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December 16, 2019

Attention: Mr. Matt Dobecka
Collin County Purchasing
2300 Bloomdale Rd. Ste. 3160
McKinney, TX 75071

Project Name: Collin County Outer Loop
Project Number: WFXQ0700

Subject: Request for Contract Amendment – Purchase Order #19003823_2019

Mr. Dobecka,

The purpose of this letter is to formally request an amendment to Jacobs' existing contract with the County for engineering services for the final design of Collin County Outer Loop from SH 289 to FM 2478 (Preston Rd to Custer Rd). We identified an error in our contract documents whereby two line items from the Fee Proposal were inadvertently omitted from the Fee Proposal Summary, which resulted in our purchase order (PO #19003823_2019) amount being \$9,019.60 short of the total fee we negotiated with the Engineering Department.

We apologize for the inconvenience and recognize that Jacobs should have caught this discrepancy prior to execution of the Engineering Agreement. However, we respectfully request a contract amendment to match the fee we negotiated in good faith with the County.

Please find attached exhibits showing the discrepancies, and please contact me for any additional information you require to process this request.

Sincerely

A handwritten signature in blue ink, appearing to read "J. Beaird".

Justin D. Beaird, PE
Project Manager
214-649-3420
justin.beaird@jacobs.com

Copies to: Jeff Durham, Project File

2019-269

EXHIBIT "C"

PAYMENT SCHEDULE

Invoices will be transmitted to the County on a monthly basis based on a percentage of completion up to that time, and payments to the Engineer will be made as follows:

A derivation of the total contract fee amount is attached.

SUMMARY
JACOBS ENGINEERING GROUP, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

<i>Collin County Outer Loop Segment 3B East of SH 289 to Custer Road</i>	
BASIC SERVICES	
Jacobs Engineering Group (Engineering Design)	\$ 629,991.49
Total Basic Services	\$ 629,991.49
SPECIAL SERVICES	
Jacobs Engineering Group (Field Survey and Geotech)	\$ 45,859.08
Professional Services Industries, Inc. (Geotechnical Testing and Engineering)	\$ 75,276.00
Total Special Services	\$ 121,135.08
INCREMENTAL SERVICES	
Jacobs Engineering Group (Crossover Design and Utility Coordination)	\$ 59,898.86
SAM, Inc. (Subsurface Utility Engineering)	\$ 50,000.00
Total Incremental Services *	\$ 109,898.86

* Incremental Services are Time and Materials Basis, Not to Exceed

Total Reimbursable Direct Expenses	\$ 1,492.00
Total Markup on Subconsultants (10%)	\$ 7,527.60

We respectfully request that these two line items be added to this Summary and increase the PO amount by \$9,019.60 to a revised total of \$870,045.03.

FEE PROPOSAL
JACOBS ENGINEERING GROUP, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

Collin County Outer Loop E. of SH 289 to FM 2478	Project Manager	Senior Engineer	Project Engineer	EIT	CAD Technician	Clerical	
Rate	\$ 201.04	\$ 175.50	\$ 137.21	\$ 111.71	\$ 110.00	\$ 73.01	
BASIC SERVICES							
Task 1 - Assembly and Review of Data							
Collection of Data, Reports and Maps			8				8
Review of Data			8				8
Project Design Criteria Tabulation			4	4		8	16
Task 1 Total Hours	0	0	20	4	0	8	32
Task 1 Total Labor Costs	\$ -	\$ -	\$ 2,744.20	\$ 446.84	\$ -	\$ 584.08	\$ 3,775.12
Task 2 - Roadway Design							
A. GENERAL							
Title Sheet	8				24		32
Index of Sheets	8		8		24		40
Project Layout Sheets	2		10	20	80		112
Typical Sections (Existing & Proposed)			10	20	80		110
Quantity Summary Sheets			10	30	16		56
B. TRAFFIC CONTROL							
Traffic Control General Notes and Narrative	2		16		16		34
Traffic Control Advance Warning Layout	2		14	16	16		48
Traffic Control Typical Sections	8		60	80	120		268
Traffic Control Plan Sheets	8		80	80	160		328
Assembly of Traffic Control Standards			8		8		16
C. ROADWAY DESIGN							
Horizontal Alignment Data Sheet			10	30	16		56
Removal Plan Sheets			20	40	40		100
Roadway Plan & Profile Sheets	8		120	80	200		408
Cross Street Plan & Profile Sheets			40	80	80		200
Intersection Layout Sheets	8		40	40	80		168
Driveway Profiles / Details / Summary			8	20	16		44
Miscellaneous Roadway Details	2		20	8	20		50
Roadway Cross Sections	8		40	40	80		168
Assembly of Roadway Standards			8		8		16
D. BID PREPARATION (ROADWAY)							
Determination of Roadway Quantities	8		16	24	16		64
Roadway General Notes (60%, 95%, Final)	2		16	8			26
Roadway Cost Estimates (60%, 95%, Final)	2		16	8			26
Roadway Specs, Bid Form and Contract Docs (95% and Final)	20					4	24
E. QUALITY CONTROL (ROADWAY)							
Roadway QA/QC Plan Review	10		50	40		4	104
Task 2 Total Hours	106	0	620	664	1100	8	2498
Task 2 Total Labor Costs	\$ 21,310.24	\$ -	\$ 85,070.20	\$ 74,175.44	\$ 121,000.00	\$ 584.08	\$ 302,139.96
Task 3 - Drainage Design							
A. HYDROLOGY							

FEE PROPOSAL
JACOBS ENGINEERING GROUP, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

Collin County Outer Loop E. of SH 289 to FM 2478	Project Manager	Senior Engineer	Project Engineer	EIT	CAD Technician	Clerical	Totals
Rate	\$ 201.04	\$ 175.50	\$ 137.21	\$ 111.71	\$ 110.00	\$ 73.01	
Offsite Drainage Area Map			32				32
Storm Sewer Drainage Area Map			40	40	16		96
Runoff Computations and Sheet Tabulations			16		16		32
B. HYDRAULIC DESIGN							
Culvert Hydraulic Data Sheet		2	16		16		34
Inlet Computations and Sheet Tabulations			120		40		160
Storm Sewer Hydraulic Data and Sheet Tabulations			120	16	40		176
Wilson Creek Hydraulic Data Sheet		8	8		24		40
Wilson Creek HEC-RAS Final Design		8	8	8	8		32
Wilson Creek HEC-RAS Floodway Final Design			8	8			16
Wilson Creek Scour Analysis	2	8	8		2		20
C. DRAINAGE STRUCTURE DESIGN							
Culvert Layouts (Non-Bridge Class)	2	2	8	8	16		36
Storm Sewer Plan & Profile Sheets	4	8	60		120		192
Miscellaneous Drainage Details	1		4	8			13
Assembly of Drainage Standards	1		4	8	4		17
D. OPEN CHANNEL DESIGN							
Ditch / Channel Layout Sheets	2		16	16	20		54
Wilson Creek Channel Layout Sheets	2		16	16	20		54
E. SW3P							
SW3P Data Sheet				8	8		16
SW3P Layouts				16	16		32
F. BID PREPARATION (DRAINAGE)							
Determination of Drainage Quantities	1		8	8	8		25
Drainage General Notes (60%, 95%, Final)	2		16				18
Drainage Cost Estimates (60%, 95%, Final)	3		3	6			12
Drainage Specifications (95% and Final)	2		8			4	14
G. QUALITY CONTROL (DRAINAGE)							
Drainage QA/QC Plan Review	4	32	8	8	8	4	64
Task 3 Total Hours	26	68	527	174	382	8	1185
Task 3 Total Labor Costs	\$ 5,227.04	\$ 11,934.00	\$ 72,309.67	\$ 19,437.54	\$ 42,020.00	\$ 584.08	\$ 151,512.33
Task 4 - Traffic Design							
A. SIGNING & PAVEMENT MARKING							
Signing & Pavement Marking Layout	1	10	20	60	80		171
Summary of Small Signs	1	2	4	8	8		23
Assembly of Sign and Marking Standards		2	4	8	8		22
B. ILLUMINATION							
Safety Lighting at Coit and Custer Intersections	2	4	8	16	16		46
C. BID PREPARATION (TRAFFIC)							
Determination of Traffic Quantities		2	4	8	8		22
Traffic General Notes (60%, 95%, Final)	1	1	2	4			8

FEE PROPOSAL
JACOBS ENGINEERING GROUP, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

Collin County Outer Loop E. of SH 289 to FM 2478	Project Manager	Senior Engineer	Project Engineer	EIT	CAD Technician	Clerical	Totals
Rate	\$ 201.04	\$ 175.50	\$ 137.21	\$ 111.71	\$ 110.00	\$ 73.01	
Traffic Cost Estimates (30%, 60%, 95%, Final)	1	4	8	8			21
Traffic Specifications (95% and Final)	1	1	2	4		4	12
D. QUALITY CONTROL (TRAFFIC)							
Traffic QA/QC Plan Review	2	12	8	8		4	34
Task 4 Total Hours	9	38	60	124	120	8	359
Task 4 Total Labor Costs	\$ 1,809.36	\$ 6,669.00	\$ 8,232.60	\$ 13,852.04	\$ 13,200.00	\$ 584.08	\$ 44,347.08
Task 5 - Bridge Design							
A. WILSON CREEK							
Bridge Layouts	2	8	16	24	24		74
Summary of Quantities		4	4	6	6		20
Control Elevations		2	6	8			16
Foundation Design		2	8	16			26
Beam Design		2	8	16			26
Boring Details		1	6	12	16		35
Abutment Details		1	12	24	24		61
Bent Details		1	12	16	24		53
Framing Plans		1	12	16	16		45
Slab Plans		1	12	20	24		57
Prepare Bridge Calculations	2	4	8	24			38
Bridge Cost Estimates	2	4	6	12			24
Bridge Specs, Bid Form, and Contract Docs	2	12	12	20			46
B. BID PREPARATION (BRIDGE)							
Bridge Cost Estimates (60%, 95%, Final)	4	8	12	24			48
Bridge Specifications (95% and Final)	2	8	12	24		4	50
C. QUALITY CONTROL (BRIDGE)							
Bridge QA/QC Plan Review	4	24	12	12		4	56
Task 5 Total Hours	18	83	158	274	134	8	675
Task 5 Total Labor Costs	\$ 3,618.72	\$ 14,566.50	\$ 21,679.18	\$ 30,608.54	\$ 14,740.00	\$ 584.08	\$ 85,797.02
Task 6 - Project Management							
A. PROJECT MANAGEMENT							
Schedule, Progress Reports, and Invoices (18 months)	36					90	126
Progress Meetings (4)	12	12	12			6	42
Miscellaneous Coordination Meetings (18)	54	18	54			8	134
Task 6 Total Hours	102	30	66	0	0	104	302
Task 6 Total Labor Costs	\$ 20,506.08	\$ 5,265.00	\$ 9,055.86	\$ -	\$ -	\$ 7,593.04	\$ 42,419.98
Total Hours (Basic Services)	261	219	1451	1240	1736	144	5051
Total Labor Costs (Basic Services)	\$ 52,471.44	\$ 38,434.50	\$ 199,091.71	\$ 138,520.40	\$ 190,960.00	\$ 10,513.44	\$ 629,991.49
	8%	6%	32%	22%	30%	2%	100%
SPECIAL SERVICES							

FEE PROPOSAL
JACOBS ENGINEERING GROUP, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

Collin County Outer Loop E. of SH 289 to FM 2478	Project Manager	Senior Engineer	Project Engineer	EIT	CAD Technician	Clerical	Totals
Rate	\$ 201.04	\$ 175.50	\$ 137.21	\$ 111.71	\$ 110.00	\$ 73.01	
Task SS1 - Survey							
A. TOPOGRAPHIC SURVEY	REFER TO SURVEY SHEET						
Topographic Survey							
B. RIGHT OF ENTRY							
Right of Entry							
Task SS1 Totals							
Task SS2 - Geotechnical							
A. GEOTECHNICAL INVESTIGATION	REFER TO GEOTECH SHEET						
Geotechnical Investigation							
B. RIGHT OF ENTRY							
Right of Entry Coordination	8		16			20	44
Task SS2 Totals	8	0	16	0	0	20	44
Total Hours (Special Services)	8	0	16	0	0	20	44
Total Labor Costs (Special Services)	\$ 1,608.32	\$ -	\$ 2,195.36	\$ -	\$ -	\$ 1,460.20	\$ 121,135.08
INCREMENTAL SERVICES							
Task IS1 - Roadway Design (Crossover)							
Roadway, Drainage and Traffic Engineering	REFER TO RATES ABOVE						
Task IS1 Total Cost (Not to Exceed)							\$ 50,000.00
Task IS2 - Subsurface Utility Engineering							
Subsurface Utility Engineering	REFER TO SAM, INC. RATES IN SCOPE						
Task IS2 Total Cost (Not to Exceed)							\$ 50,000.00
Task IS3 - Utility Coordination							
Utility Coordination	2		40				42
Utility Agreements	2		10	20			32
Task IS3 Total Cost (Not to Exceed)	4		50	20			\$ 9,898.86
Total Costs (Incremental Services)							\$ 109,898.86
Reimbursable Direct Expenses							
8.5" x 11" Copies				Unit	Quantity	Rate	Total
11" x 17" Copies				Each	1500	\$ 0.10	\$ 150.00
Mileage				Each	3000	\$ 0.15	\$ 450.00
Postage (Express Mail)				Mile	1500	\$ 0.58	\$ 870.00
				Each	40	\$ 0.55	\$ 22.00
Total Reimbursable Direct Expenses							\$ 1,492.00
Total Markup on Subconsultants (10%)							\$ 7,527.60
Total Jacobs Fee							\$ 684,870.17

These two highlighted items did not get incorporated into the Fee Summary, totalling \$9,019.60

SURVEY FEE ESTIMATE
JACOBS ENGINEERING GROUP, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

TASK/LABOR	SENIOR SURVEY STAFF	SENIOR SURVEY PROJECT MANAGER	SURVEY PROJECT MANAGER	SURVEY PRODUCTION MANAGER	SENIOR SURVEY/LASER SCANNING TECHNICIAN	SURVEY TECHNICIAN	FIELD COORDINATOR	CLERICAL / ADMIN	ABTRACTOR (IN-HOUSE)	ONE-MAN FIELD CREW	TWO-MAN FIELD CREW	TOTAL PER TASK
Detailed Topographic Survey of CR 88 Connection			2	2		5						\$ 2,585.00
Detailed Topo of Wilson Creek			2	10		12					10	\$ 13,740.00
Detailed Topo of Un-Named Tributary			2	2		10					20	\$ 4,610.00
Detailed Topo of Coit Road Intersection			2	2		10						\$ 6,210.00
Detailed Topo of Custer Road Intersection			2	2		10					30	\$ 6,210.00
Obtain Right-Of-Entry for 12 Parcels			4			8		8			30	\$ 1,920.00
												\$ -
												\$ -
												\$ -
TOTAL HOURS	0	0	14	18	0	55	0	8	0	0	160	255
HOURLY RATE			\$ 160.00	\$ 120.00	\$ 95.00	\$ 85.00	\$ 120.00	\$ 75.00	\$ 60.00	\$ 85.00	\$ 160.00	\$ 35,275.00

DIRECT EXPENSES	RATE	QUANTITY	ESTIMATE
Mileage	\$ 0.58	2400	\$ 1,392.00
Survey Equipment Fees	\$ 24.00	160	\$ 3,840.00
Postage	\$ 0.55	12	\$ 6.60
Certified Letter	\$ 6.80	12	\$ 81.60
			\$ -
			\$ -
			\$ -
TOTAL DIRECT EXPENSES			\$ 5,320.20

TOTAL ESTIMATE	\$ 40,595.20
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Field ☐
Office ☐
PM ☐
ODE ☐

GEOTECHNICAL FEE ESTIMATE
PROFESSIONAL SERVICES INDUSTRIES, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

PROVIDER NAME: PROFESSIONAL SERVICES INDUSTRIES, INC.

	PRINCIPAL	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	ENGINEER- IN-TRAINING	ENGINEER TECH	ADMIN / CLERICAL	TOTAL HRS. & COSTS	COST PER TASK
CONTRACT RATE PER HOUR	\$ 215.00	\$ 150.00	\$ 165.00	\$ 135.00	\$ 110.00	\$ 90.00	\$ 75.00	\$ 60.00		
GEOTECHNICAL BORINGS AND INVESTIGATIONS										
PROJECT PLANNING										
1 PROJECT PLANNING, SCHEDULING and KICKOFF		2	1					1	4	\$ 525.00
2 PREPARING FIELD INVESTIGATION PLAN			1	1					2	\$ 300.00
3 COORDINATION WITH DRILLING SUBCONTRACTORS				1			2		3	\$ 285.00
FIELD INVESTIGATION COORDINATION										
4 ACCESS AND ROE COORDINATION		1		1			2		4	\$ 435.00
5 STAKING AND UTILITY CLEARANCE FOR BORING LOCATIONS						2	4		6	\$ 480.00
6 SITE CLEARING FOR DRILL RIG ACCESS						2	8		10	\$ 780.00
FIELD INVESTIGATION										
7 DRILLING COORDINATION (SUBCONTRACTORS, WORK SCHEDULES, ASSIGNMENTS, ETC.)		1		1			2		4	\$ 435.00
8 DRILLING OVERSIGHT/LOGGING				1		5	60		66	\$ 5,085.00
GEOTECHNICAL LABORATORY DATA EVALUATION										
9 SAMPLE REVIEW/VISUAL CLASSIFICATION				1		4			5	\$ 495.00
10 ASSIGN LAB TESTING				1		2			3	\$ 315.00
11 REVIEW LABORATORY TEST DATA			1	2					3	\$ 435.00
GEOTECHNICAL ENGINEERING & ANALYSES										
12 SOIL BORING LOGS				1		6		8	15	\$ 1,155.00
13 GENERATE SUBSURFACE SOIL PROFILES BASED ON BORING LOGS				4		8			12	\$ 1,260.00
14 PREPARE SOIL PROPERTY PROFILES AND SELECTION OF DESIGN SOIL PARAMETERS	1		1	2		4			8	\$ 1,010.00
15 MSE WALL EXTERNAL STABILITY ANALYSES (BEARING, SLIDING, OVERTURNING, GLOBAL STABILITY)									0	\$ -
16 DESIGN SOIL PARAMETERS FOR CAST IN PLACE RETAINING WALLS INCLUDING GLOBAL STABILITY									0	\$ -
17 EMBANKMENT DESIGN/ANALYSES - BEARING PRESSURES, SLOPE STABILITY, SETTLEMENTS	1		4	8		2			15	\$ 2,135.00
18 CULVERTS CROSSING - BEARING AND EMBEDMENT AND RETAINING WALLS									0	\$ -
19 BRIDGE FOUNDATION RECOMMENDATIONS - AXIAL CAPACITY AND LATERAL SOIL PARAMETERS	1		4	8		2			15	\$ 2,135.00
20 PVR ANALYSES AND SUBGRADE PREPARATION FOR ROADWAY TO MITIGATE MOVEMENTS	1		8	16		4			29	\$ 4,055.00
21 CONCRETE PAVEMENT DESIGN AND THICKNESS ALTERNATIVES (AASHTO Design Methodology)	1		4	12		2			19	\$ 2,675.00
GEOTECHNICAL REPORT										
22 PREPARATION OF PRELIMINARY GEOTECHNICAL REPORT	2		4	16		8		2	32	\$ 4,090.00
23 PREPARATION OF FINAL GEOTECHNICAL REPORT	1	1	2	4					8	\$ 1,235.00
HOURS SUB-TOTALS										
	8	5	30	80	0	51	78	11	263	\$ 29,320.00
24 CONTRACT RATE PER HOUR	\$ 215.00	\$ 150.00	\$ 165.00	\$ 135.00	\$ 110.00	\$ 90.00	\$ 75.00	\$ 60.00		
25 TOTAL LABOR COSTS	\$ 1,720.00	\$ 750.00	\$ 4,950.00	\$ 10,800.00	\$ -	\$ 4,590.00	\$ 5,850.00	\$ 660.00		
SUBTOTAL FOR LABOR										
										\$ 29,320.00

OTHER DIRECT EXPENSES										
	UNIT	QUANTITY	RATE							TOTAL
GEOTECHNICAL FIELD EXPLORATION										
26 Mobilization/Demobilization of Drilling Rig	LUMP SUM	1	\$ 2,000.00							\$ 2,000.00
28 Site clearing for drill rig access	DAY	2	\$ 3,000.00							\$ 6,000.00
29 Soil Boring/Rock Coring without TCP<60 ft	PER FOOT	300	\$ 32.00							\$ 9,600.00
30 Soil Boring/Rock Coring with TCP<60 ft	PER FOOT	200	\$ 38.00							\$ 7,600.00
31 Soil Boring/Rock Coring with TCP>60 ft	PER FOOT	0	\$ 42.00							\$ -
32 Borehole Grouting - Bentonite Chips	PER FOOT	600	\$ 8.00							\$ 4,800.00
37 Daily Trips - Sample Transportation	DAY	7	\$ 150.00							\$ 1,050.00
GEOTECHNICAL LABORATORY TESTING										
38 Determination of Moisture Content in Soils	EACH	170	\$ 8.00							\$ 1,360.00
39 Liquid Limit (LL), Plastic Limits (PL) and Plasticity Index (PI) of Soils	EACH	52	\$ 50.00							\$ 2,600.00
40 Amount of Minus No. 200 Sieve Material of Soils	EACH	52	\$ 40.00							\$ 2,080.00
41 Determination of Particle Size Analysis of Soils Test (Part I) - Retained +40	EACH	2	\$ 48.00							\$ 96.00
42 Determination of Particle Size Analysis of Soils Test (Part II) - Hydrometer Analysis	EACH	2	\$ 125.00							\$ 250.00

GEOTECHNICAL FEE ESTIMATE
PROFESSIONAL SERVICES INDUSTRIES, INC.
Collin County Outer Loop Segment 3B: East of SH 289 to Custer Road

43	Unconfined Compressive Strength (Soil)	EACH	28	\$ 55.00							\$ 1,540.00
44	Unconfined Compressive Strength (Rock)	EACH	6	\$ 65.00							\$ 390.00
45	Triaxial Compression Test for Undisturbed Soils (UU) or ASTM D2850	EACH	4	\$ 75.00							\$ 300.00
46	One Dimensional Consolidation Properties of Soil	EACH	1	\$ 450.00							\$ 450.00
47	Consolidated Undrained Triaxial Test or ASTM D4767 (includes moisture, PI, -200 and unit weight/each)	EACH	1	\$ 1,200.00							\$ 1,200.00
48	Soil pH	EACH	4	\$ 35.00							\$ 140.00
49	Soil Resistivity	EACH	4	\$ 80.00							\$ 320.00
50	Soil Conductivity	EACH	4	\$ 30.00							\$ 120.00
51	Lime/pH	EACH	4	\$ 90.00							\$ 360.00
52	Sulphate Determination in Soils	EACH	20	\$ 50.00							\$ 1,000.00
53	One Dimensional Free Swell	EACH	10	\$ 75.00							\$ 750.00
54	CBR Testing	EACH	2	\$ 550.00							\$ 1,100.00
55	Organic Content of Soils	EACH	10	\$ 85.00							\$ 850.00
SUBTOTAL OTHER DIRECT EXPENSES											\$ 45,956.00
TOTAL FOR LABOR PLUS EXPENSES											\$ 75,276.00