

Department of Engineering
Tim Bryan, P.E., PTOE, County Engineer

3137 South Liberty Street, Canton, MS 39046
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MEMORANDUM

October 31, 2024

To: Casey Brannon, Supervisor, District I
Trey Baxter, Supervisor, District II
Gerald Steen, Supervisor, District III
Karl Banks, Supervisor, District IV
Paul Griffin, Supervisor, District V

From: Tim Bryan, P.E., PTOE
County Engineer

Re: Engineering Design Contract
Yandell Road from Smith Carr Road to N Old Canton Road

The Engineering Department requests approval of the design contract with Waggoner Engineering for the design of the widening of Yandell Road for a fee not to exceed \$1,539,367.21 and to authorize the Board President to sign the contract.

**PROFESSIONAL SERVICES AGREEMENT
BETWEEN
MADISON COUNTY BOARD OF SUPERVISORS
AND
WAGGONER ENGINEERING, INC.**



This **PROFESSIONAL SERVICES AGREEMENT** (this “Agreement”) is made by and between:

Name: Madison County Board of Supervisors
Address: 125 West North Street, Canton, MS 39046
Telephone: (601) 790-2590
Representative: Gerald Steen, President

(referred to in this Agreement as “Client”)

AND

Name: Waggoner Engineering, Inc.
Address: 143-A LeFleur's Square, Jackson, MS 39211
Telephone: 601-355-9526
Representative: Zach Adams, Vice President

(referred to in this Agreement as “Waggoner”), in connection with the Yandell Road Improvements from Smith Carr Road to N. Old Canton Road (the “Project”), effective as of the _____ day of October, 2024 (the “Effective Date”).

In consideration of the mutual covenants and promises set forth in this Agreement, Client and Waggoner agree as follows:

1. SERVICES.

- (a) **Scope of Services.** Client hereby engages Waggoner to perform or furnish the professional engineering and related services (“Services”) described on Exhibit A attached to and made part of this Agreement (the “Scope of Services”) as part of the Project.
- (b) **Additional Services.** Client may request Waggoner to perform additional services not described in the Scope of Services (“Additional Services”), regardless of whether related to the Project. Unless agreed otherwise by Waggoner, Client shall compensate Waggoner for Additional Services on an hourly basis using the rates attached to this Agreement as Exhibit B. Waggoner reserves the right to require written authorization by Client prior to performing any Additional Services.
- (c) **Standards of Practice.** Waggoner will perform the Services under this Agreement in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. Waggoner makes no other representation or warranty regarding its

Services. Client may not infer any additional or different representation or warranty by Waggoner from any report, opinion, document or other communication made by or on behalf of Waggoner.

- (d) **Changes in Scope of Services.** The Scope of Services described in Exhibit A is based on facts known at the time of execution of this Agreement, including, if applicable, information supplied by Client. For some projects involving conceptual or process development services, the Scope of Services may not be fully defined at the time of execution of the Agreement. As the Project progresses, facts discovered may indicate the need for changes to the Scope of Services. Changes in the Scope of Services will result in a change in agreed upon compensation if the change in Scope of Services changes the amount of work or expertise required of Waggoner.

2. **COMPENSATION.**

- (a) The Client shall pay Waggoner on an actual cost-plus fixed-fee basis not to exceed \$1,539,367.21 in accordance with the rate schedule attached to this Agreement as Exhibit B and shall reimburse Waggoner for all reasonable expenses incurred in the performance of the Services, to include printing, travel, lodging and subsistence, and equipment use in accordance with Exhibit B. The cost of performance is attributable to the satisfactory completion of the Scope of Work set forth under "Exhibit A".

Direct Costs are those charges deemed reasonably necessary by the client for the successful completion of the Scope of Work, which are charged directly to the project and not included in overhead.

Fixed fee as the term is used herein shall mean a dollar amount established to cover the consultant's profit and business expenses not allocable to overhead for the successful completion of the services. The consultant's fixed fee shall be \$160,322.93, which sum shall be paid incrementally each month in an amount determined by multiplying the total fixed fee by the project completion percentage, less any amounts previously paid for fixed fees.

- (b) Waggoner will invoice Client monthly based upon the work completed during the billing period, and Client shall pay Waggoner within 30 days after receipt of Waggoner's monthly invoice. Any invoice not paid within forth-five days of receipt shall bear interest at the rate of 1.5% per month in accordance with MISS. CODE ANN. § 31-7-305.
- (c) Waggoner reserves the right to modify its Hourly Rate Schedule as of January 1 of each year that the Agreement is in effect.

3. **TERM OF AGREEMENT; SCHEDULE FOR PERFORMANCE.**

- (a) This Agreement shall be effective as of the Effective Date and shall remain in effect for a period of one calendar year. Unless terminated in accordance with the

provisions of this Agreement, this Agreement will automatically renew on each anniversary of the Effective Date for successive periods of one calendar year.

- (b) Exhibit D sets forth the schedule for performance of the Services, which Schedule incorporate reasonable periods of time for Client and any necessary third-party reviews. The schedule will be revised from time-to-time to address any delays in Client or third-party reviews.
- (c) In the event of any delays in performance of the Services through no fault of Waggoner, Waggoner shall be entitled to an equitable adjustment in compensation to address increased costs of performing the Services.

4. CLIENT RESPONSIBILITIES.

- (a) **Information/Reports.** Client shall furnish Waggoner with all applicable reports, studies, site characterizations, regulatory orders and similar information in its possession relating to the Project and the Services to be performed by Waggoner. Unless specified otherwise in Exhibit A, in performing the Services, Waggoner may rely upon Client-furnished information without independent verification.
- (b) **Representative.** Client shall designate a representative who shall have authority to transmit instructions, receive information, interpret and define Client's policies and make decisions with respect to the Services performed or to be performed under this Agreement.
- (c) **Decisions.** Client shall provide all criteria and full information as to Client's requirements for the Project, obtain necessary approvals and permits (unless specified otherwise in Exhibit A), attend Project meetings, provide interim reviews on an agreed-upon schedule, make decisions as to Project alternatives, and generally participate in the Project to the extent necessary to enable Waggoner to performance the Services in a timely and efficient manner.
- (d) **Access.** Client shall provide Waggoner safe access to the Project site and any other premises under Client's control necessary for Waggoner to perform or provide the Services.
- (e) **Utilities and Other Underground Improvements.** Client shall furnish to Waggoner information identifying the type and location of any underground utilities or other underground improvements that affect the Project site. As part of any design, testing or other Services that include ground penetrations, Waggoner will prepare one or more plans that show the locations intended for subsurface penetrations for Client's approval. Client agrees, to the fullest extent permitted by law, to waive all claims and causes of action against Waggoner and anyone for whom Waggoner may be legally liable for damages to underground improvements that result from subsurface penetrations shown on the plans submitted to Client for approval. Client further agrees, to the fullest extent permitted by law, to indemnify, defend and hold Waggoner and its subconsultants harmless from any damage, liability or cost, including reasonable attorneys' fees and defense costs, for any

property damage, injury or economic loss arising or allegedly arising from subsurface penetrations in locations authorized by Client or from inaccuracy of information provided to Waggoner by Client, except for damages caused by the sole negligence of Waggoner in its use of Client-furnished information.

5. **OWNERSHIP OF INSTRUMENTS OF SERVICE.** Client acknowledges Waggoner's design and construction documents as instruments of professional service. All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by Waggoner as instruments of service shall remain the property of Waggoner. Waggoner shall retain all common law, statutory and other reserved rights, including the copyright thereto. Upon payment of all compensation due Waggoner, Client shall have a perpetual license to use all instruments of Waggoner's Services prepared in connection with the Project, but only in connection with the Project. Client shall not reuse or make any modification to any plans, specifications or other instruments of Waggoner's Services (including in connection with the Project) without the prior, written authorization of Waggoner. Client shall, to the fullest extent permitted by law, indemnify, defend and hold Waggoner harmless from any claim, liability or cost (including reasonable attorneys' fees and defense costs) arising or allegedly arising out of any unauthorized reuse or modification of the construction documents by Client or any person or entity that acquires or obtains the plans and specifications from or through Client without the written authorization of Waggoner.

6. **PROVISIONS APPLICABLE TO PARTICULAR TYPES OF SERVICES.**

(a) **Construction Observation.**

(i) If Waggoner is retained to provide construction observation services, Waggoner shall visit the Project at appropriate intervals during construction to become generally familiar with the progress and quality of the contractors' work and to determine if the contractor's work is proceeding in general accordance with the plans and specifications for the Project. Client has not retained Waggoner to make detailed inspections or to provide exhaustive or continuous review and observation of any construction or other services provided by a third party. Waggoner does not guarantee the performance of, and shall have no responsibility for, the acts or omissions of any contractor, subcontractor, supplier, or any other entity furnishing materials or performing any work in connection with the Project. Further, Client waives all claims against Waggoner arising from or in any way connected with errors, omissions, conflicts or ambiguities in any plans and specifications prepared by others. In addition, Client agrees, to the fullest extent permitted by law, to indemnify, defend and hold Waggoner harmless from any damage, liability or cost, (including reasonable attorney's fees and defense costs), arising from any errors or omissions contained in the plans, specifications or other contract documents prepared by others.

(ii) If the Scope of Services does not include observation or review of the performance by Waggoner of any construction or other third-party services,

Client assumes all responsibility for interpretation of the plans, specifications and other contract documents and for construction observation and supervision and waives any claims against Waggoner that may be in any way connected thereto. Further, Client agrees, to the fullest extent permitted by law, to indemnify, defend and hold Waggoner harmless from any loss, claim or cost, including reasonable attorneys' fees and costs of defense, arising or resulting from the performance of such services by other persons or entities.

(b) **Hazardous Materials.**

- (i) The Scope of Services does not include any Services related to investigations for or abatement or remediation of hazardous or toxic materials (“Hazardous Materials”). In the event Waggoner or any other party encounters any Hazardous Materials at the Project site, or should it become known in any way that Hazardous Materials may be present at the Project site or any adjacent areas that may affect the performance of the Services, Waggoner may, at its option and without liability for consequential or any other damages, suspend performance of the Services (in whole or in part) until Client retains appropriate specialist consultant(s) or contractor(s) to identify, abate and/or remove the Hazardous Materials.
- (ii) Client shall furnish or cause to be furnished to Waggoner all documents and information known or available to Client that relate to the identity, location, quantity, nature, or characteristic of any Hazardous Materials at or near the Project site, and shall immediately transmit new, updated, or revised information as it becomes available. In no event shall Waggoner be required to sign a hazardous waste manifest or take title to any Hazardous Materials. Client shall have the obligation to make all spill or release notifications to appropriate government agencies.
- (iii) Client agrees that Waggoner neither created nor contributed to the creation or existence of any Hazardous Materials at the Project site, and in consideration of the substantial risks to Waggoner posed by the presence or potential presence of Hazardous Materials on or about the Project site, Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless Waggoner, its officers, directors, employees, agents, and independent consultants from all claims and losses, including reasonable attorneys’ fees and defense costs, arising out of, or in any way connected with or attributable to the use, generation, storage, release, threatened release, discharge, disposal, or presence of Hazardous Materials on, under or about the Project site (whether by Client, any predecessor in title or any third party) or any employees, agents, contractors or subcontractors of Client or any persons at any time occupying or present on the Project site.

(c) **Testing and Observation.** Client understands that testing and observation are discrete sampling procedures, and that such procedures indicate conditions only at

the depths, locations, and times the procedures were performed. Waggoner will provide test results and opinions based on tests and field observations only for the work actually tested. Client is responsible (even if delegated to contractor) for requesting any additional testing services that Client deems appropriate for the Project beyond that provided in the Scope of Services. Waggoner's performance of testing and observation services shall not relieve Client's contractor in any way from its responsibility for defects in its work or create a warranty or guarantee by Waggoner. Waggoner will not supervise or direct the work performed by Client's contractor or its subcontractors, and neither any testing nor construction observation performed by Waggoner shall result in Waggoner being or becoming responsible for means and methods of construction.

- (d) **Testing Laboratory Services.** Unless specified otherwise in the Scope of Services, laboratory testing services will be performed by a third party. Client understands that Waggoner may not be knowledgeable in the procedures of the testing laboratory's services and will not rely upon Waggoner to verify the quality or accuracy of the testing laboratory's reports. In addition, Client agrees, to the fullest extent permitted by law, to indemnify and hold Waggoner harmless from any damage, liability, or cost, (including reasonable attorney's fees and defense costs), arising from any services performed by the testing laboratory, except only those damages, liabilities or costs caused by the sole negligence or willful misconduct of Waggoner.
- (e) **Sample Disposition Upon Completion of Testing.** Unless specified otherwise in the Scope of Services, material samples will be considered consumed in testing and will be disposed of upon completion of the tests.

7. **INSURANCE.** Throughout the term of this Agreement, Waggoner shall maintain the following minimum insurance coverages:

- (a) Workers' compensation insurance in such amounts as may be required under the laws of the State of Mississippi.
- (b) Comprehensive general liability insurance with limits of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate.
- (c) Automobile liability insurance with a combined single limit of not less than \$1,000,000.
- (d) Professional liability insurance in an amount of not less than \$1,000,000 annual aggregate, on a claims-made basis.

At Client's request, Waggoner shall add Client as an additional insured under Waggoner's automobile liability and general liability policies, but only with respect to the Services.

8. **TERMINATION.** Either Client or Waggoner may terminate this Agreement at any time with or without cause upon giving the other party seven (7) calendar days prior, written

notice. Client shall pay Waggoner for all Services performed and all costs incurred up to the date of termination within thirty (30) calendar days of the date of termination.

9. **DISPUTE RESOLUTION.** The parties agree to attempt to settle any disputes arising under this Agreement in an amicable manner through discussions between the parties' senior management representatives. If a dispute cannot be resolved in this manner within a reasonable party of time, the parties agree to submit the matter to non-binding mediation prior to filing any legal proceedings. Mediation shall be conducted in accordance with the mediation Rules of the American Arbitration Association with the parties sharing the cost of the mediator(s) equally. In the event any actions are brought to enforce this Agreement, the prevailing party shall be entitled to collect its litigation costs (including reasonable attorneys' fees and expenses, costs of investigation and other costs of litigation) from the other party.
10. **LIMITATION OF LIABILITY.** Waggoner's liability under this Agreement shall be limited to injury or loss caused by the negligence, gross negligence or willful misconduct of Waggoner and its subcontractors in the performance of the Services. In no event shall Waggoner's liability exceed the amount of compensation actually paid to Waggoner under this Agreement.
11. **CONSEQUENTIAL DAMAGES.** Notwithstanding any other provision of the Agreement, neither party shall be liable to the other for any consequential damages incurred due to the fault of the other party, regardless of the nature of the fault or whether it was committed by Client or Waggoner, their employees, agents, subconsultants or subcontractors. Consequential damages include, but are not limited to, loss of use and loss of profit.
12. **NOTICES.** Any notice required to be given under this Agreement shall be given in writing, and shall be effective when actually delivered, one business day after deposit with a nationally recognized overnight courier, delivery fees prepaid, or, if mailed, three business days after deposit in the United States mail, as first class, certified or registered mail postage prepaid, directed to the addresses shown below:

Client: Madison County Board of Supervisors
Gerald Steen, President
125 West North Street, Canton, MS 39046
Telephone: (601)790-2590

Waggoner: 143-A LeFleur's Square
Jackson, Mississippi 39211
Telephone: (601) 355-9526

Attention: Zach Adams

Any party may change its address for notices under this Agreement by giving formal written notice to the other parties, specifying that the purpose of the notice is to change the party's address.

13. **GENERAL PROVISIONS.**

- (a) **Amendments.** This Agreement represents the complete agreement between Client and Waggoner with respect to the subject matter hereof and may only be amended, supplemented, modified or cancelled by a duly executed instrument executed by the party sought to be charged.
- (b) **Third Party Beneficiaries.** Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either Client or Waggoner. Waggoner's Services under this Agreement are being performed solely for Client's benefit, and no other entity, including Client's contractors, shall have any claim against Waggoner because of this Agreement or the performance or nonperformance of any Services under this Agreement.
- (c) **Delays.** If events beyond the control of Client or Waggoner, including, but not limited to, fire, flood, explosion, riot, strike, war, process shutdown, act of God or the public enemy, and act or regulation of any government agency, result in delay to any schedule established in this Agreement, such schedule shall be amended to the extent necessary to compensate for such delay. In the event such delay exceeds 60 days, Waggoner shall be entitled to an equitable adjustment in compensation.
- (d) **Safety.** Waggoner shall have no responsibility for or control over general job site safety of persons other than Waggoner employees.
- (e) **Construction Means, Methods, Techniques.** Waggoner shall not have any responsibility for or control over any contractors means, methods, techniques or sequencing of any work.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives effective as of the date set forth above.

MADISON COUNTY BOARD OF SUPERVISORS
INC.

WAGGONER ENGINEERING,

By: _____

By: _____

Title: _____

Title: _____

Exhibit A
Waggoner Engineering, Inc.
Scope of Work

Madison County has experienced significant growth in the past 20 years due to increased sprawl development, resulting in a high demand for commercial and residential development. Because of the rapid growth in the County, traffic congestion has become a major problem. In response, roadway improvements have been planned by the Madison County Board of Supervisors to widen the existing **Yandell Road from Smith Carr Road to North Old Canton Road**. This project will consist of widening the existing roadway to a 5-lane section from 200 feet east of Smith Carr Road to 350 feet west of N. Old Canton Road.

Waggoner Engineering will provide all necessary professional services required to complete on-site field review, prepare final right of way plans, prepare maps and deeds, delineate wetlands and other waters of the U.S., prepare wetlands and other waters permit, complete final roadway and hydraulic design, prepare final LRFD structural design of bridges, retaining walls and appurtenances, and design traffic signals (1).

The following engineering services shall be performed by Waggoner Engineering n behalf of the Madison County Board of Supervisors (MCBOS), the CLIENT, in accordance with this CONTRACT at the direction of the MCBOS.

TYPICAL ITEMS/MATERIALS PROVIDED BY THE MCBOS:

Based upon availability, the CLIENT will provide within normal resources, the following:

1. Copies of previous studies/analyses, environmental assessments, conceptual plan, and other information pertaining to the project;
2. Names, addresses, and telephone numbers of points of contact which may prove useful to the CONSULTANT in conducting this analysis;
3. A single point of contact within the MCBOS for day-to-day coordination of each CONTRACT;
4. Computer files (depending on availability) may include Computer Aided Design and Drafting (CADD) files, GIS data, or Survey Control Points set by other Surveyors on or near the project employed by the MCBOS;
5. Plans and other related materials for adjacent projects having potential impacts on the planned execution of this project.

GENERAL REQUIREMENTS

Unless otherwise instructed by CLIENT, the CONSULTANT shall comply with the current version of the following publications:

Roadway Design:

- A. MDOT *Roadway Design Manual*, and supplemented with updated design policies as described in Design Memos located on Roadway Design Division's website;
- B. MDOT Roadway Design Standard Drawings;
- C. MDOT Roadway Design Special Design Sheets;
- D. MDOT *Roadway Design CADD Manual*;
- E. MDOT *Survey Manual*;
- F. MDOT *Access Management Manual*;
- G. MDOT Traffic Engineering's *Typical Signing Details*;
- H. MDOT *Intelligent Transportation Systems Design Manual*;
- I. *Mississippi Standard Specifications for Road and Bridge Construction*;
- J. AASHTO'S *A Policy on Geometric Design of Highways and Streets*;
- K. *AASHTO Roadside Design Guide*;
- L. *AASHTO Highway Safety Manual (HSM)*;
- M. *Manual on Uniform Traffic Control Devices (MUTCD)*; and
- N. Any other publications listed in Exhibit 8, or as instructed by MDOT.

Bridge Design

- A. MDOT *Bridge Design Manual*;
- B. MDOT *Bridge Division CADD Manual*;
- C. MDOT Bridge Standard Drawings;
- D. MDOT Bridge Design Memos;
- E. *Mississippi Standard Specifications for Road and Bridge Construction*;
- F. MDOT *Bridge Safety Inspection Policy and Procedure Manual*;
- G. National Bridge Inspection Standards (NBIS);
- H. *AASHTO LRFD Bridge Design Specifications*;
- I. *AASHTO Guide Specifications for LRFD Seismic Bridge Design*;
- J. *AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals*;
- K. *AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges*;
- L. *AASHTO LRFD Movable Highway Bridge Design Specifications*;
- M. *AASHTO/AWS D1.5M/D1.5 Bridge Welding Code*;
- N. *AASHTO Guide Specification and Commentary for Vessel Collision Design of Highway Bridges*;
- O. *AASHTO Guide Specifications for Bridges Vulnerable to Coastal Storms*;
- P. *AASHTO LRFD Bridge Construction Specifications*;
- Q. *AASHTO Standard Specifications for Highway Bridges*;
- R. *AASHTO Manual for Bridge Evaluation*;
- S. *AASHTO Manual on Subsurface Investigations*; and
- T. Any other publications listed in Exhibit 8, or as instructed by MDOT.

Survey

Surveys shall comply with the following:

- A. MDOT Survey Manual;
- B. Mississippi Board of Registration for Professional Engineers and Land Surveyor's "Standards of Practice for Surveying" in Mississippi. All traverses and right of way monument locations (being set) shall meet with Class "A" of the standards of practice specifications and traverses shall be properly adjusted according to good surveying practices. Side ties or other locations of improvements or features shall meet the class specification normally required by said minimum standards;
- C. Land Surveying laws as defined in the Mississippi Code of 1972 as well as current case law including interpretations of those laws by the judicial branches of the United States and State of Mississippi governments;
- D. Local Zoning and Subdivision laws and regulations in the project area. (Properties falling within the required right of way are not subject to these regulations. However, the remainder portion of the original tract may be affected by the MDOT acquisitions.); and
- E. Specific instructions as required by the Mississippi Department of Transportation on individual Projects.

Hydraulic Design

- A. *Mississippi Standard Specifications for Road and Bridge Construction*;
- B. *AASHTO Drainage Manual*;
- C. *AASHTO LRFD Bridge Design Specifications*;
- D. Federal Highway Administration (FHWA) Hydraulic Engineering Circulars and other publications;
- E. 23 CFR Parts 625, 630, and 650;
- F. 44 CFR Part 59-78;
- G. Floodplain Management Regulations for the State of Mississippi;
- H. National Flood Insurance Program regulations (NFIP);
- I. Federal Emergency Management Agency (FEMA) regulations;
- J. Local, state, or federal regulations as appropriate; and
- K. Any other publications listed in Exhibit 8, or as instructed by MDOT.

SCOPE OF WORK

Design Conference

The purpose of the Design Conference is to discuss any updated procedures or policies the CLIENT may have enacted that would impact the final design phase of the project. These items may constitute a change in scope. The design conference may also require a visit to the project site.

Task 1 – Roadway Design

- A. Title Sheet(s), typical sections, preliminary listing of pay items, plan-profile sheets showing all geometrics, profile grades, construction limits, cross sections, traffic control

sheets, preliminary permanent directional signing layout sheets, preliminary pavement marking sheets, special design sheets where needed, phase construction sheets as required (plan & elevation) and right-of-way limits with or without property boundaries.

B. CADD Drawings:

The Construction Plan documents will be included as part of the PS&E assembly and may be submitted in either MicroStation (.dgn) or AutoCAD Civil 3D (.dwg) format. The Construction Plans shall contain Title sheet, Index, General Notes, Typical Sections, EQ Sheets, SQ Sheets, Plan and Profile Sheets, Paving and Drainage Sheets, Intersection Design, Cross Sections, Traffic Control Plan Sheets, Signage Sheets, and Striping Sheets

Task 2 – Bridge Design

- A. Layout sheet(s) including plan and elevation, centerline soil profile, substructure details, superstructure details, miscellaneous details, pile details, notes, quantities and all other necessary details. Layout sheet(s) shall show: (1) complete geometric controls (as approved by the CLIENT), (2) grades (as approved by the CLIENT), (3) clearances, (4) topographic features (original and final), (5) design data, (6) quantities, (7) special notes, (8) pile notes and bearing requirements, and (9) all other pertinent details. A centerline soil profile will generally be compiled from field boring data and listed on separate sheets for the convenience of those involved in construction.
- B. Detail sheets for substructure and superstructure shall show all details necessary for their construction and shall include, but not be limited to: (1) all dimensions convenient to construction, (2) sufficient cross section details, (3) beam sizes, types and spacing, (4) elevations, (5) crown details, (6) reinforcing details, (7) pile bearing requirements, types and sizes, (8) prestressing data where required, (9) notes, and (10) proper cross referencing. Piling details, miscellaneous details and suitable special provisions as are available, shall be furnished by the CLIENT. All other details and special provisions that may be required shall be prepared by the CONSULTANT.

Task 3 – Field Survey

Topographical / Supplemental Surveying Phase

- A. All surveying tasks shall be performed during this phase shall be performed under the supervision and guidance of a Professional Land Surveyor who is properly registered and in good standing with the Mississippi State Board of Registration for Professional Engineers and Land Surveyors.
- B. Prior to beginning the field survey, document “good faith” efforts that the owners of the adjacent properties are notified by letter of the project and the required field surveying required for the design of the proposed widening of the existing Yandell Road.
- C. The horizontal datum used for this survey shall be based upon the North American Datum of 1983, (NAD 83), Mississippi State Plane Coordinate System, East Zone and the

vertical datum used for this survey shall be based upon the North American Vertical Datum 1988. (NAVD 88). All measurements shall be based upon US Survey feet. Any distances or bearings shown on survey shall be grid based.

- D. A centerline profile shall be performed along the mainline at 50-foot intervals plus grade breaks.
- E. Three (3) cross-sections shall be obtained on intersecting routes; and two (2) on intersecting streets. Cross-sections to extend 100 feet each way of centerline.
- F. Survey and Map locations (horizontal and vertical top of ground) of the soil borings.
- G. Establish a minimum of six (6) horizontal and vertical control points for future use. The horizontal and vertical control points shall be established utilizing a combination of GPS/RTK and conventional surveying, and their locations shall be property identified on the completed survey.
- H. The actual location of any underground utilities will be shown as per markings by the Mississippi One Call System, Madison County, or the utility owner or from any utility drawings that may be provided by the utility owner. In that the underground utilities are based at least in part, on information from others, WEI cannot and does not warrant their completeness or accuracy.
- I. This scope does not include any surveying tasks related to the performance of any boundary, property or right-of-way surveying that would be required in order to determine and/or delineate the location of any existing or proposed boundaries, properties, easements or right of way lines.

Task 4 – Hydraulics

Hydraulic engineering analysis and design for bridge and roadway plans will include providing bridge and roadway hydraulic studies and recommendations and developing design plans. This will include:

- A. Hydraulic field surveys and staking
- B. Roadway hydraulic design including hydrology, channels, culverts, energy dissipators, storm drainage systems, and storage facilities;
- C. Bridge hydraulic design including hydrologic and hydraulic analysis of bridge sites, stream stability, channel and stream bank stabilization, bridge deck drainage, one-dimensional and two-dimensional modeling, and scour analysis;
- D. Phase I-IV scour evaluations of existing bridge sites;
- E. Bridge and highway drainage design in coastal environments including hydraulic analysis and
Vulnerability assessment of tidal water bodies, storm surge, long-term sea level rise, waves,
accompanying scour, and countermeasure design;

- F. FEMA studies and analysis including "No-Rise/No-Impact" Certifications as well as Conditional Letter of Map Revision (CLOMR) application and Letter of Map Revision (LOMR) applications;
- G. Conceptual structural design and preliminary plans for bridges or other projects involving construction of new bridges or appurtenances;
- H. Analysis, design and preparation of complete construction plans for channel and stream stability countermeasures, bridge scour countermeasures, drift protection and any other scour or protective measures as required;
- I. Hydraulic reports to include all supporting documentation of hydraulic analysis and design and any additional information as referenced in the Work Assignment.

Task 5 – Geotechnical Engineering Report

Subsurface Investigation:

Perform field exploration as necessary to establish proper bridges and retaining walls foundation criteria.

1. Fifteen (15) borings will be made for the proposed bridge and approaches. Two borings will be made to a depth of 30 ft, six borings to 80 ft, four borings to 100 ft, and three borings to 130 ft.
2. Soil samples will be obtained in the borings. These samples will be taken at intervals necessary to produce continuous logs. The sampling interval will not exceed 5 feet to a depth of 60 feet and 10 ft beyond this depth.

Undisturbed soil samples will be obtained in cohesive soil zones (AASHTO T207). Standard penetration tests will be conducted in cohesionless soil zones and in cohesive soil zones too hard to sample with a Shelby tube (AASHTO T206).

All soils encountered will be described, and a generalized soil profile will be developed and drawn, showing as a minimum the ground line profile, soil zone stratification, locations of the borings, and results of the standard penetration tests. A detailed log of each boring will be prepared by a professional engineer.

Laboratory Testing:

Perform laboratory tests to supplement the existing laboratory tests and to determine necessary classification and design parameters.

1. Laboratory testing of the soil samples obtained during field exploration will be performed to adequately determine necessary classification and design parameters. The following characteristics will be determined: Atterberg limits, field moisture content, unit mass, grain size, and cohesive shear strength. A sufficient number of tests will be performed on

representative samples from each strata designated in the field exploration to adequately determine its shear strength, settlement potential and ultimate bearing capacity.

2. Unconfined compression and unconsolidated-undrained triaxial compression tests will be used to determine the shear strength characteristics of cohesive soils. A wide range of confining pressures will be used with representative samples from each zone to develop a Mohr's failure envelope.
3. Consolidation tests shall be performed on representative samples of all potentially compressible soil strata. The in-situ void ratio, saturation percentage, specific gravity, over-consolidation ratio, and coefficients of compression and vertical drainage shall be determined for these tests.
4. The angle of internal friction for each sand zone will be determined by performing triaxial tests at three (3) relative densities.
5. Laboratory testing to measure soluble sulfates would be performed on representative samples to measure corrosion potential.

Engineering Analysis:

1. Foundation conditions, together with typical bent loads and elevations will be analyzed, to develop feasible foundation support systems and general foundation designs.
2. Capacity curves will be developed in tons vs. feet for various sizes and types of piles/shafts. The curves will be developed for all bent locations. Construction considerations pertaining to pile construction will be provided.
3. Settlement analyses will be performed for the most critical combination of embankment height and compressible soil conditions at the bridge site.
4. Analyses will be performed to evaluate global stability for the spill through slopes. Pseudo-static seismic slope stability analyses (where required) should follow the current AASHTO LRFD Bridge Design Specifications.
5. Analyses will be performed to establish the site classification, Seismic Zone to estimate the site PGA and to evaluate liquefaction potential.

CADD Drawings:

The Generalized Soil Profile(s) will be included in the Geotechnical Investigation and will be submitted in MicroStation (.dgn) format. The Generalized Soil Profile will contain standard notes and disclaimers. In addition, the Generalized Soil Profile will contain a table of soil strengths and unit weights used for design calculations as well as a geologic description of the individual soil zones.

Geotechnical Investigation Report:

The Geotechnical Investigation Report will be prepared describing the results of the investigation, with specific recommendations as to foundation design and construction. The report will contain the following:

1. A cover letter containing Project Name, County, and a general description of the project;
2. A Project Layout Sheet and a map encompassing the entire project area;
3. A copy of the boring logs;
4. Results of the laboratory tests;
5. Generalized soil profile suitable for inclusion in the plans.

In addition, the Geotechnical Investigation Report shall be organized according to the following outline.

1. Cover Letter
2. Layout Sheet
3. General
4. Geology
5. Conclusions and Recommendations

Task 6 – Environmental

Wetland and Other Waters Assessment

We propose to complete a wetland and other waters assessment within the boundaries of the project to determine the extent and location of any jurisdictional wetlands and/or “other waters of the United States” that may exist under the U.S. Army Corps of Engineers (USACE), Vicksburg District’s purview. Once this is established, a preliminary map will be developed and a wetland and other waters report. This report will contain the required information to coordinate our findings with the USACE for the issuance of a jurisdictional determination, if needed. This will define the extent and location of any jurisdictional waters on the property and include concurrence from the USACE after their review.

Nationwide Permit

We anticipate that the U.S. Army Corps of Engineers, Vicksburg District (USACE) will require the project to be authorized under a Nationwide Permit and will require the completion of the permit coordination process. This includes preparation of the pre-construction notification (PCN) submittal, agency meetings, and agency coordination required to complete the permit action. If an individual permit from the USACE is required, we would provide a separate budget specific to the permitting actions that would be required.

USFWS Threatened & Endangered Species Coordination

We would complete the field surveys for listed species during the wetland delineation. Please note that if specialized surveys, including but not limited to audible, mist netting, or aquatic, are required we would a supplemental budget.

Phase I Cultural Desktop Review

As part of the permitting process, the USACE will require a desktop review of the project area. The USACE Regulatory Division could require a cultural resources survey within jurisdictional waters and adjacent upland buffers for all permit actions as a condition of the Section 404 Wetlands Permit process. If additional survey requirements are necessary, we would submit a supplemental budget.

Exclusions and Limitations

This SOW does not include the following services. These services can be provided under a separate SOW and budget if necessary:

- Section 404 Individual Wetland Permit from USACE
- Phase I Cultural Resource Survey
- Compensatory mitigation and/or credit reservation

Task 6 – Utility Coordination

The CONSULTANT shall, utilize MS811 in concert with information provided by the CLIENT, in order to identify to the extent possible, utility conflicts within the project limits. The CONSULTANT will coordinate with identified utility owners for the purposes of reviewing the relocation of utilities found to be in conflict with the project.

Task 7 - Bidding and Contracting

After the CLIENT has authorized the project for bidding, the Bidding and Contracting Phase will be initiated and the ENGINEER shall:

Bidding:

- Prepare and issue Addenda as appropriate to interpret, clarify, or expand contract documents to each known procurer of the contract documents.
- Provide information on the general scope, unusual conditions, and desired sequence of construction as requested by procurers of contract documents.
- Conduct a pre-bid conference if requested by the CLIENT.
- Consult with and advise the CLIENT as to the acceptability of Subcontractors, suppliers, and other persons or organizations proposed by the prime Contractor as required by the contract documents.
- Consult with and advise the CLIENT as to the acceptability of substitute materials and equipment proposed by the Contractor when substitution prior to the award of contracts is allowed by the contract documents.
- Attend the bid opening.
- Review bids for the purpose of completeness and accuracy.
- Prepare bid tabulation sheets.
- Prepare a Recommendation of Award letter to assist CLIENT in evaluating bids.

Contracting

- Assist the CLIENT in the preparation of the documents necessary to complete the award, including the Notice of Award letter.
- Assemble contract documents including contracts, contract bonds, and insurance for execution by the CLIENT.
- Distribute executed contract documents to each person or entity that is party to the contract.
- Schedule and conduct the Pre-Construction Conference.
- Prepare and distribute minutes of the Pre-Construction Conference.
- Prepare and forward the Notice to Proceed to the CLIENT for execution.
- Distribute the executed Notice to Proceed to the Contractor.

Exhibit B
Waggoner Engineering, Inc.
2024 Raw Rate Schedule
Overhead Rate 220.12%
Fixed Fee 12.00%

Employee Category	Raw Wage Rate	
Administrative I	\$ 19.60	Per Hour
Administrative II	\$ 38.24	Per Hour
Administrative III	\$ 40.51	Per Hour
Administrative IV	\$ 50.36	Per Hour
Administrative V	\$ 70.15	Per Hour
Architect	\$ 51.45	Per Hour
Area Manager	\$ 71.61	Per Hour
CADD Drafter	\$ 31.73	Per Hour
Construction Engineer	\$ 34.98	Per Hour
Construction Rep I	\$ 26.24	Per Hour
Construction Rep II	\$ 45.40	Per Hour
Designer	\$ 38.55	Per Hour
Discipline Manager	\$ 65.71	Per Hour
Engineer/Scientist/Consultant I	\$ 36.96	Per Hour
Engineer/Scientist/Consultant II	\$ 37.02	Per Hour
Engineer/Scientist/Consultant III	\$ 52.39	Per Hour
Engineer/Scientist/Consultant IV	\$ 61.30	Per Hour
GIS Specialist/Analyst	\$ 34.68	Per Hour
GIS Specialist/Analyst II	\$ 40.43	Per Hour
Government Relations	\$ 61.64	Per Hour
Governmental Relations II	\$ 79.69	Per Hour
Planner	\$ 26.44	Per Hour
IT Manager	\$ 37.91	Per Hour
Network Administrator	\$ 27.33	Per Hour
Principal	\$ 97.17	Per Hour
Program Manager	\$ 68.30	Per Hour
Project Accountant II	\$ 31.25	Per Hour
Project Clerk	\$ 70.15	Per Hour
Project Engineer	\$ 61.30	Per Hour
Project Manager	\$ 52.04	Per Hour

Proposal Manager	\$ 38.25	Per Hour
Sr. Discipline Manager	\$ 65.71	Per Hour
Sr. Principal	\$ 159.01	Per Hour
Sr. Project Manager	\$ 67.62	Per Hour
Sr. Technician	\$ 45.73	Per Hour
Survey Technician II	\$ 37.20	Per Hour
Surveyor I	\$ 25.50	Per Hour
Technical Architect	\$ 69.64	Per Hour
Technical Manager	\$ 62.50	Per Hour
Technician II	\$ 36.14	Per Hour
CADD/GIS Equipment	\$25.00	Per Hour
Four-Wheeler	\$40.00	Per Day
UAV	\$300	
Labor		
Flight Time-Pilot	\$175	Per Hour
Flight Time-Technician	\$150	Per Hour
Processing & Feature Extraction	\$150	Per Hour
Data Processing Tokens	\$500	Job
Expenses (est.)	\$500	Job
Mileage – IRS Actual Rate		

Reimbursable Expenses

Actual Expense + 10%

Photocopies:

Copies	Black & White	Letter & Legal	\$0.20	Per Copy
		11x17	\$0.30	Per Copy
		12x18	\$0.35	Per Copy
	Color		\$1.25	Per Copy
Plotters**	Black & White	11x17	\$4.00	Per Copy
		12x18	\$4.50	Per Copy
		18X24	\$9.00	Per Copy
		24X36	\$18.00	Per Copy
	Color	11X17	\$15.60	Per Copy
		12X18	\$18.00	Per Copy
		18X24	\$36.00	Per Copy
		24X36	\$72.00	Per Copy

**Survey crew rates include Total Stations with Data Collectors, Survey Vehicle, and Standard Survey Equipment.*

***Oversized or odd sized plots are billed at \$0.25/sq ft for black & white, and \$1.00.sq ft for color.*

Per Diem:

When travel time exceeds one and one-half (1.5) hours per day each way, it shall be classified as an out of town project and per diem will be charged at the current GSA per person, excluding areas that have been recently impacted by a natural disaster.

Travel Time:

Time required to travel to and from a project site will be billed at the normal hourly rates.

The stated rates are effective from October 1, 2024 through December 31, 2025.

WEI reserves the right to adjust the hourly rates after December 31, 2024.

Exhibit C
Waggoner Engineering, Inc.
Compensation Schedule

	Proposed Budget
Design Engineering Services	\$1,539,367.21
Additional Services	Hourly as Requested
TOTAL	\$1,539,367.21

Fee Summary

Yandell Road - Smith Carr Road to N. Old Canton Road
 Madison County Board of Supervisors
 Waggoner Engineering, Inc.
 12-Sep-2024

	Sub-Consultant Man-Hours	Prime Consultant Man- Hours	Salary Cost	Overhead	FCCM	Total Labor Cost	Direct Cost	Fixed Fee	Prime Consultant Sub- Total	Sub-Consultant Sub-Total	Total Cost
<u>Design Engineering</u>											
Waggoner Engineering, Inc.		7526	\$394,729.40	\$868,878.36	\$1,894.70	\$1,265,502.46	\$5,952.50	\$151,632.93	\$1,423,087.89	\$0.00	\$1,423,087.89
Bidding & Contracting (WEI)		31	\$2,013.18	\$4,431.41	\$9.66	\$6,454.25	\$250.00	\$773.35	\$7,477.60	\$0.00	\$7,477.60
Burns Cooley Dennis	263		\$13,238.00	\$22,934.84	\$289.91	\$36,462.75	\$31,962.22	\$4,340.74	\$0.00	\$72,765.71	\$72,765.71
AJA Management	96		\$6,924.80	\$7,285.58	\$114.26	\$14,324.64	\$44.22	\$1,421.04	\$0.00	\$15,789.90	\$15,789.90
Headwaters	134		\$8,787.92	\$9,169.32	\$0.00	\$17,957.24	\$134.00	\$2,154.87	\$0.00	\$20,246.11	\$20,246.11
Phase Totals	493	7557	\$425,693.30	\$912,699.51	\$2,308.53	\$1,340,701.34	\$38,342.94	\$160,322.93	\$1,423,087.89	\$108,801.72	\$1,539,367.21

Grand Total	\$1,539,367.21
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Bidding & Contracting

Yandell Road - Hwy 51 to Smith Carr Road
 Madison County Board of Supervisors
 Waggoner Engineering, Inc.
 9/10/2024

	Sr. Principal	Area Manager	Project Manager	Project Engineer	Administrative IV	Administrative V	Sr. Discipline Manager	Engineer II	Engineer III	Engineer IV	Total Hours
Task 1 - Design Engineering											
Subtask 1.4 Bidding & Contracting											
Prepare & issue addenda				3		3	1				7
Conduct Pre-bid Meeting		1	1	1		1	2				6
Prepare bid tabulation & award recommendation				1		3	1				5
Assemble contract documents and bonds				1	2	4					7
Conduct Pre-con Meeting		1	1	1		1	2				6
											-
											-
											-
Total Hours	0	2	2	7	2	12	6	0	0	0	31
Raw Labor Rates	\$159.01	\$71.61	\$52.04	\$61.30	\$50.36	\$70.15	\$65.71	\$37.02	\$52.39	\$61.30	
Labor Cost	\$0.00	\$143.22	\$104.08	\$429.10	\$100.72	\$841.80	\$394.26	\$0.00	\$0.00	\$0.00	\$2,013.18
						Overhead	%	220.12%			\$4,431.41
						Fixed Fee	%	12.00%			\$773.35
						FCCM Overhead	%	0.480%			\$9.66
						Total Labor Cost					\$6,454.25
					Direct Costs:	Quantity	Unit	Unit Price		Amount	
						Prints	200	Each	\$1.25	\$250.00	
						Mileage	0	Miles	\$0.655	\$0.00	
									Total Direct Costs:		\$250.00
						Prime Total					\$7,477.60

Geotechnical Engineering

Yandell Road - Smith Carr to N. Old Canton Rd.

Madison County Board of Supervisors

Burns Cooley Dennis (BCD)

9/10/2024

	Project Manager	Sr. Engineer	Project Engineer	Engineer	Draftsman	Technician	Administrative	Total Hours
Geotechnical Field Investigation								
Boring Layout			2		8	24		34
Coordinate Field Investigation	2		2					4
Coordinate Lab Investigation	2		2					4
Examine Samples			10					10
Data Assimilation/Log Preparation		8	12		87			107
Report Preparation	18	16	60				10	104
								0
								0

Total Hours	22	24	88	0	95	24	10	263
Raw Labor Rates	\$84.00	\$70.00	\$65.00	\$42.00	\$32.00	\$30.00	\$23.00	
Labor Cost	\$1,848.00	\$1,680.00	\$5,720.00	\$0.00	\$3,040.00	\$720.00	\$230.00	\$13,238.00
				Overhead	%	173.25%		\$22,934.84
				Fixed Fee	%	12.00%		\$4,340.74
				FCCM Overhead	%	2.190%		\$289.91
				Total Labor Cost				\$36,462.75

Field and Lab.

	Qty.	Unit Price ¹	
Field Equip. Mob/Demob	340	\$7.50	\$2,550.00
Drilling in Roadway, 0-5 ft	105	\$20.00	\$2,100.00
Drilling Bridges, 70-150 ft	240	\$28.55	\$6,852.00
Split Spoon Sampling with Stand Pen Test (SPT)	15	\$25.00	\$375.00
Undisturbed Sampling	15	\$25.00	\$375.00
Traffic Control	3	\$1,400.00	\$4,200.00
Unconfined Compression Test T 208	12	\$60.00	\$720.00
Triaxial Compression Test (UU) T 296	12	\$90.00	\$1,080.00
Sand Triaxial Test (3-pt)	15	\$340.00	\$5,100.00
pH of Soils MT-30	3	\$40.00	\$120.00
Soil Resistivity MT-47	3	\$75.00	\$225.00
Atterberg Limits T 89 & T 90	46	\$65.00	\$2,990.00
Water Content T 265	87	\$8.00	\$696.00
% Finer Than The No. 200 Sieve T 11	13	\$50.00	\$650.00
Shrinkage Factor (Volume Change)	3	\$75.00	\$225.00
Soluble Sulfate Ion In Soils & Water MT-58	18	\$150.00	\$2,700.00
Hydrometer	6	\$160.00	\$960.00

Total Direct Costs: \$31,918.00

Direct Costs:

Mileage	66	Miles	Unit Price \$0.670	Amount \$44.22
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Total Direct Costs: \$44.22

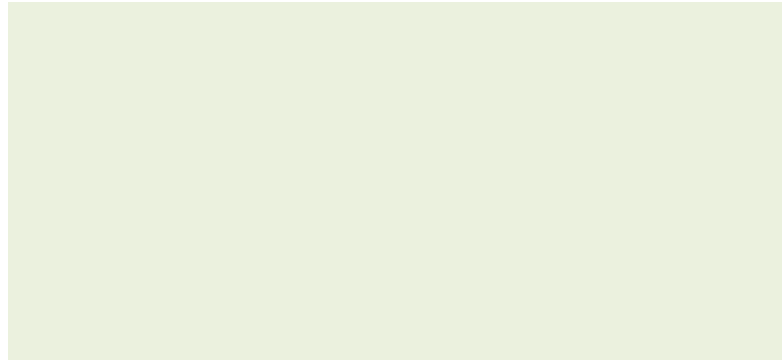
Sub Total \$72,765.71

Constructability Review

Yandell Road - Smith Carr to N. Old Canton Rd.
 Madison County Board of Supervisors
 AJA Management & Technical Services
 9/10/2024

	Sr. Principal	Sr. Project Mgr	Construction Rep	Engineer	Draftsman	Technician	Administrative	Total Hours
Plan Review - QA/QC								
								0
Site Inspection 30-60%		8	8					16
Constructability Review 30-60%	8	8	8				6	30
Team Meetings 30-60%	6	6	6					18
								0
Onsite review 90%	2	6	6					14
Team Meetings 90%	6	6	6					18
								0

Total Hours	22	34	34	0	0	0	6	96
Raw Labor Rates	\$94.50	\$84.00	\$50.00				\$48.30	
Labor Cost	\$2,079.00	\$2,856.00	\$1,700.00	\$0.00	\$0.00	\$0.00	\$289.80	\$6,924.80
				Overhead	%	105.21%		\$7,285.58
				Fixed Fee	%	10.00%		\$1,421.04
				FCCM Overhead	%	1.650%		\$114.26
				Total Labor Cost				\$14,324.64



Total Direct Costs: \$0.00

Direct Costs:
 Mileage

Quantity	Unit	Unit Price	Amount
66	Miles	\$0.670	\$44.22

Total Direct Costs: \$44.22

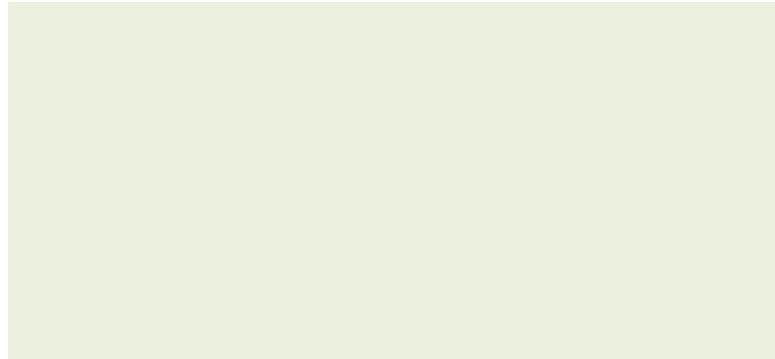
Sub Total \$15,789.90

Environmental

Yandell Road - Smith Carr to N. Old Canton Rd.
 Madison County Board of Supervisors
 Headwaters
 9/10/2024

	Principal	Project Manager	Asst. Proejct Manager	Environmental Coordinator	GIS Manager	Environmental Specialist	GIS Technician	Total Hours
Environmental								
Wetlands/Other Waters Assessment	4	24	4	40	20	20	22	134
								0
								0
								0
								0
								0
								0

Total Hours	4	24	4	40	20	20	22	134
Raw Labor Rates	\$129.14	\$82.00	\$60.70	\$79.42	\$67.15	\$51.65	\$23.08	
Labor Cost	\$516.56	\$1,968.00	\$242.80	\$3,176.80	\$1,343.00	\$1,033.00	\$507.76	\$8,787.92
				Overhead	%	104.34%		\$9,169.32
				Fixed Fee	%	12.00%		\$2,154.87
				FCCM Overhead	%	0.000%		\$0.00
				Total Labor Cost				\$17,957.24



Total Direct Costs: \$0.00

Direct Costs:
Mileage

Quantity	Unit	Unit Price	Amount
200	Miles	\$0.670	\$134.00

Total Direct Costs: \$134.00

Sub Total

\$20,246.11

