



FISHER ARNOLD
ENGINEERING INTEGRATION

March 16, 2017

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

RE: PROPOSAL FOR HARRISBURG ROAD WIDENING

Dear Mr. Light:

Fisher & Arnold, Inc. is pleased to submit the following Scope of Work and Proposal for providing design and final construction documents for widening Harrisburg Road from E. Parker Road to the Fire Station Driveway approximately 5,000 linear feet to the south of the intersection with E. Parker Road. Our design services will include the development of two plan sets. The initial plan set (Plan Set "A") will be for Harrisburg Road from the intersection with E. Parker Road to Forest Hill Road. The second plan set (Plan Set "B") will be developed for the section from Forest Hill Road to the Fire Station driveway which will be the southern terminus of the project. The Scope of Work is more particularly described as follows:

SURVEY

1. Utility research
2. Topo 125' from existing centerline each way (250' wide corridor)
3. Topo within the streets

The above survey will be performed as per AHTD Requirements in SDMS. The limits of the survey are from the Interstate 555 ramps to a point approximately 200' south of the cemetery and approximately 600' east and 400' west along E. Parker Road from the intersection with Harrisburg Road.

TOTAL FEE (NOT-TO-EXCEED) \$39,249.30

NEPA Environmental Document Preparation

F&A proposes to prepare environmental documents in the form of an expected Categorical Exclusion (CE) to meet the AHTD and FHWA process. The CE will be developed in accordance with applicable regulations. The various subtasks to be addressed in this component will include the following:

1. Purpose and Description
2. Mapping
3. Technical Noise Study
4. Endangered Species
5. Fish and Wildlife
6. Floodplain
7. SHPO/Historical Resources Impacts
8. Bicycle and Pedestrian Impacts
9. Hazardous Materials / Sites Study
10. Prepare CE Document for Submittal to AHTD
11. Amend CE Document per ADEQ Comments as required to obtain approval

TOTAL FEE (NOT-TO-EXCEED) \$19,176.31

Task Deliverables:

Environmental Document (Two hard copies and an electronic copy to the City).

NEPA Exclusions

It is anticipated that formal public involvement (project web-site and public involvement plan) will not be required for the NEPA phase of the project. The proposed scope includes preparation and attendance for one public meeting during the course of the project at a time determined by the City.

Any permitting, application, or similar project fees will be paid directly by the City.

TRAFFIC STUDIES

F&A proposes to conduct traffic counts, perform traffic analyses to determine current Level-of-Service (LOS), evaluate intersection geometry for improvements, determine LOS utilizing model of the recommended improvements and preparation of report summarizing the traffic study and recommendations. The LOS will be determined for the following intersections: Harrisburg Road at East Parker Road, Harrisburg Road at Gladiolus Road and Harrisburg Road at Forest Hill Road. Signal warrant analyses will be performed for Gladiolus Drive and Forest Hill Road intersections. The various subtasks to be addressed in this component will include the following:

1. Collect 14 hour weekday traffic counts at the three listed intersections
2. Collect 14 hour count on a Sunday at the Harrisburg Rd and East Parker Rd intersection
3. Collect 6 hour count on a Wednesday evening at Harrisburg Rd and East Parker intersection
4. Download traffic data and prepare traffic diagrams
5. Perform LOS analyses using Synchro and the Highway Capacity Software
6. Evaluate intersection geometry for potential improvements
7. Prepare schematic drawings of geometric improvements

8. Determine LOS at listed intersections with recommended improvements
9. Prepare report with Traffic Study Analysis and Recommendations
10. Perform signal warrant analysis for Gladiolus Drive and Forest Hill Road intersections

TOTAL FEE (NOT-TO-EXCEED) \$25,389.07

Task Deliverables:

Traffic Study Report (Two hard copies and an electronic copy to the City).

DESIGN

1. Project Administration
2. Title Sheet
3. Typical Sections
4. Draw Topo
5. Create Sheets
6. Horizontal Alignment
7. Vertical Alignment
8. Create DTM
9. Run Pattern Lines
10. Cut Existing and Final Cross Sections
11. Plats and Descriptions
12. Drainage Design
13. Maintenance of Traffic Plan
14. Signing and Pavement Marking Plan
15. Traffic Signal Modifications
16. Erosion Control Plans
17. Lighting Plans
18. Plan Submittals (30%, 60%, 90%)
19. Revise Plans Per Reviews
20. Item Nos./Quantity Calculations
21. Prepare Cost Estimate (60% & 90%)
22. QA/QC of Plans
23. Public Meeting and Exhibits
24. Meetings, Correspondence, etc. (Meetings to occur monthly during the course of the design phase)

TOTAL FEE (NOT-TO-EXCEED) \$166,194.66

Task Deliverables: Deliverables will include Preliminary Plans (30%) and Right-of-Way Plans (60%) which will include Plats and Descriptions, 90% Construction Plans, and Final Construction Plans.



Design Exclusions

This fee includes a field evaluation of the existing box culverts and proposed extension of boxes utilizing AHTD design standard drawings. A total redesign and replacement of the existing box culverts is not included in the above listed fee. It is assumed at the time of this proposal that the existing culverts are in fair condition, suitable for extension.

This fee includes the development of Plan Set "A" (E. Parker to Forest Hill) and Plan Set "B" (Forest Hill to Fire Station driveway).

BID PHASE (Title II)

1. Answer questions from contractors during bid phase
2. Issue addenda
3. Attend Bid Opening
4. Review and certify bids for construction
5. Issue letter of recommendation for acceptance of bid

TOTAL FEE (NOT-TO-EXCEED) \$5,435.00

TITLE I SUMMARY OF COSTS:

SURVEY	\$39,249.30
NEPA	\$19,176.31
TRAFFIC STUDY	\$25,389.07
DESIGN	<u>\$166,194.66</u>
 SUBTOTAL PLANS LABOR AND OVERHEAD	 \$250,009.34
 DIRECT COSTS:	
Miscellaneous Expense (Mileage, Printing, Deliveries, Mail, etc.)	\$2,036.50
Geotechnology, Inc.	\$18,933.72
PanAmerican	\$4,937.00
Enercon	\$3,500.00
Bowlby & Associates	\$3,700.00
EDR	\$500.00
Utility Engineering Locate Services	\$1,500.00
 SUBTOTAL DIRECT COSTS	 <u>\$35,107.22</u>
 TOTAL TITLE I (NOT-TO-EXCEED FEE)	 \$285,116.56



Mr. Craig Light, P.E.
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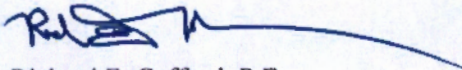
TITLE II SUMMARY:

BID PHASE (Title II)	\$5,435.00
DIRECT COSTS (Title II).....	<u>\$21.40</u>
TOTAL TITLE II (NOT-TO-EXCEED FEE).....	\$5,456.60
<u>PROJECT GRAND TOTAL NOT-TO-EXCEED.....</u>	<u>\$290,573.16</u>

We are looking forward to working with you on this project. If you have any questions regarding this proposal, please do not hesitate to call.

Sincerely,

FISHER & ARNOLD, INC.



Richard E. Gafford, P.E.
Vice President

REG/mkg

Cc: Mr. Mark Nichols, P.E.
Mr. John Pankey, P.E.



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Terms and Conditions

An invoice will be sent on a monthly basis until the completion of the project. Payment is due by the 10th of each month. Interest in the amount of 1.5% per month on the outstanding balances (18% per year) will be assessed the contracting party after the payment due date.

In the event of breach or non-payment, the contracting party agrees to pay reasonable expenses of enforcement including attorney fees and costs.

The obligation to provide further services under the Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In the event of termination, Fisher & Arnold, Inc. will be paid for all services rendered to the date of termination.

The fees shown in this proposal are based on the Owner agreeing to limit the Professional's liability for all planning, engineering and analytical services to the Owner due to the Professional's negligent acts, errors or omissions, such that the total aggregate liability of the Professional to all those named shall not exceed the Professional's total fee for services rendered on the project.

This proposal represents the entire understanding between you and us in respect to the "Project" and may only be modified in writing signed by both of us. If this satisfactorily sets forth your understanding of the arrangement between us, please sign the acceptance of this proposed Letter Agreement in the space provided below and return it to us.

[Empty rectangular box for signature]



APPENDIX A

Man-Hour Proposal



FISHER ARNOLD

ENGINEERING INTEGRATION

Justification of Fees and Costs

and

Scope of Work

FOR

Harrisburg Road Widening

City of Jonesboro, Arkansas

March 13, 2017

Appendix A

Harrisburg Road Widening City of Jonesboro, Arkansas

TITLE I

<i>Plans Total Labor and Overhead</i>	\$ 250,009.34
<i>Direct Expenses</i>	\$ 35,107.22
<i>Grand Total TITLE I</i>	\$ 285,116.56

TITLE II

<i>Plans Total Labor and Overhead</i>	\$ 5,435.20
<i>Direct Expenses</i>	\$ 21.40
<i>Grand Total TITLE II</i>	\$ 5,456.60

Appendix A
 Justification of Fees and Costs
 Harrisburg Road Widening
 City of Jonesboro, Arkansas

TITLE I

Survey Design

- 1 Utility Research, Review and Notification
- 2 Establish Vertical Control Points
- 3 Property Owner Contact
- 4 Topographic Survey (250' DTM x 6000' Length)
- 5 Field/Office Coordination

Survey Supervisor	Party Chief	Instructment Man	Total
30			
	20	20	
	4		
	180	180	360
8			8

Total Hours

38	204	200	442
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Appendix A
 Justification of Fees and Costs
 Harrisburg Road Widening
 City of Jonesboro, Arkansas

TITLE I

NEPA Studies (CE)

Principal Proj. Mngr. Designer
/Cadd Clerical Total

1 Agency Coordination (Review Agency Contacts,
Letters, Mapping, Public Involvement/Planning)

3	14	16	2	35
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2 Report Preparation

4	14	15	2	35
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3 Environmental Studies (Site visit, geology & soils, air
quality, wetlands, floodplains, threatened &
endangered species, cultural resources,
environmental justice, noise and cumulative impacts)

4	24	24		52
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4 Document Changes/Tracking (Map changes, EA
report, technical appendix)

1	8	6	2	17
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5 Administration, Coordination of Technical Studies

2	8	4		
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Total Hours per Classification

14	68	65	6	139
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Appendix A
Justification of Fees and Costs
Harrisburg Road Widening
City of Jonesboro, Arkansas

TITLE I Days

<u>Roadway Design</u>	Principal	Proj. Mngr.	Proj. Engr.	Designer/ Cadd	Total
1 Project Administration	12	24			36
2 Title Sheet		1		2	3
3 Typical Sections		2	4	8	14
4 Draw Topo		4	8	40	52
5 Horizontal Alignment		2		20	22
6 Vertical Alignment		2		12	14
7 Create Plan & Profile Sheets		2	16	40	58
8 Create DTM and Corridor Model		4		24	28
9 Cut Preliminary Cross Sections		1		4	5
10 Evaluation of Existing Box Culverts (for purpose of extending)	8				8
11 30% Plans Submittal		1		4	5
12 Address 30% AHTD Comments		4	8	40	52
13 Property Map		1		8	9
14 ROW Acquisition Table		1	2	8	11
15 Property Legal Descriptions		8	40	40	88
16 Drainage Design	4	24	40	60	128
17 Box Culvert Extension Design		2	4	4	10
18 Maintenance of Traffic Plan		16	40	40	96
19 Signing and Pavement Marking Plan		2	4	8	14
20 Traffic Signal Modifications	8	16	16	40	80
21 Erosion Control Plans		2	16	24	42
22 Special Details		8	8	24	40
23 Update Plan Profile Sheets for 60% Submittal		8	16	32	56
24 Survey Control Detail Sheets		2		8	10
25 Lighting Plans	8	40		40	88
26 Cross Sections		4	8	40	52
27 60 % Plan Submittals		2		8	10
28 Revise 60% Plans Per AHTD Review		4	8	40	52
29 60% Cost Estimate	4	8	8	16	36
30 Index, General Notes, Summary of Quantities		4	8	24	36
31 Final Maintenance of Traffic		4	16		20
32 QA/QC of Plans	8	8			16
33 Public Meeting Attendance & Exhibits	4	4		16	24
34 90% Cost Estimate	2	4	8		14
35 Meetings, Correspondence, etc.	40	40			80
36 90% Plans Submittal		2		8	10
37 Revise 90% Plans per AHTD Review		4	8	24	36
38 Create Plan Set (for design from Forest Hill Rd. to Fire Station)	1	16	18	58	93

Appendix A
Justification of Fees and Costs
Harrisburg Road Widening
City of Jonesboro, Arkansas

39 Print Final Plans
Total Hours per Classification

			8		8
99	281	304	772	0	1456

Appendix A
 Justification of Fees and Costs
 Harrisburg Road Widening
 City of Jonesboro, Arkansas

TITLE I

Traffic Studies

	Principal	Proj. Mngr.	Proj. Engr.	Designer /Cadd	Clerical	Total
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1	Collect 14 hour traffic counts on a weekday at Harrisburg Road at East Parker Road intersection; Harrisburg Road at Gladiolus Road intersection; and Harrisburg Road at Forest Hill Road.	2	6	12	12	32
2	Collect 14 hour counts on a Sunday at Harrisburg Road and East Parker Road.		2	4	4	10
3	Collect 6 hour counts on a Wednesday evening at Harrisburg Road and East Parker Road.		2	4	4	10
4	Download traffic data and prepare traffic diagrams	1	2		16	19
5	Determine current Level-of-Service (LOS) at the intersection where traffic counts have been acquired using Synchro and the Highway Capacity Software.	2	2		24	28
6	Evaluate intersection geometry for improvements to enhance traffic flow and increased capacity.	2	4	4	4	14
7	Prepare schematic drawings of geometric improvements to intersections and roadway.	2	8	16	32	58
8	Determine proposed LOS at these intersections with the recommended improvements.	2	2		12	16
9	Report with Traffic Study Analysis and Recommendations.	12	2		12	18
		12	2		12	18

Total Hours per Classification

23	30	40	120	18	231
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Appendix A
 Justification of Fees and Costs
 Harrisburg Road Widening
 City of Jonesboro, Arkansas

TITLE II

Roadway Design Title II

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

	Principal	Proj. Mngr.	Proj. Engr.	Designer	CADD Tech	Total
	4		4			8
	4		4			8
	4		2			6
	4		2			6
	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
Harrisburg Road Widening
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	38	\$56.00	\$ 2,128.00	
Party Chief	204	\$32.00	\$ 6,528.00	
Instrument Man	200	\$18.00	\$ 3,600.00	\$ 12,256.00
<u>NEPA</u>				
Principal	14	\$56.00	\$ 784.00	
Project Manager	68	\$48.00	\$ 3,264.00	
Designer/CADD	65	\$28.00	\$ 1,820.00	
Clerical	6	\$20.00	\$ 120.00	\$ 5,988.00
<u>Roadway Design</u>				
Principal	99	\$56.00	\$ 5,544.00	
Project Manager	281	\$48.00	\$ 13,488.00	
Proj. Engineer	304	\$37.00	\$ 11,248.00	
Designer/CADD	772	\$28.00	\$ 21,616.00	
Clerical	0	\$20.00	\$ -	\$ 51,896.00
<u>Traffic Studies</u>				
Principal	23	\$56.00	\$ 1,288.00	
Project Manager	30	\$48.00	\$ 1,440.00	
Proj. Engineer	40	\$37.00	\$ 1,480.00	
Designer	120	\$28.00	\$ 3,360.00	
CADD Tech	18	\$20.00	\$ 360.00	\$ 7,928.00
Direct Labor				\$ 78,068.00
Overhead (185.63%)				\$ 144,917.63
Sub-total				\$ 222,985.63
Fee				\$ 26,758.28
FCCM (0.34%)				\$ 265.43
Sub-Total Design and Development (Labor & OH)				\$ 250,009.34

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
 Harrisburgh Road Widening
 City of Jonesboro, Arkansas

TITLE I

Estimated Direct Costs:

Reproduction Costs:

8 1/2" x 11"	500 Copies @	\$0.10 each	=	\$50.00	
11' x 17"	1200 Copies @	\$0.15 each	=	\$180.00	
Full Size	150 Copies @	\$1.50 each	=	\$225.00	
Full Size (mylar)	150	\$4.36		\$654.00	
Total Reproduction Costs =					\$1,109.00

Travel Costs:

<i>Trip to Jonesboro:</i>					
13 Trips (Design) =	1300 miles @	0.535 =		\$695.50	
Survey mileage	200 miles @	0.535		\$107.00	
Total Travel Costs					\$802.50

Shipping Costs

Fed-X	5 Del. @	\$25.00 =		\$125.00	
Total Shipping Costs					\$125.00

Subsurface Utility Engineering Location Service (Estimated) \$1,500.00

Subconsultant Costs (Geotechnical Services):

Geotechnology, Inc.	=		\$18,933.72	
PanAmerican - Cultural Resources Survey	=		\$4,937.00	
Enercon - Creek/Wetlands	=		\$3,500.00	
Bowlby & Associates - Noise Study	=		\$3,700.00	
EDR NEPA Check	=		\$500.00	

Total Subconsultant Costs \$31,570.72

Total Direct Costs (Title I) \$35,107.22

Appendix A
Justification of Fees and Costs
Harrisburgh Road Widening
City of Jonesboro, Arkansas

TITLE II

Estimated Direct Costs:

Travel Costs:

Trip to Jonesboro:

2 Trips @ 20 miles = 40 miles @ 0.535 = \$21.40
Total Travel Costs \$21.40

Total Direct Costs (Title II) \$21.40

APPENDIX B

Subconsultant Backup

**DIVISION OF MATERIALS AND TESTS
GEOTECHNICAL ENGINEERING SECTION**

GEOTECHNICAL SERVICES

MANHOURLY REQUIREMENTS AND COST ESTIMATE

CRAIGHEAD

HARRISBURG ROAD WIDENING

GEOTECHNOLOGY, INC.

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

Date prepared: 2/6/2017

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: HARRISBURG ROAD WIDENING
 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: 2/6/2017
 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	@	\$1,200.00	\$1,200.00
1.06	Soil Drilling and Split Barrel Type Sampling on Land	145	vertical foot	@	\$18.50	\$2,682.50
1.07	Soil Drilling and Thin Wall Tube Type Sampling on Land	6	vertical foot	@	\$70.00	\$420.00
1.09 ^a	Traffic Control	4	Day	@	\$1,400.00	\$5,600.00
1.10	Pavement Coring and Patching	4	each	@	\$250.00	\$1,000.00
1.13	Site Restoration	12	per each	@	\$50.00	\$600.00
Total Estimated Drilling Costs						\$11,502.50

a: Direct Cost

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

County: CRAIGHEAD
Route: HARRISBURG ROAD WIDENING
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: 2/6/2017
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	7	each	@	\$71.00	\$497.00
2.02	Natural Moisture Content	60	each	@	\$7.00	\$420.00
2.03	Particle Size Analysis	4	each	@	\$85.00	\$340.00
2.05	Proctor Density Test	1	each	@	\$180.00	\$180.00
2.06	California Bearing Ratio (per point)	3	each	@	\$150.00	\$450.00
2.10	Triaxial Compression UU	0	strength properties	@	\$369.19	\$0.00
2.12	Unconfined Compression	0	per test strength	@	\$75.00	\$0.00
2.63	CD Direct Shear	0	properties	@	\$493.31	\$0.00
Total Estimated Laboratory Services Cost:						\$1,887.00

Section III
 Standard Cost Estimate for Soil and Geological Survey Report
 3.00 Manpower Requirements

County: CRAIGHEAD
 Route: HARRISBURG ROAD WIDENING
 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: 2/6/2017
 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	SUPERVISIN G 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				6.0		2.0		
3.20	Field Activities								24.0
3.30	Data Assimilation								4.0
3.40	Flexible Pavement Design			4.0					
3.50	Final Report Preparation	2.0		12.0				2.0	
3.70	Design-Phase and Post-Design Support	2.0		2.0					
Total Estimated Hours		4.0		18.0	6.0		2.0		28.0
Hourley Wages		\$57.53	\$38.12	\$25.89	\$31.70	\$24.25	\$38.36	\$23.25	\$21.50
Subtotal		\$ 230.12	\$ -	\$ 466.02	\$ 190.20	\$ -	\$ 76.72	\$ -	\$ 602.00
Overhead 205.96%		\$ 473.96	\$ -	\$ 959.81	\$ 391.74	\$ -	\$ 158.01	\$ -	\$1,239.88
Subtotal		\$ 704.08	\$ -	\$ 1,425.83	\$ 581.94	\$ -	\$ 234.73	\$ -	\$1,841.88
Fees		\$ 84.49	\$ -	\$ 171.10	\$ 69.83	\$ -	\$ 28.17	\$ -	\$ 221.03
FCCM 0.84%		\$ 1.93	\$ -	\$ 3.91	\$ 1.60	\$ -	\$ 0.64	\$ -	\$ 5.06
Subtotal of Estimated Man-hour Costs		\$ 790.50	\$ -	\$ 1,600.85	\$ 653.37	\$ -	\$ 263.54	\$ -	\$2,067.96
Total Estimate of Man-hour Requirements:									\$5,376.22

Section III
 Standard Cost Estimate for Soil and Geological Survey Report
 3.00 Manpower Requirements, Hourly Rate Breakdown

County: CRAIGHEAD
 Route: HARRISBURG ROAD WIDENING
 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: 2/6/2017
 Contract Number: N/A

Hourly Rate Breakdown		PRINCIPAL	SENIOR ENGINEER	STAFF ENGINEER	SENIOR GEOLOGIST	STAFF ENGINEER	SUPERVISIN G 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		\$57.53	\$38.12	\$25.89	\$31.70	\$24.25	\$39.35	\$26.25	\$21.50
Pay Range		\$55-\$58	\$38-\$42	\$23-\$28	\$29-\$31	\$24-\$26	\$37-\$42	\$23-\$29	\$19-\$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
Route: HARRISBURG ROAD WIDENING
Description: N/A
Contract No: N/A
Consultant: GEOTECHNOLOGY, INC.
Distance to Jobsite:

Project No.: N/A
Geotechnical Office No.: N/A
Prepared By: ASHRAF ELSAYED, PH.D., P.E.
Date Prepared: 2/6/2017

Company Headquarters: <CITY,STATE>	Job Site: <CITY,STATE>
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Travel Expenses				
Item No.	Description	Days	Rate*	Total
4.10	Travel Expenses		\$34.50	\$0.00
4.12	Lodging		\$83.00	\$0.00

*Must be in accordance with applicable AHTD Travel Regulations

Milage\Transportation Expenses				
Item No.	Description	Miles	Milage Rate*	Total
4.20	Passenger Truck	400	\$0.42	\$168.00

*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		\$0.47	\$0.00

Other Expenses				
Item No.	Description	Units	Unit Rate	Total

Total Estimate of Other Expenses:	\$168.00
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Section III
Standard Cost Estimate for Soil and Geological Survey Report
SUMMARY OF COST ESTIMATES

County: CRAIGHEAD
Route: HARRISBURG ROAD WIDENING
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: 2/6/2017

1.00 Drilling Services	\$11,502.50
2.00 Laboratory Services	\$1,887.00
3.00 Manpower Requirements	\$5,376.22
4.00 Other Expenses	\$168.00
Total Not-to-Exceed Costs	\$18,933.72



Panamerican Consultants, Inc.

Cultural Resources Management
Archaeology
Architectural History
Geophysical Survey



6 February 2017

Tim Alexander
Fisher Arnold
9180 Crestwyn Hills Drive
Memphis, TN 38125
901-748-1811
901-359-7818

RE: Revised proposal to conduct a Phase I cultural resources survey of the Harrisburg Road Improvements Project, Jonesboro, Craighead County, Arkansas.

Dear Mr. Alexander:

Panamerican Consultants, Inc. (Panamerican) is pleased to submit to you this proposal to conduct a cultural resources survey for the above referenced project. Panamerican is a registered corporation that specializes in cultural resource studies, and we have 26 years past experience in conducting cultural resources surveys in Arkansas from our Memphis office. We have extensive experience in the vicinity of the tract. Additional information regarding Panamerican can be obtained by visiting our home page on the internet www.panamconsultants.com or at the Lamar Terrace Archaeology Project web page www.lamarterracedig.com.

Our proposed budget, see attachment, provides time and materials to complete the following major project tasks that are necessary in order to meet Section 106 compliance obligations.

Guidelines and Standards

The proposed investigations will comply with the following professional standards and guidelines:

- a. National Park Service (NPS) National Register Bulletin 15 "How to Apply the National Register Criteria for Evaluation," and Bulletin 36 "Guidelines for Evaluating and Registering Historical Archeological Sites and Districts).
- b. Secretary of Interior's "Standards and Guidelines for Archaeology and Historic Preservation" as published in the *Federal Register*, September 29, 1983.
- c. The Advisory Council on Historic Preservation (ACHP) guidelines set forth in 36 CFR 800, "Protection of Historic Properties."
- d. Appendix B of the Arkansas State Plan: *Guidelines for Archeological Fieldwork and Report Writing in Arkansas* (Revised Version in effect as of 1 January 2010).

Project Background

The City of Jonesboro proposes to widen Harrisburg Road from the intersection with E. Parker Road southwards to the cemetery entrance (approximately 4,500 linear feet). The existing roadway will be widened to a five-lane section with curb, gutter and sidewalk from E. Parker Road to Forest Hill Road (existing roadway width varies from a two-lane section at Forest Hill Road to a four-lane at E. Parker). Harrisburg Road will be widened from an existing two-lane road to a three-lane road (with curb, gutter and sidewalk) from Forest Hill Road to the cemetery entrance and will then transition back to the existing two-lane section south of the cemetery entrance.



91 Tillman Street ♦ Memphis, Tennessee 38111
Phone (901) 454-4733 ♦ Fax (901) 454-4736

www.panamconsultants.com

GSA Contract Holder

Improvements to the intersection may result in the extension of an existing 4 @ 10' x 10' reinforced box culvert immediately east and north of the intersection. As a result, the stream crossing, as well as the stream channel approximately 1,350 linear feet south of the intersection will have to be evaluated.

Proposed Work Plan

The proposed work plan is a four-stage process that Panamerican has successfully implemented numerous times in the past.

Task 1: Archival Research

A literature and records search will be conducted using the Arkansas Archeological Survey (AAS) and the Arkansas Historic Preservation Program (AHPP) databases. This will provide background information on the previously recorded archaeological sites and historic properties within 2 km of the tract, as well as on past work in the study vicinity.

Other sources of information that will be consulted as a part of Task 1 include the National Register of Historic Places (<http://www.nationalregisterofhistoricplaces.com/>), soil surveys, and the General Land Office (GLO) records.

Task 2: Fieldwork

A crew that will consist of an RPA certified archaeologist and an Archaeological Technicians I will conduct a survey the limits of disturbance. Per 2010 state guidelines, if surface visibility is >50% then visual survey methods may be employed. Areas of poor surface visibility (<50%) will be surveyed via the excavation of shovel tests at 20 m intervals. Paved, water covered, and previously disturbed areas (i.e. graded) will not be shovel tested, but will be noted.

Most of the study tract exhibits poor visibility, thus a shovel testing will be assumed to be the primary site detection method. Two 1371 m long transects will be needed for the road, and two 441 m long transects will be needed for the stream. It is estimated that up to 176 shovel tests may be required.

Archaeological site boundaries will be delineated via surface and subsurface investigations (i.e., shovel tests at 10 m intervals) as appropriate. NRHP recommendations (i.e., Eligible, Undetermined, and Not Eligible) will be offered for all identified archaeological sites and historic properties, and supporting reasoning will be offered.

Task 3: Data Entry, Artifact Analysis and Curation

Field data will be entered into spreadsheets for use in the technical report. It is anticipated that a shovel test inventory and a photo log will be prepared.

Recovered artifacts, if any, will be analyzed using Panamerican's lab SOPs and prepared for curation at the University of Arkansas Collection Facility (UACF) in Fayetteville. One box of curation material can be expected. An artifact catalog will be prepared, and included with the draft and final report.

Task 4: Reporting

As part of the reporting requirements, site survey forms (or revisit forms) will be completed and submitted to AAS Registrar for all identified sites. Only official (trinomial) site numbers will be used in the report.

A draft report will be submitted that is suitable for Arkansas SHPO review. The report will contain sufficient information and documentation to assess the need for further archaeological investigations for the project to comply with Section 106 of the National Historic Preservation Act. The report will be a well-illustrated, scientifically sound document that meets or exceeds the 2010 Arkansas *State Plan* guidelines for survey level investigations, and the Secretary of Interior's guidelines.

Following the 30-day SHPO draft report review period, any SHPO and other comments (if any) will be incorporated in the document and Final report will be prepared.

All work conducted will be consistent with Section 106 (36 CFR 800), and meet the guidelines outlined in Appendix B of the Arkansas State Plan: *Guidelines For Archeological Fieldwork and Report Writing in Arkansas* (Revised Version in effect as of 1 January 2010).

Proposed Staff

Key staff that will be assigned to this project include me (Buchner) as Principal Investigator, and either Eric Albertson, John Rawls, or Andrew Saatkamp as Field Director (depending on availability and scheduling). We are all certified by and listed on the Register of Professional Archaeologists (RPA) (see <http://www.rpanet.org/>), and thus meet the Secretary of the Interior's guidelines.

Insurance

Proof of insurance can be provided to you upon award, if requested.

Safety

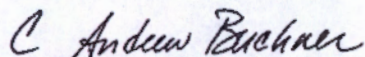
Panamerican's standard Phase I Safety Plan will be employed.

Right-of-Access

It is assumed that Fisher Arnold and/or the City of Jonesboro will obtain right-of-access for the Panamerican crew from the current landowners.

Feel free to contact me at (901) 454-4733, or via e-mail at dbuchner@panamconsultants.com or datum994@aol.com as necessary regarding this proposal.

Respectfully submitted,



PANAMERICAN CONSULTANTS, INC.
C. Andrew Buchner, RPA
Vice-President and Memphis Branch Manager

Attachment: Cost proposal

Cost Proposal

		Quantity	Units	Rate	Cost
Task 1: Literature and Records Search					
	RPA Archaeologist	2	Hour	\$56.86	\$113.72
Task 2: Fieldwork (3 Days)					
	RPA Archaeologist	16	Hour	\$56.86	\$909.76
	Archaeological Technician I	16	Hour	\$41.84	\$669.44
	Vehicle mileage	170	Mile	\$0.51	\$86.70
	Per diem—Lodging	2	Day	\$90.00	\$180.00
	Per diem—Meals	4	Day	\$35.00	\$140.00
Task 3: Data Entry, Artifact Analysis & Curation					
	Laboratory Director	8	Hour	\$51.42	\$411.36
	Laboratory Technician	8	Hour	\$35.20	\$281.60
Task 4: Reporting					
	Principal Investigator	2	Hour	\$148.92	\$297.84
	RPA Archaeologist	24	Hour	\$56.86	\$1,364.64
	Administrative Assistant	1	Hour	\$54.15	\$54.15
	Editor	8	Hour	\$42.24	\$337.92
	Shipping	2	Each	\$15.00	\$30.00
	Report hard copies (3 draft; 1 final)	4	Each	\$15.00	\$60.00
				PROPOSED COST	\$4,937.13

Budget is lump sum (i.e., fixed fee). Prices good for 180 days.



DELIVERY VIA EMAIL
talexander@fisherarnold.com

February 14, 2017

Mr. Tim Alexander
Fisher and Arnold
9180 Crestwyn Hills Drive
Memphis, TN 38125
901-748-1811

Re: **Proposal & Cost Estimate - Delineation of Aquatic Resources
Proposed Harrisburg Road Widening Project
Jonesboro, Craighead County, Arkansas**

Dear Mr. Alexander:

Enercon Services, Inc. (ENERCON) is pleased to present this proposal to perform a wetland/stream delineation of aquatic resources. Based on information provided, it is our understanding that the proposed project will potentially impact at least two linear waterways currently traversed by Harrisburg Road within the city of Jonesboro, Arkansas. The proposed project includes widening a portion of this roadway between Parker Road and the public cemetery entrance, and potentially expanding culverting at existing crossings of these stream segments.

Our proposal is organized according to Scope, Schedule, and Cost

Scope of Work

ENERCON proposes to evaluate the proposed project area for the presence of potential jurisdictional waters of the U.S., including wetlands and other water features as defined in Section 404 of the Clean Water Act and Section 10 of the Rivers & Harbors Act. ENERCON will collect necessary data to complete a formal delineation of wetlands and waters of the U.S. Our field investigations will be conducted as specified in the *US Army Corps of Engineers (Corps) Wetlands Delineation Manual* and the *Atlantic and Gulf Coastal Plain Regional Supplement* to the Corps Manual. Following our on-site investigations, a formal Section 404 delineation report will be prepared for submittal to the Corps for a jurisdictional determination (JD). This report will contain maps, datasheets, photographs and other materials required by the Corps' Memphis District Regulatory Office. Please be advised that the Corps allows consultants to prepare Section 404 delineations, but delineations are considered "preliminary" until they are approved by the Corps.

The delineation will provide details which will aid in planning in support of avoidance and minimization efforts, estimation and quantification of unavoidable project impacts, and preparation of a Section 404 permit application, if necessary (not included in this scope). Digital boundaries of wetlands or waters of the U.S. (if present) will be mapped using global positioning systems (GPS) and digital files will be available at the client's request.

The scope of this proposal does *not* include preparation of a Section 404 permit application or compensatory mitigation planning for anticipated impacts (if required). If a Section 404 permit is required, ENERCON can perform this service as an additional task under a separate scope and contract.

Schedule

ENERCON has personnel available to begin this project within one week of your authorization to proceed. We will require approval to access the property prior to commencement of the field studies. Draft documents will be submitted for your review within one month of completion of the field studies.

Cost

Costs associated with this project will be based on a fixed price of \$3,500.00 for a single task described in the scope of work above. ENERCON will invoice upon project completion. Our payment terms are Net 30 days.

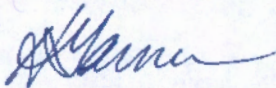
Assumptions

ENERCON has made the following assumptions in our development of the above-described costs:

- Permission for access will be arranged by F&A for field studies.
- ENERCON's support of any meetings or site visits subsequent to submittal to Corps is outside the scope of this proposal.

Thank you for the opportunity to present this proposal. If the scope and costs are acceptable to you, please sign and return the proposal, and the attached terms and conditions to authorize ENERCON to proceed. Should you have any questions or require any additional information please do not hesitate to contact me at (870) 219-1721 or email at hgarner@enercon.com.

Sincerely,
Enercon Services, Inc.



Heath Garner, M.S.
Senior Ecologist/ Environmental Scientist

Please proceed with the scope-of-work at the above-described rates.

Authorization Signature

Date

Printed Name/Title

PO # or Billing Reference

This document contains confidential and proprietary information belonging to ENERCON. Do not disclose information from this document without prior written permission from ENERCON.

Enercon Services, Inc
STANDARD TERMS AND CONDITIONS

SERVICES TO BE PROVIDED. Enercon Services, Inc. and/or its subsidiaries, affiliates, or divisions, as an independent consultant ("Consultant"), agrees to provide Client for its sole benefit and exclusive use consulting services set forth in our Proposal. The services to be provided (the "Services") are exclusively described in our Proposal and may only be modified by a written modification to the Proposal agreed upon by Consultant and Client.

DEFINITIONS. When used herein, the terms, "we", "us", or "our" and "Consultant" refer to Enercon Services, Inc. and/or its subsidiaries, affiliates and its divisions, and the terms "you", "your", "he", "his", "it", and "its" refer to Client.

RIGHT OF ENTRY AND RIGHT TO PROCEED. Client grants a right of entry from time to time to Consultant, its agents, staff, consultants, and contractors or subcontractors, for the purpose of performing and with the right to perform all acts, studies, and research including without limitation the making of test and evaluations pursuant to the agreed services. Client represents that it possesses all necessary permits and licenses required for continuation of its activities at any site involved in the Services.

BILLING AND PAYMENT. Unless otherwise indicated in our Proposal, our billings will be based on actual accrued time, test costs, and expenses except as otherwise provided by the Proposal. Client agrees to pay Consultant's invoices upon receipt. Should payment not be received within 30 days, Client shall pay a service charge of 1 1/2 percent per month or 18 percent per year and the cost of collection, including reasonable attorneys' fees, if collected by law or through an attorney. If 1 1/2 percent per month exceeds the maximum allowed by law, the charge will automatically be reduced to the maximum legally allowed. If Client has any objections to any invoice or part thereof submitted by Consultant, it shall so advise us in writing giving specifics of the objection within 14 days of receipt of such invoice. In the event Client does not object within such 14-day period, the invoice will no longer be subject to contest or dispute. Client agrees it will not exercise any right of set-off it may have. No deduction shall be made from Consultant's invoice on account of penalty or liquidated damages. Payment of an invoice shall constitute final approval as to all aspects of the work performed to date of the invoice as well as the necessity thereof. If the project described in the Proposal is terminated in whole or in part then we shall be paid for services performed prior to our receiving or issuing written notice of such termination, in addition to our reimbursable expenses and any shut down costs incurred. Shut down costs may, at our sole discretion, include completion of analysis and records necessary to document our files and protect our professional reputation.

DAMAGE AT SITE. We will not be liable for any property damage or bodily injury arising from damage to or interference with surface or subterranean structures (including, without limitation, pipes, tanks, telephone cables, etc.) which are not called to our attention in writing and correctly shown on the plans furnished by the Client in connection with work performed under this Agreement. Client recognizes that the use of exploration and test equipment may unavoidably affect, alter, or damage the terrain and affect subsurface, vegetation, buildings, structures and equipment in, at, or upon the site. Client accepts the fact that this is inherent to our work and will not hold us liable or responsible and releases and waives any claim or cause of action for any such effect, alteration, or damage.

STANDARD OF CARE AND WARRANTY. Professional services provided by us will be performed, findings obtained, and recommendations prepared in accordance with generally accepted engineering principles and practices. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESS OR IMPLIED WHICH ARE HEREBY DISCLAIMED BY US AND WAIVED BY YOU.

PUBLIC LIABILITY/THIRD PARTY MATTERS. Consultant maintains workers' compensations and employer's liability for our employees as required by state laws. In addition, we maintain comprehensive general liability insurance with limits of \$1,000,000 or more. A Certificate of Insurance can be supplied evidencing such coverage. We will not be liable or responsible for any loss, damage or liability beyond the amounts limits, coverage, or conditions of such insurance specified above and the limitation of liability provided by the paragraph immediately below. In the event any third party brings suit or claim for damages against us alleging exposure to or damage from material, elements, or constituents at or from Client's facility before, during, or after the services of this Agreement which is alleged to have resulted in or caused disease or any adverse health condition to any third party or resulting in cost for remedial action, uninhabitability of the property, or other property damage, then: Client agrees to defend us in any such suit or claim and pay on our behalf any judgment resulting against us, including any interest thereon. Further, Client, with our concurrence, will select, hire and pay an attorney to defend any such suit or claim, will pay Court costs for which we may be liable in any such suit and bear and pay litigation expenses Client incurs in providing a reasonable and professional defense which will be provided by Client according to prevailing local standards. Client will have the right to investigate, negotiate and settle, with our concurrence, any such suit or claim, and we will cooperate in the defense of any such suit or claim.

LIMITATION OF LIABILITY. CLIENT AND CONSULTANT HAVE DISCUSSED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, AS WELL AS CONSULTANT'S CHARGES FOR SERVICES. CLIENT AND CONSULTANT AGREE TO ALLOCATE CERTAIN OF THE RISKS SO THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, CONSULTANT'S TOTAL AGGREGATE LIABILITY TO CLIENT, AND ALL CONTRACTORS AND SUBCONTRACTORS ENGAGED BY CLIENT, IS LIMITED TO OUR FEE UNDER OUR PROPOSAL FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, EXPENSES OR CLAIM EXPENSES (INCLUDING ATTORNEYS' FEES AND COSTS) ARISING FROM ANY CAUSE OR CAUSES, AND CLIENT WAIVES AND RELEASES ANY CLAIM THEREFOR. SUCH CAUSES INCLUDE, BUT ARE NOT LIMITED TO, CONSULTANT'S NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT, OR BREACH OF WARRANTY. CLIENT FURTHER AGREES TO NOTIFY ALL CONTRACTORS AND SUBCONTRACTORS OF THIS LIMITATION OF CONSULTANT'S LIABILITY TO THEM AND REQUIRE THEM TO ABIDE BY THIS LIMITATION OF DAMAGES SUFFERED BY ANY CONTRACTOR.

CONSEQUENTIAL DAMAGES. In no event shall Consultant or its sub-consultants or subcontractors of any tier be liable to Client in contract, tort, strict liability, warranty or otherwise, for any special, incidental or consequential damages, such as, but not limited to, delay, disruption, loss of anticipated profits or revenue, loss of use of the equipment or system, non-operation or increased expense of operation of other equipment or systems, cost of capital, or cost of purchase or replacement equipment systems or power.

SAMPLING AND TESTING LOCATION. The fees included in our Proposal do not include costs associated with surveying the site and/or facility to determine accurate horizontal and vertical locations of tests. If surveying is required, cost of surveying will be paid by Client. Field test or boring locations described in our report or shown on sketches are based on specific information furnished by others or estimates made in the field by our personnel. Such dimensions, depths or elevations are approximations.

SAMPLING HANDLING AND RETENTION. Generally, test samples or specimens are consumed or substantially altered during the conduct of tests and Consultant, at our sole discretion, will dispose (subject to the following) of any remaining residue immediately upon completion of tests.

A. **NON-HAZARDOUS SAMPLES.** At Client's written request, we will maintain preservable test samples and specimens or the residue there from for 30 days after submission of our report free of storage charges. After the initial 30 days and upon written request, we will retain test specimens or samples for a mutually acceptable storage charge and period of time. Client agrees that it will not hold us responsible or liable for any loss of test specimens or samples retained in storage.

B. **HAZARDOUS OR POTENTIALLY HAZARDOUS SAMPLES.** In the event that samples contain substances or constituents hazardous or detrimental to health, safety, or the environment as defined by federal, state, or local statutes, regulations or ordinances, we will, after completion of testing and at Client's expense, (i) return such samples to Client, or (ii) using a manifest signed by Client, as generator, we will have such samples transported to a location selected by Client for final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of samples. Client recognizes and agrees that we are acting as a bailee and at no time assume title to said waste.

C. **INVESTIGATION DERIVED WASTE.** Investigation derived waste generated during investigations, such as drill cuttings, will be left on Client's site. In the event that investigation derived waste contains substances or constituents hazardous or detrimental to health, safety, or the environment as defined by federal, state, or local statutes, regulations or ordinances, we will, after completion of testing and at Client's expense, using a manifest signed by Client, as generator, transport such investigation-derived waste to a location selected by Client for final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of samples. Client recognizes and agrees that we are acting as a bailee and at no time assume title to said waste or samples.

CLAIMS. In the event that Client makes claim against us in law or otherwise, for any alleged error, omission, or act arising out of the performance of our services that cannot be mutually resolved without resort to litigation, and Client fails to prove such claim, then Client shall pay all costs incurred by us in defending ourselves against the claim, including, without limitation, our personnel-related costs, attorneys' fees, court costs, and other claim-related expenses, including without limitation, costs, fees, and expenses of experts. Client agrees that for the purposes of this Agreement it has failed to prove its claim when judgment in litigation is for a sum of money less than that sum offered by us to resolve the matter without litigation.

HAZARDOUS SUBSTANCES OR CONSTITUENTS. Client agrees to advise us upon execution of this Agreement of any hazardous substances or any condition existing in, on, or near the site presenting a potential danger to human health, the environment, or equipment. Client agrees to provide continuing information as it comes available to the attention of Client in the future. By virtue of entering into this Agreement or of providing services hereunder or under a Proposal, we do not assume control or responsibility for the site or the person in charge of the site, or undertake responsibility for reporting to any federal, state, or local public agencies and conditions at the site that may present a potential danger to public health, safety, or the environment. Client agrees to notify the appropriate federal, state, or local public agencies as required by law, or otherwise to disclose in a timely manner, any information that may be necessary to prevent any danger to health, safety, or the environment. In connection with hazardous waste, Client agrees to maximum extent permitted by law to defend, hold harmless and indemnify Consultant from and against any and all claims and liabilities resulting from:

- (a) Client's violation of any federal, state, or local statute, regulation, or ordinance relating to the disposal of hazardous substances or constituents;
- (b) Client's undertaking of or arrangement for the handling, removal, treatment, storage, transportation, or disposal of hazardous substances or constituents found or identified at the site;
- (c) Changed conditions or hazardous substances or constituents introduced at the site by Client or third persons before or after the completion of services by Consultant;
- (d) Allegations that Consultant is a handler, generator, operator, treater or storer, transporter, or disposer under the Resource Conservation and Recovery Act of 1976 as amended, or any other similar Federal, state, or local regulations or law in connection with services rendered or circumstances arising under a Proposal.

CONTAMINATED EQUIPMENT. All laboratory or field equipment contaminated in performing our services and which cannot be reasonably decontaminated shall become the property and responsibility of the Client. All such equipment shall be delivered to Client or disposed of in a manner similar to that indicated for hazardous samples. Client agrees to pay the fair market value of any such equipment which cannot reasonably be decontaminated.

UNFORESEEN OCCURRENCES. If, during the performance of services, any unforeseen hazardous substances or constituents or other unforeseen conditions or occurrences are encountered which, in our sole judgment significantly affect or may affect the services, the risk involved in providing the services, or the recommended scope of services, we will promptly notify Client thereof. Subsequent to that notification, Consultant may:

- (a) If practicable, in our sole judgment, complete the original Scope of Services in accordance with the procedures originally intended in the Proposal;
- (b) Agree with Client to modify the Scope of Services and the estimate of charges to include study of the previously unforeseen condition or occurrences, such revision to be in writing and signed by the parties and incorporated herein; or
- (c) Terminate the services effective on the date specified by us in writing.

DOCUMENTS. Consultant will furnish Client the number of written reports and supporting documents specified by the Proposal or otherwise agreed by Consultant. These instruments of services are furnished for Client's exclusive internal use and reliance, use of Client's counsel, use of Client's qualified bidders (design services only) and for regulatory submittal in connection with the project or services provided for in this Agreement, but not for advertising or other type of distribution, and are subject to the following:

- (a) All documents generated by Consultant under this Agreement shall remain the sole property of Consultant. Any unauthorized use or distribution of Consultant's work shall be at Client's and recipient's sole risk and without liability to Consultant. Consultant may retain a confidential file copy of its work product and related documents.
- (b) If Client desires to release, or for Consultant to provide, our report(s) to a third party not described above for that party's reliance, Consultant will agree to such release provided we receive written acceptance from such third party to be bound by acceptable terms and conditions similar to this Agreement (e.g. Secondary Client Agreement). Reports provided for disclosure of information only will not require separate agreement. Client acknowledges and agrees to inform such third party that Consultant's report(s) reflects conditions only at the time of the study and may not reflect conditions at a later time. Client further acknowledges that such request for release creates a potential conflict of interest for Consultant and by this request Client waives any such claim if Consultant complies with the request.
- (c) Client agrees that all documents furnished to Client or Client's agents or designees, if not paid for, will be returned upon demand, will not be used by Client or any other entity for any purpose whatsoever and that Consultant is given a security interest therein to secure outstanding invoiced sums due. Client further agrees that documents produced by Consultant pursuant to this Agreement will not be used for any project not expressly provided for in a Proposal without Consultant's prior written approval.
- (d) Client shall furnish documents or information reasonably within Client's control and deemed necessary by Consultant for proper performance of our services. Consultant may rely upon Client-provided documents in performing the services required under this Agreement; however, Consultant assumes no responsibility or liability for their accuracy. Client provided documents will remain the property of Client, but Consultant may retain one confidential file copy as needed to support our report.
- (e) Upon Client's request, Consultant's work product may be provided on magnetic media. By such request, Client agrees that the written copy retained by Consultant in its files, with at least one conformed written copy provided to Client, shall be the official base document. Consultant makes no warranty or representation to Client that the magnetic copy is accurate or complete, but will correct in good faith any omissions or errors on such media brought to Consultant's attention by Client. Any modifications of such magnetic copy by Client shall be Client's risk and without liability to Consultant. Such magnetic copy is subject to all conditions to this Agreement.
- (f) Consultant will maintain project files for a period of no more than five years following the issuance of contracted reports.

FIELD REPRESENTATIVE. The presence of our field personnel, either full- or part-time, will be for the purpose of providing observation and field testing of specific aspects of the project. Should a contractor engaged by Client be involved in the project, our work does not include supervision or direction of the actual work of the contractor, its employees or agents. The Client shall so advise all contractors. The contractor should also be informed that neither the presence of our field representative nor the observation and testing by us shall excuse the contractor in any way for defects discovered in contractor's work. It is agreed that we will not be responsible for job or site safety on the project and that we do not have the right to stop the work of the contractor.

SEVERABILITY. In the event that any provision herein shall be deemed invalid or unenforceable, the other provisions hereof shall remain in full force and effect, and binding upon the parties hereto.

SURVIVAL. All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between Client and Consultant shall survive the completion of the services under any Proposal.

INTEGRATION. This Agreement and the documents attached hereto and which are incorporated herein constitute the entire Agreement between the parties and cannot be changed except by a written instrument signed by both the parties.

GOVERNING LAW AND JURISDICTION. This Agreement shall be governed in all aspects by the laws of the State of Oklahoma. The jurisdiction and venue for any legal proceedings between Consultant and Client, including actions to interpret or enforce this Agreement or the terms of any Proposal or agreement between the parties, shall be in the federal or state court for Tulsa County, Oklahoma.

Accepted by: _____ Title: _____

Date: _____

Print Name: _____

Bowlby & Associates, Inc.



504 Autumn Springs Court, #11
Franklin, Tennessee 37067-8278
(615) 771-3006, Fax (615) 771-3406
w Bowlby@bowlbyassociates.com

February 6, 2017

Mr. Tim Alexander
Project Manager
Fisher Arnold, Inc.
9180 Crestwyn Hills Drive
Memphis, TN 38125

Dear Tim:

Subject: Proposal for Noise Screening Analysis
Harrisburg Road (E. Parker Road to Cemetery), Jonesboro, AR

Based on our email correspondence with you and a phone call with Don Nichols of AHTD, this letter is our proposal for the noise screening analysis. Don indicated that this scale of project qualified for a screening level noise analysis under AHTD noise policy and the FHWA noise regulation in 23 CFR 772. Don also indicated that a barrier analysis would not be required even if impacts are identified based on the unlikelihood of a barrier being cost effective in these cases.

We will create a simplified model of the project area using the FHWA Traffic Noise Model 2.5. After running the model, we will identify future noise impacts along the project and develop the distances from the pavement edges to the 66 and 71 dBA one-hour equivalent sound levels. We will document the results using the summary letter report format provided by AHTD in our previous noise screening analysis in Jonesboro (which will not include any graphics).

You will provide us with:

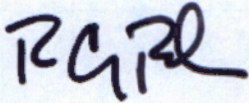
1. traffic volumes for the peak hour (AM and PM) existing year and design year (typically 20 years in the future) for:
 - Harrisburg Road (northbound and southbound)
 - E. Parker Road (eastbound and westbound)
 - I-555 (eastbound and westbound)
 - I-555 eastbound off-ramp to E. Parker Road
 - I-555 eastbound on-ramp from E. Parker Road
2. peak hour truck and vehicle mix % for each of the above roadways
3. posted speeds for each roadway above to use in our modeling

Mr. Tim Alexander
February 6, 2017
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Our cost for this work is a lump sum \$3,700 assuming no additional model runs, barrier modeling or documentation is required by AHTD, which we do not expect to happen.

This concludes our proposal. If you have any questions, please give me a call. We can finalize an agreement either with our own standard form or one of yours. Thank you for contacting us.

Sincerely yours,

A handwritten signature in black ink, appearing to read "RCPT", written in a cursive style.

R. Clay Patton
Senior Project Manager