requested by the OWNER, or for delays or other causes beyond the ENGINEER's reasonable control.
- 2. The ENGINEER shall proceed expeditiously, consistent with professional skills, with adequate forces to achieve completion within the Contract Time.
- 3. The OWNER shall not be liable to the ENGINEER for additional time or money if the ENGINEER submits a progress report expressing an intention to achieve completion of the Work prior to the Contract Time and then is not able to achieve intended accelerated

schedule regardless of the reason.

- 4. If the ENGINEER is delayed at any time in the commencement or progress of the Work by an act or negligence of the OWNER, changes in the Work as agreed upon by the OWNER and the ENGINEER in writing, or other causes beyond the ENGINEER'S control, then the Contract Time may be extended per Section 5 of this Agreement. Extensions of time not associated with modifications or changes to the Work shall not be allowed to increase the Contract amount for overhead or for any other reason and shall strictly apply toward liquidated damages, as found in Subsection (b) of this Section.
- 5. The ENGINEER shall promptly notify the OWNER in writing of any conditions that may delay delivery of work beyond the Contract Time.
- 6. The OWNER shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the ENGINEER'S performance of its Services.
- (b) CONTRACT TIME AND LIQUIDATED DAMAGES
- 1. The ENGINEER agrees that the Services being provided under this Agreement will be performed regularly, diligently and without interruption at such rate of progress as will provide for completion within the Contract Time. It is expressly understood and agreed, by and between the ENGINEER and the OWNER, that the Contract Time is a reasonable time for completion of the Services, taking into consideration the usual conditions for performing the Services. The ENGINEER agrees to promptly notify the OWNER of delays in completing the services under this Agreement that are beyond ENGINEER's control and for which a Contract Time extension will be requested. If the ENGINEER neglects, fails, or refuses to complete the Services within the Contract Time, including any time extension granted by the OWNER, then the ENGINEER agrees to pay the OWNER the amount specified in the Attachments, not as a penalty, but as liquidated damages.
- 2. The parties agree that the amount of the likely damages to the OWNER for such delay is difficult to ascertain at the time of execution of this Agreement, but that a reasonable estimate of such damages may be deducted from any monthly payments due to the ENGINEER, or from other monies being withheld from the ENGINEER, when a reasonable estimate of the expected date of completion can be determined by the OWNER.
- 3. Final accounting of liquidated damages shall be determined at completion and the ENGINEER shall be liable for any liquidated damages over and above unpaid balances held by the OWNER.
- 4. The OWNER and the ENGINEER agree that reasonable liquidated damages for delay (but not as a penalty) due from the ENGINEER to the OWNER are <u>one hundred dollars</u> (\$100.00) per day (minimum one-hundred dollars [\$100.00] per day) for each calendar day that expires after the Contract Time specified in the Agreement until the Work is complete and accepted by the OWNER. The OWNER shall have no more than ten (10) calendar days to accept or reject the Work.

## 9. Project Design

Unless otherwise approved by the OWNER and Funding Agency, the ENGINEER shall specify materials, equipment, and processes that are readily available through competitive procurement and consistent with State and Federal regulations.

## 10. Audits and Access to Records

(a) The ENGINEER shall maintain books, records, documents, and other evidence directly pertinent to performance on work under this Agreement in accordance with generally accepted accounting principles and practices consistently applied, and Funding Agency regulations in effect on the date of execution of this Agreement. The ENGINEER shall also maintain the financial information and data used by the ENGINEER in the preparation of the cost submission required under EPA regulations in effect on the date of execution for any negotiated agreement or amendment thereof. and a copy of the cost summary submitted to the OWNER. The Funding Agency, the Comptroller General of the United States, the U.S. Department of Labor, the OWNER, and the State water pollution control agency, or their duly authorized representatives, shall have access to such books, records, documents, and other evidence for inspection, audit, and copying during normal business hours. The ENGINEER will provide proper facilities for such access and inspection.

(b) The ENGINEER agrees to make paragraphs (a) through (f) applicable to agreements it awards in excess of \$10,000, at any tier, and to make paragraphs (a) through (f) of this clause applicable to all amendments directly related to Project performance.

(c) Audits conducted under this provision shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing or audit agency(ies) and the General Accounting Office.

(d) The ENGINEER agrees to disclose all information and reports resulting from access to records under paragraphs (a) and (b) of this clause to any of the agencies referred to in paragraph (a) upon their request.

(e) Records under paragraphs (a) and (b) above shall be maintained and made available by the ENGINEER during performance of services under this Agreement and for three (3) years from the date of final Federal/State assistance payment to the OWNER for the Project. In addition, those records which relate to any controversy arising under this Agreement, litigation, the settlement of claims arising out of such performance or to costs or items to which an audit exception has been taken shall be maintained and made available by the ENGINEER until three (3) years after the date of resolution of such appeal, litigation, claim or exception.

(f) This right of access clause applies to financial records pertaining to agreements (except formally advertised, competitively awarded, fixed price agreements) and agreement amendments regardless of the type of agreement. In addition, this right of access applies to records pertaining to all agreements and agreement amendments:

- 1. To the extent the records pertain directly to Agreement performance; or
- 2. If there is any indication that fraud, gross abuse or corrupt practices may be involved; or
- 3. If the Agreement is terminated for default or for convenience.

## 11. Subcontracts

(a) Any subcontractors and outside associates or consultants required by the ENGINEER in connection with services under this Agreement will be limited to such individuals or firms as were specifically identified and agreed to during negotiations of this Agreement. The OWNER must give prior approval for any substitutions, additions or deletions to such subcontractors, associates, or consultants but will not dictate whom the ENGINEER must hire.

(b) The ENGINEER may not subcontract services to subcontractors or consultants in excess of thirty (30) percent of the total phased compensation due to the ENGINEER and detailed in the Attachments without prior written approval of the OWNER and funding agency.

## 12. Insurance

The ENGINEER agrees to obtain and maintain, at their expense, such insurance as specified in Attachment I.

## 13. Environmental Condition of Site

(a) The OWNER has disclosed to the ENGINEER in writing the existence of all known and suspected Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, hazardous substances, and other Constituents of Concern located at or near the Site, including type, quantity, and location.

(b) The OWNER represents to the ENGINEER that to the best of its knowledge no Constituents of Concern, other than those disclosed in writing to the ENGINEER, exist at the Site.

(c) If the ENGINEER encounters an undisclosed Constituent of Concern, then the ENGINEER shall notify: 1) the OWNER; and 2) appropriate governmental officials if the ENGINEER reasonably concludes that doing so is required by applicable Laws or Regulations.

(d) It is acknowledged by both parties that the ENGINEER'S scope of services does not include any services related to Constituents of Concern. If the ENGINEER or any other party encounters an undisclosed Constituent of Concern, or if investigative or remedial action, or other professional services, are necessary with respect to disclosed or undisclosed Constituents of Concern, then the ENGINEER may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until the OWNER: 1) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Constituents of Concern; and 2) warrants that the Site is in full compliance with applicable Laws and Regulations.

(e) If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of the ENGINEER'S services under this Agreement, then the ENGINEER shall have the option of: 1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or 2) terminating this Agreement for cause on 30 calendar days' notice.

(f) Owner acknowledges that the ENGINEER is performing professional services for the OWNER and that the ENGINEER is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with the ENGINEER'S activities under this Agreement.

## 14. Mutual Waiver

To the fullest extent permitted by law, the OWNER and the ENGINEER waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

## 15. Independent Contractor

The ENGINEER will, at all times during the performance of this Agreement and in connection with the Services, be deemed to be an Independent Contractor. No relationship of employeremployee or agency or other fiduciary capacity is created by this Agreement or by the ENGINEER'S performance of the Services.

## 16. Equal Employment Opportunity

The ENGINEER shall comply with U.S. Executive Order 11246, entitled "Equal Employment Opportunity", as amended by U.S. Executive Order 11375, and as supplemented in Department of Labor regulations 41 CFR Part 60.

## 17. Gratuities

(a) If the OWNER find that the ENGINEER or any of the ENGINEER's agents or representatives offered or gave gratuities (in the form of entertainment, gifts, or otherwise), to any official, employee, or agent of the OWNER or the Funding Agency in an attempt to secure this Agreement, or favorable treatment in awarding, amending or making any determinations related to the performance of this Agreement, the OWNER may, by written notice to the ENGINEER, terminate this Agreement. The OWNER may also pursue other rights and remedies that the law or this Agreement provides. However, the existence of the facts on which the OWNER bases such findings shall be in issue and may be reviewed in proceedings under the Remedies clause of this Agreement.

(b) In the event this Agreement is terminated as provided in Subsection (a) of this Section, the OWNER may pursue the same remedies against the ENGINEER as it could pursue in the event of a breach of the Agreement by the ENGINEER. As a penalty, in addition to any other damages to which it may be entitled by law, the OWNER may pursue exemplary damages in an amount (as determined by the OWNER) which shall be not less than three nor more than ten times the costs the ENGINEER incurs in providing any such gratuities to any such officer or employee.

## 18. Covenant Against Contingent Fees

The ENGINEER represents that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the ENGINEER for the purpose of securing business. For breach or violation of this assurance the OWNER shall have the right to annul this Agreement without liability or, at its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fees.

## 19. Cost and Pricing Data on Federally-funded Projects (delete section if not applicable)

The ENGINEER and its subcontractor(s) confirm that cost and pricing data submitted for evaluation with respect to negotiation of prices for negotiated agreements, lower tier subagreements, or amendments are based on current, accurate, and complete data supported by their books and records. If the OWNER, or Funding Agency determines that any price (including profit) negotiated in connection with this Agreement, any lower tier subagreement, or any amendment thereunder was increased by any significant sums because the data provided was incomplete, inaccurate, or not current at the time of submission, then such price or cost or profit shall be reduced accordingly; and this Agreement shall be modified in writing to reflect such action. Failure to agree on a reduction shall be subject to the Remedies clause of this Agreement.

## 20. Remedies

Unless otherwise provided in this Agreement, all claims, counter-claims, disputes, and other matters in question between the OWNER and the ENGINEER arising out of or relating to this Agreement or the breach of it will be decided by non-binding mediation or arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the OWNER is located.

## 21. Assurance Against Debarment

The ENGINEER confirms that it and its subcontractors have not been suspended or debarred by EPA, USDA, or the State of New Mexico.

## **SECTION B – ENGINEERING SERVICES**

The ENGINEER shall furnish ENGINEERING SERVICES as follows in accordance with the GENERAL PROVISIONS of the Agreement and as authorized by the appropriate Attachment to this Agreement:

- The ENGINEER shall complete the ENGINEERING SERVICES described in Attachment II – <u>Engineering Services During the Planning Phase</u> within the time specified from the date of written authorization to proceed unless otherwise mutually agreed to in writing by both parties.
- The ENGINEER shall complete the ENGINEERING SERVICES described in Attachment III – <u>Engineering Services During the Design Phase</u> within the time specified from the date of written authorization to proceed unless otherwise mutually agreed to in writing by both parties.
- 3. ENGINEER shall complete the ENGINEER SERVICES described in Attachment IV Engineering Services During the Construction Phase within the time specified from the date of written authorization to proceed unless otherwise mutually agreed to by both parties.

4. The ENGINEER shall complete the ENGINEERING SERVICES described in Attachment V – <u>Engineering Services During the Operation Phase</u> within the time specified from the date of written authorization to proceed unless otherwise mutually agreed to in writing by both parties.

## SECTION C – SPECIAL PROVISIONS OR MODIFICATIONS TO THE STANDARD LANGUAGE IN THIS AGREEMENT

(Mark those that apply or describe, attach or indicate "None")

	None
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For Planning Grant Funds from NMFA Insert the note: For Preliminary Engineering Reports or other documents paid for using NMFA Planning Grant Funds, the community can only submit one reimbursement request. This request for payment must be based on a final invoice and can only occur after the document is approved by the pertinent reviewing agency. Interim payments to the engineer will be at the discretion of the community as agreed upon in this contract.

The terms of this Agreement are contingent upon sufficient appropriations and authorization being made by the Legislature of New Mexico for the performance of this Agreement. If sufficient appropriations and authorization are not made by the Legislature, the OWNER may immediately terminate this Agreement by giving the ENGINEER written notice of such termination. The OWNER's decision as to whether sufficient appropriations are available shall be accepted by the ENGINEER and shall be final. The ENGINEER hereby waives any rights to assert an impairment of contract claim against the OWNER or NMED or the State of New Mexico in the event of immediate or Early Termination of this Agreement by the OWNER or the Department

This contract is funded in whole or in part by funds made available under a NMED Grant Agreement. Should the NMED early terminate the grant agreement, the OWNER may early terminate this contract by providing the ENGINEER written notice of such termination. In the event of termination pursuant to this paragraph, the OWNER's only liability shall be to pay the ENGINEER or vendor for acceptable goods delivered and services rendered before the termination date.

MODEL CONTRACT CLAUSE FOR ENGINEERING AGREEMENTS used for Clean Water State Revolving Fund (CWSRF) or Drinking Water State Revolving Fund (DWSRF) projects.

## 1. PRIVITY OF CONTRACT

This contract is expected to be funded in part with funds from the U.S. Environmental Protection Agency. Neither the United States nor any of its departments, agencies or employees is, or will be, a party to this contract or any lower tier contract. This contract is subject to the applicable EPA procurement regulations in effect on the date of the assistance award for this project.

## 2. CHANGES

1. The OWNER may at any time, by written order make changes within the general scope of this contract in the services to be performed. If such changes cause an increase or decrease in the ENGINEER'S cost or time required to perform any services under this contract, whether or

not changed by any order, the OWNER shall make an equitable adjustment and modify this contract in writing. The ENGINEER must assert any claim for adjustment under this clause in writing within 30 days from the date it receives the OWNER'S notification of change, unless the OWNER grants additional time before the date of final payment.

2. No claim by the ENGINEER for an equitable adjustment shall be allowed if made after final payment under this contract.

3. No services for which the ENGINEER will charge an additional compensation shall be furnished without the written authorization of the OWNER.

#### 3. TERMINATION

a. This contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this contract through no fault of the terminating party, provided that no termination may be effected unless the other party is given (1) not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate, and (2) an opportunity for consultation with the terminating party prior to termination.

b. This contract may be terminated in whole or in part in writing by the OWNER for its convenience, provided that the ENGINEER is given: 1) not less than ten (10) calendar days' written notice (delivered by certified mail, return receipt requested) of intent to terminate, and; 2) an opportunity for consultation with the terminating party prior to termination.

c. If termination for default is effected by the OWNER, an equitable adjustment in the price provided for in this contract shall be made, but: 1) no amount shall be allowed for anticipated profit on unperformed services or other work; and 2) any payment due to the ENGINEER at the time of termination may be adjusted to cover any additional costs to the OWNER because of the ENGINEER'S default. If the ENGINEER effects termination for default, or if the OWNER effects termination for convenience, the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to the ENGINEER for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by the ENGINEER relating to commitments which had become firm prior to the termination.

d. Upon receipt of a termination action under paragraphs (a) or (b) above, the Engineer shall (1) promptly discontinue all affected work (unless the notice directs otherwise), and (2) deliver or otherwise make available to the Owner all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the Engineer in performing this contract, whether completed or in process.

e. Upon termination under paragraphs (a) or (b) above, the Owner may take over the work and may award another party a contract to complete the work under this contract.

f. If, after termination for failure of the Engineer to fulfill contractual obligations, it is determined that the Engineer had not failed to fulfill contractual obligations, the termination shall be deemed to have been for the convenience of the Owner. In such event, adjustment of the sub-agreement price shall be made as provided in paragraph (c) of this clause.

#### 4. <u>REMEDIES</u>

Unless otherwise provided in this contract, all claims, counter-claims, disputes and other matters in question between the OWNER and the ENGINEER arising out of, or relating to, this contract or the breach of it will be decided, if the parties mutually agree, by arbitration, mediation, or other alternative dispute resolution mechanism; or in a court of competent jurisdiction within the State in which the OWNER is located.

#### 5. AUDIT; ACCESS TO RECORDS

a. The ENGINEER shall maintain books, records, documents and other evidence directly pertinent to performance on EPA funded work under this contract in accordance with generally accepted accounting principles and practices consistently applied, and the applicable EPA regulations in effect on the date of execution of this contract. The ENGINEER shall also maintain the financial information and data used in the preparation or support of any cost submission required under applicable regulations for negotiated contracts or change orders and a copy of the cost summary submitted to the OWNER. The United States Environmental Protection Agency, the Comptroller General of the United States, the United States Department of Labor, the OWNER, and [the State] or any of their authorized representatives shall have access to all such books, records, documents and other evidence for the purpose of inspection, audit and copying during normal business hours. The ENGINEER will provide proper facilities for such access and inspection.

b. If this is a fixed price contract awarded through sealed bidding or otherwise on the basis of effective price competition, the ENGINEER agrees to make paragraphs (a) through (f) of this clause applicable to all negotiated change orders and contract amendments affecting the contract price. In the case of all other types of prime contracts, the ENGINEER agrees to make paragraphs (a) through (f) applicable to all contract awards in excess of \$10,000, at any tier, and to make paragraphs (a) through (f) of this clause applicable to all change orders directly related to project performance.

c. Audits conducted under this provision shall be in accordance with generally accepted auditing standards and with established procedures and guidelines of the reviewing or audit agency(ies).

d. The ENGINEER agrees to disclose all information and reports resulting from access to records under paragraphs (a) and (b) of this clause to any of the agencies referred to in paragraph (a).

e. Access to records is not limited to the required retention periods. The authorized representatives designated in paragraph (a) of this clause shall have access to records at any reasonable time for as long as the records are maintained.

f. This right of access clause applies to financial records pertaining to all contracts (except for fixed price contracts awarded through sealed bidding or otherwise on the basis of effective price competition) and all contract change orders regardless of the type of contract, and all contract amendments regardless of the type of contract. In addition, this right of access applies to all records pertaining to all contracts, contract change orders and contract amendments:

- 1. To the extent the records pertain directly to contract performance;
- 2. If there is any indication that fraud, gross abuse or corrupt practices may be involved; or

3. If the sub-agreement is terminated for default or for convenience.

#### 6. COVENANT AGAINST CONTINGENT FEES

The ENGINEER assures that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee excepting bona fide employees or bona fide established commercial or selling agencies maintained by the ENGINEER for the purpose of securing business. For breach or violation of this assurance, the OWNER shall have the right to annul this agreement without liability or, at its discretion, to deduct from the contract price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee.

#### 7. GRATUITIES

a. If the OWNER finds after a notice and hearing that the ENGINEER or any of the ENGINEER'S agents or representatives offered or gave gratuities (in the form of entertainment, gifts or otherwise) to any official, employee or agent of the OWNER, the State or EPA in an attempt to secure a contract or favorable treatment in awarding, amending or making any determinations related to the performance of this contract, the OWNER may, by written notice to the ENGINEER, terminate this contract. The OWNER may also pursue other rights and remedies that the law or this contract provides.

b. In the event this contract is terminated as provided in paragraph (a), the OWNER may pursue the same remedies against the ENGINEER as it could pursue in the event of a breach of the contract by the ENGINEER, and as a penalty, in addition to any other damages to which it may be entitled by law, be entitled to exemplary damages in an amount (as determined by the Owner) which shall be not less than three nor more than ten times the costs the ENGINEER incurs in providing any such gratuities to any such officer or employee.

#### 8. FINAL PAYMENT

Upon satisfactory completion of the work performed under this contract, as a condition before final payment under this contract or as a termination settlement under this contract the ENGINEER shall execute and deliver to the OWNER a release of all claims against the OWNER arising under, or by virtue of, this contract, except claims which are specifically exempted by the ENGINEER to be set forth therein. Unless otherwise provided in this contract, by State law or otherwise expressly agreed to by the parties to this contract, final payment under this contract or settlement upon termination of this contract shall not constitute a waiver of the OWNER'S claims against the ENGINEER under this contract.

#### 9. 40 CFR Part 33

The contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in termination of this contract or other legal available remedies.

IN WITNESS THEREOF, the parties hereto have executed, or caused to be executed, by their duly authorized officials, this Agreement on the respective dates indicated below. The parties further certify by their signatures below that no modifications have been made to the standard language of this Agreement, other than those detailed in Section C.

## IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date of the signature by the required approval authorities below.

By:		Date:	
-	OWNER		
	Type Name <u>Philo Shelton III</u>		

Title Manager, Department of Public Utilities, Incorporated County of Los Alamos

By:

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

ENGINEER Type Name <u>Todd Burt</u> Title <u>Sr. Vice President</u> Address <u>7500 Jefferson St. NE</u> Albuquerque, NM 87109

REVIEWED AND APPROVED: FUNDING AGENCY AGENCY NAME: \_\_\_\_\_\_ By \_\_\_\_\_\_ Type Name\_\_\_\_\_ Date \_\_\_\_\_

## **ATTACHMENT I – Insurance**

The ENGINEER agrees to obtain and maintain, at the ENGINEER's expense, such insurance as will protect the ENGINEER from claims under the Workman's Compensation Act and such comprehensive general liability and automobile insurance as will protect the OWNER and the ENGINEER from all claims for bodily injury, death, or property damage which may arise from the performance by the ENGINEER, or by the ENGINEER's employees, for the ENGINEER's functions and services required under this Agreement. Such insurance shall be in an amount not less than \$1,000,000 for injury to any one person and \$1,000,000 on account of any one accident and in the amount of not less than \$1,000,000 for property damage. The ENGINEER further agrees to procure and maintain professional liability (errors and omissions) insurance in an amount not less than \$2,000,000 per claim and in the aggregate. Prior to commencement of any work, the ENGINEER shall furnish to the OWNER a certificate that complies with this paragraph. The certificate shall provide that the policy shall not be canceled until at least ten (10) calendar days prior written notice shall have been given to the OWNER. ENGINEER shall provide annual updates of the certificate to demonstrate the policy remains in effect for the duration of this Agreement.



## CERTIFICATE OF LIABILITY INSURANCE

**JSTEINKE** 

DATE (MM/DD/YYYY)	
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HUE	International Insurance Services (N	MX)			PHONE (A/C, No, Ext): <b>(50</b> 5	5) 828-4000	FAX	(866)	487-3972
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					SHOULD ANY (	OF THE ABOVE [	DESCRIBED POLICIES BE	E CANCEL	LED BEFORE
1						ION DATE TH	HEREOF. NOTICE WIL		ELIVERED IN

Incorporated County of Los Alamos County 1000 Central Ave Los Alamos, NM 87544

## ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Laty admit



#### THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## NEW MEXICO CHANGES - ADDITIONAL INSUREDS -AUTOMATIC STATUS WHEN REQUIRED BY WRITTEN CONTRACT, WRITTEN AGREEMENT OR PERMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

- A. Paragraph 6.f. of Section II, Who Is An Insured is replaced by the following:
  - 6. Additional Insureds When Required By Written Contract, Written Agreement Or Permit
    - f. Owners, Lessees Or Contractors When Required In A Construction Agreement With You

Any owner, lessee or contractor when you and such person or organization have agreed in a construction contract or agreement that such person or organization be added as an additional insured on your policy. Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused by your negligence, acts or omissions of those acting on your behalf:

- In the performance of your ongoing operations for the additional insured; or
- (2) In connection with "your work" and included within the "products-completed operations hazard", but only if
  - (a) The written contract or agreement requires you to provide such coverage to such additional insured; and
  - (b) This Coverage Part provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard".

With respect to the insurance afforded to these additional insureds, this insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- (1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- (2) Supervisory, inspection, architectural or engineering activities.
- B. The following is added to Paragraph 6. of Section II, Who Is An Insured:
  - 6. Additional Insureds When Required By Written Contract, Written Agreement Or Permit
    - g. Any Other Party

Any other person or organization who is not an insured under Paragraphs **a.** through **f.** above, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

- In the performance of your ongoing operations; or
- (2) In connection with your premises owned by or rented to you.

Form HC 26 68 06 05

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## **ATTACHMENT III – Engineering Services During the Design Phase**

1. As set forth in the AGREEMENT FOR ENGINEERING SERVICES dated the <u>31<sup>st</sup></u> day of <u>July</u>, 20<u>19</u> (effective date) by and between the <u>Incorporated County of Los Alamos</u>, the OWNER, and <u>Bohannan Huston</u>, Inc., the ENGINEER, the OWNER and ENGINEER agree this <u>31st</u> day of <u>May</u>, 20<u>19</u> (authorization to proceed date) that ENGINEER shall furnish ENGINEERING SERVICES During the Design Phase in accordance with the GENERAL PROVISIONS of the Agreement and OWNER shall compensate the ENGINEER for services described as set forth below:

- A. Perform or provide the following tasks and/or deliverables: See attached EXHIBIT B.1 – DESIGN SERVICES SCOPE OF WORK
- B. Cost Proposal Include hourly breakdown for each task See attached Exhibit B.2 - DESIGN PHASE SERVICES FEE
- C. Reimbursable Expense Schedule See attached hourly rate sheet dated March 2, 2019
- D. Contract Time shall be <u>408</u> calendar days from the date of the OWNERS signature on Attachment III. Design phase services shall be completed and accepted by the OWNER by <u>September 30, 2020</u> (DATE). If design phase services have not been completed and accepted by <u>September 30, 2020</u> the ENGINEER shall pay the OWNER liquidated damages as outlined in the Agreement.

2. Compensation for ENGINEERING SERVICES During the Design Phase shall be by the

LUMP SUM method of payment. The total amount of compensation for ENGINEERING SERVICES During the Design Phase, as described, including reimbursable expenses shall not exceed \$962,774.00, excluding gross receipt tax.

**STANDARD HOURLY RATE WITH MAXIMUM** method of payment. The total amount of hourly charges, including reimbursables, for ENGINEERING SERVICES During the Design Phase, as described, shall not exceed \$\_\_\_\_\_, excluding gross receipt tax, without prior written approval of the OWNER, with Funding Agency concurrence.

3. The amount of compensation shall not change unless the scope of services to be provided by the ENGINEER changes and this Agreement is formally amended according to Section A-5.

4. Signatures

## IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date of the signature by the required approval authorities below.

By:	Date:
	OWNER
	Type Name Philo Shelton III
	Title Manager, Department of Public Utilities, Incorporated County of Los Alamos
By:	Date:
,	ENGINEER
	Type Name <u>Todd Burt</u>
Title	Sr. Vice President
Addres	ss 7500 Jefferson St. NE
	Albuquerque, Nm 87109
REVIE	WED AND APPROVED: FUNDING AGENCY
AGEN	CY NAME:
	Vame
Date	

## Los Alamos County White Rock WRRF

## EXHIBIT B.1 – DESIGN SERVICES SCOPE OF WORK

## Task 1 – Project Management and Communication

*Objective:* This task consists of communications, coordination, meetings, and project administration and management during the project. Engineer will conduct a Project Kickoff Meeting with the County and other stakeholders to obtain additional project information, County and stakeholder input, and to develop critical success factors for design and implementation of the Project. The Project Kickoff Meeting will also serve as a design workshop with the Engineer's team and County engineering and operations staff. Using the preliminary design concepts outlined in our response to the RFP along with other available information as the preliminary basis of design, we will go over the major design elements, and the County's design preferences for the project.

BHI will also meet with the County in monthly face to face progress meetings and bi-weekly conference calls to keep the County informed of the Project's progress and obtain additional input from the County as necessary. Monthly progress meetings will be held at the County's offices and will include representatives that may have express interest in the project development. Bi-weekly conference calls will focus on action items and items critical to the project schedule. The Engineer will also provide County with monthly progress reports summarizing project technical status. These reports will include progress made, problems resolved, anticipated problem areas and recommended solutions, and upcoming activities.

Also included in this task is assisting the County with public outreach and meetings associated with the project. BHI's assistance will consist of preparing materials for use in presentations (Power Point presentations, boards, handouts, etc.) and participation in a maximum of one (1) public meeting.

Other project management activities that will be performed under this task are management of subcontracts, project accounting, scheduling and budget tracking, and maintenance of project files.

## Assumptions:

- 1. The duration of project management includes design phase of 9 months and bidding for this portion of the project. The VE phase is included within this duration.
- 2. The Project Kickoff Meeting will be held at the County's offices with County staff, Engineer's client service manager, project manager and project engineer, and subconsultants
- 3. Design phase monthly progress meetings will be held at the Albuquerque office of the Engineer, unless otherwise agreed upon by the parties
- 4. Design phase bi-weekly progress meetings will be conducted via conference call
- 5. Monthly Progress Reports will be provided with monthly invoices

6. Additional meetings (including construction progress meetings) have been included in other tasks

## Deliverables:

- Kick-off meeting agenda, presentation and meeting minutes
- Monthly progress reports delivered via e-mail
- Monthly progress meeting agenda and minutes
- Monthly invoices for Engineer's services
- Public Meeting Presentation Material (i.e. boards or Powerpoint)

## Task 2 – Supplemental Site Data Acquisition

**Objective:** Work under this Task includes geotechnical investigation and surveying required to support the design of the facilities at White Rock. Permitting associated with the construction of the facilities will also be included in this task.

## Subtask 2A – Geotechnical Investigation

The purpose of the geotechnical investigation is to determine the site subsurface conditions and based upon the conditions encountered; develop geotechnical and foundation design recommendations for the design of buildings, slabs, foundations, and other structural components within the project. The Geotechnical Report will include results of the field exploration including boring logs including depth to bedrock; design criteria related to the recommended foundation systems including design values for shallow foundations, slab-on-grade design recommendations, foundation bearing pressures, site grading, pavement design and drainage, estimated settlement, site seismic classification, and subgrade preparation and earthwork recommendations. The Geotechnical Report will be signed by a New Mexico registered Professional Engineer.

## Assumptions:

- 1. County will provide previous geotechnical reports of original and expansion of the treatment facilities projects, if available.
- 2. Twenty (20) 15-ft geotechnical borings will be required. Subsurface conditions will be logged by a qualified field geologist.

## Deliverables:

• Written geotechnical report summarizing findings and recommendations for foundation and other design conditions. Geotechnical report will be included as an appendix to the design specifications.

## Subtask 2B – Survey and SUE

**Objective:** Engineer will perform design survey of the existing treatment plant site to the extent required which includes the entire fenced boundary of the existing site. Topographic survey will be performed using a combination of aerial and on-site ground surveying methods as best suits

the needs of the project.

Engineer will utilize the services of a subconsultant to perform SUE services. SUE services will be used during design for verification of utility locations and connections.

## Assumptions:

- 1. Survey will be prepared with 1-ft elevation contours based upon NAD 83 and NAVD 88 datum.
- 2. Access to the site will be made available by the County.

#### Deliverables:

• Digital AutoCAD files of the design survey and SUE data for the project site.

#### Subtask 2C – Permitting

**Objective:** The Engineer will provide permitting coordination services during the design phase, Engineer will schedule and participate in meetings with NMED to discuss the overall project expansion and permitting requirements. The Engineer will meet with NMED to review the existing discharge permit and discuss the proposed changes to the existing facility.

#### Assumptions:

1. A modification to the existing NMED permit is not required. A single meeting will be held with NMED

#### Deliverables:

• Following the meeting, Engineer will prepare and submit meeting minutes.

## Task 3 – Value Engineering

**Objective:** Engineer will prepare a Value Engineering Report for the proposed modifications to the WRRF. This report serves two primary purposes:

- 1. Document major design decisions and document equipment requirements supported by preliminary sizing calculations; and
- 2. Evaluate and document project design considerations and construction phasing to allow for full operation of the existing plant during the construction phase.

The Report will include a finalized layout of treatment components and cost estimate at a conceptual level. Specific technical components that will be addressed in detail include:

- Headworks
- Oxidation Ditch
- Secondary Clarifiers

- Disinfection
- Filtration
- On-Site Chlorine Generation
- Solids Handling
- Re-Purposing of Existing Facilities
- Grit Removal
- Electrical site service feed and emergency generator capacity
- Administration Building

During this phase, members of the design team and the County will also visit existing utilities to review the operations of operational wastewater treatment plants and discuss the concerns or benefits of various options to consider.

## Assumptions:

- 1. Report will not contain evaluations of alternative treatment technologies and will instead focus on design decisions related to equipment or process approaches with input from the County. It is assumed the improvements to the facility will be based on the incorporation of an oxidation ditch into the improvements.
- 2. The facility site visit will occur over a three (3) day period total including travel. If County staff attend they will pay for their own expenses.
- 3. A workshop will be held with the draft report to review the recommendations and gain input prior to finalizing the report.

## Deliverables:

- Draft report for review and evaluation by the County (PDF copy only).
- Final report in hard and electronic (PDF) copy.

#### Task 4 – Design

**Objective:** This task consists of development of construction documents for the upgrades to the facility. Class 1A effluent water quality will be achieved by the new plant. Major design elements include the following items and have been divided into a base bid along with Bid Alternates as the bid alternates may be deleted once the Value Engineering Report is complete:

#### **Base Bid Items:**

- 1. Refurbish existing administrative building for new computer and other operations equipment
- 2. Building for Headworks, Disinfection and/or Tertiary Treatment System
- 3. Civil site improvements, site utilities, grading, and drainage;
- 4. Addition of oxidation ditch;

- 5. New or modification to existing headworks including addition of new coarse and fine screens;
- 6. New Secondary Clarifiers;
- 7. New Disinfection;
- 8. New Tertiary Treatment Filtration System;
- 9. Solids Handling including use of existing primary clarifiers or aerobic digesters;
- 10. Site Electrical Modifications including Instrumentation and Control
- 11. Upgrades to electrical power and evaluation of the existing generator;
- 12. Design considerations to allow for full plant operations during construction of new and expanded facility components

## **Bid Alternates:**

- 1. Re-Purpose or removal of Secondary Clarifiers
- 2. Re-Purpose Trickling Filters for use as Effluent Reuse Storage

Design will include intermediate milestones of 50%, 95%, and 100% for review submittals to the County. Submittal of the deliverables will be made approximately 2 weeks prior to a review meeting to be held of the milestone submittal. Drawings will be completed in AutoCAD; specifications will utilize County front ends and documents required by funding agency.

## Task 4A: Preliminary Design (50 Percent Design Package)

The major activities included in this subtask include preparation of 50% design level drawings and framework for front end and technical specifications. The 50% design submittal will include:

- General sheets and anticipated drawing list
- Civil site, utility and grading plan including preliminary site piping layout
- Architectural building plans
- Process mechanical plans
- Preliminary HVAC and building mechanical plans
- Process and Instrumentation Diagrams (P&IDs)
- Electrical site plan
- General/Supplemental Conditions and listing of Technical Specification Sections
- 50 percent opinion of probable construction cost

## Task 4B: Pre-Final Design (95 Percent Design Package)

Based on the 95% design, internal quality review, and the County's review comments, the Engineer will further develop the design to 95% level. The major activities included in this subtask include preparation of 95% design level drawings and specifications. The 95% design submittal will include:

• General sheets and complete drawing list

- Civil site, utility, grading, and site piping plans
- Architectural building sections and details
- Structural plans and details
- Process mechanical plans and details
- HVAC and building mechanical plans and details
- Front end and major equipment technical specification sections
- 95 percent opinion of probable construction cost

## Task 4C: Final Design (100 Percent Design Package)

Based on the 95% design, internal quality review, and the County's review comments, the Engineer will further develop the design to 100% level. The major activities included in this subtask include preparation of bid ready drawings, design report/calculations and specifications. The 100% design level plans and specifications will be developed as a "Pre-Final" set for final quality and agency review. Minor modifications will be incorporated into the "Final" set used for bidding. The "Pre-Final" submittal at the 100% milestone will consist of all plans and specifications and a final construction cost estimate.

## Assumptions:

- 1. Agency reviews are not required at the 50% design submittals. These submittals will be used for internal and County reviews.
- 2. A 50% design review meeting and 95% design review meeting will be held with the County to go over comments.
- 3. Each deliverable will be submitted approximately 2 weeks prior to design review meetings for the County benefit.
- 4. A new administration building has been excluded from the scope of work.
- 5. Construction Cost estimates will be developed to the level of detail appropriate to the milestone percentage completion of the design.
- 6. Engineer's standard technical specifications and CAD standards when not provided by the County.
- 7. Engineer will submit final plans, specifications, bid documents and design report/calculations for approval by funding agency. Revisions will be made as necessary to achieve funding agency approval
- 8. Engineer will utilize the BHI's CAD Layering and Sheet Naming Conventions

## Deliverables:

- Drawings: 22-inch x 34-inch format; 5 copies of half-size drawing will be provided to the County at each milestone for review purposes. One master 22-inch x 34-inch paper plotted set of bid package drawings will be provided at 100% submittal.
- Specifications will follow CSI 48-division format for technical sections; front end documents will utilize County-provided format or General/Supplemental Conditions and

other documents as appropriate for the County and funding agencies. Electronic specifications will be provided at each review milestone. One master hard copy set of specifications will be provided at 100% submittal.

- Electronic drawing and specification files in Adobe Portable Document Format (.pdf) format will be provided on DVD at each milestone for review purposes.
- 50 percent, 95 percent, and final construction cost estimate

## Task 5 – Bidding Phase Services

**Objective:** This task will provide Engineer services during bidding phase to assist the County where appropriate. Bidding phase services will include:

- Provide Advertisement for Bid to County for publication.
- Attend Pre-bid conference and provide meeting minutes.
- Answer bidder's questions during the bidding period.
- Provide addenda based upon potential changes and/or clarifications in the bidding documents.
- Attend Bid Opening, evaluate bids received, and provide letter of evaluation and recommendations for award of contract.
- Assist the County to execute the contract between the Construction Contractor and County as appropriate.

## Assumptions:

- 1. Advertisement in newspaper or other media will be performed by the County.
- 2. One Pre-Bid Conference and site tour will be conducted by the Engineer.
- 3. Engineer will prepare up to three addenda during the bid phase and distribute to the County.
- 4. County will reproduce and distribute plans and specifications to prospective bidders. Cost of reproduction of bid documents will be the responsibility of the County.

## Deliverables:

- Attendant at the Pre-Bid Meeting
- Preparation of Addenda assumed three (3) total
- Preparation of Bid Tabulation
- Recommendation of Award Letter to County

			E	XHIB	IT B.2	2 - DESI	GN SO	COPE	FEE														
	Name of Project:		White F	Rock W	RRF Re	eplacemer	ıt																
	Client:		Los Ala										Date o	f propo	sal:					5/3	1/2019		
	Principal-in-Charge/ PM, Des. Eng:		Todd B	Burt / De	onzil W	orthingto	ר					_	Prepar							Todo	d Burt / Do	onzil Worthingto	า
													Approv	ved by:								inits.	
	Task / Activity	of Sheets	eer 7, PIC	iical alist 6, PM	eer 6, PE	eer 5	Tech 6	eer 4	eer 3	eer 2	eer 1	Tech 5	Tech 3	Admin Assist 4	Subconsultant (Pathfinder, Geo Test, Santa Fe Vacuum)	Cubconcultant	subconsultain (Aqua Engineering)	Groups	(Survey, Structures, Construction)		Keimburseable Expenses	Task Sub	-Totals
		# of S	Engineer	Technical Specialist (	Engineer	Engineer	Engr <sup>-</sup>	Engineer	Engineer	Engineer	Engineer	Engr <sup>-</sup>	Engr <sup>-</sup>	Admir	Subcc (Pathf Test, { Vacuu	Subcy	subcc (Aqua Engin	Other	(Surve Struct Const		Exper	Per-Hrs	Cost
No.	Hourly Rate:		\$ 240	\$ 215	\$ 215	\$ 175	\$ 115	\$ 155	\$ 135	\$ 115	\$ 100	\$ 102	\$82	\$85									
1	TASK 1: Project Management & Communication		19	85	62	24				18	52			76	\$-	\$	24,800	\$	-	\$	1,160	336 \$	80,055
2	Kick-Off Meeting with LAC		4	4	4					12				12		\$	2,280			\$	500	36 \$	7,860
3	Bi-Weekly Teleconference Coordination (12 total)		6	12	12											\$	3,840					30 \$	10,440
4	Monthly Face to Face Meetings (6 Total during design phase)			24	24									40		\$	13,680			\$	660	88 \$	28,060
5	Project Management and Documentation (6		9	9	18					6				10		\$	1 1 2 0					54 \$	10 705
0	months); Review Risk Log Funding Administration		9	•					<u> </u>	0				12		Ф \$	1,120 320					54 \$ 16 \$	10,795 3,240
6 7				12 16		24			<u> </u>		40			4		Ф \$						88 \$	14,120
1	Permitting Assistance (NMED)			10	4	24					40			4		\$	1,280					¢ 88	14,120
8	Public Meeting Assistance (1 Total)			8							12			4		\$	2,280					24 \$	5,540
9	TASK 2. Supplemental Site Data Acquisition		12	8	28			8		44		40		8	\$-	\$	-	\$	32,691	\$	8,608	120 \$	62,979
10	Compile existing information		2	2	8					8				8								76 \$	4,230
11	As-built/record survey of existing WRRF		2	2	12					20		40										\$	9,870
12	Topographic and Utility Survey / Field SUE And																	•	o			10.0	
	potholing (Total of 2 days of potholing)		4		4				<u> </u>	8								\$	24,045			16 \$	26,785
13	Geotechnical Investigation/Report		2					8	<u> </u>									\$	8,646			10 \$	10,366
14	Hazardous Waste Assessment		2	4	4				<b></b>	8										\$	8,608	18 \$	11,728
15	TASK 3. Value Engineering		22	10	64					48		16		8	\$-	\$	46,600	\$	7,500	\$	1,000	168 \$	84,122
16	Review/Refine PER Basis of Design		2		8					8						\$	1,865					18 \$	4,985
17	Verify Existing facilities Demolition/Repurposing				8					8		4				¢	1,325					20 \$	4,373
18	Plan and Options Update Project cost estimates/ budget		1		8					0		4				\$ \$	1,930					16 \$	5,070
	Site Visit to Existing Facilities (Assumed Utah, 3		4		0					4						φ	1,950					10 \$	5,070
19	total days)																					\$	-
20	Risk Assessment and Analysis		8	2	24					8												42 \$	8,430
21	Prepare VE Report		2	2	4					8		8		4		\$	31,430	\$	7,500			28 \$	42,776
22	VE Workshop		4	4	8					8		2		2		\$	2,820			\$	1,000	28 \$	8,654
23	Final VE Report		2	2	4					4		2		2		\$	7,230					16 \$	9,834
24	TASK 4A: Preliminary Design (50% Submittal)		50	46	239	106	8			415		320		44	\$ 21,000	D \$	130,500	\$	-	\$	-	1228 \$	328,350
<b>25</b>	General Cover Sheet								<b> </b>	-													
	Site Vicinity Map, Site Location, Sheet Index	1			4				<u> </u>	2		4										10 \$ 10 \$	1,498 1,298
	General Symbols and Abbreviations	1			2				<u> </u>	4		4				_						8 \$	1,298
	General Notes and Legend	1			2				<u> </u>	2 		4										0 \$ 10 \$	1,000
	General Site Plan - WWTP	. 1	2		8				<u> </u>	12		12										34 \$	4,804
31	Contract Documents		2						<u> </u>	12		12		16		+						28 \$	3,990
32	Total	5																					
33	Civil Design																						
	Civil Notes and Legend	1	1						<u> </u>	2												3 \$	470
	Civil Demolition Plan	1	1		4					8		12										25 \$	3,244

	Name of Project:	1	White R	lock W	RRF Re	placemer	nt														
	Client:		Los Ala	imos (	County								Date o	of propo	sal:				5/31/2019		
	Principal-in-Charge/ PM, Des. Eng:	-	Todd B	urt / D	onzil W	orthingto	n					-	Prepa	red by:					Todd Burt /	Donzil Worthing	gton
												-	Appro	ved by:						inits.	
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		# of Sh	Engineer	Technical Specialist (	Engineer 6,	Engineer 5	Engr T	Engineer	Engineer 3	Engineer	Engineer	Engr T	Engr T	Admin	Subcoi (Pathfii Test, S	Vacuur Subcor	(Aqua Engine	Other ( Surve) Structu Constr	Reimbursea Expenses	Per-Hrs	Cost
No.	Hourly Rate:		\$ 240	\$ 215	\$ 215	\$ 175	\$ 115	\$ 155	\$ 135	\$ 115	\$ 100	\$ 102	\$82	\$85							
35a	Demolition or Modifications Plan/Section/Photos Headworks	1			2					4		8								14	\$ 1,70
36	Demolition or Re-Purposing Plan/Section/Photos Primary Clarifiers	1			2					4		8								14	\$ 1,70
37	Demolition or Re-Purposing Plan/Section/Photos Secondary Clarifiers	2			2							8								14	\$ 1,70
38	Demolition or Re-Purposing Plan/Section/Photos CCB	2			2				+	4		8								14	
39	Demolition or Re-Purposing Plan/Section/Photos Recirculation Pump Stations	1			2					4		8								14	
40	Demolition or Re-Purposing Plan/Section/Photos Digester Bldg Demolition or Re-Purposing Plan/Section/Photos	1			2					4		8								14	\$ 1,70
41	Digesters	2			2					4		8								14	\$ 1,70
42	Demolition Plan/Section/Photos Sludge Beds	2			2					4		8								14	
43	Civil Yard Piping Plan - base	1	1		16					24		40								81	
44	Civil Yard Piping Plan - enlargements	2	1		12					16		24								53	
45	Yard Piping Profiles	2			8					40		20								68	
46	Pipe Connection Details	2			8					12		20								40	
47 48	Paving and Grading Plan Civil Site Structures (Splitting, Manholes)	3	1		12					16		20 16								49 40	
40	Standard Civil Details	2	1		8					12		24								40	
50	Technical Specifications (utilize NMPWSS Standard Specs and coordinate Supp Specs)		4		16					16		21		16						52	
51	Total	37																			
52	Process Design																				
53	Process Diagram, Design Basis	1		2						8						\$	2,500			18	
54	Hydraulic Profile	1		2	8					8						\$	3,000			18	
55 56	Mass Balance Headworks Plan and Profiles	1			2					2						\$	3,000 7,000				\$ 3,00 \$ 7,66
57	Grit Chamber Plan and Profiles	4			2					2						\$ \$	5,000			4	\$ 7,00 \$ 5,00
58	Oxidation Ditch Mechanical Plans and Sections	6			2					2						\$	12,000			4	
59	Secondary Clarifier Mechanical Plans and Sections	2														\$	3,500				\$ 3,50
60	On-Site Chlorination System Plan and Sections	2	2	2	8				-	24		24								60	
61	Filtration Mechanical Plan and Sections	2														\$	4,500				\$ 4,50
62	UV Plan and Sections	2														\$	4,000				\$ 4,00
63	Reuse Water Storage Plan and Sections	2			4					4						\$	3,000			8	
64	RAS/WAS Pump Station Plan and Sections	2			2				<u> </u>	2						\$	4,500			4	
65 66	Sludge Holding Tank Plans and Sections	2			2					2						\$	3,000			4	
66 67	Dewatering Plan and Sections Sludge Bed Plan and Section	2			2					2						\$ \$	4,500 3,000			4	\$ 4,50 \$ 3,66
68	Technical Specifications	2			2				+							\$ \$	2,500				\$ 3,00 \$ 2,50
<b>69</b>	Total	34														¥	_,000				- 2,00
70	Architectural Design								-												
71	Architectural Notes, Legend, and Codes	2							1			2			\$ 1,	500				2	\$ 1,70
72	Architectural Symbols and Abbreviations	2			1							2			\$ 1,	500				3	\$ 1,91
73	Headworks Architectural Plan, Elevations, and Section	3			1							2			\$ 4,	000				3	\$ 4,41
74	RAS/WAS &UV Architectural Plan, Elevations, and Section											-			\$ 4.	000				3	\$ 4,41

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No.	Hourly Rate:																					
NO.			\$ 240 \$	215	\$ 215	\$ 175	\$ 115	\$ 155	\$ 135	\$ 11	\$ 100	\$ 102	2 \$ 82	2 \$ 85								
70	Renovations to Existing Admin Building Architectural														<b>•</b> • • • •					10	•	
	Plan, Elevations, and Section	4	2	4	4						4		4	4	\$ 10,0	00					\$	12,948
	Technical Specifications Total	40	2		4						4			8						18	\$	2,480
80	Structural Design	10																				
81 82	-	1			0						4										¢	1 000
	Structural Notes and Legend Headworks Plan and Sections		1		2	4	·				4 0										\$ \$	1,830 4,090
	Oxidation Ditch Plan	3	3		3	18					8										\$ \$	4,090
	Secondary Clarifier Plan and Sections	2	2		2	10				1											\$	3,925
	Filter Building Plan and Sections	2			2	10				1											\$	3,923
	RAS/WAS &UV Building Plan and Sections	2	2		2					1											\$	3,925
	Existing O&M Renovation (Additive Alternate)	4	2		2	g					9										\$	3,520
	Sludge Drying Beds	2	1		2					1	-										\$	3,685
	Re-Purpose Ex Anaerobic Digesters	2	2		2	10				1											\$	3,925
96	Renovate Ex Humus Pump Area	2	1		1	10				1											\$	3,470
98	Technical Specifications	_			•	6					•										\$	1,050
99	Total	32																				,
100	Electrical/Instrumentation Design																					
101	Electrical Notes, and Legend	1														\$	1,000				\$	1,000
	Electrical Notes, and Legend Electrical Symbols and Abbreviations	1 1														\$ \$	1,000 1,000				\$ \$	1,000 1,000
102	· •	1 1 9			4						8		8			,				20	•	
102	Electrical Symbols and Abbreviations	1 1 9 3			4						8 8		8			\$	1,000				\$	1,000
102 103	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams	1 1 9 3 1			4						-		-			\$	1,000 22,500				\$ \$	1,000 25,096 5,596 1,500
102 103 104 105	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings	1 1 9 3 1 3			4						-		-			\$ \$ \$	1,000 22,500 3,000 1,500 1,500				\$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 1,500
102 103 104 105 106 107	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition	1 1 9 3 1 3 1			4						-		-			\$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 1,500 2,000				\$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 1,500 2,000
102 103 104 105 106 107 108	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan	1 9 3 1 3 1 1 1			44						-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 1,500 2,000 2,000				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 1,500 2,000 2,000
102 103 104 105 106 107 108 109	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan	1 9 3 1 3 1 1 1 1			4 4						-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 1,500 2,000 2,000 3,000				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 1,500 2,000 2,000 3,000
102 103 104 105 106 107 108 109 110	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan	1 9 3 1 3 1 1 1 1 1			4						-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 1,500 2,000 2,000 3,000 1,250				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 1,500 2,000 2,000 3,000 1,250
102 103 104 105 106 107 108 109 110 111	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan	1 9 3 1 3 1 1 1 1 1 1 1			4 4						-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 2,000 2,000 2,000 3,000 1,250 2,000
102 103 104 105 106 107 108 109 110 111 111	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan	1 9 3 1 3 1 1 1 1 1 1 1 1			4 4						-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 2,000 2,000 2,000 1,250 2,000 1,250
102 103 104 105 106 107 108 109 110 111 111 112 113	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan RAS/WAS Layout Plan	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1			4						-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500
102 103 104 105 106 107 108 109 110 111 111 112 113 114	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan RAS/WAS Layout Plan UV/Filters Layout Plan	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500				\$         \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500
102           103           104           105           106           107           108           109           110           111           112           113           114	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan RAS/WAS Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			4 4						-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500				\$         \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500
102           103           104           105           106           107           108           109           110           111           112           113           114           115           118	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan RAS/WAS Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000				\$         \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000
102           103           104           105           106           107           108           109           110           111           112           113           114           115           118           119	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500
102           103           104           105           106           107           108           109           110           111           112           113           114           115           118           119           120	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan RAS/WAS Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications <b>Total</b>	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 2 2 9									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000
102           103           104           105           106           107           108           109           110           111           112           113           114           115           118           119           120           121	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan RAS/WAS Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 9 2 9									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000 3,000				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000 3,000 -
102           103           104           105           106           107           108           109           110           111           112           113           114           115           118           119           120           121           122	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 9 2 9 1 1									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 1,250 1,500 2,500 1,500 4,000 3,000				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000 3,000 - - - 1,000
102           103           104           105           106           107           108           109           110           111           112           113           114           115           118           119           120           121           122           123	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend Headworks HVAC and Plumbing Plans	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 9 2 9 1 1 1 1									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 1,250 1,250 1,500 2,500 1,500 4,000 3,000				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 2,500 1,500 4,000 3,000 - - - 1,000 1,500
102           103           104           105           106           107           108           109           110           111           112           113           114           115           118           119           120           121           122           123           124	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend Headworks HVAC and Plumbing Plans Filter Building HVAC and Plumbing Plans	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 9 2 9 1 1 1 1									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 1,250 1,250 1,250 1,500 2,500 1,500 4,000 3,000 1,500 1,500 1,500				\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 25,096 5,596 1,500 2,000 2,000 1,250 1,250 1,250 1,500 2,500 1,500 3,000 - - - 1,000 1,500 1,500
102         103         104         105         106         107         108         109         110         111         112         113         114         115         118         119         120         121         122         123         124	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend Headworks HVAC and Plumbing Plans Filter Building HVAC Plan	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1									-		-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 1,250 1,250 1,500 2,500 1,500 4,000 3,000 1,500 1,500 1,500 1,500				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 1,250 1,250 1,500 2,500 1,500 4,000 3,000 - - - 1,000 1,500 1,500 1,500
102         103         104         105         106         107         108         109         110         111         112         113         114         115         118         119         120         121         122         123         124         127	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend Headworks HVAC and Plumbing Plans Admin Building HVAC Plan RAS/WAS & UV HVAC and Plumbing Plan	1 1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1											-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,500 1,500 4,000 3,000 1,500 1,500 1,500 1,500 1,500				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 1,250 1,250 1,250 1,500 2,500 1,500 4,000 3,000 - - 1,000 1,500 1,500 1,500 1,500
102         103         104         105         106         107         108         109         110         111         112         113         114         115         118         119         120         121         122         123         124         127         128	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend Headworks HVAC and Plumbing Plans Admin Building HVAC Plan RAS/WAS & UV HVAC and Plumbing Plan Plumbing Schedules/Details	1 1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1											-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,250 1,500 4,000 3,000 1,500 1,500 1,500 1,500 1,500 1,500 1,500				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 1,250 1,250 1,250 1,500 4,000 3,000 - - - 1,000 1,500 1,500 1,500 1,500 1,500 1,500 1,600
102         103         104         105         106         107         108         109         110         111         112         113         114         115         118         119         120         121         122         123         124         127         128         129	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan RAS/WAS Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend Headworks HVAC and Plumbing Plans Admin Building HVAC Plan RAS/WAS & UV HVAC and Plumbing Plan Plumbing Schedules/Details HVAC Schedules/Details	1 9 3 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1											-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 1,250 1,250 1,250 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500 1,500				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 1,250 1,500 2,500 1,500 4,000 3,000 - - - 1,000 1,500 1,500 1,500 1,500 1,500 1,500 1,600
102         103         104         105         106         107         108         109         110         111         112         113         114         115         118         119         120         121         122         123         124         127         128	Electrical Symbols and Abbreviations Process and Instrumentation Diagrams Instrumentation Drawings Network Drawings Electrical Details Oneline Demolition Electrical Site Demolition Plan Electrical Site Plan Headworks Layout Plan Oxidation Ditch Layout Plan Secondary Clarifier Layout Plan UV/Filters Layout Plan Dewatering/Solids Holding Layout Plan Onelines Technical Specifications Total Mechanical Design Mechanical Notes, Symbols and Legend Headworks HVAC and Plumbing Plans Admin Building HVAC Plan RAS/WAS & UV HVAC and Plumbing Plan Plumbing Schedules/Details	1 1 1 1 1 1 1											-			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,000 22,500 3,000 1,500 2,000 2,000 3,000 1,250 2,000 1,250 1,250 1,500 4,000 3,000 1,500 1,500 1,500 1,500 1,500 1,500 1,500				\$     \$       \$     \$	1,000 25,096 5,596 1,500 2,000 2,000 3,000 1,250 1,250 1,250 1,500 4,000 3,000 - - - 1,000 1,500 1,500 1,500 1,500 1,500 1,600

5/31/2019	

			F	YHIR	IT B 2	- DESI	GN S		EEE											
	Name of Project:					placeme														
	Client:		Los Ala			placemen							Date	of propo	sal:			5/31/2019		
-	Principal-in-Charge/ PM, Des. Eng:					orthingto	n					_		ared by:					Donzil Worthingt	on
			I COUCID			sraningto	••					_		roved by:				Toda Barty	inits.	
			PIC	Βd	Ы									t 4	e Geo	t	0 -	ple	Task Su	b-Totals
		ş	7, F	ι. Ω	ۍ	2	9 L	4		Я	<del>, -</del>	15	3	sis	ıltaı êr, ( ta F	ıltaı ng)	s, up:	sea		
	Task / Activity	of Sheets	er	Technical Specialist (	Engineer	Engineer (	Engr Tech	Engineer	Engineer 3	Engineer	Engineer '	Tech	Engr Tech	Admin Assist	Subconsultant (Pathfinder, Gec Test, Santa Fe Vacuum)	Subconsultant (Aqua Engineering)	Other Groups (Survey, Structures, Construction)	Reimburse Expenses		
		fS	gine	scia	gine	gine	gr T	gine	gine	gine	gine	gr 1	gr 1	nin	oco thfi st, S cuu	oco Jua gine	irve ucti	en im		
		o #	Engineer	Spi	Eng	Enç	Eng	Enį	Eng	Eng	Enį	Engr	Eng	Adi	Sul (Pa Tes Vac	Sul (Aq Eng	Col Str	Ext 8	Per-Hrs	Cost
N	Lisensky Distant																			
No.	Hourly Rate:		\$ 240	\$ 215	\$ 215	\$ 175	\$ 115	\$ 155	\$ 135	\$ 115	\$ 100	\$ 10	02 \$ 8	32 \$ 85						
137	Internal QA/QC																			
138	Constructability Review		2	20	4		4												30 \$	6,100
139	Final plans/Specs Review		8	4	16		4												32 \$	
140	Design Review Meeting		4	4	8					8									24 \$	4,460
142	TASK 4B: Preliminary Design (95% Submittal)		50	30	143	157	8	20		348	ş	1	26	28 22	2 \$ 12,000	\$ 147,000	\$ -	\$ -	940 \$	297,528
143	General		00	00	0	107	0	20		040					φ 12,000	÷ 117,000	¥	•	040 W	
	Cover Sheet	1												2					2 \$	164
145	Site Vicinity Map, Site Location, Sheet Index	1								1				2					3 \$	
146	General Symbols and Abbreviations	1								1				2					3 \$	
	General Notes and Legend	1								1				2					3 \$	279
	General Site Plan - WWTP	1	2					20		8				20					50 \$	6,140
149	Contract Documents		2											8	5				10 \$	1,160
150	Total	31																		
151	Civil Design																			
152	Civil Notes and Legend	1	1							2									3 \$	470
	Civil Demolition Plan	1	1		2					4			8						15 \$	1,946
	Demolition or Modifications Plan/Section/Photos	4			0														10 0	4 000
	Headworks Demolition or Re-Purposing Plan/Section/Photos	1			2					4			4						10 \$	1,298
	Primary Clarifiers	2			2					2			4						8 \$	1,068
	Demolition or Re-Purposing Plan/Section/Photos																			
	Secondary Clarifiers	2			2					2			4						8 \$	,
157	Demolition or Re-Purposing Plan/Section/Photos CCB	1			2					2			4						8 \$	1,068
158	Demolition or Re-Purposing Plan/Section/Photos Recirculation Pump Stations	1			2					2			4						8 \$	1,068
100	Demolition or Re-Purposing Plan/Section/Photos				2					2			4						υψ	1,000
159	Digester Bldg	2			2					2			4						8 \$	1,068
	Demolition or Re-Purposing Plan/Section/Photos				_					_										1 0 0 0
	Digesters Demolition Plan/Section/Photos Sludge Beds	2			2					2			4	_					8 \$	
	Demolition Plan/Section/Photos Sludge Beds Civil Yard Piping Plan - base	1	4		2					2			4						8 \$	
	Civil Yard Piping Plan - enlargements	1	1		8					•			12						29 \$ 34 \$	
	Yard Piping Profiles	2			4					20			10 10						22 \$	
	Pipe Connection Details	4	1		4 8					0 8			10						22 \$	
	Paving and Grading Plan	3			4					8			12						24 \$	
	Civil Site Structures (Splitting, Manholes)	4	1		4					8			12						25 \$	
	Standard Civil Details	3	4		8					8									20 \$	
	Technical Specifications		4							8	8	5		8	3				28 \$	
170	Total	69																		
171	Process Design																			
172	Process Diagram, Design Basis	1		1	2					2					·	\$ 2,500			5 \$	
	Hydraulic Profile	1		1	4					4						\$ 3,000			9 \$	
	Mass Balance	1														\$ 3,000			\$	- ,
	Headworks Plan and Profiles	3			1					1						\$ 7,000			2 \$	
	Grit Chamber Plan and Profiles	3										-				\$ 5,000			\$	,
	Oxidation Ditch Mechanical Plans and Sections	7			1					2				_		\$ 12,000			3 \$	
178	Secondary Clarifier Mechanical Plans and Sections	6														\$ 3,000			\$	3,000

			E	(HIB	IT B.2	- DES	IGN S	COPE	FEE											
	Name of Project:		White Re	ock W	RRF Re	placeme	nt													
	Client:		Los Alar										Date o	of propo	sal:			5/31/2019		
	Principal-in-Charge/ PM, Des. Eng:		Todd Bu	irt / D	onzil Wo	orthingto	n					=	•	red by:				Todd Burt /	Donzil Worthin	gton
												_	Appro	ved by:					inits.	
	Task / Activity	eets	er 7, PIC	cal list 6, PM	er 6, PE	er 5	ech 6	er 4	er 3	er 2	er 1	Tech 5	ech 3	Admin Assist 4	Subconsultant (Pathfinder, Geo Test, Santa Fe Vacuum)	Subconsultant (Aqua Engineering)	Other Groups (Survey, Structures, Construction)	urseable	Task	Sub-Totals
		# of Sheets	Engineer	Technical Specialist	Engineer	Engineer	Engr Tech 6	Engineer	Engineer	Engineer	Engineer	Engr To	Engr Tech	Admin	Subcor (Pathfii Test, S Vacuur	Subcor (Aqua Engine	Other C (Surve) Structu Constr	Reimburs Expenses	Per-Hrs	Cost
No.	Hourly Rate:		\$ 240	\$ 215	\$ 215	\$ 175	\$ 115	\$ 155	\$ 135	\$ 115	\$ 100	\$ 102	\$82	\$ 85						
179	On-Site Chlorination System Plan and Sections	2	2	2	4					12		12	2					•	32	\$ 4,374
180	Filtration Mechanical Plan and Sections	4														\$ 4,000	)			\$ 4,000
181	UV Plan and Sections	4														\$ 4,000	)			\$ 4,000
182	Reuse Water Storage Plan and Sections	2			2					2						\$ 3,000	)			\$ 3,660
	RAS/WAS Pump Station Plan and Sections	3			1					2						\$ 4,000	)			\$ 4,445
	Sludge Holding Tank Plans and Sections	3			1					2						\$ 3,000			3	\$ 3,445
	Dewatering Plan and Sections	4														\$ 4,000				\$ 4,000
	Sludge Bed Plan and Section	3			1					2						\$ 3,000				\$ 3,445
	Pump, Valve, Mechanical Schedules	5			1					2					I	\$ 10,000			3	\$ 10,445
	Technical Specifications															\$ 3,500	)			\$ 3,500
189	Total	52																		
190	Architectural Design																			
	Architectural Notes, Legend, and Codes	2													\$ 1,500					\$ 1,500
	Architectural Symbols and Abbreviations	2													\$ 1,500					\$ 1,500
	Headworks Architectural Plan, Elevations, and Section RAS/WAS Architectural Plan, Elevations, and Section	3		0										0	\$ 2,250					\$ 2,250
	UV/Filter Architectural Plan, Elevations, and Section	3		2	-										\$ 2,250					\$ 3,710
	Renovations to Existing Admin Building Architectural	3		2	4									2	\$ 2,250				8	\$ 3,710
	Plan, Elevations, and Section	4		2	4									2	\$ 2,250				8	\$ 3,710
200	Total	21																		
201	Structural Design																			
202	Structural Notes and Legend	1	1		2	2	!			9	)								14	\$ 2,055
	Headworks Plan and Sections	3	3		2	8	1			11									24	
205	Oxidation Ditch Plan	1	1		2	27				27	•								57	
208	Secondary Clarifier Plan and Sections	5	4		3	17				20	1								44	\$ 6,880
209	UV/Filter Building Plan and Sections	3	2		2	17				20									41	\$ 6,185
210	RAS/WAS Foundation Plan and Sections	2	1		2	17				20									40	
	Existing O&M Renovation (Additive Alternate)	4	2		2	12				17									33	
	Sludge Drying Beds	2	2		2	17				20									41	
	Re-Purpose Ex Anaerobic Digesters	2	1		2	17				20									40	
	Renovate Ex Humus Pump Area	2	2		2	17				20									41	
	Technical Specifications		2		2	6													10	\$ 1,960
220	Total	42																		
221	Electrical/Instrumentation Design																			
	Electrical Notes, and Legend	1														\$ 1,000				\$ 1,000
	Electrical Symbols and Abbreviations	1														\$ 1,000				\$ 1,000
	P&IDs	9			2					4		4		-		\$ 9,000			10	
	Instrumentation Drawings	10			2					4		4	1			\$ 5,000			10	
	Network Drawings	1														\$ 1,000				\$ 1,000
	Electrical Details	4														\$ 1,000				\$ 1,000
	Oneline Demolition	1														\$ 1,000				\$ 1,000 \$ 1,000
	Electrical Site Demolition Plan	1														\$ 1,000				\$ 1,000
	Electrical Site Plan	2														\$ 2,000 \$ 1.250				\$ 2,000 \$ 1,250
	Headworks Layout Plan	1														\$ 1,250 \$ 2,000				\$ 1,250 \$ 2,000
	Oxidation Ditch Layout Plan	1														\$ 2,000 \$ 1,250				\$ 2,000 \$ 1,250
233	Secondary Clarifier Layout Plan							I			I					φ 1,250	/			φ 1,250

	5/31	/2019
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## EXHIBIT B.2 - DESIGN SCOPE FEE

Name of Project:

White Rock WRRF Replacement

	Name of Project:					placemen	t															
	Client:			amos C										f propo				5/31/20				
	Principal-in-Charge/ PM, Des. Eng:		Todd E	Burt / D	onzil W	orthingtor	า						Prepar					Todd Bu	rt / Donzil \		n	
													Approv	ved by:						inits.		
	Task / Activity		er 7, PIC	cal list 6, PM	er 6, PE	er 5	Tech 6	eer 4	er 3	er 2	er 1	ech 5	Tech 3	Admin Assist 4	Subconsultant (Pathfinder, Geo Test, Santa Fe Vacuum)	Subconsultant (Aqua Engineering)	Other Groups (Survey, Structures, Construction)	urseable ses		Task Sub-Totals		
		# of Sheets	Enginee	Technical Specialist	Engineer	Engineer	Engr T	Engine	Engineer	Engineer	Engineer	Engr Te	Engr Te	Admin ,	Subcon (Pathfin Test, Sa Vacuum	Subcon (Aqua Enginee	Other ( Surve) Structu Constr	Reimburse Expenses	Pe	r-Hrs	Cost	
No.	Hourly Rate:		\$ 240	\$ 215	\$ 215	\$ 175	\$ 115	\$ 155	\$ 135	\$ 115	\$ 100	\$ 102	\$82	\$85								
234	RAS/WAS Layout Plan	1														\$ 1,500				\$	1,500	
235	UV/Filters Layout Plan	1														\$ 2,000	_			\$	2,000	
236	Dewatering/Solids Holding Layout Plan	1														\$ 1,000				\$	1,000	
239	Onelines, Calcs	3														\$ 3,000				\$	3,000	
240	Schematics	3														\$ 6,000				\$	6,000	
241	Instrument Schedule	1														\$ 3,000				\$	3,000	
242	Conduit Schedule	3														\$ 9,000				\$	9,000	
243	Conduit Development	3														\$ 9,000				\$	9,000	
244	Technical Specifications															\$ 3,000				\$	3,000	
246	Total	49																				
247	Mechanical Design																					
	Mechanical Notes, Symbols and Legend	1			2					2						\$ 1,000				4 \$	1,660	
249	Headworks HVAC and Plumbing Plans	1			1					2						\$ 1,000				3 \$	1,445	
250	Filter Building HVAC and Plumbing Plans	1			1					2						\$ 1,000				3 \$	1,445	
253	RAS/WAS & UV HVAC and Plumbing Plan	1														\$ 1,000				\$	1,000	
	Plumbing Schedules/Details	1														\$ 1,000				\$	1,000	
255	HVAC Schedules/Details	1														\$ 1,000				\$	1,000	
256	Technical Specifications															\$ 2,000				\$	2,000	
257	Total	6														,						
258	Internal QA/QC																					
259	Constructability Review		2	12	4		4													22 \$	4,380	
260	Final plans/Specs Review		4	4	12		4													24 \$	4,860	
261	Review Meeting		4	4	8					8										24 \$	4,460	
262	Task 4C: 100% Final Drawings		12		56					64		104			\$-	\$ 35,670	\$ 10,940	\$	-	236 \$	79,498	
263	Incorporate comments into Final Drawings		8		40					40		80				\$ 30,670				168 \$	64,890	
	Produce 100% Drawings		4		16					24		24				\$ 5,000				68 \$	14,608	
	Task 5: Bidding Services		6	12	-				4	52		16		23		\$ 7,805		\$	220	139 \$	30,242	
266	Prepare Advertisement for Bids.			2						4				1		. ,	. ,			7 \$	975	
267	Request wage rates	⊢┠		2						•				4						6 \$	770	
	Maintain Web based Bid TrackerTM			-	2									4						6 \$	770	
	Conduct pre-bid meeting at the project site.			8										1				\$	110	16	355	
	Provide clarifications		2	0	8					24		16				\$ 7,500	\$ 2,500			50 \$	16,592	
	Prepare and distribute addenda (assumed 3 total)		- 4		4					8		.0		8		- 1,000	÷ 2,000			24 \$	3,420	
	Attend Bid Opening		r		, T					8				1				\$	110	8 \$	1,030	
	Tabulate/evaluate bids	┝─┨			2					<u> </u>				2		\$ 305		¥		12 \$	1,825	
	Verify Contractor compliance	┝─┨			1					0				2		÷ 000				3 \$	385	
	Prepare a recommendation of award letter	┝─┨			1				4					2						7 \$	925	
210		270	171	191		287	16	28	-	989	60	622	28			392375	5363	1	988	3167	96277	
TO	TAL PROJECT COST (DESIGN AND BIDDIN		., ,	131	515	201	10	20	4	505	00	022	20	101	55000	002070					962,774	
10	TAL FRUJEUT UUST (DESIGIN AND BIDDIN	vG).																		\$	962.7	

#### BOHANNAN HUSTON, INC. FEE SCHEDULE HOURLY RATES MARCH 2, 2019

	1	2	3	4	5	6	7
PROFESSIONAL	\$100	\$115	\$135	\$155	\$175	\$215	\$240
Engineers, Surveyors, Photogrammetrists							
TECHNICAL SPECIALIST	\$72	\$77	\$82	\$92	\$102	\$115	\$135
Engineering, Survey, Mapping, GIS, Graphics							
PLANNER	\$95	\$105	\$120	\$135	\$150	\$190	\$230
Community, Transportation							
CONSTRUCTION	\$70	\$75	\$80	\$90	\$105	\$120	\$160
Inspection, Observation							
LABORATORY TECHNICIAN	\$55	\$65	\$70	\$75	\$80	\$90	\$100
Materials Testing							
ANALYST	\$85	\$100	\$115	\$130	\$175	\$210	\$235
Programming, Computer Systems, GIS, Spatial Data							
ADMINISTRATIVE PROFESSIONAL	\$105	\$115	\$125	\$140	\$160	\$210	\$235
Administrative, Marketing, Technical Writing							
ADMINISTRATIVE ASSISTANT	\$55	\$65	\$75	\$85	\$95	\$105	\$120

#### MATERIALS AND REIMBURSABLE EXPENSES

Plotting, Printing, and Binding – As invoiced at cost of labor and materials.

Courier / Delivery Service – As invoiced by provider.

Mileage – Two-Wheel Drive Vehicle rate as published for the IRS Standard Mileage Rate.

Four-Wheel Drive Vehicle rate is the IRS Standard Mileage Rate plus \$0.10 per mile.

Per Diem / Travel – Field personnel in accordance with the latest GSA Schedule based on location of service.

Office / Professional staff travel costs, meals and lodging will be billed at cost.

Survey Equipment Charge – \$25.00/Hour.

Survey Material Charge – \$2.00/Hour.

**Expert Witness** – Rates shall be negotiated based on the requirements of the contract with a minimum of four hours while in court. **Other Direct Project Expenses** – At Cost.

**Overtime** – Performed upon request of the client; will be invoiced at 1.30 times the standard hourly rate.

Applicable Gross Receipts or Sales and Use Tax – Added to all fees charged for professional services unless they are exempt and official documentation is on file with Bohannan Huston, Inc.

### ATTACHMENT A

### **ATTACHMENT IV – Engineering Services During the Construction Phase**

1. As set forth in the AGREEMENT FOR ENGINEERING SERVICES dated the <u>31st</u>day of <u>July</u>, 20<u>19 (effective date)</u> by and between the <u>Incorporated County of Los Alamos</u>, the OWNER, and <u>Bohannan Huston</u>, Inc. , the ENGINEER, the OWNER and ENGINEER agree this <u>1<sup>st</sup></u> day of <u>October</u>, 20<u>20</u> (authorization to proceed date) that ENGINEER shall furnish ENGINEERING SERVICES During the Construction Phase in accordance with the GENERAL PROVISIONS of the Agreement and OWNER shall compensate the ENGINEER for services described as set forth below:

- A. Perform or provide the following tasks and/or deliverables: <u>See attached EXHIBIT C.1 – CONSTRUCTION AND ADDITIONAL SERVICES SCOPE</u> <u>OF WORK. The scope includes Construction Phase Services along with Additional</u> <u>Services within this Attachment.</u>
- B. Cost Proposal Include hourly breakdown for each task See attached EXHIBIT C.2 - CONSTRUCTION SERVICES FEE
- C. Reimbursable Expense Schedule See attached hourly rate sheet dated March 2, 2019
- D. Contract Time shall be <u>546</u> calendar days from the date of the OWNERS signature on Attachment IV. Construction phase services shall be completed and accepted by the OWNER by <u>March 31<sup>st</sup></u>, 2022 (DATE). If construction phase services have not been completed and accepted by <u>March 31<sup>st</sup></u>, 2022 the ENGINEER shall pay the OWNER liquidated damages as outlined in the Agreement.

2. Compensation for ENGINEERING SERVICES During the Construction Phase shall be by the

LUMP SUM method of payment. The total amount of compensation for ENGINEERING SERVICES During the Construction Phase, as described, including reimbursable expenses shall not exceed \$<u>1,052,500.00</u>, excluding gross receipt tax.

STANDARD HOURLY RATE WITH MAXIMUM method of payment. The total amount of hourly charges, including reimbursables, for ENGINEERING SERVICES During the Construction Phase, as described, shall not exceed \$<u>34,015.00</u>, excluding gross receipt tax, without prior written approval of the OWNER, with Funding Agency concurrence.

3. The amount of compensation shall not change unless the scope of services to be provided by the ENGINEER changes and this Agreement is formally amended according to Section A-5.

4. Signatures

### IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date of the signature by the required approval authorities below.

By:	Date:
	OWNER
	Type Name <u>Philo Shelton III</u>
	Title Manager, Department of Public Utilties, Incorporated County of Los Alamos
By:	Date:
_ ) -	ENGINEER
	Type Name <u>Todd Burt</u>
Title	Sr. Vice President
Addres	ss <u>7500 Jefferson St. NE</u>
	Albuquerque, NM 87109
REVIE	WED AND APPROVED: FUNDING AGENCY
AGEN	CY NAME:
Ву	
Туре М	Name
Date _	

#### Los Alamos County White Rock WRRF

#### EXHIBIT C.1 – CONSTRUCTION PHASE SERVICES SCOPE OF WORK

#### Task 6: Engineering Services During Construction

**Objective:** To provide Engineering services during the Construction Phase, including review of the Contractor's submittals, responding to requests for information (RFIs), and special site visits by the engineering team. The Engineering team will assist the on-site inspectors throughout the duration of the project to respond to questions and provide direction.

**Approach:** Construction phase services shall include the following items:

- 1. Conduct a pre-construction conference. Prepare agenda, sign-in sheet and meeting minutes.
- 2. Make up to 18 monthly periodic visits to the site at such times as appropriate during the progress of the work to observe the progress and quality of the work and advise accordingly.
- 3. Review Contractor's Submittals for conformance with Design Concept and Contract Documents.
- 4. Project will use BHI's Project Tracker for construction administration management.
- 5. Render interpretations of documents as necessary.
- 6. Coordinate and conduct Final Inspection and obtain written warranties and related documents as required by the Contract Documents.
- 7. Modify the original reproducible drawings delineating recorded as-built conditions provided by the contractor.
- 8. Coordinate and conduct 11-month warranty review.

#### **Assumptions:**

- 1. Record drawings from the Contractor shall be scanned and provided in PDF format to the Owner.
- A maximum of 18 monthly site visits will be required by the ENGINEER and be conducted at the regular progress meetings. An additional five (5) site visits have been included to provide inspection at key points during construction. These site visits may occur during the weekly teleconference meetings if required by circumstances in the field.
- 3. The engineering team will not attend weekly teleconference meetings.
- 4. Assumed construction duration is 540 consecutive calendar days (approximately 18 months).

#### **Deliverables:**

- Review and Response to RFIs and Submittals
- Site Inspection Reports

#### Task 7: Construction Management and Inspection

**Objective:** BHI will provide full time field inspection for the duration of the construction phase, projected to have a duration of 18 months. The field inspection shall be scheduled appropriately with the construction contractor to ensure that all critical facility installations are observed and documented within the allowable time frame.

All appropriate documents and correspondence, as determined by the Owner, shall be placed on the Project Tracker webpage included in the currently contracted construction management duties.

- **Construction Management**: BHI will provide construction management support services to the Owner for a period of 18 months, consecutive calendar days (CCD). Resident Project Representative (RPR) roles, responsibilities and authorities regarding administration of the construction contract. The main function that BHI shall serve is to 1) Ensure that the project is constructed in accordance with the construction drawings and specifications, 2) Attend progress meetings and document meetings with meeting minutes and prepare agendas, 3) provide coordination between the Contractor, Owner and Engineering Team. BHI does not have the authority to act on behalf of the Owner. BHI shall provide the following services:
  - 1. <u>Process Material Submittals.</u> BHI will process materials submittals prepared by contractor for engineer review and approval through our BHITracker.
  - 2. <u>Process Requests for Information (RFIs)</u>. BHI will process Request for Information made by Contractor and Design Revisions for engineer review and approval through our BHITracker. BHI will maintain a tracking log and copies of all correspondence will be available to the Owner throughout the project.
  - 3. <u>Process Change Orders.</u> BHI will review and make recommendations on contract change orders proposed by Owner or Contractor. Upon acceptance by the owner BHI will process the change order. The change orders will be submitted to the funding agency for approval prior to execution
  - 4. <u>Review and Process Contractor's Application for Payment.</u> Pay applications are anticipated to occur monthly.
    - a. Track and verify quantities. BHI will verify installed quantities stated on the Contractor's Application for Payment and send written recommendations for payment to the Owner. Funding agency review and approval of progress payments shall be conducted by BHI.

- 5. <u>Review Schedules</u>. BHI will track the progress of the construction and advise the construction contractor of any delays that may affect completing the project on time.
- 6. <u>Attend Project Progress Meetings</u>. It is anticipated that progress meetings will be conducted throughout the construction contract. BHI will prepare agendas and meeting minutes of the weekly progress meetings. BHI will conduct and attend the following meetings.
  - a. Special milestone inspections.
  - b. Progress meetings.
  - c. Payment meetings. If a separate meeting is requested by the construction contractor.
- 7. Conduct Pre-final and Final Inspections
  - a. Prepare punch list. After the construction contractor has requested for substantial completion, BHI will conduct a pre-final inspection in which all major construction items will be reviewed for completeness. A punch list will be drafted and sent to the contractor, with copies to the Owner outlining items still needing to be complete. BHI will conduct a final inspection walkthrough as the final acceptance of the construction contract.
- 8. <u>Certificate of Substantial Compliance</u>. BHI will submit to the Owner written certification that the installed facilities conform to the contract drawings and specifications.
- 9. <u>Final Contract Close-out Documents</u>. BHI will administer all remaining close-out documents of the construction contract and make recommendation for final payment to the Owner.
- **Field inspections**: BHI will provide on-site construction observation for a duration of 15 months of the total construction contract duration. The main function that BHI shall serve is to ensure that the project is constructed in accordance with the construction drawings and specifications, and to report progress to the Owner. BHI will provide the following services.
- 10. <u>Construction Observation</u>. BHI will provide full time field inspection for the duration of the construction phase. BHI will prepare and maintain the following as a means of documenting the construction contract. All documentation shall be uploaded to the BHITracker as soon as practical, but not less frequent than once a week.
  - a. Photos. BHI will maintain a digital photo log of representative construction activities, especially those activities that will be buried, backfilled, or under subsequent building construction. Photos will be titled or placed in folders to indicate the activity in the photo and be organized according to date. Digital photos will also be given to the Owner at the conclusion of the construction phase.

- b. Field Reporting. BHI will maintain a digital field report daily and provide written weekly summaries. The field report will contain a written narrative of daily construction activities, conversations, weather, progress, etc.
- 11. <u>Testing (Allowance)</u>. BHI will provide quality assurance testing per the minimum testing requirements established in the contract documents. Results of tests will be documented via the BHITracker. BHI will conduct QA/Referee testing as directed by the Owner.
- 12. <u>Verifying installed quantities</u>. BHI Field inspection personnel will verify installed quantities, including stored materials if requests are made for payments of stored materials.
- 13. <u>Reviewing contractor as-builts for accuracy and completeness</u>. BHI will notify the contractor of inaccurate, incomplete or out of date as-builts. The contractor shall be responsible for maintaining the official project progress drawings during construction which BHI will verify on a weekly basis.
- **Review and Drafting of Record Drawings**: BHI will review and, in conjunction with the Owner, approve the contractor's preliminary as-constructed drawings and plot of as-constructed survey. BHI will provide professional drafting services and provide two (2) reproducible mylar sets to the Owner. BHI shall provide to the Owner electronic copies (pdf formats) of the final record drawings including any OWNER specified sheet labeling.

#### **Assumptions:**

- 1. The construction duration will be 540 consecutive calendar days (approximately 18 months) and assume the contractor shall work a 40-hour work week from Monday to Friday
- 2. A single construction contract will be awarded for this project.
- 3. The on-site inspector shall conduct inspection for 450 consecutive calendar days (approximately 15 months) of the construction duration. The inspector shall work a 40-hour work week which includes travel time to the site.

#### **Deliverables:**

- Attend meetings including: payment, progress, special milestone and final inspections
- Processing of submittals for design engineer's approvals, processing RFI's, contract modifications and field directives from design engineer approval – throughout duration of the construction contract. Provide digital copies of all such correspondence at the end of the project.
- Other written and email correspondence throughout duration of the construction contract
- Photos and weekly report
- Issuance of Operational Readiness Test (ORT), Functional Acceptance Test (FAT) and Performance Testing (PT) acceptance memos

- Certificate of Substantial Compliance
- Record Drawings
- Final binder incl. compilation of Weekly Field Reports (Digital deliverable)

#### Task 8: Standard Operating Job Procedures

**Objective:** To provide Engineering support during the facility commissioning and start-up of the facilities. The engineering team will assist the Construction Inspector and Contractor during the start-up and commissioning of the new facility.

**Approach:** Standard Operating Job Procedures services shall include the following items:

- 1. Verify compliance of Contractor with Operational Readiness Test Inspection and review checklist criteria with the Contractor prior to acceptance
- 2. Assist during the Functional Acceptance Test (FAT), effluent water quality, of the Facility
- 3. Assist during the Reliability Acceptance Test (RAT), raw sewage testing, of the Facility
- 4. Prepare comprehensive Operation and Maintenance Manuals for the Owner prior to the FAT.
- 5. Coordinate and Assist with Training for Operators during the commissioning.

#### Assumptions:

- Contractor shall collect Operation and Maintenance Manual information from each Supplier prior to the ORT. The Engineer shall compile the information and develop an O&M Manual for the Owner prior to the FAT
- 2. The Performance Testing Period shall be a duration of seven (7) days.
- 3. The Engineering shall have a maximum of three (3) representatives on-site during the start-up and commissioning of the facility.
- 4. The Engineer shall assist the Contractor with the checklists and verification that all performance criteria are met during the testing of the facility.
- 5. The ORT shall occur over a two (2) day period. The FAT and Training shall occur within a one-week period.

#### **Deliverables:**

- ORT Memo and Acceptance
- FAT Memo and Acceptance
- RAT Memo and Acceptance
- Operation and Maintenance Manual Three (3) hard copies and one (1) PDF
- Record Drawings Three (3) hard copies, full size, three (3) hard copies, half size and one (1) PDF

#### **ADDITIONAL SERVICES:**

The following Tasks are Additional Services that will be performed as part of this contract.

#### Task 9: Operational Assistance

**Objective:** To provide Operational Support after the Commissioning for the project has been completed by the Contractor and the Substantial and Final Completion of the project has been granted. The Operational assistance shall be members of the Engineering Team or Operators working with the Design Team. The objective of this Task is to allow the Owner to have resources available to assist with questions or review operational information during the first year the facility is operational.

**Approach:** Operational Assistance services shall include the following items:

- 1. The BHI team shall coordinate a site visit after the facility has been operational for 6 months. Vendors and Suppliers shall be requested to attend this site visit, as needed, to conduct additional training or give the LAC operators the ability to ask additional questions that may have arisen since the original training of the facility.
- 2. On-Call operational assistance through teleconference calls and other forms of communication.
- 3. If needed, site visit by design team members

#### **Assumptions:**

- 1. The operational assistance shall occur after the Final Acceptance of the facility until the 11-month warranty inspection
- 2. The services shall be performed on an as needed basis when requested by the Owner.
- 3. The services are expected to vary and depend on the level of assistance needed.

#### **Deliverables:**

• Deliverables will be dependent on tasks requested by the Owner.

#### Task 10: Controls / Programming / Integration

**Objective:** To provide the County a complete and operational control system for the upgraded wastewater treatment facility at the conclusion of the construction project. The Engineer will review the project with the Owner to complete the programming of Software along with the HMI Hardware. The Engineering team will serve as the integrator for the project and work side by side with the Owner, the design team and the Contractor to incorporate the programming for monitoring and control of the facility.

Approach: Controls, Programming, Integration services shall include the following items:

 Control Loop Descriptions – Loop numbers and descriptions will be developed in conjunction with the P&IDs from the construction documents. Control descriptions will be developed with the County describing the monitoring and control requirements for

each loop. This will include a preliminary workshop with the County to review the approach to this work and then the descriptions will be developed. Once developed an additional workshop will be held to review the loop descriptions and Owner input will again be incorporated in the final loop descriptions.

- 2. Development of Programming Standards We will work with County staff to develop programming standards that will be utilized throughout any and all logic developed for the project. This will be reviewed by staff also.
- System Integration This includes developing a detailed replacement plan and schedule for the replacement of the existing control assemblies. Programing each PLC/RIO. Programing the SCADA network. Upgrading the HMI equipment and upgrading the HMI Software. Programming the HMI. Providing necessary programming and coordination to fully integrate vendor supplied systems.
- 4. Commissioning and Startup of the Control System Following a successful factory acceptance test of the PLC panels, they will be delivered to the Contractor for installation. Once installed, it will be necessary to perform I/O tests, loop tests and to startup and commission the Control System. As part of this effort, we will provide panel installation assistance, network cutover and commissioning assistance, I/O and loop testing with the Contractor, and the final Commissioning of the control system with the Contractor.
- Control System Training To appropriately conclude the integration services, proper System Training for the Control System will be provided. This will include a training session focusing on the following: SCADA System Documentation, PLC System Hardware and Software, HMI System Hardware and Software, and SCADA System Maintenance.

#### **Assumptions:**

- 1. The integration services will begin during the design phase of the project and will continue to completion at the end of the construction project.
- 2. The Engineering Team will use software similar to or compatible with the existing infrastructure used by the Owner.

#### **Deliverables:**

- Loop Descriptions along with minutes of loop description workshops
- Programming Standards document
- HMI Hardware and Software Information
- PLC Replacement Plan
- PLC Programming
- HMI System Development and Configuration
- HMI Programming

- SCADA Network Programming
- Factory Acceptance Test
- Panel Installation Assistance
- Network Cutover and Commissioning
- I/O and Loop Testing
- PLC/System Commissioning
- Control System Training

#### Task 11: Geotechnical Material Testing

**Description:** This task will provide the following material testing services for the construction of the project, to include the following:

- Certified field technicians to test field materials per construction documents including:
  - o Subgrade compaction and moisture testing
  - o field sampling of materials
  - o concrete field testing and sampling
- Field and materials testing laboratory to analyze all materials per the contract documents including:
  - o Proctor analysis
  - o concrete cylinder strength testing
  - o project reporting and correspondence
- Field and laboratory testing per ASTM, AASHTO, ACI, etc. as required through our AASHTO reference laboratory accreditation
- All sampling and laboratory testing will be performed under the direction of a registered professional engineer licensed in the State of New Mexico

#### **Assumptions:**

- Field and materials testing will be conducted on the following:
  - Oxidation Ditch
  - Secondary Clarifier(s)
  - Ras/WAS&UV Building
  - Filter Building
  - Headworks Building
- The minimum testing requirements in our estimate were based on American Public Works Association Standard Specifications

#### **Deliverables:**

• Hardcopy or electronic copy of each material test result

### **EXHIBIT C.2 - CONSTRUCTION PHASE AND ADDITIONAL SERVICES FEE**

	Name of Project:		White Ro										•_										
	Client:		Los Alan	nos C	ounty								Date o	f propo	sal:				5/3	30/2019			
	Principal-in-Charge/ PM, Des. Eng:		Todd Bu	rt / Do	onzil Wor	thingto	n						Prepar	red by:					Тос	d Burt / Do	onzil Worthi	ngton	
						-							Approv	ved by:							inits.		
	Task / Activity	eets	er 7, PIC	cal list 6, PM	er 6, PE	er 5	Tech 6	er 4	er 3	er 2	er 1	Tech 5	Tech 3	Assist 4	Subconsultant (Pathfinder, Geo Test, Santa Fe Vacuum)		Subconsultant (Aqua Engineering)	Other Groups (Survey, Structures,		urseable ses	Tas	sk Sub	-Totals
		# of Sheets	Engineer	l echnical Specialist	Engineer	Engineer	Engr To	Engineer	Engineer	Engineer	Engineer	Engr T	Engr T	Admin	Subcor (Pathfii Test, S Vacuur		Subcor (Aqua Engine	Other ( (Surve) Structu		Reimburse Expenses	Per-Hrs		Cost
No.	Hourly Rate:				\$ 215 \$	175	\$ 115	\$ 155	\$ 135	\$ 115	\$ 100	\$ 102	\$ 82	\$ 85									
1	TASK 6: ENGINEERING SERVICES DURING CONSTRUCTION		22	152	196					223					\$-	\$	70,215	\$ 22,50	00 \$	2,970	593	\$	201,430
2	Engineering Support Services																					\$	-
3	Construction Phase Kick off meeting			8	8											\$	2,280				16	\$	5,720
4	Weekly Teleconference Calls (78 total)																					\$	-
5	18 Monthly Progress Meetings		9		108					108						\$	2,880	\$-	\$	1,980	225		42,660
6	18-month Project Management (8 hours per month) Submittal Review/Approval (Assumes 75		9	144	40					75						\$	24 050	\$ 15,00	0		153 115		33,120 64,075
7	Submittals)				-												- ,						
8	RFI Responses (Assumes 30 Total)				20					40						\$	18,325	\$ 7,50				\$	34,725
10	Site Visits (5 Total) TASK 7: CONSTRUCTION MANAGEMENT AND		4		20											\$	14,880		\$	990	24	\$	21,130
11	INSPECTION														\$ -	\$	-	\$ 482,3	50 \$	-		\$	482,350
12	CONSTRUCTION INSPECTION SERVICES																						
	Full Time Construction Inspection, Management																						
13	and Reporting (15 months, 40 hours per week On- Site) - See Attachment for Additional Detail																	\$ 482,3	50			\$	482,350
15	TASK 8: Standard Operating Job Procedures				48					100		60			\$-	\$	66,270	\$-	\$	-	208	\$	94,210
16	Facility Commissioning - Start Up and Testing				20					40						\$	19,950				60	\$	28,850
17	Operations and Maintenance Manual				8					20						\$	34,330					\$	38,350
18	Record Drawings				20					40		60			-	\$	11,990				120		27,010
	TOTAL HRS (Construction Phase Services):		22	152	244					323		60					136485	5048	50	2970	801	\$	777,990
TOTAL C	ONSTRUCTION PHASE SERVICES COST:																					\$	777,990
									Add	itional S	ervices	S											
22	TASK 9: Operational Assistance (T&M)			12	8					8					\$-	\$	28,795	\$-	\$	-	28	\$	34,015
23	6-month Site Visit with Equipment Reps/Vendors as needed				8					8						\$	8,100				16	5 \$	10,740
24	11-month Site Visit									0													
	On-call assistance via phone as desired by operations			12												\$	5,720				12	2 \$	8,300
25	staff															\$	14,975					\$	14,975
27	TASK 10: Controls/Programming/Integration			4	8					12					\$-	\$	155,550	\$-	\$	50,000		\$	209,510
28	Loop development with Owner Input/Meeting/Review			4	4					4						\$	27,450				12	2 \$	29,630
29	Programming (includes software and HMI hardware)															\$	76,750		\$	30,000		\$	106,750
30	Loop testing with Contractor/Owner															\$	21,000		\$	7,500		\$	28,500
31	Start-Up				4					4						\$	23,700		\$	10,000		8	35,020
32	Training									4						\$	6,650		\$	2,500	2	\$	9,610
33	TASK 11: Geotechnical Materials Testing														\$-	\$	-		00 \$	-		\$	65,000
34	Material Testing Allowance			40	4.0											-	404 045 00	\$ 65,00		0.000.00	¢ =0.00	\$	65,000
	TOTAL HRS (Additional Services):			16	16					20						\$	184,345.00	\$65,000.0	U \$5	u,uuu.00	\$ 52.00		308,525.00
TOTAL	TOTAL ADDITIONAL SERVICES COST:																					\$	308,525
TUTALC	ONSTRUCTION PHASE AND ADDITIONAL SERVICES COST:																					\$	1,086,515

### Attachment A

#### COST ESTIMATE FOR CONSTRUCTION MANAGEMENT, AND INSPECTION FOR WHITE ROCK WWTP

#### **Assumptions:**

Estimated Construction Cost

#### \$ 13,000,000.00

Construction Management (CM) and Inspection Effort Duration of 18 months; Field Inspection fo 15 Months of Construction at 40 hours per week total

Effort of full time inspection/observation by Bohannan Huston, Inc.

QA Geotechnical Field and Materials Testing by BHI (allowance)

#### **Construction Management and Inspection (LS)**

	Effort (Hrs.)	<u> </u>	Hourly Rate	<u>Amount</u>
Engineer 7 (PIC)	90.00	\$	240.00	\$ 21,600.00
Engineer 4 (PM)	528.00	\$	155.00	\$ 81,840.00
Construction Observer 5	2600.00	\$	100.00	\$ 260,000.00
Administrative Assistant 4	156.00	\$	105.00	\$ 16,380.00
Mileage per month	18.00	\$	2,025.00	\$ 36,450.00
Per diem	18.00	\$	2,960.00	\$ 53,280.00
Subtotal - Construction Engineering and Inspection				\$ 469,550.00

#### Close Out, Final Acceptance, Record Drawings, and Start up (LS)

	Effort (Hrs.)	<u>Ho</u>	ourly Rate		<u>Amount</u>
Engineer 7 (PIC)	10.00	\$	240.00	\$	2,400.00
Engineer 4 (CM)	40.00	\$	155.00	\$	6,200.00
Administrative Assistant 4	40.00	\$	105.00	\$	4,200.00
Subtotal - Close Out and Final Acceptance				\$	12,800.00
Subtotal: LS fee for CM and Inspection	Total (	excl N	NMGRT)	\$	482,350.00
Field and Materials Testing - BHI	Effort (Hrs.)	Н	ourly Rate		Amount
QA Field and Materials Testing	<u></u>		<u> </u>	<u>\$</u>	65,000.00
Total - Field and Materials Testing (allowance)				\$	65,000.00
Subtotal: LS fee for QA/Referee Material Testing				\$	65,000.00
Total:	Total (	excl N	MGRT)	\$	547,350.00

#### BOHANNAN HUSTON, INC. FEE SCHEDULE HOURLY RATES MARCH 2, 2019

	1	2	3	4	5	6	7
PROFESSIONAL	\$100	\$115	\$135	\$155	\$175	\$215	\$240
Engineers, Surveyors, Photogrammetrists							
TECHNICAL SPECIALIST	\$72	\$77	\$82	\$92	\$102	\$115	\$135
Engineering, Survey, Mapping, GIS, Graphics							
PLANNER	\$95	\$105	\$120	\$135	\$150	\$190	\$230
Community, Transportation							
CONSTRUCTION	\$70	\$75	\$80	\$90	\$105	\$120	\$160
Inspection, Observation							
LABORATORY TECHNICIAN	\$55	\$65	\$70	\$75	\$80	\$90	\$100
Materials Testing							
ANALYST	\$85	\$100	\$115	\$130	\$175	\$210	\$235
Programming, Computer Systems, GIS, Spatial Data							
ADMINISTRATIVE PROFESSIONAL	\$105	\$115	\$125	\$140	\$160	\$210	\$235
Administrative, Marketing, Technical Writing							
ADMINISTRATIVE ASSISTANT	\$55	\$65	\$75	\$85	\$95	\$105	\$120

#### MATERIALS AND REIMBURSABLE EXPENSES

Plotting, Printing, and Binding – As invoiced at cost of labor and materials.

Courier / Delivery Service – As invoiced by provider.

Mileage – Two-Wheel Drive Vehicle rate as published for the IRS Standard Mileage Rate.

Four-Wheel Drive Vehicle rate is the IRS Standard Mileage Rate plus \$0.10 per mile.

Per Diem / Travel – Field personnel in accordance with the latest GSA Schedule based on location of service.

Office / Professional staff travel costs, meals and lodging will be billed at cost.

Survey Equipment Charge – \$25.00/Hour.

Survey Material Charge – \$2.00/Hour.

**Expert Witness** – Rates shall be negotiated based on the requirements of the contract with a minimum of four hours while in court. **Other Direct Project Expenses** – At Cost.

**Overtime** – Performed upon request of the client; will be invoiced at 1.30 times the standard hourly rate.

Applicable Gross Receipts or Sales and Use Tax – Added to all fees charged for professional services unless they are exempt and official documentation is on file with Bohannan Huston, Inc.

### ATTACHMENT A