

Matthew G. Bevin Governor

## COMMONWEALTH OF KENTUCKY TRANSPORTATION CABINET

Department of Highways, District 5 Office 8310 Westport Road Louisville, KY 40242-3042 (502) 210-5400 **Greg Thomas**Secretary

January 22, 2018

David Moses Integrated Engineering, PLLC 166 Prosperous Place, Suite 220 Lexington, KY 40509

Dear Mr. Moses:

The Kentucky Transportation Cabinet has prepared for your review and signature the enclosed letter agreement for design services for the Lexington Fayette Urban County Government's Armstrong Mill Project (7-3213).

Please mail the signed original to Amanda Spencer, PE, Kentucky Transportation Cabinet, Division of Program Management, 200 Mero Street, Frankfort, KY 40622. And, email a scanned copy to Amanda Spencer@ky.gov.

As mentioned in the letter agreement, the Lexington Fayette Urban County Government (LFUCG) is administering this project with oversight from KYTC. The LFUCG should provide any notices to proceed. Requests for reimbursement should be sent to the LFUCG.

Thank you in advance for your work on this project. Please do not hesitate to contact me if you have any questions.

Sincerely,

Amanda Spencer

KYTC Program Management

ars

Enclosures (1)

c: Jackie Jones, KYTC OLP Shane Tucker, KYTC Highway District 7



Matthew G. Bevin Governor

## COMMONWEALTH OF KENTUCKY TRANSPORTATION CABINET

Frankfort, Kentucky 40622 www.transportation.ky.gov/

Greg Thomas Secretary

January 5, 2018

## LETTER AGREEMENT NO. 4

David Moses Integrated Engineering, PLLC 166 Prosperous Place, Suite 220 Lexington, KY 40509

Subject:

Statewide Local Public Agency (LPA) Services

Fayette County - CS-3037 Item No. 07-3213.00

Dear Mr. Moses:

WHEREAS, on December 2, 2015, the Transportation Cabinet, DEPARTMENT of Highways (hereinafter referred to as the "Department") and Integrated Engineering, PLLC (hereinafter referred to as the "Consultant"), entered into a Master Agreement whereby the Consultant would provide various Statewide Local Public Agency (LPA) Services at the request of the Department.

WHEREAS, under the terms of Master Agreement No. 2016-02-6, PON2 625 1600000938 the Department now desires that the Consultant perform the following items of work on the above subject Project.

## STATEMENT OF WORK

This Project provides for LPA Project Services to design for sidewalks along the north and south sides of Armstrong Mill Road between Tates Creek Road and Greentree Road, then on to the intersection of Armstrong Mill side roads, along CS-3037 in Fayette County, Kentucky.

NOW, THEREFORE, in consideration of the aforesaid premises, the Department and the Consultant agree as follows:

1. Comply with the terms, conditions and provisions as set out in the above referenced Master Agreement (No. 2016-02-6).



- 2. The Department's Project Manager issued the Consultant with Notice to Proceed on this Letter Agreement No. 4 on June 27, 2017.
- 3. Consultant's proposal and scope of work are made a part of this Letter Agreement No. 4.
- 4. The work to be performed by Integrated Engineering, PLLC shall be administered by the Lexington-Fayette Urban County Government on behalf of the Kentucky Transportation Cabinet. In exchange for the work provided, the Lexington-Fayette Urban County Government agrees to pay all invoices provided by Integrated Engineering, PLLC for acceptable work pursuant to the contract terms. All funding shall be reimbursed to the Lexington-Fayette Urban County Government by the Kentucky Transportation Cabinet through a separate contract; no funding shall be directly reimbursed to the consultant as a result of this Letter Agreement.
- 5. It is expected that the Consultant will complete all work by September 13, 2018.
- 6. Funding: 12F0 C35 D625 FD52 1550 C034 E143 Federal #: 00TAP4003012 State Program #: 9237001D

County/Route: Fayette/CS-3037

7. The maximum amount payable under this Letter Agreement No. 4 is \$120,999.00. Letter Agreement No. 4 increases the total amount for Master Agreement (No. 2016-02-6) to \$370,306.40.

Sincerely

Andy Barber, PF State Highway Engineer

## ACCEPTED:

Integrated Engineering, PLLC

By: Tand Moses

1/25/2018 Date:

Please sign and return this Letter Agreement to the Division of Professional Services. Funding will not be encumbered for reimbursement without return of a signed Letter Agreement.

## **Armstrong Mill Sidewalks**

FAYETTE COUNTY ITEM NO. 7-3213

## PHASE I & II DESIGN ENGINEERING AND RELATED SERVICES

## PROPOSED PRODUCTION HOURS AND FEE

Submitted by:

Integrated Engineering, PLLC 166 Prosperous Place, Suite 220 Lexington, Kentucky 40509 859-368-0145



January 4, 2018

## **Negotiation Minutes**

Date:

December 20, 2017

Project:

Fayette County

Item Number 7-3213.00 Armstrong Mill Sidewalks PON2 625 1600000938 Agreement # 2016-02-6 Letter Agreement #4

Integrated Engineering met with Mark Feibes of LFUCG on site on July 20, 2017 and sent proposed work units on that day. Mr. Feibes agreed with the units and a fee proposal was submitted to Mr. Feibes on July 21, 2017. After reviewing the fee proposal LFUCG requested a meeting to discuss the project scope. The meeting was held on October 4, 2017. A revised scope was proposed a man-hour estimate was sent to Mark Feibes and Thomas Clements of LFUCG on October 4, 2017. Thomas Clements agreed to the adjusted man-hour estimate of 974 hours for the roadway design on October 6, 2017. A revised geotechnical fee for the revised scope was sent to Mr. Clements on October 10, 2017. After reviewing some changes to the geotechnical fee were requested and another revised Geotech fee of \$12,959.76 was sent on October 23, 2017. This fee was approved by Mr. Clements November 2, 2017.

Work units for the KYTC independent man-hour estimate were sent to Shane Tucker on October 10, 2017. Integrated Engineering sent a full fee proposal based on the 974 hours was sent to Brad Frazier on October 19, 2017. The district 7 independent man hour estimate of 2024 man hours was sent to Professional Services shortly thereafter and the Cabinet agreed to Integrated Engineering's estimate of 974 hours on December 18, 2017. The Getotechnical Branch approved the geotechnical fee on December 22, 2017.

**End of Minutes** 

**David Moses** 

**Integrated Engineering** 

David Moses

PROJECT SCHE	PROJECT SCHEDULE AND PAYMENT PLAN									
MILESTONE	DAYS	DATE	% PAYMENT							
Notice to Proceed (estimated)	0	February 15, 2018	0%							
Survey Complete	30	March 17, 2018	20%							
Submit Preliminary Design	75	May 1, 2018	50%							
Submit R/W Plans	150	July 15, 2018	70%							
Submit Final Roadway/Structural Plans	180	August 14, 2018	90%							
Submit Bit Package	210	September 13, 2018	100%							

## Notes:

<sup>1. %</sup> payment is the maximum amount of contract amount that can be paid before completion of given milestone. The % payment shown for each milestone is based on an estimate of the % complete and % of fee earned for all work tasks at that given milestone date.

## KENTUCKY TRANSPORTATION CABINET

**Department of Highways DIVISION OF PROFESSIONAL SERVICES** 

Rev. Page

TC 40-2 10/2017

	ENGIN			ROFESSIONAL S ATED SERVI	SERVICES CES FEE PRO	OPO	Page <b>DSAL</b>		1 of 1
SECTION 1:	PROJECT INFORM	IATION							
DATE:	Dec 20, 2017	COUNTY:		Fayette		Т	ITEM #:		7-3213
100000000000000000000000000000000000000	Armstrong Mill Sid	CONCRETE SOCIAL CONTRACT CONTR		· uyette					
	arriser orig ram ora	e Trains							
SECTION 2:	BUDGET INFORM	ATION							
52011011121		tanto escarros		PROPOSED	NEGOTIATED	Α	VERAGE		STIMATED
	FEE CONSIDERA	ATIONS			MAN HOURS		RATE		COST
Survey				145	145	\$	39.17	\$	5,679.65
Line and Grad									
Utility Coordi				24	24	\$	47.45	\$	5,792.24 1,138.80
Final Plans	00 NO.			431	431	\$	47.45	\$	20,450.95
Meetings				24	24	\$	61.90	\$	1,485.60
Structures				212	212	\$	50.08	\$	10,616.96
					.===			\$	-
								\$	-
								\$	
								\$	=
-	TOTAL PRODUCTION	ON HOURS		972 /	7 972	\$	46.47	7	
·					TOTAL DIRE		27/2/201 1000	\$	45,164.20
					OVERHEAD			\$	48,551.52
					PROFIT		15.00 %)	\$	14,057.36
				CC	OST OF MONEY	<u> </u>	/0.59 %)	\$	266.47
						`	,,,	7	
		DIR	ECT COS	TS					AMOUNT
								$\vdash$	
					TOTAL D	IRE	CT COSTS	\$	_3
								,	
		SUBC	ONSULTA	NTS					AMOUNT
Geotechnolo	gv	3020	31130E17					\$	12,959.76
deoteermoio	67							<u> </u>	12,333.70
								$\vdash$	
								$\vdash$	
					TOTAL SUBCO	ONS	ULTANTS	\$	12,959.76
					1017120000		021711110	Υ	12,333.70
						TC	TAL FEE	\$	120 000
						10		- 55	120,999
							*Rou	naea t	o the nearest dolla
	SIGNATURE								
FIRM NAME	: Integrated En	gineering			SIGNED BY: D	avid	Moses		
F	Tus he	pes		Vice	President			12/	20/2017
	ONSULTANT SIGN	ATURE		s.	TITLE				DATE
					<del></del>				
PROFF	SSIONAL SERVICES	SIGNATURE		<u> </u>	TITLE				DATE

	PRODUCTION-HOUR W	ORKSI	HEET	Γ		
COUNTY:	Fayette					
PROJECT:	Armstrong Mill Sidewalks	PROJECT	TYPE :	Sidewalks	& Drainage	е
UPN:		CONSULTA	ANT:	Integrated		
FED.NO:		PREPAREI	DBY:	David Mos		
ITEM NO :	7-3213	DATE:		1/4/2018		
	SURVEY					IE 2
No.	ITEM	CREW	UNIT	AMOUNT	HRS/UNIT	HOURS
	RECONNAISSANCE					
1	Control - (existing)	1	Mile	0.33	10	3
2	Utilities - (data gathering, identification & contact)	1	No.	0.33	20	7
3	Drainage - (sink holes, streams, pipes, etc.)	1	Mile	0.33	10	3
3	CONTROL	<u> </u>	Tivillo	0.00		
4	Horizontal	2	Mile	0.33	8	5
5	Vertical	2	Mile	0.33	8	5
6	Process data	1	Mile	0.33	15	5
	PLANIMETRIC SURVEY		IVIIIC	0.00	10	
7	Planimetric location (specify complete, pickup or update)	2	Mile	0.33	40	26
8	Subsurface Utility Engineering, Quality Levels C & D	1	Mile	0.33	40	13
7500	Subsurface Utility Engineering, Quality Levels C & D  Subsurface Utility Engineering, Quality Level B	1	LS	0.55	40	0
9	Subsurface Utility Engineering, Quality Level A	1	LS			0
10	Process data	1	Mile	0.33	20	7
11	TERRAIN SURVEY	1	IVIIIE	0.33	20	,
40		2	Λ ===	1.5	0	C
12	DTM data collection (Items 11-18 not required if used)	2	Acre	1.5	U	0
13	Verify terrain model accuracy	2	Mile			0
14	Tie-ins (Dill)	2	No.			8
15	Drainage situations survey (Bridge)	2	No.	2	2	
16	Drainage situations survey (Culvert)	2	No.			C
17	Drainage pipe section (non-situation size)	2	No.	-		0
18	Flood plain data	2	No.	2	4	
19	Railroad Surveys	2	No.			C
20	Additional necessary DTM data (specify pickup or update		Acre			C
21	Process data	1	Mile	0.33	20	7
	ESTABLISH PROPERTY LINES & OWNERSHIP					
22	Contact & Interview Property Owners	1	Parcel			C
23	Field tie property lines/corners	2	Parcel	24	0.5	24
	STAKING		-			
24	Stake centerlines, approaches, detours	2	Mile			C
25	Stake core holes - structures (unit is per structure)	2	No.			C
26	Stake core holes - roadway (unit is per core hole)	2	No.			C
	SURVEY MISCELLANEOUS					
27	Determine roadway elevations (Crown and EP)	2	Mile	0.33	24	0.00
28	Environmental areas	2	No.			C
29						C
						4.7-
	SURVEY TOTAL					145

No.	ITEM	UNIT	AMOUNT	HRS/UNIT	HOUF
30	Computer setup	LS	1	0	
31	Prepare existing manuscripts	Mile	0.33	30	
32	Establish approximate property lines and ownership	Parcel	24	0	
33	Study and develop typical sections	No.	1	4	
34	Study and develop horizontal alignments	Mile	0.59	15	
35	Study and develop vertical alignments	Mile	0.59	15	
36	Create and evaluate proposed roadway models	Mile	0.59	10	
37	Design entrances	No.	14	0.57	
38	Pre-size pipes (all alternates)	No.			
39	Pre-size culverts (all alternates)	No.			
40	Pre-size bridges (all alternates)	No.			
41a	Conduct Traffic Engineering Analysis (Basic; Highway Capacity Manu	Intersec	1	24	
41b	Conduct Traffic Engineering Analysis (Advanced; Micro-simulation)	Intersec	tion		
42	Study and development of interchange	No.			
43	Study and development of intersection	No.	1	12	
44	Study and develop maintenance of traffic plan	LS	1	20	
45	Plot/print copies of plans for team meeting and inspections	LS	1	4	
46	Calculate preliminary quantities and develop cost estimates	Alt.	1	16	
47	Revise plans and estimates	LS			
48	Preliminary Right of Way with taking areas	Parcel	6	1	
49	Prepare Design Executive Summary	LS			
50	Develop/document "Avoidance Alternatives to Water Related Impacts	L\$			
	PRELIMINARY LINE & GRADE MISCELLANEOUS				
51	Prepare Preliminary Design Technical Memorandum	LS	1	8	
52	Research for Public Agency & Permit Requirements	LS	1	0	
53					
54					
55					

No.	ITEM	PERSONS	UNIT	AMOUNT	HRS/UNIT	HOURS
56	Utility Coordination Meeting	1	No.	4	4	
57	Develop Utility Relocation Layout Sheets (1"=200")		Mile	0.33	24	
58	Develop Utility Relocation Plans (1"=50")		Mile			C
	UTILITY COORDINATION MISCELLANEOUS					
59						
	UTILITY COORDINATION TOTAL					24
	RIGHT OF WAY PLANS					
No.	ITEM		UNIT	AMOUNT	HRS/UNIT	HOURS
60	Deed research		Parcel	6	0	0
61	Establish property and ownership		Parcel	6	0	
62	Calculate Right of Way		Parcel	6	0	
63	Prepare legal descriptions		Parcel	6	0	0
64	Complete Right of Way summary sheet		Parcel	6		0
65	Generate Right of Way strip map (scale 1" = 50')		Sheet	1	0	O
66	Prepare Right of Way Plans Submittal		LS	1	0	0
67	Right of Way revisions after Right of Way submittal		LS	1	0	C
	R/W PLANS MISCELLANEOUS					
68	Deed Research for Existing Alignments		LS			0
69	Deed Research for Existing Parcels		Parcel			0
70	Prepare Legal Descriptions for Right of Way transfer		Parcel			C
71						
72						
			<u> </u>			
			<u> </u>			
	RIGHT OF WAY PLANS TOTAL					0

No.	ITEM	UNIT	AMOUNT H	RS/UNIT H	ō
80	Computer setup	LS	1	0	=
81	Update existing topography and terrain model	Mile	0.33	6	_
82	Refine alignments (horizontal & vertical)	Mile	0.59	20	_
83	Develop pavement design	No.			_
84	Finalize templates & transitions	No.	<del> </del>		_
85	Develop final roadway model	Mile	0.59	40	_
86	Develop proposed design	Mile	0.33	100	_
87	Generate plan sheets (scale 1" = 20')	Sheet	3	6	_
88	Generate profile sheets (scale 1" = xxx')	Sheet	3	6	_
89	Detail cross sections (scale 1" = xxx')	No.	54	0.75	_
90	Design entrances	No.	19	0.1	_
91	Revise roadway plans from soils report	Mile			_
	DRAINAGE	•	<del></del>	•	_
92	Develop pipe sections (< 54")	No.	4	0	_
93	Develop drainage system map	Mile	0.33	0	_
94	Develop drainage situation (bridge)	No.	2	10	Т
95	Develop drainage situation (culvert)	No.			
96	Develop blue line stream channel change ( => 200')	No.			_
97	Drainage analysis (entrance pipes)	No.			_
98	Drainage analysis (A < = 200 acres)	No.	4	2	_
99	Drainage analysis (200 acres < A < 1.0 sq. mile)	No.			_
100	Drainage analysis (A = > 1.0 sq. mile) level 1 analysis	No.			Т
101	Drainage analysis (A = > 1.0 sq. mile) level 2 analysis	No.	2	40	
102	Drainage analysis (A = > 1.0 sq. mile) level 3 analysis	No.			_
103	Special drainage studies	No.			
104	Roadway ditches and channels	Mile			_
105	Develop Erosion Control Plan	Mile			
106	Inlet spacing calculations	No.	4	0.5	_
107	Storm sewers calculations	No.	4	6	_
108	Perform scour analysis	No.			_
109	Assemble preliminary and final drainage folders	LS			Τ
110	Prepare advanced situation folder - bridge	No.	3	0	
111	Prepare advanced situation folder - culvert	No.			
	DRAINAGE MISCELLANEOUS				
112	Prepare No Rise Certification	LS	1	10	
113					
114					
115					

No.	NAL PLAN PREPARATION (Continued)	UNIT	AMOUNT	HRS/UNIT	HOURS
	Prepare layout sheet	ILS	AIVIOOITI	<u> </u>	HOOK
116		No.	1 1	6	
117	Prepare typical sections				
118	Prepare Interchange geometric approval	No.			
119	Prepare intersection geometric approval	No.	0.00	45	
120	Prepare coordinate control sheet	Mile	0.33	15	
121	Prepare elevation developments	No.			
122	Prepare striping plan	No.	1	8	
123	Calculate final quantities	Mile	0.33	30	1
124	Complete general summary	LS	1	6	
125	Complete paving summary	LS	1	4	
126	Complete drainage summary	LS	1	4	
127	Complete pavement under-drain summary	LS			
128	Prepare cost estimate	LS	1	8	
129	Plot/print copies of plans	LS	1	8	
130	Plan revisions	Mile	0.33	40	1
131	Prepare final construction plans submittal	LS	1	24	2
	MAINTENANCE OF TRAFFIC				
132	Write maintenance of traffic notes (TCP)	LS	1	8	
133	Prepare construction phasing plans	Mile	0.33	20	
134	Develop diversion plan sheets	Sheet			
135	Develop diversion profile sheets	Sheet			
136	Develop diversion cross sections	No.			
137	Develop temporary drainage	No.			
	FINAL PLANS MISCELLANEOUS				
138	Document available rock quantities	LS			
139	Prepare Bid Proposal	LS	1	8	
140	LPA Paperwork & Coordination	LS	1	8	
141	Permits Preparation	LS	1	8	
142					
143					
	FINAL PLANS TOTAL				4:

	MEETINGS					
No.	ITEM	PERSONS	UNIT	AMOUNT	HRS/UNIT	HOURS
150	Prelim. line and grade inspection	2	No.	1	3	
151	Drainage inspection	2	No.			0
152	Final inspection	2	No.	1	3	6
153	Misc. project coordination meetings	2	No.			0
154	Project team meetings	2	No.	2	3	12
455	MEETINGS MISCELLANEOUS		11.0	1	<u> </u>	_
155 156	Value Engineering Study Constructability Review		LS	<del> </del>		0
130	Constructability Neview		LS	-		
			-	<del> </del>	-	
			1			
	MEETINGS TOTAL					24
<u>-</u>						
	PUBLIC INVOLVEMENT					
No.	ITEM	PERSONS	UNIT	AMOUNT	HRS/UNIT	HOURS
160	Develop and Maintain Mailing List		LS			0
161	Prepare for Advisory Committee/Officials Meeting		No.	<u> </u>		0
162	Attend Advisory Committee/Officials Meeting	2	No.			0
163	Prepare for Public Meetings/Hearings Attend Public Meetings/Hearings		No.	-		0
164 165	Prepare and Distribute Newsletter	2	No.	1		0
166	Property owner coordination		No.			0
100	PUBLIC INVOLVEMENT MISCELLANEOUS	!	1110.	1		
167			1	T		0
168			İ			0
169						
	PUBLIC INVOLVEMENT TOTAL				_	0
	QA/QC					
No.	ITEM		UNIT	AMOUNT	HRS/UNIT	HOURS
180	Stuctures (See Attached Structural Production Hours)	)	LS	1	212	212
181	Structure review					0
	QA/QC TOTAL					212
	DECEMBER OF THE STATE OF THE ST				•	
	PRODUCTION-HOUR SUMMARY					4 4 5
	RVEY TOTAL					145
	NE AND GRADE TOTAL					136
	ILITY COORDINATION TOTAL					24
	GHT OF WAY PLANS TOTAL					0
	NAL PLANS TOTAL					431
ME	ETINGS TOTAL					24
PU	BLIC INVOLVEMENT TOTAL					0
ST	RUCTURES TOTAL	-				212
	RAND TOTAL				•	972

## **Structural Production-Hour Process:**

- 1) The consultant shall provide a project scope and detailed desciption of each structure on this sheet.
- 2) This description shall be used to agree with Structural Design on items and units for each structure.
- 3) The consultant shall submit a copy of this workbook, with units and descriptions only, to Structural Design.
- 4) The consultant and Structural Design shall submit independent estimates to Professional Services.
- 5) Professional Services shall then negotiate structural production-hours to negotiate a fee on the project.

## **Armstrong Mill Road Improvements**

s1: A prefabricated pedestrian bridge will be placed parallel with the existing bridge crossing over the Branch of West Hickman Creek along the North side of the structure. The bridge will span approximately 80ft with the abutments being placed behind the wing walls of the existing bridge. The existing wing walls will likely need to be modified to accommodate the bottom chord of the pedestrian bridge, which is expected to be 1.67 ft below the deck elevation. Due to the slope and positioning of the creek, the West Abutment will likely have a turn back wing wall to retain the additional fill.

	PRODUCTION-HOUR	WORKSH	HEET		
COUN.	TY Fayette	ITEM NO.			
ROUTE	E Armstrong Mill Road Improvements	CONSULTAN	IT Integrate	ed Engineering	
	RIPTION Structure Design	PREPARED		3 3	
	ECT TYPE LPA	DATE Nover		7	
KOJI		DATE NOVE	11061 21, 201	1	
	ARMSTRONG MILL ROAD	IMPROV	EMENT	s	
No.	ITEM	UNIT	AMOUNT	HOURS/UNIT	HOURS
	PRELIMINARY STRUCT	URE PLANS			
1	Plan, Geometric Data, Concept Alternates, Cost Estimates	Sheet	1	60	60
				Sub Total	60
	FINAL OTPLICTURE	DI ANO			
	FINAL STRUCTURE	PLANS			
	Substructures Breastwall/Stub Abutments	EA	2	10 1	
2					
2		EA		40	80
	Superstructure - 1 Span			40	80
3	Superstructure - 1 Span Prefabricated Bridge	No. Spans	1	40	80
3	Superstructure - 1 Span Prefabricated Bridge Miscellaneous	No. Spans	1		
3	Superstructure - 1 Span Prefabricated Bridge Miscellaneous Title Sheet	No. Spans Sheet	1	16	16
3	Superstructure - 1 Span Prefabricated Bridge Miscellaneous Title Sheet General Notes Sheet	No. Spans	1		
3 4 5	Superstructure - 1 Span Prefabricated Bridge Miscellaneous Title Sheet	No. Spans Sheet Sheet	1 1 1	16 8	16

	PRODUCTION-H	IOUR WORKSHEET								
COUN	TY Fayette	ITEM NO.								
ROUT	E Armstrong Mill Road Improvements	CONSULTANT Integrated Engineering								
DESC	RIPTION Structure Design	PREPARED BY Sewell								
PROJI	ECT TYPE LPA	DATE November 21, 2017								
		-								
	TOTAL STRUCTURAL PRODUCTION-HOUR SUMMARY									
No.	ITEM	UNIT AMOUNT HOURS/UNIT HOURS								
	Final Plans									
1	Armstrong Mill Road Improvements	LS 1 212								
2		LS								
3		LS								
	Total Structure Hours	212								
	Shop Plans									
1		LS 0								
2		LS								
	Total Shop Plan Hours	0								

## **CLASSIFICATIONS AND PERCENTAGES FOR DESIGN**

COUNTY: Fayette	Escalation:	
PROJECT : Armstrong Mill Sidewalks	Estimated Notice to Proceed:	2/15/2018
UPN:	Estimated End of Project:	9/13/2018
FED.NO:	midpoint	5/31/2018
ITEM NO : 7-3213	rate = 2.93%	
<del></del>		

period = 0.86 factor = 0.02515

<sup>\*</sup> effective 7/21/2017

				CLASSIF	ICATIO	NS, CEF	TIFIED	/ AUDITI	D RATI	ES, AND	PERCE	NTAGE	S
DESCRIPTION		AVERAGE RATE	Principal	Project Manager	Project Engineer	Engineer in-Training	CADD Tech	Professional Land Surveyor	Field Technicians	Stuctural Project Manager			TOTAL PERCENT
		`	\$70.00	\$50.75	\$42.00	\$28.35	\$29.00	\$38.75	\$23.25	\$51.00	\$0.00	\$0.00	] [
			\$71.76	\$52.03	\$43.06	\$29.06	\$29.73	\$39.72	\$23.83	\$52.28	\$0.00	\$0.00	
A.	SURVEY TOTAL	\$ 39.17	5%	10%			10%	60%	15%				100%
B.	LINE AND GRADE TOTAL	/ \$ 42.59	10%	40%		40%	10%						100%
C.	UTILITY COORDINATION TOTAL	\$ 47.45	10%	40%	35%	10%	5%						100%
D.	RIGHT OF WAY PLANS TOTAL	A \$ 47.45	10%	40%	35%	10%	5%						100%
E.	FINAL PLANS TOTAL	\$ 47.45	10%	40%	35%	10%	5%						100%
F.	MEETINGS TOTAL	\$ 61.90	50%	50%								1	100%
G.	PUBLIC INVOLVEMENT TOTAL	\$ 61.90	50%	50%									100%
H.	STRUCTURES TOTAL	\$ 50.08	10%		45%					45%			100%
		\$ ·											0%



October 9, 2017

Mr. David Moses, PE, PLS Integrated Engineering, PLLC 166 Prosperous Place Suite 220 Lexington, Kentucky 40509

Re: Cost Estimate 1

Geotechnical Exploration

Armstrong Mill Road Improvements - Pedestrian Bridge

Fayette County, Kentucky

Geotechnology Proposal No. P030478.01

This letter and the attached Kentucky Transportation Cabinet (KYTC) Forms TC 66-521 and TC 66-204 represent our cost estimate to perform geotechnical drilling, laboratory testing, and engineering for the proposed pedestrian bridge associated with the Armstrong Mill Road Improvements project in Fayette County, Kentucky. We understand the pedestrian bridge will be a single-span structure that will cross a tributary of West Hickman Creek approximately 150 feet west of the intersection of Armstrong Mill Road and Greentree Road. The geotechnical services are estimated to be \$12,959.76 as detailed on the attached forms.

We appreciate the opportunity to consult with you on this project. If you have any questions and/or comments, please do not hesitate to contact us.

Respectfully submitted, **GEOTECHNOLOGY**, **INC**.

William T. Basich, PE Senior Project Manager

WTB/LJC:wtb

Attachments: Cost Estimate on KYTC Forms TC 66-521 and TC 66-204

## KENTUCKY TRANSPORTATION CABINET Division of Structural Design

Geotechnical Branch

	COUNTYFayette	١	TEM#	-		MARS#			•
	REGION # 2 RANK 1	Agr	eement#_	1		ESTIMATE #			1
		u	NIT PRICE						TOTAL
1	Rock Coring	\$	44.45	per foot	x	30	=	\$	1,333.50
2	Rock Core Floating Equipment	\$	66.67	per foot	x		=	\$	<u> </u>
3	Rock Sounding	\$_	14.02	per foot	x		=	\$	
4	Rock Sounding Floating Equipment	\$	21.03	per foot	x		=	\$	
5	Standard Penetration Test	\$	112.17	per sample	x	2	=	\$	224.34
6	SPT on Floating Equipment	\$	168.25	per foot	x		=	\$	
7	Thin-Walled Tube Sample	\$	153.21	per sample	x	4	=	\$	612.84
8	Thin Walled tubes on Floating Equipment	\$	229.81	per foot	x		=	\$	•
9	Field Vane Shear Test	\$	280.42	per test	x		=	\$	
10	Field Vane Shear Test on Floating Equipment	\$_	420.62	per test	x		=	\$	
11	Cased Observation Well	\$	159.43	per well	x	<del></del>	=	\$_	
12	Drill Hole for Slope Inclinometer Casing	\$	11.10	per foot	x		=	<u>\$</u>	
13	Pavement Cores	\$	115.57	per foot	x		=	\$	
14	Grouting Intervals, 6 Inch Auger	\$	8.72	per foot	x	50	=	\$	436.00
15	Grouting Intervals, 4 Inch Auger	\$	8.72	per foot	x		=	\$	
16	Grouting Intervals, Rock Core	\$	8.72	per foot	x		=	\$	·
17	Moisture Content Sample	\$	80.12	per sample	x		=	\$	-
18	Bag Sample	\$	70.10	per sample	x		=	\$	
19	Visual Inspection and Logging Rock Exposure	\$	9.62	per foot	x		=	\$	
20	Logging Cores (250 ft per 8 hrs)	\$	3.52	per foot	x	30	=	\$	105.60
21	GINT Production of Logs	\$	300.00	lump sum	x	1	=	\$	300.00
22	Undisturbed Tube Extraction	\$	30.74	per tube	x	4	=	\$	122.96

	COUNTY Fayette	_ ITEM #			_		
23	Moisture Content Test	\$ 15.3 <b>7</b>	per test	x	2	=	\$ 30.74
24	Soil Classification	\$ 245.88	per test	x	4	=	\$ 983.52
25	Wash Gradation	\$ 61.47	per test	x			\$ 
26	Moisture Density, CBR, and Soil Classificaton	\$ 583.97	per test	x			
27	Moisture Density	\$ 184.41	per test	x		=	\$ 
28	Slake Durability Index and Jar Slake Test	\$ 76.84	per test	x		=	\$
29	Unconfined Compression Test on Rock	\$ 122.94	per test	x		=	\$
30	Unconfined Compression Test on Soil	\$ 61.47	per test	X		=	\$ 
31	UU Triaxial Test	\$ 122.94	per test	x		=	\$ 
32	One Dimensional Consolidation	\$ 553.23	per test	x		=	\$
33	CU Triaxial Test with Pore Pressure Measurements	\$ 368.82	per test	x		=	\$ 
34	CU Triaxial Test (Large Scale) with Pore Pressure Measurements	\$ 614.70	per test	x		=	\$ 
35	Resilient Modulus Test	\$ 614.70	per test	x		=	\$ 
36	Remolding Sample for Permeability or Triaxial Testing	\$ 61.47	per sample	x		=	\$ 
37	Direct Shear Test	\$ 215.15	per test	X		=	\$ 
38	Direct Shear Test (Large Scale)	\$ 614.70	per test	x		=	\$ 
39	Constant Head Permeability Test on Granular Soil	\$ 307.35	per test	x		=	\$ 
40	Falling Head Permeability Test on Cohesive Soil	\$ 491.76	per test	x		=	\$ <del></del>
41	Falling Head Permeability Test on Rock	\$ 1014.26	per test	X		=	\$ 
42	Slope Stability Analysis	\$ 529.12	per analysis	x		=	\$ 
43	Settlement Analysis	\$ 716.54	per analysis	x		=	\$ 
44	Deep Foundation Analysis	\$ 716.54	per analysis	x		=	\$ 

	COUNTY Fay	ette	_ ITI	EM#	-					
45	Wave Equation Driveability	/ Analysis	\$	716.54	per analysis	x		=	<u>\$</u>	
46	Negative Skin Friction Ana	lysis	\$	415.22	per analysis	x		=	\$	
47	<b>Bearing Capacity Analysis</b>		\$	529.12	per analysis	x		=	\$	
48	Retaining Wall Analysis		\$	830.44	per analysis	x		=	\$	
49	Dozer Working Time		\$	149.96	per hour	x		=	\$	
50	Trackhoe Working Time		\$	169.96	per hour	×		=	\$	
51	Water Hauling		\$	77.86	per hour	×		=	\$	
52	Mobilization/Demobilizatio	n of Drill Eq.	\$		per mile/crew on Administration		168 x No. of Crews	= =	\$ \$	672.00 250.00
53	Mobilization/Demobilizatio Company Owned Water		\$	4.00	per mile Mobilization	X n Adri	ninistration Fee	=	\$ \$	
54	Mobilization/Demobilizatio Subcontracted Dozer or		\$		per hour	x		=	\$	
55	Mobilization/Demobilizatio Company Owned Dozer		\$	4.00	per mile Mobilization		ninistration Fee	=	\$ \$	
56	Mobilization/Demobilizatio Company Owned Floati		\$		per trip	x		=	\$	
57	Weekly Mobilization		\$	213.86	per week	x		=	\$	
58	Towboat and /or Barge & c (Subcontracted)	crew	\$		per day	X Adr	ninistration Fee	=	\$ \$	
59	Towboat and /or Barge & c (In-House)	crew	\$		per day	X Adr	ninistration Fee	=	\$ \$	
60	Reclamation : Activity		\$	159.32	per hour	x		=	\$	
61	Reclamation: Material Co	ost	\$		per invoice	×		=	\$	
62	Traffic Control (In-House)		\$	159.32	per hour	X Re	ntal Equipment	=	\$ \$	
63	Subcontracted Traffic Con	trol	_\$	1000.00	per invoice	X Adr	1 ninistration Fee	=	\$ \$	1,000.00 100.00
64	Guardrail Removal		\$	200.00	per location	x	0	=	\$	
65	Rental Equipment		\$		per invoice	x		=	\$	
66	Delivery of Cores to Geote	chnical Br.	\$	319.40	per project	x	1	=	\$	319.40

	COUNTY Fayette	_	ITEM #	-					
67	Core Boxes	\$	42.00	per box	× _	2	_ =	\$	84.00
68	Property Contacts	\$	500.00	lump sum	x _	1	_ =	\$	500.00
69	Utility Coordination	\$	397.10	lump sum	x _	1	_ =	\$	397.10
70	Preliminary Plans	\$	635.83	lump sum	x _	1	_ =	\$	635.83
71	Local Meetings	\$	1258.05	per meeting	x _		=	\$	
72	Rock Core Meeting	\$	1139.88	per meeting	× _		_ =	\$	
73	Interim Meetings	\$	2448.90	per meeting	× _		_ =	\$	
74	Drafting	\$	681.53	per sheet	× _	1	_ =	\$	681.53
75	Report Writing	\$	2579.54	lump sum	x _	1	_ =	\$	2,579.54
76	Publication of Reports	\$	179.90	per report	× _	1	_ =	\$	179.90
77	Site Reviews Travel	_\$_	126.00	per day\ per person	x x	1	_ =	\$	
78	Site Reviews Mileage	\$	67.20	per trip	x _	1	_ =	\$	67.20
79	Site Review Project Manager	\$	588.16	per day	x _	1	_ =	\$	588.16
80	Site Review Project Engineer	\$	455.60	per day	x _	1	_ =	\$	455.60
81	Site Review Geologist	\$	439.40	per day	x _		_ =	\$	
82	<b>GINT Testing</b>	\$	300.00	lump sum	× _	1	_ =	\$	300.00
83	Lateral Capacity Estimate for Single Foundation Element	\$	716.54	per test	× _		_ =	\$	
84	Lateral Capacity Estimate for Foundation Element Group	\$	1058.24	per test	× _		_ =	\$	
85	Group Uplift Capacity Estimate	\$	830.44	per test	x		=	\$	
			тот	AL THIS ESTIN	IATE		=	\$	12,959.76
	ACCUMULATED TOTAL ESTIMATES			THROUGH	_		_ =	\$	
				FIRM NAME		Geotec	hnol	ogy,	Inc.
				SIGNED 4	<i>i)</i> .	llia	17	<u> </u>	ا
				DATE		10	0/9/20	017	

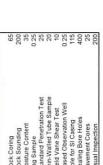
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	DATE 10/1/2017	ATE 10/1/2018	FE 4/1/2018	RATES 4/26/2015	2.93	%00.0	%00.0	196.29% (OH + FCCM)	15%	15%	
	ESTIMATED WORK BEGIN DATE	ESTIMATED WORK END DATE	MIDDLE OF WORK DATE	FYE DATE OF AUDITED RA	DIFFERENNCE IN YEARS	<b>ESSCALATION PER YEAR</b>	ALLOWABLE ESCALATION	ш		PROFIT for Lab	
	Armstrong Mill Pedestrian Bridges										
	PROJECT A	ITEM NO.	r								
	Inc.			al) Urban							
Fayene	1T Geotechnology,		NO S	SSIFICATION (Enter Urban or Run	-	0	1				
	8		35	5		Z	0				

		9	0.0%	%0.0	%00	%0.0	%0.0	%0.0	%0.0	%0.0	%00	%0.0	%0.0	%00	%0.0	%0'0	%000	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	0.0%	0.0%	%0.0	%0.0	%0.0	%0.0	%0.0	%00	%00	%0.0	%0.0	%0.001		100.0%
		ITEM Adminstrative Assistar	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	\$0.00	00.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	\$0.00	\$66.00	_	\$66.00
	6		- 0	%0.0	%0.0	%0.0	100.0%	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0		100.0%
	(OH + FCCM)	ITEM Draffing Technician	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$81.09
	10/1/2017 4/1/2018 4/1/2018 4/2015 2 93 0 00% 0 00% 196.29% 15% 15% 15%	to d	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%00	%0.0	%0.0	%0.0	%0.0	%0.0	100.0%	%0.0	0.0%	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%00	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0		100.0%
	DATE ATE ATES	ITEM Lab Lech	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$61.47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	00.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$61.47
	ORK BEGIN ORK END D ORK DATE AUDITED R. EIN YEARS SCALATION ATE	ţ	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	0.0%	%0.0	%0.0	%0.0	%0.0	0.0%	%0.0	%0.0	%0.0	%00	%0.0	%0.0	700.0%	%00	%0.0	%0.0	%0.0		100.0%
	ESTIMATED WORK BEGIN DATE ESTIMATED WORK END DATE MIDDLE OF WORK MIDDLE OF W	ITEM	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	00.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	00.00	\$0.00	\$0.00	\$109.85	\$0.00	\$0.00	\$0.00	\$0.00		\$109.85
			%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	0.0%	%0.0	%0.0	%0.0	100.0%	0.0%	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	0.0%	%0.0	%0:0	%0.0	%0.0	%0.0	%0.0	0.0%	0.0%	0.0%	%0.0	%0.0		100.0%
	n Bridges	Helper	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	\$0.00	00.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$60.24
GES	II Pedestria	> :	%0.0	%0.0	%00	%0.0	%0.0	%0.0	%0.0	%00	%0.0	%0.0	%0.0	%00	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	0.0%	%0.0	%0.0	%0.0	%0.0	100.0%	%00	%0.0	%00	%0.0	%0.0	%0.0		100.0%
CLASSIFICATIONS AND PERCENTAGES	Amstrong Mil Pedestran Bridges	ITEM	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$79.42	\$0.00	20.00	\$0.00	\$0.00	\$0.00	\$0.00		\$79.42
TIONS AND	PROJECT ITEM NO.	A	%0.0 0.0%	%0.0	30.0%	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	50.0%	%00	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0		%0.0	%0.0		20.0%	0	%0.0	%0.0	%0.0	%0.0	%0.0	0.0%	%00	%0.0	%0.0	%0.0		100.0%
CLASSIFICA		Droingt Engineer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$113.90
J		Jeneral	0.0%	%0.0	0.0%	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%0.0	%00	%0.0	%0.0	0.0%	0.0%	0.0%	%0.0	%0.0	0.0%	%0.0	3.0%	%0.0	%0.0	%0.0	0.0%	0.0%	%0.0	%0.0	0.0%	%0.0	%00	0.0%	0.0%	%0.0	%0.0	%0.0		100.0%
	Urban	Project Manager	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	80.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	\$5.36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	00.00	\$0.00	\$0.00	20.00	\$0.00	\$0.00	\$0.00	\$0.00		\$147.04
		LOADED	\$80.24	\$175.38	\$161.95	\$149.07	\$85.52	\$115.99	\$93.67	\$106.17	\$127.43	\$89.17	\$97.72	\$60.82	\$51.62	\$61.47	\$71.28	\$81.00	\$99.70	\$50.67	\$60.82	\$ 102.22	\$181.34	\$178.61	\$164.68	\$225.43	\$97.72	\$36.36	\$139.80	\$137.79	\$110.91	\$202.50	\$79.42	\$63.07	\$109.85	\$98.03	\$68.25	\$116.80	\$66.00		
	linc.	ESC	\$23.55	\$51.47	\$47.53	\$43.75	\$25.10	\$34.04	\$27.49	\$17.93	\$37.40	\$26.17	\$28.68	\$17.85	\$15.15	\$18.04	\$20.92	\$20.90	\$29.26	\$14.87	\$17.85	\$30.00	\$53.22	\$52.42	\$48.33	\$66.16	\$28.68	\$28.34	\$41.03	\$40.44	\$32.55	\$59.45	\$23.31	\$18.51	\$32.24	\$28.77	\$20.03	\$34.28	\$19.37		
Favette	Geatechnology, Inc. 2 2 2 2 Er Urban or Rural) 1 1 1 1	AVG.	\$23.55	\$51.47	\$47.53	\$43.75	\$25.10	\$34.04	\$27.49	\$17.93	\$37.40	\$26.17	\$28.68	\$17.85	\$15.15	\$18.04	\$20.92	\$25.90	\$29.26	\$14.87	\$17.85	\$30.00	\$53.22	\$52.42	\$48.33	\$66.16	\$28.68	\$28.34	\$41.03	\$40.44	\$32.55	\$59.45	\$23.31	\$18.51	\$32.24	\$28.77	\$20.03	\$34.28	\$19.37		
COUNTY	TANT GION SLASSIFICATION (Ent. 11 No.	POSITION	Administration	Associate Sr. Project Manager A	Associate Sr. Project Manager B	Associate Sr. Project Manager D	Cadd Operator A	CMT Engineer B	CMT Engineer C	Driller Preling Coordinator	Drilling Manager	Engineer / Scientist A	Engineer / Scientist B	Engineer / Scientist D	Field Rep I	Field Rep II	Field Rep III	Fried Safety Specialist	Lab Manager A	Laboratory Technician	Ndt Technician - Level 1	Not Technician - Level 3	Principal Branch Manager 8	Principal Branch Manager C	Principal Engineer / Scientist A	Principal, Vice President B	Project Eng. / Scientist A	Project Eng. / Scientist B	Project Manager E	Project Manager F	Project Manager G	Senior Consultant A	Senior Driller	Senior Driller Helper	Senior Eng. / Scientist B	Senior Eng / Scientist D	Senior Field Rep	Senior Project Engineer A	Wordprocessor A		TOTAL

ATTC FURBIEU RAICS	0000	
Per Diem	\$36,00	per day
Lodging	\$90.00	per night
Mileage	\$0.40	per mile
4 X 4 Pickup Mileage	\$0.53	per mile
Drill Hourly Rate	\$100.00	per hour
Water Pump Hourly Rate	\$4.25	per hour
Heavy Equipment	\$4.00	per mile
Mobilization Administrative Fee	\$250.00	Fixed
Administrative Fee for Subcontracted Towboat/Barge	\$1,000.00	Fixed
Guard Rail Removal	\$200.00	Fixed
Administrative Fee for Subcontracted Traffic	\$100.00	Fixed

Rock Coring	65
Rock Sounding	200
Moisture Content	35
Bag Sample	0.25
Standard Penetration Test	25
Thin-Walled Tube Sample	20
Field Vane Shear Test	10
Cased Observation Well	0.25
Hole for SI Casing	115
Sealing Bore Holes	400
Pavement Cores	25
Visual Inspection	200



## TABULATION OF QUANTITIES FOR INVOICES

Page 1a of 5		16	GROUTING INTERVALS ROCK CORE											0	
Page		15	GROUTING INTERVALS 4" AUGER											0	
	MARS#	14	GROUTING INTERVALS 6" AUGER		25	25							20	50	
		13	PAVEMENT CORES											0	
3ridges		12	DRILL HOLE FOR SLOPE INCLINOMETER CASING											0	
destrian E	Item #	11	CASED OBSERVATION WELL											0	
Armstrong Mill Pedestrian Bridges	-	10	FIELD VANE SHEAR TEST ON FLOATING EQUIPMENT											0	
Armstr		6	FIELD VANE SHEAR TEST											0	
	Estimate #	8	THIN-WALLED TUBE SAMPLE ON FLOATING EQUIPMENT											0	
		7	THIN-WALLED TUBE SAMPLE		2	2							4	4	
Project #	-	9	STANDARD PENETRATION TEST ON FLOATING EQUIPMENT											0	
		2	STANDARD PENETRATION TEST		-	1							2	2	
	ent #	4	ROCK SOUNDING ON FLOATING EQUIPMENT	(,9										0	
	Agreement #	3	ROCK SOUNDING	- (80' x										0	
Fayette		2	ROCK CORING ON FLOATING EQUIPMENT	Hickman										0	
Fa	. Rank #	1	ROCK CORING	f West I	15	15				SI .			30	30	
	t 2		OFFSET	ranch o	×	×							Sheet	This Estimate	All Estimates
County	Region #		STATION	e 1 - Over Branch of West H <mark>ickman</mark> - (80' x <mark>6')</mark>	×	×								This E	All Es
			HOLE NO.	Bridge '	1001	1002									

# TABULATION OF QUANTITIES FOR INVOICES

Page 2a of 5	33	CONSOLIDATED- UNDRAINED TRIAXIAL TEST							75				0	
Page	32	ONE-DIMENSIONAL CONSOLIDATION TEST											0	
	31	UNCONSOLIDATED- UNDRAINED TRIAXIAL TEST											0	
	30	UNCONFINED COMPRESSION TEST ON SOIL						,					0	
	29	UNCONFINED COMPRESSION TEST ON ROCK											0	
	28	SLAKE DURABILITY AND JAR SLAKE TEST											0	
	27	MOISTURE / DENSITY TEST											0	
1	26	MOISTURE / DENSITY, CBR, SOIL CLASSIFICATION											0	
Item #	25	WASH AND SIEVE GRADATIONS											0	
	24	SOIL CLASSIFICATION		2	2							4	4	
	23	MOISTURE CONTENT TEST		1	Į.							2	2	
	22	UNDISTURBED TUBE EXTRACTION		2	2							4	4	
	21	PRODUCTION OF GINT LOGS		-	-							2	2	
	20	LOGGING ROCK CORE	(,9	15	15							30	30	
	19	VISUAL INSPECTION AND LOGGING ROCK EXPOSURES	- (80' x										0	
Fayette	18	BAG SAMPLE	lickman										0	
Fay	17	MOISTURE CONTENT SAMPLE	f West H										0	
		OFFSET	ranch o	×	×							Sheet	This Estimate	All Estimates
County		STATION	1 - Over Branch of West Hickman <mark>- (80'</mark>	×	×								This	All Es
		HOLE NO.	Bridge	1001	1002									

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3a of 5	51	WATER HAULING	4												0	
Page :	20	TRACKHOE WORKING TIME													0	
	49	DOZER WORKING TIME													0	
	48	RETAINING WALL ANALYSES													0	
	47	BEARING CAPACITY ANALYSES													0	
	46	NEGATIVE SKIN FRICTION ANALYSES													0	
	45	WAVE EQUATION DRIVEABILITY ANALYSES													0	
	44	DEEP FOUNDATION ANALYSIS													0	
	43	SETTLEMENT ANALYSES													0	
Item #	42	SLOPE STABILITY ANALYSIS													0	
	14	FALLING HEAD PERMEABILITY TEST ON ROCK													0	
	40	FALLING HEAD PERMEABILITY TEST ON COHESIVE SOIL													0	
	68	CONSTANT HEAD PERMEABILITY TEST ON GRANULAR SOIL													0	
	38	DIRECT SHEAR TEST (LARGE SCALE)								) Wed	12.40				0	
	28	DIRECT SHEAR TEST	(,9 x												0	
	98	REMOLDING SAMPLE FOR PERMEABILITY OR TRAXIAL TESTING	( ,08) - u	拉基的											0	
ette	35	RESILIENT MODULUS TEST	Hickman			No. of					Kel.				0	
Fayette	34	CONSOLIDATED- UNDRAINED TRIAXIAL TEST (LARGE SCALE)	f West I									0.000			0	
	OFFSET		Over Branch of <mark>West Hickman - (80'</mark>	×	×									Sheet	This Estimate	All Estimates
County	STATION			×	×										This E	All Est
		HOLE NO.	Bridge	1001	1002											

## TABULATION OF QUANTITIES FOR INVOICES

	COUNTY	Fayette	ITEM NO		Page 4a of 5
52	MOBILIZATIO	DN/DEMOBILIZATION	OF DRILL EQUIPMENT	168 1	MILES CREWS
53	MOBILIZATIO	ON/DEMOBILIZATION	OF WATER TRUCK	0	MILES
54		ON/DEMOBILIZATION RACKHOE	OF SUBCONTRACTED	\$0.00	HOURLY RATE
55	MOBILIZATIO DOZER	ON/DEMOBILIZATION	OF COMPANY OWNED	0	MILES
56		ON/DEMOBILIZATION ND/OR TOWBOAT	OF COMPANY OWNED	\$0.00	NEGOTIATED PRICE
57	WEEKLY MO	BILIZATION		0	WEEKS
58	SUBCONTRA	ACTED TOWBOAT/BA	RGE	\$0.00	INVOICE
59	COMPANY O	WNED TOWBOAT/BA	RGE/CREW	\$0.00	NEGOTIATED PRICE
60	RECLAMATIO	ON ACTIVITY (10 HOU	IRS EACH FOR 2 MEN)	0	PER DAY HOURS
61	MATERIAL C	ost		\$0.00	INVOICE
62		NTROL (IN HOUSE) S EACH FOR 2 MEN)		\$0.00	HOURS RENTAL EQUIPMEN
63	TRAFFIC CO	NTROL (SUBCONTRA	ACTED)	\$1,000.00	INVOICE
64	GUARDRAIL	REMOVAL		0	LOCATIONS
65	RENTAL EQU	JIPMENT		\$0.00	INVOICE
66	DELIVERY O	F ROCK CORES TO G	SEOTECHNIAL BR.	1	PROJECT(Yes/No - 1
67	CORE BOXE	s		2	BOXES

## **TABULATION OF QUANTITIES FOR INVOICES**

	COUNTY Fayette	ITEM NO.		Page 4b of 5
68	PROPERTY CONTACTS		\$500.00	_LUMP SUM
69	UTILITY COORDINATION		1	Yes/NO - 1/0
70	PRELIMINARY PLANS		1 2 3	Yes/NO - 1/0
71	LOCAL MEETINGS		0	MEETINGS
72	ROCK CORE MEETINGS		0	MEETINGS
73	INTERIM MEETINGS		0	MEETINGS
74	DRAFTING		1	SHEETS
75	REPORT WRITING		1	Yes/NO - 1/0
76	PUBLICATION OF REPORTS		1	Reports
77	SITE REVIEWS TRAVEL		0	DAYS
			1	PERSONS
78	SITE REVIEWS MILEAGE		1	TRIPS
79	SITE REVIEW PROJECT MANAGER		1	DAYS
80	SITE REVIEW PROJECT ENGINEER		1	DAYS
81	SITE REVIEW GEOLOGIST		0	DAYS
82	GINT TESTING		1	Yes/NO - 1/0
	Firm Name			
	Signed	_		
	Date	_		

## 70. PRELIMINARY PLANS

1)	Project Engineer
	Audited Wage Rate

Roadway Boring Plan

Review Previous Information and Mapping Culvert Boring Plan (2.0 Hrs per Culvert) Bridge Boring Plan (4.0 Hrs per Bridge) Wall Boring Plan (3.0 Hrs per Wall)

Hours

Hrs
3

Sub-total

\$341.70

2) Project Manager Audited Wage Rate

Roadway Plan Review

Culvert Plan Review (0.5 Hrs per Culvert) Bridge Plan Review (1.0 Hrs per Bridge) Wall Plan Review (1.0 Hrs. per Wall)

Hours

Hrs 0 1

Sub-total \$147.04

 Drafting Audited Wage Rate Hrs

1

Sub-total \$81.09

4) Administrative Services Audited Wage Rate Hrs

Sub-total \_\_\_\_\$66.00

\$1,258.05 Per Meeting

Cost \$635.83 Lump Sum

Cost

## 71. LOCAL MEETINGS (Conducted at Office or KYTC)

Project Manager     Audited Wage Rate	Hrs 4	Sub-total	\$588.16
Project Engineer     Audited Wage Rate	Hrs 4	Sub-total	\$455.60
Drafting     Audited Wage Rate	Hrs 1	Sub-total	\$81.09
4) Administrative Services	Hrs 1	Sub-total	\$66.00
5) Mileage	Mile/Trip	Sub-total	\$67.20

72. ROCK CORE MEETING				
Project Manager     Audited Wage Rate	Hrs 4		Sub-total	\$588.16
Project Engineer     Audited Wage Rate	4		Sub-total	\$455.60
Administrative Services     Audited Wage Rate	Hrs 1		Sub-total	\$66.00
Helper     Audited Wage Rate	Hrs 0.5	Layout and Pickup of Co	ores Sub-total	\$30.12
			Cost	<b>\$1,139.88</b> Per Meeting
73. INTERIM MEETING (Conduct	ted within District	and On-Site including	Joint Meeti	nas)
				90/
Project Manager     Audited Wage Rate	Hrs 8		Sub-total	\$1,176.32
Project Engineer     Audited Wage Rate	8		Sub-total	\$911.20
Mileage     KYTC Mileage Rate	Mile/Trip 168		Sub-total	\$67.20
4) Drafting	Hrs 2		Sub-total	\$162.18
Administrative Services     Audited Wage Rate	Hrs 2		Sub-total	\$132.00
		Ĭ	Cost	\$2,448.90 Per Meeting
74. DRAFTING				
1) Drofting Tachnician	Us/Chaot	# Chasta		
Drafting Technician     Audited Wage Rate	Hr/Sheet 7	# Sheets 1	Sub-total	\$567.63
Project Engineer     Audited Wage Rate	Hr/Sheet 1	# Sheets 1	Sub-total  Cost	\$113.90 <b>\$681.53</b> per sheet

75. REPORT WRITING					
Project Engineer		_	Hrs		
Audited Wage Rate	Develop Geotechnical Notes Design Team Interaction and proje	-+	1		
	correspondence	Cl			
	Review Prior to Meetings		10-14-6-4		
1a. Roadway	Laboratory Testing: Analysis and F	Review			
	Develop Roadway Report				
1b. Structures	Structure Testing and Analysis Rec Develop Structure Reports	quests	1 16		
		Hours	18		
			Sub-total	\$2,050.20	Only pay h
			Hrs		
2) Geologist	Evaluate Cut Slopes				
Audited Wage Rate	(2 Hrs per section) Review Geologic Mapping				
	Report Development of Alignment				
		Hours	0		
			Sub-total	\$0.00	
3) Project Manager					
<ol> <li>Project Manager         Audited Wage Rate     </li> </ol>	Total Hours of 1 and 2 X 20%	Hours	3.6		
			Sub-total	\$529.34	
			Cost	\$2,579.54 Lump Sum	

## 76. REPORT PUBLICATION (3 bound copies as well as PDF copy and all electronic files)

<ol> <li>Project Engineer         Audited Wage Rate     </li> </ol>	Hrs  1 per report	Sub-total \$113	.90
Administrative Services     Audited Wage Rate	Hrs 1 per report	Sub-total \$66	responding to comments from Lochner, CTS, KYTC .00
		Cost \$179	.90 per report

## Wells, Adrian A (KYTC)

From: Gormley, David E (KYTC)

Sent: Monday, December 18, 2017 3:05 PM

To: Harsha Wijesiri; Spencer, Amanda R (KYTC); David Moses

Cc: Wells, Adrian A (KYTC); Pelfrey, Eric A (KYTC); Sprague, Robin L (KYTC-D07); Frazier, Brad

B (KYTC); Scott, Erik T (KYTC-WSC)

Subject: Integrated | Fayette | 7-3213 | LPA | Armstrong Mill | Negotiation

Attachments: Integrated - Fayette - 7-3213 - LPA - Armstrong Mill -Negotiation.xls; Integrated - Fayette -

7-3213 - LPA - Armstrong Mill - Structures - Negotiation.xlsx

## Harsha,

The Division of Professional Services has received independent estimates from Integrated Engineering and our LPA Project Manager for the Armstrong Mill improvements in Fayette County. This project was assigned under the Statewide LPA Project Services Master Agreement. After reviewing the total hours, the Integrated team estimated 972 hours against the Department's 2024 hours. Brad Frazier has confirmed by email that the Scope of Work was understood by both parties and that the KYTC estimate was probably not reflective of the less intensive level of effort needed to complete this small LPA project. Therefore, the Division of Professional Services is comfortable accepting all **972 hours** as submitted by Integrated. For your reference, an Excel file of the hours submitted by both parties are attached to this email, with the Department's hours in **black font**, Integrated's hours in **blue font**, and the difference to the right in **red font**. The negative "difference" amounts reflect areas where the Department was higher than Integrated.

Integrated also submitted 212 Bridge Design hours for Structure Design of the pedestrian bridge and KYTC Division of Structures submitted 284 Structure hours. After comparing both individual items and the overall total hours, the estimates are close enough to each other and there appears to be a good understanding of anticipated level of effort to accomplish this work. We are comfortable with the 212 hours offered by Integrated.

In addition to the above hours, Integrated submitted \$12,959.76 for Geotechnical Services. The estimate for these services is being reviewed by Erik Scott and the Fee proposal should be revised to reflect his recommendations when received.

Please coordinate with Adrian to ensure that all items that have already been received are accurate before submitting to her the fully negotiated fee proposal package. To aid in the preparation of consultant fee proposals, several checklists are provided in a new document on the Professional Services webpage at: Fee Proposal Checklists for Contracts Agreements and Modifications.pdf. This includes Checklists for Minutes of Negotiations and Letter Agreements. We look forward to working with you on this project.

Thanks and we sincerely appreciate your honesty & integrity for providing accurate estimates for only the needed services,

## David Gormley

Kentucky Transportation Cabinet Division of Professional Services 200 Mero Street

Frankfort, Kentucky 40622 Phone: 502-782-5107

email: David.Gormley@ky.gov

## Wells, Adrian A (KYTC)

From: Scott, Erik T (KYTC-WSC)

Sent: Friday, December 22, 2017 4:35 PM

To: Wells, Adrian A (KYTC); Pelfrey, Eric A (KYTC)

Cc: Gormley, David E (KYTC); Basich, Bill; Czor, Lee; Carpenter, Michael L (KYTC-WSC)

Subject: RE: Armstrong Mill Sidewalks Project - Statewide LPA Services - Approved Geotech Proposal

Attachments: Geotech Cost Estimate - Armstrong Mill Ped Bridges - Fayette.pdf

## Adrian / Eric,

I checked with Geotechnology on a couple questions I had, which they addressed. I approve Geotechnology's proposal of \$12,959.76 for the subject LPA project.

If you need anything else just let me know.

Thanks and have a good Christmas & New Year's.

Erik

## Erik Scott, P.E.

Kentucky Transportation Cabinet

Division of Structural Design, Geotechnical Branch

Office: (502) 564-2374 Direct: (502) 782-3819 Fax: (502) 564-4839 Email: Erik.Scott@ky.gov

This transmission is sent on behalf of the Kentucky Transportation Cabinet and may be privileged, proprietary or confidential. It is only for the use of the intended recipient. If you are not the intended recipient or a person responsible for delivering this transmission to the intended recipient, you shall not disclose, copy, or distribute this transmission or take any action in reliance on it. If you have received this transmission in error, please notify us immediately by telephone at (502) 564-2374 or by e-mail at Erik. Scott@ky.gov. Please dispose of and delete this transmission. Thank you!

From: Wells, Adrian A (KYTC)

Sent: Thursday, December 21, 2017 1:58 PM
To: Scott, Erik T (KYTC-WSC) < Erik. Scott@ky.gov>

Cc: Gormley, David E (KYTC) <David.Gormley@ky.gov>; Pelfrey, Eric A (KYTC) <Eric.Pelfrey@ky.gov>

Subject: RE: Armstrong Mill Sidewalks Project - Statewide LPA Services

Erik- Just sending a reminder on this one. Thank you!

From: Wells, Adrian A (KYTC)

Sent: Monday, December 11, 2017 9:18 AM

To: Scott, Erik T (KYTC-WSC)

Cc: Gormley, David E (KYTC); Pelfrey, Eric A (KYTC)

Subject: FW: Armstrong Mill Sidewalks Project - Statewide LPA Services

Erik- This is part of an LPA project that has Geotech involved. I've checked the rates and they are correct. I need your approval the Cost Estimate of 12,959.76. Thank you!

From: Frazier, Brad B (KYTC)

Sent: Wednesday, November 29, 2017 2:36 PM

To: Wells, Adrian A (KYTC)

Cc: Pelfrey, Eric A (KYTC); Spencer, Amanda R (KYTC)

Subject: Armstrong Mill Sidewalks Project - Statewide LPA Services

Hello Adrian. Attached is a copy of Integrated's proposed fee for design services for the Armstrong Mill Sidewalks Project in Fayette County, item number 07-3213. Due to the number of man hours, District 7 and the Division of Structural Design did independent estimates which are also attached (Excel files)

Could Professional Services please review the proposed fee and provide negotiations for this assignment? David Moses is the Integrated contact (<a href="mailto:david@int-engineering.com">david@int-engineering.com</a>) and Jackie Jones in OLP is the project manager. After the fee is finalized I'll forward over the template and request a Letter Agreement be drafted.

If you have any questions or need additional information, please let me know. Thanks Adrian.