

AGREEMENT
FOR
ENGINEERING SERVICES
(LOCAL VERSION – COST PLUS FEE)

AHTD JOB NO. 100849
FEDERAL AID PROJECT ("FAP") NO. TDIP-9227(51)
W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)

PREAMBLE

THIS AGREEMENT, entered into this 20TH day of Nov., 2015, by and between **City of Jonesboro** ("Owner"), and **Fisher & Arnold, Inc.** ("Consultant"), a corporation existing under the laws of the State of Arkansas with principal offices at **9180 Crestwyn Hills Drive, Memphis, Tennessee 38125**.

WITNESSETH:

WHEREAS, the Owner is planning to **design and construct a Bridge on West College Avenue over Christian Creek in the City of Jonesboro, Arkansas**.

WHEREAS, the Owner's forces are fully employed on other urgent work that prevents their early assignment to the aforementioned work; and,

WHEREAS, the Consultant's staff is adequate and well qualified, and it has been determined that its current workload will permit completion of the project on schedule.

NOW THEREFORE, it is considered to be in the best public interest for the Owner to obtain the assistance of the Consultant's organization in connection with engineering services. In consideration of the faithful performance of each party of the mutual covenants and agreements set forth hereinafter, it is mutually agreed as follows:

1. PRELIMINARY MATTERS

- 1.1. "Consultant's Representative" shall be Richard E. Gafford, P.E. until written notice is provided to the Owner designating a new representative.
- 1.2. "Contract Ceiling Price." The Contract Ceiling Price for this Agreement is **\$89,657.27**. The Contract Ceiling Price is the maximum aggregate amount of all payments that the Owner may become obligated to make under this Agreement. In no event, unless modified in writing, shall total payments by the Owner under this Agreement exceed the Contract Ceiling Price. The Consultant shall not be entitled to receive adjustment, reimbursement, or payment, nor shall the Owner, its officers, agents, employees, or representatives, incur any liability for, any fee or cost, exceeding the Contract Ceiling Price.
- 1.3. "Contract Price" is aggregate amount of allowable costs and fees to be paid by the Owner under this Agreement.
- 1.4. "Default" means the failure of the Consultant to perform any of the provisions of this Agreement. *Default includes, but is not limited to, failure to complete phases of the work according to schedule or failure to make progress in the work so as to endanger timely performance of this Agreement, failure to pay subcontractors in a timely manner, failure to comply with federal and state laws, and failure to comply with certifications made in or pursuant to this Agreement.*

- 1.5. "Department" or "AHTD" means the Arkansas State Highway and Transportation Department.
- 1.6. "DOT" means the United States Department of Transportation.
- 1.7. "FAR" means the Federal Acquisition Regulations, codified in 48 C.F.R.
- 1.8. "Fee" whether fixed or otherwise is a dollar amount that includes the Consultant's profit on the job.
- 1.9. "FHWA" means the Federal Highway Administration.
- 1.10. "Indirect Cost Rate." The Indirect Cost Rate is defined in the provisions of 48 C.F.R. Part 31, and is also subject to any limitations contained herein. The Provisional Indirect Cost Rate for the Consultant under this Agreement shall be **181.81** percent plus **0.33** percent FCCM. If applicable, the Indirect Cost Rate for each subcontractor shall be listed in Appendix B.
- 1.11. "Title I Services" are those services provided by the Consultant before the award of the contract for the construction of the Project, consisting primarily of engineering services for the planning or design of the Project.
- 1.12. "Title I Services Ceiling Price." The Title I Services Ceiling Price for this Agreement is **\$83,998.07**. The Title I Services Ceiling price is the maximum aggregate amount of all payments that the Owner may become obligated to make under this Agreement for fees and costs related to Title I Services. In no event, unless modified in writing, shall total payments by the Owner related to Title I Services exceed the Title I Services Ceiling Price. The Consultant shall not be entitled to receive adjustment, reimbursement, or payment for, nor shall the Owner, its officers, agents, employees, or representatives, incur any liability for, any fee or cost related to, Title I Services exceeding the Title I Services Ceiling Price.
- 1.13. "Title II Multiplier" (if applicable) is the mark-up by which the fee and indirect costs associated with Title II services are calculated. The Title II Multiplier, which accounts for the fee and indirect costs, is multiplied by the salary rate, as shown on the Schedule of Salary Ranges, of the particular individual(s) performing the Title II services. The Title II Multiplier for the term of this Agreement is **3.16**.
- 1.14. "Title II Services" are those services provided by the Consultant after the award of the contract for the construction of the Project, consisting primarily of engineering services during the construction of the Project.
- 1.15. "Title II Services Ceiling Price". The Title II Services Ceiling Price for this Agreement is **\$5,659.20**. The Title II Services Ceiling price is the maximum aggregate amount of all payments that the Owner may become obligated to make under this Agreement for fees and costs related to Title II Services. In no event, unless modified in writing, shall total payments by the Owner related to Title II Services exceed the Title II Services Ceiling Price. The Consultant shall not be entitled to receive adjustment, reimbursement, or payment for, nor shall the Owner, its officers, agents, employees, or representatives, incur any liability for, any fee or cost related to, Title II Services exceeding the Title II Services Ceiling Price.

2. TYPE OF AGREEMENT

- 2.1. This Agreement is a cost-plus-fixed-fee contract. The Consultant is being hired to perform professional engineering services in connection with the Project as set forth herein. In consideration for Title I services performed, the Owner will reimburse the Consultant for allowable direct and indirect costs, as defined herein, and pay the Consultant a fixed fee. If Title II services are to be performed, the Owner will reimburse the Consultant for allowable direct costs and also pay the Consultant an amount determined by multiplying the salary rate of the individual(s) performing the Title II services, as shown on the Schedule of Salary Ranges, by the Title II Multiplier.
- 2.2. The Project to be performed under this Agreement is a federally-assisted project and federal funds will be used, in part, to pay the Consultant. Therefore, notwithstanding any provision of this Agreement, all payments, costs, and expenditures are subject to the requirements and limitations of 48 C.F.R. Part 31, and the Consultant shall certify the accuracy of all invoices and requests for payment, along with supporting documentation and any information provided in determining the Indirect Cost Rates.

3. COSTS, FEES, AND PAYMENT

3.1. Allowable costs.

3.1.1. Allowable costs are subject to the limitations, regulations, and cost principles and procedures in 48 C.F.R. Part 31, which are expressly incorporated into this Agreement by reference. For the purpose of reimbursing allowable costs (except as provided in subparagraph 2 below, with respect to pension, deferred profit sharing, and employee stock ownership plan contributions), the term *costs* includes only—

3.1.1.1. Those recorded costs that, at the time of the request for reimbursement, the Consultant has paid by cash, check, or other form of actual payment for items or services purchased directly for the Agreement;

3.1.1.2. When the Consultant is not delinquent in paying costs of contract performance in the ordinary course of business, costs incurred, but not necessarily paid, for—

- Materials issued from the Consultant's inventory and placed in the production process for use in its performance under this Agreement;
- Direct labor;
- Direct travel;
- Other direct in-house costs; and
- Properly allocable and allowable indirect costs, as shown in the records maintained by the Consultant for purposes of obtaining reimbursement under government contracts; and
- The amount of progress payments that have been paid to the Consultant's subcontractors under similar cost standards.

- 3.1.2. Consultant's contributions to any pension or other post-retirement benefit, profit-sharing or employee stock ownership plan funds that are paid quarterly or more often may be included in indirect costs for payment purposes; *provided*, that the Consultant pays the contribution to the fund within 30 days after the close of the period covered. Payments made 30 days or more after the close of a period shall not be included until the Consultant actually makes the payment. Accrued costs for such contributions that are paid less often than quarterly shall be excluded from indirect costs for payment purposes until the Consultant actually makes the payment.
- 3.1.3. Notwithstanding the audit and adjustment of invoices or vouchers, allowable indirect costs under this Agreement shall be obtained by applying Indirect Cost Rates established in accordance with Subsection 3.3 below.
- 3.1.4. Any statements in specifications or other documents incorporated in this Agreement by reference designating performance of services or furnishing of materials at the Consultant's expense or at no cost to the Owner shall be disregarded for purposes of cost-reimbursement.
- 3.2. *Salaries.* The following schedule covers the classification of personnel and the salary ranges for all personnel anticipated to be assigned to this project by the Consultant:

3.2.1.1. SCHEDULE OF SALARY RANGES

Survey Design:

Survey Supervisor	\$30.00 to \$34.00
Party Chief	\$24.00 to \$28.00
Instrument Man	\$16.00 to \$18.00

Roadway Design:

Principal	\$52.00 to \$55.00
Project Manager	\$46.00 to \$50.00
Project Engineer	\$35.00 to \$39.00
Designer	\$25.00 to \$28.00
CADD Tech	\$22.00 to \$26.00

Structural Design:

Principal	\$62.00 to \$65.00
Project Manager	\$48.00 to \$52.00
Project Engineer	\$38.00 to \$42.00
Designer	\$26.00 to \$30.00
CADD Tech	\$25.00 to \$28.00

- 3.2.1.2. The Owner shall reimburse the Consultant for overtime costs only when the overtime has been authorized in writing by the Owner. When authorized, overtime shall be reimbursed at the rate of time and one-half for all nonexempt employees. Notwithstanding this provision, the Consultant must comply with all federal and state wage and hour laws and regulations, regardless whether the overtime is considered reimbursable under this Agreement.

3.3. *Indirect Cost Rates.*

- 3.3.1. Allowable indirect costs incurred by the Consultant shall also be reimbursed by the Owner at the Indirect Cost Rate. The Indirect Cost Rate of the Consultant for this Agreement shall be the rate as set forth in subsection **1.10**. If applicable, the

Indirect Cost Rate for subcontractors shall be determined in the same manner and subject to the same limitations as the Consultant, and shall be listed for each subcontractor identified in Appendix **B**. The Indirect Cost Rate, or any adjustment thereto, shall not change any monetary ceiling, contract obligation, or specific cost allowance, or disallowance provided for in this Agreement except as provided for in sections 3.3.4. and 3.3.5. The Indirect Cost Rate must reflect the allowable indirect costs pursuant to 48 C.F.R. Part 31 ("FAR").

- 3.3.2. In establishing the Indirect Cost Rate or proposing any adjustment thereto, the Consultant shall, upon request, submit to the Owner, FHWA, or their representatives an audited indirect cost rate and supporting cost data in accordance with the requirements set forth in the current *Arkansas Highway & Transportation Department Indirect Cost Rate Audit Requirements*.
- 3.3.3. During the term of this Agreement, if an audit of a subsequent accounting period of the Consultant demonstrates that the Consultant has incurred allowable indirect costs at a different rate than the Indirect Cost Rate, the Indirect Cost Rate shall be adjusted. Any adjustment is subject to the audit and documentation requirements of the FAR and the current *Arkansas Highway & Transportation Department Indirect Cost Rate Audit Requirements*. Except in the case of a provisional Indirect Cost Rate, as provided in the following subparagraphs, or the disallowance of cost following a subsequent audit, any adjustment to the Indirect Cost Rate shall be effective only prospectively from the date that the adjustment is accepted.
- 3.3.4. In order to expedite some projects, when an audited indirect cost rate has not yet been submitted and approved, the Owner may extend a temporary waiver and accept a provisional indirect cost rate. This provisional rate must be reviewed by, and receive a positive recommendation from the Arkansas Highway and Transportation Department's Chief Auditor. The provisional cost proposal must be accompanied by written assurance from an independent CPA that he/she has been engaged to audit the costs in accordance with the above requirements. The anticipated audit must be based on costs incurred in the most recently completed fiscal year for which the cost data is available, with the audit scheduled to begin within a reasonable time frame. If the date of the initial cost proposal is within the last quarter of the current fiscal year, the audit may be delayed until the current fiscal year is closed and the final cost data is available. The written assurance from the CPA that he or she has been engaged to perform the audit at an appropriate time is still required.
- 3.3.5. Once an audited indirect cost rate is approved, the ceiling prices provided for in the initial agreement using the provisional indirect cost rate will be adjusted with a supplemental agreement to implement the resulting increase or decrease from revising the indirect cost rate, and all amounts paid the consultant prior to receipt and acceptance of an audited indirect cost rate will be retroactively adjusted for changes in the indirect cost rate. However, no changes in hours, fixed fees, or other costs will be allowed as a result of applying the audited indirect cost rate.
- 3.4. *Fees.* The justification for the fees and costs is contained in Appendix A. In addition to reimbursement of the allowable costs as set forth above, the Owner shall pay to the Consultant a fixed fee of **\$5,730.66** for Title I Services. For Title II Services, if applicable, the Owner shall reimburse the Consultant for allowable direct costs and also pay to the Consultant an amount determined by multiplying the salary rate of the individual(s) performing the Title II Services, as shown on the Schedule of Salary Ranges, by the Title II Multiplier. The Title II Multiplier shall account for all fees and indirect costs associated with Title II services.

3.5. *Invoices, Reimbursement, and Partial Payments.* Submission of invoices and payment of the fees shall be made as follows, unless modified by the written agreement of both parties:

3.5.1. Not more often than once per month, the Consultant shall submit to the Owner, in such form and detail as the Owner may require, an invoice or voucher supported by a statement of the claimed allowable costs for performing this Agreement, and estimates of the amount and value of the work accomplished under this Agreement. The invoices for costs and estimates for fees shall be supported by any data requested by the Owner.

3.5.2. In making estimates for fee purposes, such estimates shall include only the amount and value of the work accomplished and performed by the Consultant under this Agreement which meets the standards of quality established under this Agreement. The Consultant shall submit with the estimates any supporting data required by the Owner. At a minimum, the supporting data shall include a progress report in the form and number required by the Owner.

3.5.3. Upon approval of the estimate by the Owner, payment upon properly executed vouchers shall be made to the Consultant, as soon as practicable, of 100 percent of the allowed costs, and of 90 percent of the approved amount of the estimated fee, less all previous payments. Notwithstanding any other provision of this Agreement, only costs and fees determined to be allowable by the Owner in accordance with subpart 31.2 of the Federal Acquisition Regulations (FAR) in effect on the date of this Agreement and under the terms of this Agreement shall be reimbursed or paid.

3.5.4. Before final payment under the Agreement, and as a condition precedent thereto, the Consultant shall execute and deliver to the Owner a release of all claims which are known or reasonably could have been known to exist against the Owner arising under or by virtue of this Agreement, other than any claims that are specifically excepted by the Consultant from the operation of the release in amounts stated in the release.

3.6. *Title I Services, Title II Services, and Contract Ceiling Prices.* The parties agree that aggregate payments under this Agreement, including all costs and fees, shall not exceed the Contract Ceiling Price. The parties further agree that aggregate payments for Title I services under this Agreement, including all costs and fees, shall not exceed the Title I Services Ceiling Price; and that aggregate payments for Title II services under this Agreement, including all costs and fees, shall not exceed the Title II Services Ceiling Price. No adjustment of the Indirect Cost Rate or the Title II Multiplier, claim, or dispute shall affect the limits imposed by these ceiling prices. No payment of costs or fees shall be made above these ceiling prices unless the Agreement is modified in writing.

3.7. *Final payment.*

3.7.1. The Consultant shall submit a completion invoice or voucher, designated as such, promptly upon completion of the work, but no later than forty-five (45) days (or longer, as the Owner may approve in writing) after the completion date. Upon approval of the completion invoice or voucher, and upon the Consultant's compliance with all terms of this Agreement, the Owner shall promptly pay any balance of allowable costs and any retainage owed to the Consultant. After the release of said retainage Consultant agrees that it will continue to provide consultation services to the Owner as needed through supplemental agreement(s) with respect to the contracted services under this Agreement until all work is completed under both Title I and Title II.

3.7.2. The Consultant shall pay to the Owner any refunds, rebates, credits, or other amounts (including interest, if any) accruing to or received by the Consultant or any assignee under this Agreement, to the extent that those amounts are properly allocable to costs for which the Consultant has been reimbursed by the Owner. Reasonable expenses incurred by the Consultant for securing refunds, rebates, credits, or other amounts shall be allowable costs if approved by the Owner. Before final payment under this Agreement, the Consultant and each assignee whose assignment is in effect at the time of final payment shall execute and deliver—

- An assignment to the Owner, in form and substance satisfactory to the Owner, of refunds, rebates, credits, or other amounts (including interest, if any) properly allocable to costs for which the Consultant has been reimbursed by the Owner under this Agreement; and,
- A release discharging the Owner, its officers, agents, and employees from all liabilities, obligations, and claims which were known or could reasonably have been known to exist arising out of or under this Agreement.

3.8. *Owner's Right to Withhold Payment.* The Owner may withhold payment to such extent as it deems necessary as a result of: (1) third party claims arising out of the services of the Consultant and made against the Owner; (2) evidence of fraud, over-billing, or overpayment; (3) inclusion of non-allowable costs; (4) failure to make prompt payments to subcontractors in the time provided by this Agreement; (5) payment requests received including fees for unapproved subcontractors; and/or (6) the Consultant's default or unsatisfactory performance of services. The withholding of payment under this provision shall in no way relieve the Consultant of its obligation to continue to perform its services under this Agreement.

4. DISALLOWANCE OF COSTS

- 4.1. Notwithstanding any other clause of this Agreement, the Owner may at any time issue to the Consultant a written notice of intent to disallow specified costs incurred or planned for incurrence under this Agreement that have been determined not to be allowable under the contract terms.
- 4.2. Failure to issue a notice under this Section shall not affect the Owner's rights to take exception to incurred costs.
- 4.3. If a subsequent audit reveals that: (1) items not properly reimbursable have, in fact, been reimbursed as direct costs; or (2) that the Indirect Cost Rate contains items not properly reimbursable under the FAR; then, in the case of indirect costs, the Indirect Cost Rate shall be amended retroactively to reflect the actual allowable indirect costs incurred, and, in the case of both direct and indirect costs, the Owner may offset, or the Consultant shall repay to Owner, any overpayment.

5. RECORDS & AUDITS

- 5.1. *Records* includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.
- 5.2. *Examination.* The Consultant shall maintain, and the Owner, AHTD, FHWA, and their authorized representatives shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs (direct and indirect) claimed to have

been incurred or anticipated to be incurred in performance of this Agreement. This right of examination shall also include examination and audit of any records considered, relied upon, or relating to the determination of the Indirect Cost Rate or any certification thereof, including any CPA audit relied upon to establish the rate. This right of examination shall also include inspection at all reasonable times of the Consultant's offices and facilities, or parts of them, engaged in performing the Agreement.

- 5.3. *Supporting Data.* If the Consultant has been required to submit data in connection with any action relating to this Agreement, including the negotiation of or pre-negotiation audit of the Indirect Cost Rate, the negotiation of the Fee, request for cost reimbursement, request for payment, request for an adjustment, or assertion of a claim, the Owner, AHTD, FHWA, or their authorized representatives, in order to evaluate the accuracy, completeness, and accuracy of the data, shall have the right to examine and audit all of the Consultant's records, including computations and projections, related to—
- The determination or certification of the Indirect Cost Rate, including any independent CPA audit or certification thereof;
 - Any proposal for the Agreement, subcontract, or modification;
 - Discussions conducted on the proposal(s), including those related to negotiating;
 - Fees or allowable costs under the Agreement, subcontract, or modification;
 - Performance of the Agreement, subcontract or modification; or,
 - The amount and basis of any claim or dispute.
- 5.4. *Audit.* The Owner, AHTD, FHWA, or their authorized representatives, shall have access to and the right to examine any of the Consultant's records involving transactions related to this Agreement or a subcontract hereunder.
- 5.5. *Reports.* If the Consultant is required to furnish cost, funding, or performance reports, the Owner, AHTD, FHWA, or their authorized representatives shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Consultant's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.
- 5.6. *Availability.* The Consultant shall retain and make available at its office at all reasonable times the records, materials, and other evidence described in this Section and Section 28, Disputes and Claims, for examination, audit, or reproduction, until five years after final payment under this Agreement, or for any longer period required by statute or by other clauses of this Agreement. In addition—
- 5.6.1. If this Agreement is completely or partially terminated, the records relating to the work terminated shall be retained and made available for five years after the termination; and,
- 5.6.2. Records relating to any claim or dispute, or to litigation or the settlement of claims arising under or relating to this Agreement shall be retained and made available until after any such claims or litigation, including appeals, are finally resolved.
- 5.7. The Consultant shall insert a clause containing all the terms of this Section in all subcontracts under this Agreement.

6. DESCRIPTION OF THE PROJECT

The City of Jonesboro is planning to replace the Christian Creek Bridge located on West College Avenue in Jonesboro, Arkansas. The existing two-lane, 58-foot, three-span concrete bridge was constructed in 1970. Based on visual observation, the bottom of the creek is assumed to be approximately 25 feet below roadway elevation. The replacement bridge structure is assumed to be a simple-span, precast bridge supported on geosynthetic-reinforced soil (GRS) abutment. The new structure will meet current AASHTO / FHWA design standards and safety requirements, will reduce future maintenance and improve the hydraulic conditions by eliminating the channel piers. The design will be reviewed and approved by the Arkansas State Highway and Transportation Department (AHTD).

7. INFORMATION AND TITLE I SERVICES TO BE PROVIDED BY CONSULTANT

See Scope of Work in Appendix A.

8. INFORMATION TO BE PROVIDED BY THE OWNER

- A. Existing right of way information on W. College Avenue in project area.
- B. Traffic count information including present and future ADT, DHV, and percent of trucks.
- C. Existing aerial photography (2014, 6-inch resolution, true color, high altitude, geo-referenced, Ortho-rectified), as needed.
- D. Approved environmental documents.
- E. Value Engineering Study, if necessary.
- F. Right of Way acquisition, utility coordination, and relocation services
- G. Advertise, conduct bid opening, and award the construction contract.
- H. Administer the construction process, including inspection and final project close out.
- I. Hydraulics report including no-rise and scour analysis.

9. TITLE II SERVICES TO BE PROVIDED BY CONSULTANT

- A. Provide review and approval of shop drawings and any other supplementary plans or similar data submitted by the Contractor and requiring approval.
- B. Upon request by Owner and or AHTD, provide design related solutions to construction problems and issues that may arise.

See Appendices A & B.

10. COORDINATION WITH OWNER

- 10.1. Throughout the Project, the Consultant shall hold *monthly* conferences in **Jonesboro, Arkansas**, or such other location as designated by the Owner, with representatives of the Owner, the AHTD, and the FHWA so that as the Project progresses, the Consultant shall have full benefit of the Owner's knowledge of existing needs and facilities and be consistent with the Owner's current policies and practices. The extent and character of the work to be done by the Consultant shall be subject to the general oversight and approval of the Owner.

11. OFFICE LOCATION FOR REVIEW OF WORK

- 11.1. Review of the work as it progresses and all files and documents produced under this Agreement may be made by representatives of the Owner, the AHTD, and the FHWA at the project office of the Consultant located in the Consultant's Arkansas office located at **1801 Latourette Drive, Jonesboro, Arkansas 72404.**

12. ACCESS TO PROPERTY

- 12.1. The Consultant's services to the Owner may require entry upon private property. The Owner will present or mail to private landowners a letter of introduction and explanation, describing the work, which shall be drafted by the Consultant. The Consultant will make reasonable attempts to notify resident landowners who are obvious and present when the Consultant is in the field. The Consultant is not expected to provide detailed contact with individual landowners. The Consultant is not expected to obtain entry by means other than the consent of the landowner. If the Consultant is denied entry to private property by the landowner, the Consultant will not enter the property. If denied entry to the property, the Consultant shall notify the Owner and advise the Owner of an alternate evaluation method if one is feasible. The Owner shall decide on the course of action to obtain access to the property.

13. DELIVERABLES

- A. During the Preliminary Design Phase
1. Roadway and Bridge Design Criteria
 2. Geotechnical Report for Pavement Design
 3. Geotechnical Report for Bridges (Preliminary and Final Versions)
 4. Hydraulic Report (Provided by City), as applicable
 5. 50% Complete Roadway Plans
 6. Preliminary Bridge Layout Drawings
 7. Meeting Minutes from Coordination Meetings
- B. During the Final Design Phase
1. 90% Complete Roadway Design Plans
 2. 90% Complete half-size Bridge Design Drawings
 3. Final half-size reproducible Roadway Design Plans signed and sealed by an Arkansas Registered Professional Engineer.
 4. Final full-size Bridge Design Drawings printed in black ink on quality bond paper and signed and sealed by an Arkansas Registered Professional Engineer.
 5. Provide Special Provisions
 6. Provide transportation management plan
 7. Provide construction cost estimate
 8. One Copy of Bridge Design and Quantity Computations
 9. Provide all appropriate Federal and State permits and certifications necessary to construct the proposed project
 10. Provide certification of hydraulic calculations and drainage system design (Provided by City)
 11. Meeting Minutes from Coordination Meetings
 12. Electronic files of the project design and plans on a compact disc in Bentley System Version 8i Microstation format that is fully indexed (all reference files attached and set to load automatically.) This includes the electronic copies of Roadway and Bridge submittals.

14. SUBCONTRACTING

- 14.1. Unless expressly disclosed in Appendix B, the Consultant may not subcontract any of the services to be provided herein without the express written approval of the Owner. All subcontractors, including those listed in Appendix B, shall be bound by the terms of this Agreement. All subcontractors shall be subject to all contractual and legal restrictions concerning payment and determination of allowable costs, and subject to all disclosure and audit provisions contained herein and in any applicable federal or state law.
- 14.2. Unless the consent or approval specifically provides otherwise, neither consent by the Owner to any subcontract nor approval of the Consultant's purchasing system shall constitute a determination (1) of the acceptability of any subcontract terms or conditions, (2) of the acceptability of any subcontract price or of any amount paid under any subcontract, or (3) to relieve the Consultant of any responsibility, obligation, or duty under this Agreement.
- 14.3. No subcontract placed under this Agreement shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement subcontracts shall not exceed the fee limitations of the FAR.
- 14.4. Furthermore, notwithstanding any other provision within this Agreement, no reimbursement or payment for any markup of the cost of any subcontract shall be considered by the Owner without the express written agreement of the Owner.
- 14.5. *Prompt Payment.* The Consultant shall pay subcontractors for satisfactory performance of their subcontracts within 30 days of receipt of each payment by the Owner to the Consultant. Any retainage payments held by the Consultant must be returned to the subcontractor within 30 days after the subcontractor's work is completed. Failure to comply with this provision shall be considered a Default by the Consultant. If the Consultant fails to comply with this provision, in addition to any other rights or remedies provided under this Agreement, the Owner, at its sole option and discretion, may:
- make payments directly to the subcontractor and offset such payments, along with any administrative costs incurred by the Owner, against reimbursements or payments otherwise due the Consultant;
 - notify any sureties; and/or,
 - withhold any or all reimbursements or payments otherwise due to the Consultant until the Consultant ensures that the subcontractors have been and will be promptly paid for work performed.
- 14.6. The Consultant shall insert a clause containing all the terms of this Section in all subcontracts under this Agreement.

15. RESPONSIBILITY OF THE CONSULTANT

- 15.1. Notwithstanding any review, approval, acceptance, or payment by the Owner, the Consultant shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by the Consultant under this Agreement. The Consultant shall, without additional compensation, correct or revise any errors or deficiencies in its designs, drawings, specifications, and other services.
- 15.2. The Consultant shall demonstrate to the Owner the presence and implementation of quality assurance in the performance of the Consultant's work. The Consultant shall identify individual(s) responsible, as well as methods used to determine the completeness and accuracy of drawings, specifications, and cost estimates.
- 15.3. The Consultant further agrees that in its performance of work under this Agreement, it shall adhere to the requirements in the Design Standards of the AHTD and FHWA, which shall be incorporated herein by reference.
- 15.4. The Owner shall have the right at any time and in its sole discretion to submit for review all or any portion of the Consultant's work to consulting engineers engaged by the Owner for that purpose. The Consultant shall fully cooperate with any such review.
- 15.5. The Consultant and any subcontractor shall employ qualified and competent personnel to perform the work under this Agreement.
- 15.6. Neither the Owner's review, approval, or acceptance of, nor payment for, the services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement, or of any cause of action arising out of the performance of this Agreement. The Consultant shall be and remain liable to the Owner for all damages to the Owner caused by the Consultant's negligent performance of any of the services furnished under this Agreement.
- 15.7. The rights and remedies of the Owner provided under this Agreement are in addition to any other rights and remedies provided by law.
- 15.8. If the Consultant is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

16. WARRANTY OF SERVICES

- 16.1. *Definitions. Acceptance*, as used in this Agreement, means the act of an authorized representative of the Owner by which the Owner approves specific services, as partial or complete performance of the Agreement. *Correction*, as used in this Agreement, means the elimination of a defect.
- 16.2. Notwithstanding inspection and acceptance by the Owner or any provision concerning the conclusiveness thereof, the Consultant warrants that all services performed and work product under this Agreement will, at the time of acceptance, be free from defects in workmanship and conform to the requirements of this Agreement.
- 16.3. If the Consultant is required to correct or re-perform, it shall be at no cost to the Owner, and any services corrected or re-performed by the Consultant shall be subject to this Section to the same extent as work initially performed. If the Consultant fails or refuses to correct or re-perform, the Owner may, by contract or otherwise, correct or

replace with similar services and charge to the Consultant the cost occasioned to the Owner thereby, or make an equitable adjustment in the Contract Price.

16.4. If the Owner does not require correction or re-performance, the Owner shall make an equitable adjustment in the Contract Price.

16.5. Nothing within this Section shall constitute a waiver or exclusion of any other right or remedy that the Owner may possess at law or under this Agreement.

17. TERM, COMMENCEMENT, AND COMPLETION

17.1. This Agreement shall commence on the effective date set forth above and remain in effect until the completion of the Consultant's Scope of Services, as defined herein, to be completed ***within a period of eighteen (18) weeks***, unless extended or terminated by the Owner in accordance with this Agreement.

17.2. The Consultant shall begin work under the terms of this Agreement within ten (10) days of receiving written notice to proceed. [If services are to be performed in subsequent phases, then each phase shall be commenced upon the Owner's approval of the previous phase. The Consultant shall not be entitled to any compensation or reimbursement for services performed in a phase unless and until it has received approval from the Owner to proceed with such services.]

17.3. It is further agreed that time is of the essence in performance of this Agreement. The Consultant shall complete the work, or each phase, as scheduled, and the Owner shall provide any required approval of the work or phase meeting the requirements contained herein in a reasonable and timely manner. The Project shall be completed as follows:
See Appendix D. The schedule is dependent upon Notice-to-Proceed by City of Jonesboro.

18. TERMINATION

18.1. The Owner may terminate this Agreement in whole or, from time to time, in part, for the Owner's convenience or because of the Default of the Consultant.

18.2. The Owner shall terminate this Agreement by delivering to the Consultant written notice of the termination.

18.3. Upon receipt of the notice, the Consultant shall:

- Immediately discontinue all services affected (unless the notice directs otherwise).
- Deliver to the Owner all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this Agreement, whether completed or in process.
- Terminate all subcontracts to the extent they relate to the work terminated.
- In the sole discretion and option of the Owner, and if and only if requested to do so, assign to the Owner all right, title, and interest of the Consultant under the subcontracts terminated, in which case the Owner shall have the right to settle any claim or dispute arising out of those subcontracts without waiver of any right or claim the Owner may possess against the Consultant.

- With approval or ratification by the Owner, settle all outstanding liabilities arising from the termination of subcontracts, the cost of which would be allowable in whole or in part, under this Agreement.
 - Complete performance of any work not terminated.
 - Take any action that may be necessary, or that the Owner may direct, for the protection and preservation of the property related to this Agreement which is in the possession of the Consultant and in which the Owner has or may acquire an interest.
- 18.4. If the termination is for the convenience of the Owner, the Owner shall make an equitable adjustment in the Contract Price, subject to the Ceiling Prices and Funding Limitations provisions, *but shall allow no anticipated fee or profit on unperformed services.*
- 18.5. If the termination is for the Consultant's Default, the Owner may complete the work by contract or otherwise and the Consultant shall be liable for any reasonable and necessary additional cost incurred by the Owner to the extent caused by Consultant's default.
- 18.6. Disputes and claims arising from termination of this Agreement shall be governed by Section 28, Disputes and Claims.
- 18.7. The rights and remedies of the Owner provided in this Section are in addition to any other rights and remedies provided by law or under this Agreement, and shall not constitute a waiver of any other such right or remedy.

19. STOP WORK ORDERS

- 19.1. The Owner may, at any time, by written order to the Consultant, require the Consultant to stop all, or any part, of the work called for by this Agreement for a period of up to 90 days after the order is delivered to the Consultant, and for any further period to which the parties may agree. Upon receipt of the order, the Consultant shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop work order is delivered to the Consultant, or within any extension of that period to which the parties shall have agreed, the Owner shall either—
- 19.1.1. Cancel the stop work order; or
- 19.1.2. Terminate the work pursuant to Section 18, Termination.
- 19.2. If a stop work order issued under this Section is canceled or the period of the order or any extension thereof expires, the Consultant shall resume work. The Owner shall make an equitable adjustment in the delivery schedule or Contract Price, or both, and the Agreement shall be modified in writing accordingly, if—
- The stop work order was not issued because of Consultant's Default in its performance of its obligations under any part of this Agreement; and,
 - The stop work order results in an increase in the time required for, or in the Consultant's cost properly allocable to, the performance of any part of this Agreement; and,

- The Consultant provides Notice of Potential Claim pursuant to Section 28, Disputes and Claims.

20. CHANGES

- 20.1. The Owner may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this Agreement, including but not limited to: (1) drawings, designs, or specifications; (2) time of performance (i.e., hours of the day, days of the week, etc.); and (3) places of inspection, delivery, or acceptance.
- 20.2. If any such change causes an increase *or decrease* in the cost of, or the time required for, performance of any part of the work under this Agreement, whether or not changed by the order, the Owner shall make an equitable adjustment in the (1) estimated cost, delivery or completion schedule, or both; (2) amount of any fee; and (3) other affected terms.
- 20.3. All claims and disputes shall be governed by the Section 28, Disputes and Claims. As provided in Section 28, the Consultant must provide written notice of its intention to make a claim for additional compensation before beginning the work on which the claim is based. If such notice is not given, the Consultant hereby agrees to waive any claim for such additional compensation.
- 20.4. Failure to agree to any adjustment shall be a dispute under Section 28, Disputes and Claims. *However, nothing in this Section or any other provision of this Agreement shall excuse the Consultant from proceeding with the Agreement as changed.*

21. OWNERSHIP OF DOCUMENTS & DATA

- 21.1. All project documents and data, regardless of form and including but not limited to original drawings, disks of CADD drawings, cross-sections, estimates, files, field notes, and data, shall be the property of the Owner. The Consultant shall further provide all documents and data to the Owner upon the Owner's request. The Consultant may retain reproduced copies of drawings and other documents. In the event that any patent rights or copyrights are created in any of the documents, data compilations, or any other work product, the Owner shall have an irrevocable license to use such documents, or data compilations, or work product.

22. PATENT AND COPYRIGHT INFRINGEMENT

- 22.1. The Consultant shall report to the Owner, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this Agreement of which the Consultant has knowledge.
- 22.2. In the event of any claim or suit against the Owner on account of any alleged patent or copyright infringement arising out of the performance of this Agreement or out of the use of any supplies furnished or work or services performed under this Agreement, the Consultant shall furnish to the Owner, when requested by the Owner, all evidence and information in possession of the Consultant pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Consultant.
- 22.3. The Consultant agrees to include, and require inclusion of, the provisions of this Section in all subcontracts at any tier for supplies or services.

22.4. The Consultant shall indemnify the Owner and its officers, agents, and employees against liability, including costs and attorneys' fees, for infringement of any United States patent or copyright arising from the manufacture or delivery of supplies, the performance of services, or the construction, alteration, modification, or repair of real property under this Agreement, or out of the use or disposal by or for the account of the Owner of such supplies or construction work.

22.5. This indemnity shall not apply unless the Consultant shall have been informed within ten (10) business days following the Owner's receipt of legal notice of any suit alleging such infringement and shall have been given such opportunity as is afforded by applicable laws, rules, or regulations to participate in its defense. Further, this indemnity shall not apply to (1) an infringement resulting from compliance with specific written instructions of the Owner directing a change in the supplies to be delivered or in the materials or equipment to be used, or directing a manner of performance of the Agreement not normally used by the Consultant, (2) an infringement resulting from addition to or change in supplies or components furnished or construction work performed that was made subsequent to delivery or performance, or (3) a claimed infringement that is unreasonably settled without the consent of the Consultant, unless required by final decree of a court of competent jurisdiction.

23. BANKRUPTCY

23.1. In the event the Consultant enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Consultant agrees to furnish, by certified mail, written notice of the bankruptcy to the Owner. This notice shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notice shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of AHTD job numbers and FAP numbers for all contracts with Owner against which final payment has not been made. This obligation remains in effect until final payment under this Agreement.

24. FUNDING LIMITATIONS

24.1. The Owner's obligations under this Agreement are contingent upon the availability of appropriated funds from which payments under the terms of this Agreement can be made in this and each subsequent fiscal year for the duration of the Agreement. No legal liability on the part of the Owner of any kind whatsoever under this Agreement shall arise until funds are made available to the Owner for performance of this Agreement, including those to be appropriated and provided by the State of Arkansas and those to be provided by the United States.

25. SUCCESSORS AND ASSIGNS

25.1. This Agreement shall be binding upon the parties and their successors and assigns, and except as expressly set forth herein, neither the Owner nor the Consultant may assign, delegate, or transfer any benefit or obligation under this Agreement without the express written consent of the other party. Nothing herein shall be construed as a waiver of any immunity or as creating any personal liability on the part of any officer or agent of the Owner or any other governmental entity either made a party to, or having any interest in, this Agreement.

26. INDEMNITY AND RESPONSIBILITY FOR CLAIMS AND LIABILITY

- 26.1. *Indemnity.* The Consultant shall hold harmless and indemnify the Owner and the AHTD, their officers, employees, and agents, from and for all claims and liabilities stemming from any wrongful (whether negligent, reckless, or intentional) acts or omissions on the part of the Consultant and its subcontractors, and their agents and employees.
- 26.2. *No Personal Liability.* No director, officer, manager, employee, agent, assign, or representative of the Owner or the AHTD shall be liable to the Consultant in a personal or individual capacity under any term of this Agreement, because of any breach thereof, or for any act or omission in its execution or performance.
- 26.3. *Independent Contractor Relationship.* The parties intend that the Consultant shall be an independent contractor of the Owner and that the Consultant shall be liable for any act or omission of the Consultant or its agents, employees, or subcontractors arising under or occurring during the performance of this Agreement. No act or direction of the Owner shall be deemed to be an exercise of supervision or control of the Consultant's performance.

27. INSURANCE

- 27.1. *Professional Liability Insurance Coverage.* The Consultant shall maintain at all times during the performance of services under this Agreement professional liability insurance coverage for errors, omissions, and negligent acts arising out of the performance of this Agreement in an amount per claim of not less than five (5) times the original Contract Ceiling Price or \$1,000,000, whichever is less. Such insurance shall extend to the Consultant and to its legal representatives in the event of death, dissolution, or bankruptcy, and shall cover the errors, omissions, or negligent acts of the Consultant's subcontractors, agents, and employees. Such insurance shall extend to any errors, omissions, and negligent acts in the performance of services under this Agreement committed by the Consultant or alleged to have been committed by the Consultant or any person for whom the Consultant is legally responsible.
- 27.2. *Deductible.* The Consultant may maintain a professional liability insurance policy with a deductible clause in an amount approved by the Owner if, in the judgment and opinion of the Owner, the Consultant's financial resources are sufficient to adequately cover possible liability in the amount of the deductible. The Consultant shall submit promptly to the Owner, upon request as often as quarterly, detailed financial statements and any other information requested by the Owner to reasonably determine whether or not the Consultant's financial resources are sufficient to adequately cover possible liability in the amount of the deductible.
- 27.3. *Worker's Compensation Insurance.* The Consultant shall at all times during the Term of this Agreement maintain Worker's Compensation and Employers Liability Insurance as required under Arkansas law.
- 27.4. *General Liability Insurance.* The Consultant shall at all times during the term of this Agreement maintain comprehensive general liability insurance coverage for bodily injury and property damage in the combined single limit of \$1,000,000, and comprehensive automobile liability insurance coverage for bodily injury and property damage in the combined single limit of \$1,000,000, which shall cover all owned, hired, and non-owned vehicles. The Consultant's insurance coverage shall also cover restoration of plans, drawings, field notes, and other documents in the event of their loss or destruction while in the custody of the Consultant.

- 27.5. *Insurance Policies and Certificates.* The Consultant shall provide the Owner upon request copies of its insurance policies and evidence satisfactory to the Owner concerning the effectiveness and the specific terms of the insurance. Prior to the execution of this Agreement, the Consultant shall furnish to the Owner certificates of insurance reflecting policies in force, and it shall also provide certificates evidencing all renewals of any expiring insurance policy required hereunder within thirty (30) days of the expiration thereof. The Consultant's failure to provide and continue in force and effect any insurance required under this Article shall be deemed a Default for which Owner, in its sole discretion, may terminate this Agreement immediately or on such other terms as it sees fit.
- 27.6. *Additional Insurance Requirements.* All insurance maintained by the Consultant pursuant to this Section shall be written by insurance companies licensed to do business in Arkansas, in form and substance satisfactory to the Owner, and shall provide that the insurance will not be subject to cancellation, termination, or change during its term except upon thirty (30) days prior written notice to the Owner.
- 27.7. *Duration of Insurance Obligations.* The Consultant shall maintain its professional insurance coverage required under this Agreement in force and effect for a period not less than five years after the final acceptance of the project or the completion of the Consultant's services under this Agreement, whichever comes later. Comprehensive General Liability Insurance Coverage required under this Agreement shall be in full force and effect until the final acceptance or the completion of the Consultant's services, whichever comes later. All other insurance shall be maintained in full force and effect until final acceptance of the project or completion of the Consultant's services, whichever comes first.
- 27.8. *Consultant's Insurance Primary.* All insurance policies maintained by the Consultant pursuant to this Agreement shall provide that the consultant's insurance shall be primary and the Owner's own insurance shall be non-contributing.
- 27.9. *Additional Insured.* All liability insurance policies, except the professional liability policy, maintained by the Consultant pursuant to this Agreement shall be endorsed to include the Owner, its officers, directors, managers, employees, agents, assigns and representatives, individually and collectively, as additional insured, and all property damage insurance shall be endorsed with a waiver of subrogation by the insurer as to the Owner.

28. DISPUTES AND CLAIMS

- 28.1. *Notice of Potential Claim.* Whenever a Consultant deems that any additional compensation is due, the Consultant shall notify the Owner in writing of its intention to make a claim for additional compensation ("Notice of Potential Claim") **before beginning the work that gives rise to the claim.**
- 28.2. *Time & Manner for Submitting Claim.* All disputes and claims shall first be submitted in writing to the Owner within 45 calendar days after the completion or termination date. **The Consultant hereby agrees that the failure to submit the dispute or claim to the Owner prior to 45 calendar days after the completion or termination date shall constitute a waiver of the dispute or claim.**
- 28.3. *Form.* All disputes and claims must be submitted in writing and in sufficient detail to permit the Owner to determine the basis for entitlement and the actual allowable costs incurred. Each claim must contain:

- A detailed factual statement of the claim providing all necessary dates, locations, and items of work affected by the claim;
- The date the actions resulting in the claim occurred or conditions resulting in the claim became evident;
- A copy of the "Notice of Potential Claim";
- The name, title, and activity of each Owner's employee knowledgeable about facts that gave rise to such claim;
- The name, title, and activity of each Consultant, Subcontractor, or employee knowledgeable about the facts that gave rise to the claim;
- The specific provisions of the Agreement that support the claim and a statement why such provisions support the claim;
- The identification and substance of any relevant documents, things, or oral communications related to the claim;
- A statement whether the claim is based on provisions of the Agreement or an alleged breach of the Agreement;
- If an extension of time is sought, the specific number of days sought and the basis for the extension;
- The amount of additional compensation sought and a specific cost breakdown of the amount claimed; and,
- Any other information or documents that are relevant to the claim.

28.4. *Decision and Appeal.* The decision of the Owner shall be final and conclusive.

28.5. *Continued Performance.* Pending final resolution of a dispute or claim, unless the Owner has terminated this Agreement pursuant to Section 18 or issued a stop work order pursuant to Section 19, the Consultant shall proceed diligently with the performance of this Agreement in accordance with the Owner's decisions.

28.6. The rights and remedies of the Owner provided in this Section are in addition to any other rights and remedies provided by law or under this Agreement, and shall not constitute a waiver of any other such right or remedy. If the Owner decides the facts justify the action, the Owner may, at its sole option and discretion, receive and act upon a proposal, dispute, or claim submitted at any time before final payment under this Agreement.

29. COVENANT AGAINST CONTINGENCY FEES

29.1. The Consultant warrants that no person or agency has been employed or retained to solicit or obtain this Agreement upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Owner shall have the right to annul this Agreement without liability or, in its discretion, to deduct from the Contract Price or consideration, or otherwise recover, the full amount of the contingent fee.

- 29.2. *Bona fide agency*, as used in this Section, means an established commercial or selling agency, maintained by the Consultant for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain government contracts nor holds itself out as being able to obtain any government contract or contracts through improper influence.
- 29.3. *Bona fide employee*, as used in this Section, means a person, employed by the Consultant and subject to the Consultant's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain government contracts nor holds out as being able to obtain any government contract or contracts through improper influence.
- 29.4. *Contingent fee*, as used in this Section, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a government contract.
- 29.5. *Improper influence*, as used in this Section, means any influence that induces or tends to induce a government employee or officer to give consideration or to act regarding a government contract on any basis other than the merits of the matter.

30. TITLE VI ASSURANCES (NONDISCRIMINATION)

During the performance of this Agreement, the Consultant, for itself, its successors, and its assigns, certifies and agrees as follows:

- 30.1. *Compliance with Regulations*. The Consultant shall comply with the Regulations relative to Title VI (Nondiscrimination in Federally-assisted programs of the Department of Transportation and its operating elements, especially Title 49, Code of Federal Regulations, Part 21 and 23 Code of Federal Regulations, as amended, and hereinafter referred to as the Regulations). These regulations are herein incorporated by reference and made a part of this Agreement. Title VI provides that the recipients of Federal financial assistance will maintain and implement a policy of nondiscrimination in which no person shall, on the basis of race, color, national origin, sex, age, or disability, be excluded from participation in, denied the benefits of, or subject to discrimination under any program or activity by recipients of Federal financial assistance or their assignees and successors in interest.
- 30.2. *Nondiscrimination*. The Consultant, with regard to the work performed by it during the term of this Agreement, shall not discriminate on the basis of race, color, national origin, sex, age, or disability in the selection and retention of subcontractors, including procurement of material and leases of equipment. The Consultant shall not participate either directly or indirectly in any discrimination prohibited by Section 21.5 of the Regulations, including employment practices.
- 30.3. *Solicitations for Subcontracts, Including Procurements of Material & Equipment*. In all solicitations, either by competitive bidding or negotiation, made by the Consultant for work to be performed under a subcontract, including procurement of materials and leases of equipment, each potential subcontractor or supplier shall be notified by the Consultant of the Consultant's obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, or disability.
- 30.4. *Information and Reports*. The Consultant shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, and accounts, other sources of information, and its facilities

by the Owner, the AHTD, or the FHWA to be pertinent to ascertain compliance with such regulations and directives. Where any information required of the Consultant is in the exclusive possession of another who fails or refuses to furnish this information, the Consultant shall so certify to the Owner, the AHTD or the FHWA, as appropriate, and shall set forth the efforts made by the Consultant to obtain the records or information.

30.5. *Sanctions for Noncompliance.* In the event of the Consultant's noncompliance with the nondiscrimination provisions of this Agreement, the Owner shall impose such contract sanctions as it, the AHTD, or the FHWA may determine to be appropriate, including but not limited to, withholding of payments to the Consultant under the Agreement until the Consultant complies with the provisions and cancellation, termination, or suspension of the Agreement, in whole or in part.

30.6. *Incorporation of Provisions.* The Consultant shall include the terms and conditions of this section in every subcontract including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Consultant shall take such action with respect to any subcontract or procurement as the Owner, the AHTD, or FHWA may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; *provided*, however that, in the event the Consultant becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Consultant may request the Owner, the AHTD, or the United States to enter into the litigation to protect the interests of the State and the United States, respectively.

31. DBE CLAUSE

31.1. The Consultant or subcontractor shall not discriminate on the basis of race, color, national origin, sex, age, religion, or disability in the performance of this Agreement. The Consultant shall comply with the applicable requirements of 49 C.F.R. Part 26 and perform any actions necessary to maintain compliance in the award and administration of DOT-assisted contracts. Failure by the Consultant to comply with or perform these requirements is a material breach of this Agreement, which may result in the cancellation, termination, or suspension of this Agreement in whole or in part, or such other remedy that the Owner may determine appropriate.

31.2. The Consultant shall insert a clause containing all the terms of this Section in all subcontracts under this Agreement.

32. TITLE II OF THE AMERICANS WITH DISABILITIES ACT (NONDISCRIMINATION)

32.1 The Consultant will comply with the provisions of the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act, Title VI of the Civil Rights Act of 1964, FHWA Federal Aid Project Guidance, and any other Federal, State, and/or local laws, rules and/or regulations.

32.2 The Consultant, during the term of this Agreement, shall not discriminate on the basis of race, color, sex, national origin, age, religion or disability, in admission or access to and treatment in programs and activities associated with this Agreement, or in the selection and retention of subcontractors, including procurement of material and leases of equipment. The Consultant shall not participate either directly or indirectly in any discrimination prohibited by the Regulations, including employment practices.

32.3 In accordance with Section 504 regulations 49 C.F.R. Part 27.15, the Owner's Notice of Nondiscrimination is required in any bulletins, announcements, handbooks, pamphlets, brochures, and any other publications associated with this Agreement that are made available to the public, program participants, applicants or employees.

33. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS

33.1. The Consultant certifies, to the best of its knowledge and belief, that—

33.1.1. The Consultant and any of its Principals—

33.1.1.1. Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any federal or state agency;

33.1.1.2. Have not, within a 3-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

33.1.1.3. Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in Subsection 33.1.1.2; and,

33.1.1.4. The Consultant has not within a 3-year period preceding this offer, had one or more contracts terminated for default by any federal or state agency.

33.2. *Principals*, for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions). This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Section 1001, Title 18, United States Code, as well as any other applicable federal and state laws.

33.3. The Consultant shall provide immediate written notice to the Owner if, at any time prior to contract award, the Consultant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

33.4. The certification in Subsection 33.1 is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Consultant knowingly rendered an erroneous certification, the Owner may terminate the contract resulting from this solicitation for default in addition to any other remedies available to the Owner.

34. MISCELLANEOUS

34.1. *General Compliance with Laws*. The Consultant shall comply with all Federal, State, and local laws, regulations, and ordinances applicable to the work, including but not limited to, the Americans with Disabilities Act and Occupational Safety and Health Act as amended.

- 34.2. *Registered Professional Engineer's Endorsement.* All plans, specifications, estimates, and engineering data provided by the Consultant shall be endorsed and recommended by an authorized representative of the Consultant, who shall be a registered Professional Engineer licensed in the State of Arkansas.
- 34.3. *Choice of Law.* This Agreement shall be governed by the laws of the State of Arkansas without consideration of its choice of law provisions.
- 34.4. *Choice of Forum.* The Consultant agrees that any cause of action stemming from or related to this Agreement, including but not limited to disputes or claims arising under this Agreement, for acts or omissions in the performance, suspension, or termination of this Agreement, whether sounding in contract or tort, equity or law, may only be brought in the appropriate forum within State of Arkansas.
- 34.5. *No Waiver of Immunity.* The Owner expressly does not waive any defense of immunity that it may possess under either federal or state law, and no provision in this Agreement shall be construed to constitute such a waiver in whole or in part.
- 34.6. *Conflicts Between Laws, Regulations, and Provisions.* In the event of conflicting provisions of law, the interpretation shall be governed by the following in this order, from most controlling to least: Federal law and regulations, State law and regulations, Department and FHWA Design Standards, and this Agreement.
- 34.7. *Severability.* If any term or condition of this Agreement shall be held invalid, illegal, or unenforceable by a court of competent jurisdiction, all remaining terms of this Agreement shall remain valid and enforceable unless one or both of the parties would be materially prejudiced.
- 34.8. *No-Waiver.* The failure of the Owner to strictly enforce any term of this Agreement shall not be construed as a waiver of the Owner's right to require the Consultant's subsequent performance of the same or similar obligation or duty.
- 34.9. *Modification and Merger.* This written Agreement and any provisions incorporated by reference reflect the entire agreement of the parties and may be modified only by the express written agreement of both parties.

35. CERTIFICATION OF AUTHORIZED REPRESENTATIVES

- 35.1. This Agreement and the certifications contained herein or attached hereto constitute the whole Agreement of the parties, and each party certifies that this Agreement and any attached certification have been executed by their duly authorized representatives.

36. NOTICE

- 36.1. All notices, approvals, requests, consents, or other communications required or permitted under this Agreement shall be addressed to either the Owner's Representative or the Consultant's Representative, and mailed or hand-delivered to:

36.1.1. To the Owner's Representative:

Craig Light, P.E.
City of Jonesboro
300 S. Church Street
Jonesboro, AR 72401

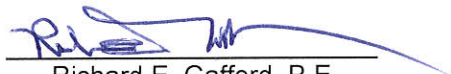
36.1.2. To the Consultant:

Richard E. Gafford, P.E.
Fisher & Arnold, Inc.
9180 Crestwyn Hills Drive
Memphis, Tennessee 38125

IN WITNESS WHEREOF, the parties execute this Agreement, to be effective upon the date set out above.

FISHER & ARNOLD, INC.

BY:


Richard E. Gafford, P.E.
Vice President

APPENDICES

APPENDIX A	JUSTIFICATION OF FEES AND COSTS
APPENDIX B	SUBCONTRACTS: Geotechnology, Inc.
APPENDIX C	STANDARD CERTIFICATIONS C-1 Fisher & Arnold, Inc. C-2 Geotechnology, Inc. C-3 Arkansas Highway Commission
APPENDIX D	PROJECT SCHEDULE

APPENDIX A

APPENDIX A



FISHER ARNOLD

ENGINEERING INTEGRATION

Justification of Fees and Costs

and

Scope of Work

FOR

W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)

City of Jonesboro, Arkansas

AHTD Job No. 100849

Federal Aid Project No. TDIP-9227(51)

TITLES I & II

September 30, 2015

CITY OF JONESBORO, ARKANSAS

SCOPE OF WORK

W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S) Craighead County

I. SURVEYS

Surveys will consist of performing control, design, and land surveys. Surveys will consist of the tasks that follow.

- A. Control survey tasks
 - 1. Primary Control
 - 2. Vertical Control
 - 3. Secondary Baseline Control
- B. Design survey tasks
 - 1. Topography and Terrain Data Collection
 - 2. Field Data Processing
 - 3. Digital Terrain Modeling
- C. Land Surveys
 - 1. Parcel Surveys
 - 2. Right of Way staking

II. ROADWAY DESIGN AND PLANS

- A. PRELIMINARY DESIGN
 - 1. Submit design criteria to be used in the design of the project for approval by the Owner and AHTD prior to beginning preliminary design work.
 - 2. Obtain subsurface borings, field and laboratory testing and material properties for pavement design.
 - 3. Provide pavement design alternatives according to the requirements of the Roadway Design Plan Development Guidelines using AASHTO design procedures, and submit recommendation to Owner and AHTD for approval.
 - 4. Provide the roadway plan sheets. A field inspection for the project will be performed at the 50% review level.
 - 5. The preliminary roadway plans shall show, as a minimum:
 - a) Title sheet
 - b) Typical sections of improvement
 - c) Special details as needed
 - d) Control detail sheets of the survey baseline and design centerline with control point data.
 - e) Roadway plan sheets showing:
 - Survey information including existing utilities
 - Roadway grades for main lanes, crossing roads and other roads as needed.

- Alignment data for main lanes, crossing roads and other roads as needed.
 - Tentative construction limits
 - Existing and Proposed Right of Way, permanent and temporary construction easements, and control of access (existing and proposed)
 - All roadway/roadside features within the right of way
 - Proposed roadside safety items such as guardrail, impact attenuation barriers, etc.
 - Sketch of bridge layouts
 - Preliminary size of drainage structures
 - Environmental restraining conditions, if any.
- f) Maintenance of traffic signing and striping conceptual plans
- g) Erosion control plans and information required by the NPDES Permit.
6. Provide two (2) paper copies, one electronic pdf, and Microstation files of plans for preliminary field inspection, right of way review, and 50% plan review.
7. Attend preliminary field inspection.
8. Make revisions necessary to respond to comments made at the 50% review and the value engineering study as well as comments made at the preliminary field inspection.

B. FINAL DESIGN

1. Provide final roadway plans showing all information requested in Item 5 of Section A.
2. Provide quantities.
3. Provide special provisions.
4. Provide transportation management plan.
5. Provide construction cost estimate (Provided by City).
6. Provide control detail sheets of the survey baseline and design centerline with control point data.
7. Provide two (2) paper copies and one electronic pdf of plans for final field inspection and 90% review.
8. Attend final field inspections.
9. Make plan changes resulting from the 90% review, subsequent reviews, and final field inspection.
10. Perform all other work required to advertise and receive bids.
11. Provide hydraulic certification (Provided by City).
12. Provide two (2) paper copies of half-size signed and sealed plans and one electronic pdf of final plans.

C. POST AWARD OF CONTRACT (TITLE II SERVICES)

1. Provide review and approval of shop drawings and any other supplementary plans or similar data submitted by the Contractor and requiring approval.
2. Upon request by Owner and or AHTD, provide design related solutions to construction problems and issues that may arise.

III. BRIDGE DESIGN AND PLANS

A. PRELIMINARY DESIGN

1. Submit design criteria to be used in the design of the project for approval by the Owner and AHTD prior to beginning preliminary design work.
2. Geotechnical
 - a) Obtain subsurface borings, field testing, laboratory testing and material properties for bridge foundation, embankment and retaining wall designs.
 - b) Interpret and evaluate geotechnical data for the foundation analysis and design, and bridge end and side slope embankment stability analyses
 - c) Provide recommendations for embankment height and material requirements for bridge approaches.
 - d) Field surveying to determine location of soil borings.
3. Provide two (2) half-size copies of the preliminary bridge layout for review

The bridge layouts shall show, as a minimum:

- a) Topography
- b) Bridge length, width, and span lengths and types
- c) Design, construction, and material specifications
- d) Bridge foundation type, including, as applicable, estimated number and size of columns, pile sizes and lengths, etc.
- e) Schematic cross-section sketches of superstructure, showing deck thickness, girder type, size, and spacing, stage construction sequencing, etc.

Preliminary bridge layouts shall not be submitted for review until after the 50% roadway plans have been reviewed and approved.

B. FINAL DESIGN

1. Perform bridge design calculations based on the approved layout
2. Provide complete bridge detail drawings to include GRS abutments, intermediate bents if required, piles, bearings, superstructure, expansion joints, parapets, retaining walls, approach slabs, approach gutters, and bridge quantity sheets. Each detail drawing should be fully checked and signed by a checking engineer. When different detail checking engineers are used for the same bridge or for different bridges, compatibility of details between bridge components and consistency between different bridges shall be carefully checked and confirmed by the Consultant prior to submittal.
3. Provide quantities

4. Provide special provisions
5. Submit two (2) half-size copies of detail drawings for Bridge Division review prior to the final field inspection.
6. Revise and resubmit detail drawings as required to address comments from all reviews and field inspections.
7. Provide construction cost estimate.
8. Provide hydraulic certification.
9. Provide two (2) paper copy of full size signed and sealed plans and one electronic pdf of final plans.

C. POST AWARD OF CONTRACT (TITLE II SERVICES)

1. Provide review and approval of shop drawings and any other supplementary plans or similar data submitted by the Contractor and requiring approval.
2. When requested, provide design related solutions to construction problems and issues that may arise.

IV. PROJECT CONDITIONS OF THE WORK

The facility shall be designed in accordance with FHWA "Geosynthetic Reinforced Soil Integrated Bridge System Interim Implementation Guide", the latest edition of AASHTO, "A Policy on Geometric Design of Highways and Streets", the latest edition of "AASHTO LRFD Bridge Design Specifications" with current interims, AHTD Bridge Division memorandums, Department policies, and current AREMA publications as appropriate. Other appropriate AASHTO publications and guide specifications shall also be utilized. The project is to be designed in AHTD format utilizing the "Roadway Design Plan Development Guidelines". Upon completion of the contract, the Consultant shall furnish to the Owner all electronic files of the project design and plans on a compact disc in Bentley System Version 8i InRoads and Microstation format, and AutoCAD format.

All plans shall be in U.S. Foot Units and based on Arkansas State Plane Grid that have been converted to ground units based on the Combination Adjustment Factor (CAF) approved by, or provided by, the AHTD. All design and plans shall be Bentley System Version 8i InRoads and Microstation using the AHTD feature tables and cell libraries.

Construction specifications shall be the current edition of the AHTD's Standard Specifications for Highway Construction.

All work performed by the Consultant shall be in compliance with all applicable Federal, State, and local laws, regulations, and ordinances.

V. COORDINATION WITH OWNER

Coordination meetings will be conducted on an as needed basis. These meetings shall include the Consultant, the Owner, AHTD and others, as appropriate. The Consultant shall schedule these meetings with AHTD and Owner concurrence, and compile and distribute meeting minutes, as required.

VI. DELIVERABLES

- A. During the Preliminary Design Phase
 1. Roadway and Bridge Design Criteria
 2. Geotechnical Report for Pavement Design
 3. Geotechnical Report for Bridges (Preliminary and Final Versions)
 4. Hydraulic Report, as applicable
 5. 50% Complete Roadway Plans
 6. Preliminary Bridge Layout Drawings
 7. Meeting Minutes from Coordination Meetings

- B. During the Final Design Phase
 1. 90% Complete Roadway Design Plans
 2. 90% Complete half-size Bridge Design Drawings
 3. Final half-size reproducible Roadway Design Plans signed and sealed by an Arkansas Registered Professional Engineer.
 4. Final full-size Bridge Design Drawings printed in black ink on quality bond paper and signed and sealed by an Arkansas Registered Professional Engineer.
 5. Provide Special Provisions
 6. Provide transportation management plan
 7. Provide construction cost estimate
 8. One Copy of Bridge Design and Quantity Computations
 9. Provide all appropriate Federal and State permits and certifications necessary to construct the proposed project
 10. Provide certification of hydraulic calculations and drainage system design
 11. Meeting Minutes from Coordination Meetings
 12. Electronic files of the project design and plans on a compact disc in Bentley System Version 8i Microstation format that is fully indexed (all reference files attached and set to load automatically.) This includes the electronic copies of Roadway and Bridge submittals.

Appendix A

W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S) City of Jonesboro, Arkansas

TITLE I

<i>Plans Total Labor and Overhead</i>	\$ 53,542.10
<i>Direct Expenses</i>	\$ 30,455.97
<i>Grand Total TITLE I</i>	\$ 83,998.07

TITLE II

<i>Plans Total Labor and Overhead</i>	\$ 5,435.20
<i>Direct Expenses</i>	\$ 224.00
<i>Grand Total TITLE II</i>	\$ 5,659.20

Appendix A
 Justification of Fees and Costs
 W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)
 City of Jonesboro, Arkansas

TITLE I

Survey Design

- 1 Topographic Survey (100' DTM x 400' Length)
- 2 Property Owner Contact
- 3 Visible Utility Location
- 4 Two Cross-Sections of Creek at the Proposed Bridge Locations
- 5 Property Surveys
- 6 Field/Office Coordination

	Survey Supervisor	Party Chief	Instructment Man	Total
		6	6	12
		1	1	2
		4	4	8
		5	5	10
		4	4	8
	8	1	1	10

Total Hours

8	21	21	50
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Appendix A
 Justification of Fees and Costs
 W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)
 City of Jonesboro, Arkansas

TITLE I

Roadway Design

	<i>Principal</i>	<i>Proj. Mngr.</i>	<i>Proj. Engr.</i>	<i>Designer</i>	<i>CADD Tech</i>	<i>Total</i>
1 Project Administration	8	8				16
2 Title Sheet		1			2	3
3 Typical Sections (Mainline, Detour, Loc. Rd., Misc)		1			2	3
4 Draw Topo		4		8		12
5 Create Sheets					4	4
6 Horizontal Alignment		1		2		3
7 Vertical Alignment		2		4		6
8 Cross Sections		1		2	2	5
9 Create DTM		1		4		5
10 Run Pattern Lines			1	1		2
11 Cut Existing Cross Sections			1	1		2
12 Evaluate/Run Shape Files			1	1		2
13 Determine Proposed Template Criteria			1	1		2
14 Generate Proposed Template			1	1		2
15 Maintenance of Traffic Signing/Striping Concept Plans		1		8		9
16 Erosion Control Plans		1	2	6	6	15
17 Revise Plans Per Review	1	2	4	4	4	15
18 Quality Calculations		1	4		4	9
19 Research & Provide Special Provisions		4	4			8

Total Hours per Classification

9	28	19	43	24	123
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Appendix A
 Justification of Fees and Costs
 W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)
 City of Jonesboro, Arkansas

TITLE I

Structural Design

For 50% Submittal

	Principal	Proj. Mngr.	Proj. Engr.	Designer	CADD Tech	Total
1 Develop Preliminary Design Criteria	4		2			6
2 Set Span Lengths and Member Depths	4		2			6
3 Evaluate Superstructure Elements	4		2			6
4 Framing Plan & General Notes	2		8			10
5 Interior Beam Details	2		8			10
6 Exterior Beam Details	2		8			10
7 Parapet Details	2		8			10
8 Beam Sections	2		8			10
9 Bridge Quantities	2		8			10
10 GRS-IBS Details and Notes	8		8			16
11 GRS-IBS Abutment Plan/Profile	8		8			16

For 90% Submittal

12 Framing Plan & General Notes	1		2			3
13 Interior Beam Details	1		2			3
14 Exterior Beam Details	1		2			3
15 Parapet Details	1		2			3
16 Beam Sections	1		2			3
17 Bridge Quantities	1		2			3
18 GRS-IBS Details and Notes	1		2			3
19 GRS-IBS Abutment Plan/Profile	1		2			3
20 Calculate Quantities	1		8			9
21 Cost Estimate	4		2			6
22 Project Meetings (3)	12		12			24
23 Site Visits (3)	12		12			24
24 Travel Time	12		12			24
25 Project Special Provisions	10		4			14

Total Hours per Classification

99	0	136	0	0	235
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THE CITY OF JONESBORO SHALL PROVIDE ALL HYDRAULIC CALCULATIONS INCLUDING A "NO-RISE" CERTIFICATE AND SCOUR ANALYSIS OF THE PROPOSED STRUCTURE.

Appendix A
 Justification of Fees and Costs
 W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)
 City of Jonesboro, Arkansas

TITLE II

Bridge Structure Title II

- 1 Project Milestone Meetings(2)
- 2 Meeting Travel Time
- 3 Shop Drawing Review
- 4 Submittal Review
- 5 Project Management

	<i>Principal</i>	<i>Proj. Mngr.</i>	<i>Proj. Engr.</i>	<i>Designer</i>	<i>CADD Tech</i>	<i>Total</i>
1	4		4			8
2	4		4			8
3	4		2			6
4	4		2			6
5	4					4

INSPECTION OF ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED BY THE
 CITY OF JONESBORO.

Total Hours

20	0	12	0	0	32
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Appendix A
 Justification of Fees and Costs
 W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)
 City of Jonesboro, Arkansas

TITLE I

Design and Plans Development (Labor and Overhead Summary):

<u>Position</u>	<u>Hours</u>	<u>Cost per Hr.</u>	<u>Total</u>	<u>Total per Phase</u>
<u>Survey Design</u>				
Survey Supervisor	8	\$32.00	\$ 256.00	
Party Chief	21	\$26.00	\$ 546.00	
Instrument Man	21	\$17.00	\$ 357.00	\$ 1,159.00
<u>Roadway Design</u>				
Principal	9	\$52.00	\$ 468.00	
Project Manager	28	\$48.00	\$ 1,344.00	
Proj. Engineer	19	\$37.00	\$ 703.00	
Designer	43	\$26.00	\$ 1,118.00	
CADD Tech	24	\$24.00	\$ 576.00	\$ 4,209.00
<u>Structural Design</u>				
Principal	99	\$62.00	\$ 6,138.00	
Project Manager	0	\$50.00	\$ -	
Proj. Engineer	136	\$40.00	\$ 5,440.00	
Designer	0	\$28.00	\$ -	
CADD Tech	0	\$25.00	\$ -	\$ 11,578.00
Direct Labor				\$ 16,946.00
Overhead (181.81%)				\$ 30,809.52
Sub-total				\$ 47,755.52
Fee				\$ 5,730.66
FCCM (0.33%)				\$ 55.92
Sub-Total Design and Development (Labor & OH)				\$ 53,542.10

TITLE II

Post Award of Contract (Title II Services)

Principal	20	\$62.00	\$ 1,240.00	
Project Manager	0	\$50.00	\$ -	
Proj. Engineer	12	\$40.00	\$ 480.00	
Designer	0	\$28.00	\$ -	
CADD Tech	0	\$25.00	\$ -	\$ 1,720.00
Direct Labor				\$ 1,720.00
TITLE II MULTIPLIER (3.16) X Direct Labor				\$ 5,435.20
Total Labor Title II Services				\$ 5,435.20

Appendix A
Justification of Fees and Costs
W. College Avenue Bridge Replacement (AIDD) (Jonesboro) (S)
City of Jonesboro, Arkansas

TITLE I

Estimated Direct Costs:

Reproduction Costs:

8 1/2" x 11"	100 Copies @	\$0.10 each	=	\$10.00
11' x 17"	200 Copies @	\$0.15 each	=	\$30.00
Full Size	60 Copies @	\$1.50 each	=	\$90.00

Total Reproduction Costs = **\$130.00**

Travel Costs:

Trip to Jonesboro:

6 Trips @ 200 miles =	1200 miles @	0.560 =	\$672.00
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Total Travel Costs **\$672.00**

Shipping Costs

Fed-X	4 Del. @	\$25.00 =	\$100.00
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Total Shipping Costs **\$100.00**

Subsurface Utility Engineering Location Service **\$500.00**

Subconsultant Costs (Geotechnical Services):

Geotechnology, Inc.	=	\$29,053.97
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Total Subconsultant Costs **\$29,053.97**

Total Direct Costs (Title I) **\$30,455.97**

TITLE II

Estimated Direct Costs:

Travel Costs:

Trip to Jonesboro:

2 Trips @ 200 miles =	400 miles @	0.560 =	\$224.00
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Total Travel Costs **\$224.00**

Total Direct Costs (Title II) **\$224.00**

Appendix B

APPENDIX B

SUBCONSULTANT AGREEMENT AHTD JOB NO. 100849 FEDERAL AID PROJECT ("FAP") NO. TDIP-9227(51)

1. SUBCONSULTANT AGREEMENT

- 1.1. The services to be performed under this Subconsultant Agreement will be performed in connection with the Agreement for Engineering Services ("Prime Agreement") between the Consultant and the **City of Jonesboro** ("Owner") for Job No. 100849, dated October 12, 2015. **Fisher & Arnold, Inc.** ("Consultant") and **Geotechnology, Inc.** ("Subconsultant") hereby agree that the Subconsultant shall perform the professional and related services as described herein. In consideration for the performance of the professional services the Consultant agrees to compensate (and reimburse, if applicable) the Subconsultant in the manner and at the rate(s) provided herein.
- 1.2. The definitions of the Prime Agreement, and its provisions relating to the obligations, duties, and rights of subcontractors, *or which are otherwise required to be inserted into any subcontracting agreements*, are deemed to be part of, and are hereby incorporated by reference into, this Subconsultant Agreement and made binding upon the Subconsultant.

2. DESCRIPTION OF PROJECT AND SERVICES TO BE PROVIDED

PROJECT INFORMATION

The city of Jonesboro is planning to replace the Christian Creek Bridge located on West College Avenue in Jonesboro, Arkansas. The existing two-lane, 58-feet, three-span concrete bridge was constructed in 1970. Based on visual observation, the bottom of the creek is approximately 25 feet below roadway elevation. The replacement bridge structure will be a simple-span, precast bridge supported on geosynthetic-reinforced soil (GRS) abutment. The new structure will meet current design standards and safety requirements, will reduce future maintenance and improve the hydraulic conditions by eliminating the channel piers. The design will be reviewed and approved by the State of Arkansas highway and Transportation Department (AHTD).

SCOPE OF SERVICES

Based on our understanding of the scope of work, we anticipate our services will include the following tasks:

- Performing a subsurface exploration to obtain the soil information required for bridge foundation and wall analyses.
- Performing GRS internal and external stability analyses for the bridge wall and abutments.
- Performing flexible pavement design in accordance with the AASHTO 1993 flexible pavement design method. AHTD is currently performing parallel pavement design, but has not switched to the Mechanistic Empirical Pavement Design Guide (MEPDG) method yet. Therefore, the 1993 method is the current pavement design method utilized by AHTD.
- Attending design meetings, responding to geotechnical-related inquiries and providing geotechnical support during the design phase.

These tasks are explained in the following sections.

Task 1: Subsurface Exploration

This task will include field exploration, field supervisor, laboratory testing and a site-specific seismic study. These sub-tasks are explained below.

Field Exploration. The field exploration will include drilling of 4 borings; 2 at each end of the bridge. Information from the borings will be used for performing the analyses described later in this document. The borings will be drilled to approximate depths of 25 to 60 feet, for a total footage of 170 lineal feet. Soil samples will be obtained by split-spoon and Shelby tube sampling methods at regular intervals. An appropriate level of traffic control will be utilized in accordance with the latest version of the Manual for Traffic control Devices (MUTCD). Upon completion of drilling activities, the 60-foot borings will be backfilled with grout and the 25-foot borings will be backfilled with auger cuttings. Borings located in the roadway will be patched with asphalt.

Boring Locations. It is expected that the borings will be located and surveyed by the project surveyor. Boring coordinates and elevation will be used during the design phase.

Laboratory Testing. Laboratory testing will include moisture content, unconfined compression, unconsolidated-undrained triaxial, unit weight, gradation, standard Proctor, California Bearing Ratio (CBR) and Atterberg limits.

Site-Specific Seismic Study. A site-specific seismic study is included herein for discussion purposes; it will only be performed if the City and the design team collectively think it will benefit the project. It is our understanding that this project may be used to assess the feasibility of the geosynthetic-reinforced soil – integrated bridge system (GRS-IBS) system in northeast Arkansas; specifically from seismic design standpoint. The City of Jonesboro is located within the zone of influence of the New Madrid Seismic Zone (NMSZ). The new bridge will be designed in accordance with the latest FHWA Geosynthetic Reinforced Soil Integrated Bridge System Interim Implementation Guide and AASHTO LRFD Bridge Design Specification documents. The FHWA document requires seismic evaluation of the external stability of reinforced-earth wall systems. The AASHTO document requires that bridges in this seismic zone be designed using seismic accelerations from an earthquake that has a probability of exceedance of 7 percent in 75 years (975-year return period). Due to the potential impact of seismic forces on the design of the proposed bridge system, as well as the potential for significant reduction of the code-based design seismic accelerations, the design team may perform a site-specific seismic study for this project.

A site-specific seismic study includes two sub-studies: a site-specific hazard analysis and a site-specific ground response analysis. The latter involves assessing the shear wave velocity of the near-surface soils. Several methods are available for determining the shear wave velocity profile of the soil and they can be mainly divided into invasive and non-invasive techniques. Invasive techniques, such as cross-hole, down-hole and seismic cone penetration testing (SCPT) provide high-quality data and they will require one to three borings or penetration into the subsurface soils. Non-invasive techniques include active methods (such as spectral analysis of surface waves, or SASW) and passive surface seismic methods, such as Refraction Microtremor (ReMi). The vertical variations of mechanical properties of the soil are estimated from spectral variation of phase velocities through the inversion of dispersion curves. High frequency dispersion controls shallow depths and low frequencies control deeper depths. Accordingly, ReMi alone does not provide a good resolution at a shallow depth, which has the most influence on the site response analysis. Also, if high modes of vibration and propagation are not considered (Typical ReMi inversion does not consider higher modes), this may result in inaccurate determination of soil profile and the process will not capture the presence of soft soil layers. Subconsultant will utilize either a combination of both ReMi and SASW techniques or an invasive technique to

estimate the shear wave velocity profile. Site specific seismic studies can result in significant reduction in the design seismic accelerations compared to the general values published in the code.

Liquefaction Analysis. The liquefaction analysis will be performed using the simplified method. If liquefaction is expected, the residual strength of the soils in the liquefiable zones will be estimated based on the approach introduced by Idriss and Boulanger (2008 and 2014). The impact of liquefaction on shallow foundations, in terms of dynamic settlement, will be assessed. The impact of such zones on deep foundation axial and lateral capacities will also be evaluated.

Task 2: GRS Design

Design of GRS System. The GRS design will be performed in accordance with the procedures set forth in FHWA document “Geosynthetic Reinforced Soil Integrated Bridge System Interim Implementation Guide”, dated June 2012. Subconsultant will perform the following tasks:

- Selection of facing, reinforcing and backfill materials based on local availability
- Performing the necessary calculations for determining the reinforcement configurations (length and vertical spacing) based on specific backfill and reinforcing material properties
- Performing external and internal stability analyses for non-seismic conditions. The internal stability analyses will include material strength, pullout and internal sliding. The external stability analyses will include sliding, bearing capacity and global stability (overturning is typically not a concern).
- Performing external stability analyses for seismic conditions
- Review of the GRS construction plans, which will be provided by the prime consultant
- Assist with production and review of construction specification, which will be produced by the prime consultant

Bridge Design – Additional Consideration. If the analyses described in the previous section lead to the conclusion that alternative pile support systems are to be considered, Subconsultant will provide additional recommendations for bridge support. The recommendations will include options for both driven piles and drilled shaft.

Task 3: Flexible Pavement Design

Flexible pavement design will be performed in accordance with the AASHTO 1993 pavement design procedure. The Owner will provide the traffic information required for the design, which may include the following:

- Average Daily Traffic (ADT)
- Design period, in years
- Anticipated traffic annual growth rate
- Percent trucks and truck configurations, in terms of axle type and loads

Subconsultant will perform identification, standard Proctor and CBR tests on collected soil samples in the laboratory. The results will be used to estimate the soil resilient modulus, which is one of the inputs to the pavement design. The design will result in a minimum Structural Number (SN). Alternative pavement structures will be provided to meet the minimum SN requirements.

Task 4: Design-Phase and Post-Design Support

Subconsultant will attend regular meetings with the prime consultant's team during the design phase. Once the design is submitted, Subconsultant will respond to Requests for Information (RFI's) and attend meetings with the City of Jonesboro or AHTD as necessary.

DELIVERABLES

Three geotechnical reports related to the activities described for Tasks 1-3 will be submitted. The contents of the three reports are described below.

A. Preliminary Bridge Design Report

Subconsultant will summarize the results of borings, laboratory tests and engineering analyses in a report in which design recommendations are given, including the following:

- Description of the field exploration and laboratory testing
- General subsurface conditions
- Seismic site class
- Design seismic accelerations; either code-based or from the site-specific seismic study
- Recommended soil parameters to be used in the GRS design
- Liquefaction analysis and mitigation recommendations, if required
- Preliminary GRS design
- Assessment of the feasibility of the GRS system based on the findings of the subsurface exploration and preliminary design

B. Final Bridge Design Report

The final bridge design report will include the following:

- Relevant contents of the preliminary bridge design report
- Foundation soil improvement options
- Detailed GRS design
- Fill placement recommendations
- Site excavation, including shoring and dewatering recommendations
- Deep foundation recommendations, if required

C. Pavement Design Report

The pavement design report will include the following:

- Description of the field exploration and laboratory testing
- Description of the design methodology
- A summary of the input parameters used in the pavement design, including all assumptions
- Pavement design results using the 1993 AASHTO flexible pavement design procedure
- Pavement structure alternatives based on locally available materials and City/AHTD practice

3. COSTS, FEES, PAYMENTS AND RATE SCHEDULES

Thirty Thousands Seven Hundred and Fifty Seven Dollars and Thirteen Cents (\$29,053.97).

3.1. This Agreement is a cost-plus-fixed-fee contract. The Subconsultant is being hired to perform professional engineering services in connection with the Project as set forth herein. In consideration for Title I services performed, the Consultant will reimburse the Subconsultant for allowable direct and indirect costs, as defined herein, and pay the Subconsultant a fixed fee. If Title II services are to be performed, the Consultant will reimburse the Subconsultant for allowable direct costs and also pay the Subconsultant an amount determined by multiplying the salary rate of the individual(s) performing the Title II services, as shown on the Schedule of Salary Ranges, by the Title II Multiplier.

3.2. "Indirect Cost Rate." The Indirect Cost Rate is defined in the provisions of 48 C.F.R. Part 31, and is also subject to any limitations contained herein. The Indirect Cost Rate for the Subconsultant under this Agreement shall be **165.88** percent + 0.76 percent FCCM.

3.3. Salaries. The following schedule covers the classification of personnel and the salary ranges for all personnel anticipated to be assigned to this project by the Subconsultant:

3.3.1. SCHEDULE OF SALARY RANGES

Principal	\$55.00 - \$58.00
Senior Engineer	\$38.00 - \$42.00
Staff Engineer 1	\$25.00 - \$28.00
Senior Geologist	\$29.00 - \$31.00
Staff Engineer 2	\$24.00 - \$26.00
Supervising Driller	\$37.00 - \$40.00
Staff CADD Technician	\$23.00 - \$25.00
Staff Engineer 3	\$21.00 - \$23.00

3.4. The Consultant shall reimburse the Subconsultant for overtime costs only when the overtime has been authorized in writing by the Owner. When authorized, overtime shall be reimbursed at the rate of time and one-half for all nonexempt employees. Notwithstanding this provision, the Subconsultant must comply with all federal and state wage and hour laws and regulations, regardless whether the overtime is considered reimbursable under this Agreement.

4. COMPENSATION SUBJECT TO LIMITATIONS OF FEDERAL AND STATE LAW

4.1. The Project (as defined in the Prime Agreement), part of which is to be performed under this Subconsultant Agreement, is a federally-assisted project and federal funds will be used, in part, to pay the Consultant and Subconsultant. Therefore, notwithstanding any provision of this Subconsultant Agreement or the Prime Agreement, all payments, costs, and expenditures are subject to the requirements and limitations of 48 C.F.R. Part 31, including those relating to determination of indirect cost rates, if applicable. The Subconsultant shall certify the accuracy of all invoices, requests for payment, and cost rates (if applicable), along with supporting documentation and any supporting information or records provided prior to, during, or after the term of this Subconsultant Agreement.

5. COMMISSION, AHTD, AND FHWA AS THIRD PARTY BENEFICIARIES

5.1. This Subconsultant Agreement is between and binding upon only the Consultant and Subconsultant. The Commission, AHTD, and FHWA are not parties to this Subconsultant Agreement, but are expressly made third-party beneficiaries of this Subconsultant Agreement and shall be entitled to enforce any obligation of the Subconsultant owed to the Consultant. No provision of this Subconsultant Agreement or the Prime Agreement, nor the exercise of any right thereunder, shall be construed as creating any obligation or any liability on the part of, or operating as a waiver of any immunity of, the Commission, the AHTD, the FHWA, or any of their employees, officers, or agents.

- 5.2. The Subconsultant's sole recourse, if any, for any injury arising under or related to this Subconsultant Agreement, the performance of services hereunder, or compensation or claims hereunder, shall be against the Consultant.
- 5.3. The Disputes and Claims provisions of the Prime Agreement shall not apply to this Subconsultant Agreement.

6. RECORDS & AUDITS

- 6.1. *Records* includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.
- 6.2. *Examination.* The Subconsultant shall maintain, and the Owner, AHTD, FHWA, and their authorized representatives shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs (direct and indirect) claimed to have been incurred or anticipated to be incurred in performance of this Agreement. This right of examination shall also include examination and audit of any records considered, relied upon, or relating to the determination of the Indirect Cost Rate or any certification thereof, including any CPA audit relied upon to establish the rate. This right of examination shall also include inspection at all reasonable times of the Subconsultant's offices and facilities, or parts of them, engaged in performing the Agreement.
- 6.3. *Supporting Data.* If the Subconsultant has been required to submit data in connection with any action relating to this Agreement, including the negotiation of or pre-negotiation audit of the Indirect Cost Rate, the negotiation of the Fee, request for cost reimbursement, request for payment, request for an adjustment, or assertion of a claim, the Owner, AHTD, FHWA, or their authorized representatives, in order to evaluate the accuracy, completeness, and accuracy of the data, shall have the right to examine and audit all of the Subconsultant's records, including computations and projections, related to—
- The determination or certification of the Indirect Cost Rate, including any independent CPA audit or certification thereof;
 - Any proposal for the Agreement, subcontract, or modification;
 - Discussions conducted on the proposal(s), including those related to negotiating;
 - Fees or allowable costs under the Agreement, subcontract, or modification;
 - Performance of the Agreement, subcontract or modification; or,
 - The amount and basis of any claim or dispute.
- 6.4. *Audit.* The Owner, AHTD, FHWA, or their authorized representatives, shall have access to and the right to examine any of the Subconsultant's records involving transactions related to this Agreement or a subcontract hereunder.
- 6.5. *Reports.* If the Consultant is required to furnish cost, funding, or performance reports, the Owner, AHTD, FHWA, or their authorized representatives shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating (1) the effectiveness of the Consultant's policies and procedures to produce data compatible with the objectives of these reports and (2) the data reported.

6.6. *Availability.* The Consultant shall retain and make available at its office at all reasonable times the records, materials, and other evidence described in this Section and Section 28, Disputes and Claims, for examination, audit, or reproduction, until five years after final payment under this Agreement, or for any longer period required by statute or by other clauses of this Agreement. In addition—

6.6.1. If this Agreement is completely or partially terminated, the records relating to the work terminated shall be retained and made available for five years after the termination; and,

6.6.2. Records relating to any claim or dispute, or to litigation or the settlement of claims arising under or relating to this Agreement shall be retained and made available until after any such claims or litigation, including appeals, are finally resolved.

7. SUBCONTRACTING

7.1. Unless expressly disclosed in Appendix B, the Subconsultant may not subcontract any of the services to be provided herein without the express written approval of the Owner. All subcontractors, including those listed in Appendix B, shall be bound by the terms of this Agreement. All subcontractors shall be subject to all contractual and legal restrictions concerning payment and determination of allowable costs, and subject to all disclosure and audit provisions contained herein and in any applicable federal or state law.

7.2. Unless the consent or approval specifically provides otherwise, neither consent by the Owner to any subcontract nor approval of the Subconsultant's purchasing system shall constitute a determination (1) of the acceptability of any subcontract terms or conditions, (2) of the acceptability of any subcontract price or of any amount paid under any subcontract, or (3) to relieve the Subconsultant of any responsibility, obligation, or duty under this Agreement.

7.3. No subcontract placed under this Agreement shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement subcontracts shall not exceed the fee limitations of the FAR.

7.4. Furthermore, notwithstanding any other provision within this Agreement, no reimbursement or payment for any markup of the cost of any subcontract shall be considered by the Owner without the express written agreement of the Owner.

7.5. *Prompt Payment.* The Subconsultant shall pay subcontractors for satisfactory performance of their subcontracts within 30 days of receipt of each payment by the Consultant to the Subconsultant. Any retainage payments held by the Subconsultant must be returned to the subcontractor within 30 days after the subcontractor's work is completed. Failure to comply with this provision shall be considered a Default by the Subconsultant. If the Subconsultant fails to comply with this provision, in addition to any other rights or remedies provided under this Agreement, the Owner, at its sole option and discretion, may:

- make payments directly to the subcontractor and offset such payments, along with any administrative costs incurred by the Owner, against reimbursements or payments otherwise due the Subconsultant;
- notify any sureties; and/or,

- withhold any or all reimbursements or payments otherwise due to the Subconsultant until the Subconsultant ensures that the subcontractors have been and will be promptly paid for work performed.

8. COVENANT AGAINST CONTINGENCY FEES

- 8.1. The Subconsultant warrants that no person or agency has been employed or retained to solicit or obtain this Subconsultant Agreement upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the AHTD and Consultant shall have the right to annul this Subconsultant Agreement without liability or, in its discretion, to deduct from the Contract Price or consideration, or otherwise recover, the full amount of the contingent fee.
- 8.2. *Bona fide agency*, as used in this section, means an established commercial or selling agency, maintained by the Subconsultant for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain government contracts nor holds itself out as being able to obtain any government contract or contracts through improper influence.
- 8.3. *Bona fide employee*, as used in this section, means a person, employed by the Subconsultant and subject to the Subconsultant's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain government contracts nor holds out as being able to obtain any government contract or contracts through improper influence.
- 8.4. *Contingent fee*, as used in this section, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a government contract.
- 8.5. *Improper influence*, as used in this section, means any influence that induces or tends to induce a government employee or officer to give consideration or to act regarding a government contract on any basis other than the merits of the matter.

9. TITLE VI ASSURANCES (NONDISCRIMINATION)

During the performance of this Subconsultant Agreement, the Subconsultant, for itself, successors, and assigns, certifies and agrees as follows:

- 9.1. *Compliance with Regulations*. The Subconsultant shall comply with the Regulations relative to Title VI (Nondiscrimination in Federally-assisted programs of the Department of Transportation and its operating elements, especially Title 49, Code of Federal Regulations, Part 21 and 23 Code of Federal Regulations, as amended, and hereinafter referred to as the Regulations). These regulations are herein incorporated by reference and made a part of this Subconsultant Agreement. Title VI provides that the recipients of Federal financial assistance will maintain and implement a policy of nondiscrimination in which no person shall, on the basis of race, color, national origin, sex, age, or disability, be excluded from participation in, denied the benefits of, or subject to discrimination under any program or activity by recipients of Federal financial assistance or their assignees and successors in interest.
- 9.2. *Nondiscrimination*. The Subconsultant, with regard to the work performed by it during the term of this Subconsultant Agreement, shall not discriminate on the basis of race, color, national origin, sex, age, or disability in the selection and retention of

subcontractors, including procurement of materials and leases of equipment. The Subconsultant shall not participate either directly or indirectly in any discrimination prohibited by Section 21.5 of the Regulations, including employment practices.

- 9.3. *Solicitations for Subcontracts, Including Procurements of Material & Equipment.* In all solicitations, either by competitive bidding or negotiation, made by the Subconsultant for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Subconsultant of the Subconsultant's obligations under this Subconsultant Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, or disability.
- 9.4. *Information and Reports.* The Subconsultant shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, and accounts, other sources of information, and its facilities as may be determined by the Owner, the AHTD, or the FHWA to be pertinent to ascertain compliance with such regulations and directives. Where any information required of the Subconsultant is in the exclusive possession of another who fails or refuses to furnish this information, the Subconsultant shall so certify to the Owner, the AHTD or the FHWA, as appropriate, and shall set forth the efforts made by the Subconsultant to obtain the records or information.
- 9.5. *Sanctions for Noncompliance.* In the event of the Subconsultant's noncompliance with the nondiscrimination provisions of this Subconsultant Agreement, the Owner shall impose such contract sanctions as it, the AHTD, or the FHWA may determine to be appropriate, including but not limited to, withholding of payments to the Consultant or Subconsultant under the Agreement until the Subconsultant complies with the provisions and/or cancellation, termination, or suspension of the Subconsultant Agreement, in whole or in part.
- 9.6. *Incorporation of Provisions.* The Subconsultant shall include the terms and conditions of this section in every subcontract including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Subconsultant shall take such action with respect to any subcontract or procurement as the Owner, the AHTD, or FHWA may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; *provided*, however that, in the event the Subconsultant becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Subconsultant may request the Owner, the AHTD, or the United States to enter into the litigation to protect the interests of the State and the United States, respectively.

10. DBE CLAUSE

- 10.1 The Subconsultant shall not discriminate on the basis of race, color, national origin, sex, age, religion, and disability in the performance of this Subconsultant Agreement. The Subconsultant shall comply with the applicable requirements of 49 C.F.R. Part 26 and perform any actions necessary to maintain compliance in the award and administration of DOT-assisted contracts. Failure by the Subconsultant to comply with or perform these requirements is a material breach of this Subconsultant Agreement, which may result in the cancellation, termination, or suspension of this Subconsultant Agreement in whole or in part, or such other remedy that the AHTD may determine appropriate.

10.2 *Prompt Payment.* The Subconsultant shall pay its subcontractors, if any, for satisfactory performance of their subcontracts within 30 days of receipt of each payment by the AHTD to the Subconsultant. Any retainage payments held by the Subconsultant must be returned to the subcontractor within 30 days after the subcontractor's work is completed. Failure to comply with this provision shall be considered a Default by the Subconsultant. If the Subconsultant fails to comply with this provision, in addition to any other rights or remedies provided under this Subconsultant Agreement, the AHTD, at its sole option and discretion, may:

- make payments directly to the subcontractor and offset such payments, along with any administrative costs incurred by the AHTD, against reimbursements or payments otherwise due the Subconsultant;
- notify any sureties; and/or,
- withhold any or all reimbursements or payments otherwise due to the Subconsultant until the Subconsultant ensures that the subcontractors have been and will be promptly paid for work performed.

10.3 The Subconsultant shall insert a clause containing all the terms of this section in all subcontracts under this Subconsultant Agreement.

11. TITLE II OF THE AMERICANS WITH DISABILITIES ACT (NONDISCRIMINATION)

11.1. The Subconsultant will comply with the provisions of the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act, Title VI of the Civil Rights Act of 1964, FHWA Federal Aid Project Guidance, and any other Federal, State, and/or local laws, rules and/or regulations.

11.2. The Subconsultant, during the term of this Agreement, shall not discriminate on the basis of race, color, sex, national origin, age, religion or disability, in admission or access to and treatment in programs and activities associated with this Agreement, or in the selection and retention of subcontractors, including procurement of material and leases of equipment. The Subconsultant shall not participate either directly or indirectly in any discrimination prohibited by the Regulations, including employment practices.

11.3. In accordance with Section 504 regulations 49 C.F.R. Part 27.15, the Owner's Notice of Nondiscrimination is required in any bulletins, announcements, handbooks, pamphlets, brochures, and any other publications associated with this Agreement that are made available to the public, program participants, applicants or employees.

12. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS

12.1. The Subconsultant certifies, to the best of its knowledge and belief, that—

12.1.1. The Subconsultant and any of its Principals—

12.1.1.1. Are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any federal or state agency;

12.1.1.2. Have not, within a 3-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a

criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

12.1.1.3. Are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subsection 12.1.1.2; and,

12.1.1.4. The Subconsultant has not within a 3-year period preceding this offer, had one or more contracts terminated for default by any federal or state agency.

12.2. *Principals*, for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions). This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under section 1001, title 18, United States Code, as well as any other applicable federal and state laws.

12.3. The Subconsultant shall provide immediate written notice to the AHTD if, at any time prior to contract award, the Subconsultant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

12.4. The certification in subsection 12.1 is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Subconsultant knowingly rendered an erroneous certification, the AHTD may terminate the contract resulting from this solicitation for default in addition to any other remedies available to the AHTD.

13. NOTICE

13.1. All notices, approvals, requests, consents, or other communications required or permitted under this Agreement shall be mailed or hand-delivered to:

13.1.1. To the Subconsultant:

Ashraf S. Elsayed, Ph.D., P.E.
3312 Winbrook Dr.
Memphis, TN 38116

13.1.2. To the Consultant:


Richard E. Gafford, P.E.
Fisher & Arnold, Inc.
9180 Crestwyn Hills Drive
Memphis, TN 38125

IN WITNESS WHEREOF, the parties execute this Subconsultant Agreement, to be effective
October 12, 2015.

FISHER & ARNOLD, INC.

BY: 
Richard E. Gafford, P.E.
Vice President

GEOTECHNOLOGY, INC.

BY:  10-7-15
~~Dominic J. Grana~~ DUANE KREUGER
Senior Consultant SECRETARY

*DIVISION OF MATERIALS AND TESTS
GEOTECHNICAL ENGINEERING SECTION*

GEOTECHNICAL SERVICES

MANHOUR REQUIREMENTS AND COST ESTIMATE

CRAIGHEAD

CHRISTIAN CREEK BRIDGE REPLACEMENT

GEOTECHNOLOGY, INC.

Prepared By: ASHRAF ELSAYED, PH.D., P.E.

Date prepared: 9/30/2015

Federal Project No. N/A
State Project No. N/A
Geotechnical Office No. N/A
Pin No. N/A
Contract No, Work Order No. N/A
<Invoice Number>
ASHRAF ELSAYED, PH.D., P.E.
5501 Kreuger Drive, Suite 110
Jonesboro, AR 72401
<CONTACT ADDRESS>
901-353-1981
a_elsayed@geotechnology.com

Section III
Standard Cost Estimate For Soil And Geological Survey Report
1.00 Drilling Services

County: CRAIGHEAD
Route: CHRISTIAN CREEK BRIDGE REPLACEMENT
Description: N/A
Project No.: N/A
Geotechnical Office No.: N/A
Consultant: GEOTECHNOLOGY, INC.
Prepared By: ASHRAF ELSAYED, PH.D., P.E.
Date Prepared: 9/30/2015
Contract Number: N/A

For further explanation of Item No. and Description refer to attached "Pay Item Numbers and Methods of Measurement for Cost Estimates".

Item No.	Description	Estimated Quantities	Basis of Payment		Price	Amount
1.01	Mobilization	1	each	@	\$795.00	\$795.00
1.06	Soil Drilling and Split Barrel Type Sampling on Land	170	vertical foot	@	\$15.00	\$2,550.00
1.07	Tube Type Sampling on Land	4	vertical foot	@	\$50.00	\$200.00
1.09	Borehole Grouting	120	vertical foot	@	\$4.00	\$480.00
1.10	Water Hauling	2	working day	@	\$265.22	\$530.44
1.13	Site Restoration ^a	4	per each	@	\$50.00	\$200.00
Total Estimated Drilling Costs						\$4,755.44

a: Includes patching the holes with asphalt

Section III
 Standard Cost Estimate for Soil and Geological Survey Report
2.00 Laboratory Services

County: CRAIGHEAD
 Route: CHRISTIAN CREEK BRIDGE REPLACEMENT
 Description: N/A
 Project No.: N/A
 Geotechnical Office No.: N/A
 Consultant: GEOTECHNOLOGY, INC.
 Prepared By: ASHRAF ELSAYED, PH.D., P.E.
 Date Prepared: 9/30/2015
 Contract Number: N/A

For further explanation of Item No. and Description refer to attached "Pay Item Numbers and Methods of Measurement for Cost Estimates".

Item No.	Description	Estimated Quantities	Basis of Payment		Rate	Amount
2.01	Atterberg Limits	6	each	@	\$55.00	\$330.00
2.02	Natural Moisture Content	42	each	@	\$5.00	\$210.00
2.03	Particle Size Analysis	10	each	@	\$75.00	\$750.00
2.05	Proctor Density Test	2	each	@	\$180.00	\$360.00
2.06	California Bearing Ratio (per point)	4	each	@	\$135.00	\$540.00
2.10	Triaxial Compression UU	2	strength properties	@	\$369.19	\$738.38
2.12	Unconfined Compression	4	per test strength	@	\$75.00	\$300.00
2.63	CD Direct Shear	2	properties	@	\$493.31	\$986.62
Total Estimated Laboratory Services Cost:						\$4,215.00

Section III
Standard Cost Estimate for Soil and Geological Survey Report

3.00 Manpower Requirements

County: CRAIGHEAD
Route: CHRISTIAN CREEK BRIDGE REPLACEMENT
Description: N/A
Project No.: N/A
Geotechnical Office No.: N/A
Consultant: GEOTECHNOLOGY, INC.
Prepared By: ASHRAF ELSAYED, PH.D., P.E.
Date Prepared: 9/30/2015
Contract Number: N/A

See "Pay Item Numbers and Methods of Measurement for Cost Estimates" for further description of services required by state.

Item No.	ACTIVITY	PRINCIPAL	SENIOR ENGINEER	STAFF ENGINEER	SENIOR GEOLOGIST	STAFF ENGINEER	SUPERVISING DRILLER	STAFF CADD TECHNICIAN	STAFF ENGINEER
		MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR
3.10	Project Planning and Coordination	2.0			8.0		2.0		
3.20	Field Activities				6.0				24.0
3.30	Data Assimilation			8.0					8.0
3.40	GRS Design	4.0	56.0	16.0					
3.41	Flexible Pavement Design			8.0					
3.50	Final Report Preparation	5.0	3.0	24.0					
3.70	Design-Phase and Post-Design Support	12.0	4.0	2.0					
Total Estimated Hours		23.0	63.0	58.0	14.0		2.0		32.0
Hourley Wages		\$ 55.62	\$ 38.12	\$ 25.89	\$ 29.25	\$ 24.25	\$ 38.36	\$ 23.25	\$ 21.50
Subtotal		\$1,279.26	\$ 2,401.56	\$ 1,501.62	\$ 409.50	\$ -	\$ 76.72	\$ -	\$ 688.00
Overhead 165.88%		\$2,122.04	\$ 3,983.71	\$ 2,490.89	\$ 679.28	\$ -	\$ 127.26	\$ -	\$1,141.25
Subtotal		\$3,401.30	\$ 6,385.27	\$ 3,992.51	\$ 1,088.78	\$ -	\$ 203.98	\$ -	\$1,829.25
Fees		\$ 408.16	\$ 766.23	\$ 479.10	\$ 130.65	\$ -	\$ 24.48	\$ -	\$ 219.51
FCCM 0.76%		\$ 9.72	\$ 18.25	\$ 11.41	\$ 3.11	\$ -	\$ 0.58	\$ -	\$ 5.23
Subtotal of Estimated Man-hour Costs		\$3,819.17	\$ 7,169.75	\$ 4,483.02	\$ 1,222.54	\$ -	\$ 229.04	\$ -	\$2,053.99

Total Estimate of Man-hour Requirements:	\$18,977.53
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Section III
 Standard Cost Estimate for Soil and Geological Survey Report
3.00 Manpower Requirements, Hourly Rate Breakdown

County: CRAIGHEAD
 Route: CHRISTIAN CREEK BRIDGE REPLACEMENT
 Description: N/A
 Project No.: N/A
 Geotechnical Office No.: N/A
 Consultant: GEOTECHNOLOGY, INC.
 Prepared By: ASHRAF ELSAYED, PH.D., P.E.
 Date Prepared: #####
 Contract Number: N/A

Hourly Rate Breakdown

	PRINCIPAL	SENIOR ENGINEER	STAFF ENGINEER	SENIOR GEOLOGIST	STAFF ENGINEER	SUPERVISING DRILLER	STAFF CADD TECHNICIAN	STAFF ENGINEER
	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR	MAN-HOUR
Direct Pay Rate	\$55.62	\$38.12	\$25.89	\$29.25	\$24.25	\$38.36	\$23.25	\$21.50
Pay Range	\$55-\$58	\$38-\$42	\$25-\$28	\$29-\$31	\$24-\$26	\$37-\$40	\$23-\$25	\$21-\$23
Overhead	165.88	165.88	165.88	165.88	165.88	165.88	165.88	165.88
FCCM	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76

Section III
 Standard Cost Estimate for Soil and Geological Survey Report
4.0 Other Expenses

County: CRAIGHEAD

Project No.: N/A

Route: CHRISTIAN CREEK BRIDGE REPLACEMENT

Geotechnical Office No.: N/A

Description: N/A

Contract No: N/A

Prepared By: ASHRAF ELSAYED, PH.D., P.E.

Consultant: GEOTECHNOLOGY, INC.

Date Prepared: 9/30/2015

Distance to Jobsite:

Company Headquarters: <CITY,STATE>	Job Site: <CITY,STATE>
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Travel Expenses				
Item No.	Description	Days	Rate*	Total
4.10	Travel Expenses	4	\$34.50	\$138.00
4.12	Lodging	4	\$83.00	\$332.00

*Must be in accordance with applicable AHTD Travel Regulations

Milage\Transportation Expenses				
Item No.	Description	Miles	Milage Rate*	Total
4.20	Passenger Truck	800	\$0.56	\$448.00

*Must be in accordance with applicable AHTD Travel Regulations

Equipment Rental				
Item No.	Description	Days	Daily Rate	Total

Plans Reproduction Costs				
Item No.	Description	Units	Unit Price	Total
4.43	Photocopies	400	\$0.47	\$188.00

Other Expenses				
Item No.	Description	Units	Unit Rate	Total

Total Estimate of Other Expenses:	\$1,106.00
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a: Item includes down-Hole testing and site-specific seismic analysis. This item will only apply with prior City approval

Section III
Standard Cost Estimate for Soil and Geological Survey Report
SUMMARY OF COST ESTIMATES

County: CRAIGHEAD
Route: CHRISTIAN CREEK BRIDGE REPLACEMENT
Description: N/A
Project No.: N/A
Geotechnical Office No.: N/A
Consultant: GEOTECHNOLOGY, INC.
Prepared By: ASHRAF ELSAYED, PH.D., P.E.
Date Prepared: 9/30/2015

1.00 Drilling Services	\$4,755.44
2.00 Laboratory Services	\$4,215.00
3.00 Manpower Requirements	\$18,977.53
4.00 Other Expenses	\$1,106.00
Total Not-to-Exceed Costs	\$29,053.97

Appendix C

CERTIFICATION OF CONSULTANT

I hereby certify that I, **Richard E. Gafford**, am the **Vice President** and duly authorized representative of the firm of **Fisher & Arnold, Inc.** whose headquarters address is **9180 Crestwyn Hills Drive, Memphis, Tennessee 38125** and that neither I nor the above firm I here represent has:

(a) employed or retained for a commission, brokerage, contingent fee, or other considerations, any firm or person (other than a bona fide employee working solely for me) to solicit or secure this contract,

(b) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or

(c) paid or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me) any fee contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the contract;

(d) included any costs which are not expressly allowable under the cost principles of the FAR of 48 CFR 31, whether direct or indirect. All known material transactions or events that have occurred affecting the firm's ownership, organization and indirect cost rates have been disclosed.

except as here expressly stated (if any):

I acknowledge that this certificate is to be furnished to the Arkansas State Highway and Transportation Department and the Federal Highway Administration, U.S. Department of Transportation, in connection with this contract involving participation of Federal Aid Highway Funds, and is subject to applicable State and Federal laws, both criminal and civil.

Furthermore, as a recipient of Federal Aid Highway Funds, I certify and hereby agree to the conditions of Title VI Assurances as outlined in Section 31 of this Agreement and shall insert the Notice of Nondiscrimination Statement as shown below in all solicitation of work or procurement of materials or equipment.

NOTICE OF NONDISCRIMINATION STATEMENT

Fisher & Arnold, Inc. ("Consultant"), complies with all civil rights provisions of federal statutes and related authorities that prohibited discrimination in programs and activities receiving federal financial assistance. Therefore, the Consultant does not discriminate on the basis of race, sex, color, age, national origin, or disability, in the admission, access to and treatment in Consultant's programs and activities, as well as the Consultant's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Consultant's nondiscrimination policies may be directed to **Richard E. Gafford** (ADA/504/Title VI Coordinator), **9180 Crestwyn Hills Drive, Memphis, Tennessee 38125, (901) 748-1811**, (Voice/TTY 711), or , the following email address: **rgafford@fisherarnold.com**.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.


Authorized Firm Representative

9/16/2015
Date

CERTIFICATION OF SUBCONSULTANT

I hereby certify that I, Dominic J. Grana, am the Senior Consultant and duly authorized representative of the firm of Geotechnology, Inc. whose headquarters address is 11816 Lackland Rd, Suite 150, St. Louis MO 63146, and that neither I nor the above firm I here represent has:

(a) employed or retained for a commission, brokerage, contingent fee, or other considerations, any firm or person (other than a bona fide employee working solely for me) to solicit or secure this contract,

(b) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or

(c) paid or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me) any fee contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the contract;

(d) included any costs which are not expressly allowable under the cost principles of the FAR of 48 CFR 31, whether direct or indirect. All known material transactions or events that have occurred affecting the firm's ownership, organization and indirect cost rates have been disclosed.

except as here expressly stated (if any):

I acknowledge that this certificate is to be furnished to the Arkansas State Highway and Transportation Department and the Federal Highway Administration, U.S. Department of Transportation, in connection with this contract involving participation of Federal Aid Highway Funds, and is subject to applicable State and Federal laws, both criminal and civil.

Furthermore, as a recipient of Federal Aid Highway Funds, I certify and hereby agree to the conditions of Title VI Assurances as outlined in Section 9 of this Subconsultant Agreement and shall insert the Notice of Nondiscrimination Statement as shown below in all solicitation of work or procurement of materials or equipment.

NOTICE OF NONDISCRIMINATION STATEMENT

Geotechnology, Inc ("Subconsultant"), complies with all civil rights provisions of federal statutes and related authorities that prohibited discrimination in programs and activities receiving federal financial assistance. Therefore, the Subconsultant does not discriminate on the basis of race, sex, color, age, national origin, or disability, in the admission, access to and treatment in Subconsultant's programs and activities, as well as the Subconsultant's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Subconsultant's nondiscrimination policies may be directed to Bailey Cody (ADA/504/Title VI Coordinator), 11816 Lackland Rd, Suite 150, St. Louis MO 63146, 314-997-7440, (Voice/TTY 711), or , the following email address: b_cody@geotechnology.com.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille:



Authorized Firm Representative

8-20-15
Date

CERTIFICATION OF CITY OF JONESBORO, ARKANSAS

I hereby certify that I am the Mayor of the City of Jonesboro, Arkansas and that the aforementioned consulting firm or its representative has not been required, directly or indirectly as an express or implied condition in connection with obtaining or carrying out this contract to:

- (a) employ or retain, or agree to employ or retain, any firm or person, or
- (b) pay, or agree to pay, to any firm, person, or organization, any fee contributions donation, or consideration of any kind:

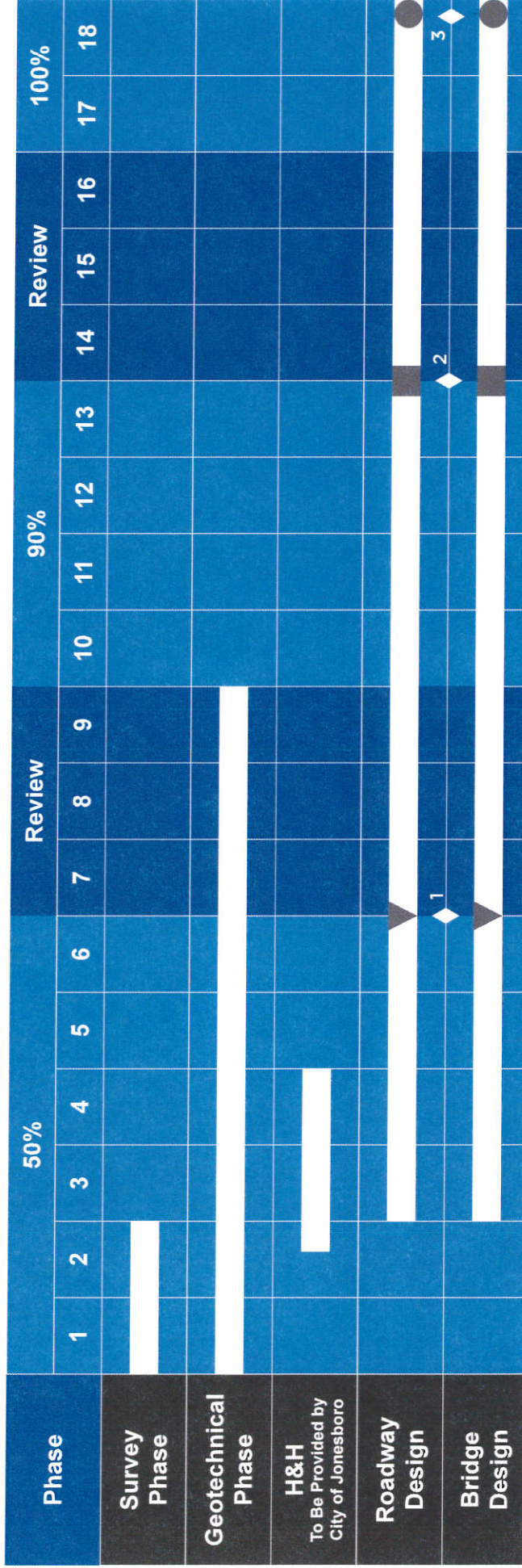
except as here expressly stated (if any):

I acknowledge that this certificate is to be furnished to the Arkansas Highway and Transportation Department and the Federal Highway Administration, U.S. Department of Transportation, in connection with this contract involving participation of Federal-Aid Highway Funds, and is subject to applicable State and Federal laws, both criminal and civil.

11-20-15
Date

Appendix D

Work Schedule (In Weeks)



Milestones

- ▼ 50%
- 90%
- 100%

Deliverable Products

1. 50% Roadway Plans, 50% Bridge Plans
2. 90% Roadway Plans, 90% Bridge Plans, Construction Cost Estimate, Traffic Management Plan, Design & Quantity Computations
3. 100% Roadway Plans, 100% Bridge Plans