

**WORK AUTHORIZATION NO. 2**

**PROJECT: On Call Geotechnical Engineering and Materials Testing**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated **February 23, 2017** and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **Kleinfelder, Inc.** (the "Engineer").

Part 1. The Engineer will provide the following Engineering Services set forth in Attachment "B" of this Work Authorization.

Part 2. The maximum amount payable for services under this Work Authorization without modification is **\$20,000.00.**

Part 3. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the Contract.

Part 4. This Work Authorization shall become effective on the date of final acceptance and full execution of the parties hereto and shall terminate on **September 30, 2019.** The Engineering Services set forth in Attachment "B" of this Work Authorization shall be fully completed on or before said date unless extended by a Supplemental Work Authorization.

Part 5. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

Part 6. County believes it has sufficient funds currently available and authorized for expenditure to finance the costs of this Work Authorization. Engineer understands and agrees that County's payment of amounts under this Work Authorization is contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to continue to make payments under this Contract. It is further understood and agreed by Engineer that County shall have the right to terminate this Contract at the end of any County fiscal year if the governing body of County does not appropriate sufficient funds as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination to Engineer.

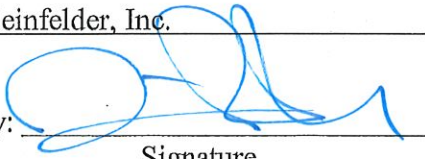
Part 7. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ENGINEER:

Kleinfelder, Inc.

By:



Signature

David R. Boes

Printed Name

VP, Area manager

Title

COUNTY:

Williamson County, Texas

By:

Signature

Printed Name

Title

## LIST OF ATTACHMENTS

Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

## **Attachment A - Services to be Provided by County**

Williamson County Road & Bridge Division personnel will provide project direction, review and oversight.

## **Attachment B - Services to be Provided by Engineer**

The Scope of Services to be provided under the terms of this contract include:

Geotechnical Engineering Studies and Consultation

Construction Materials Engineering and Testing

Environmental Consulting and Testing

A detailed description of the scope of services should be provided for each specific Project Assignment as listed in each Letter of Agreement.

### **Attachment C - Work Schedule**

Work shall begin immediately upon receipt of agreement between County and Kleinfelder on the work schedule and authorization to proceed on assigned services.

**Attachment D - Fee Schedule**

See attached.

**KLEINFELDER 2016 HOURLY SCHEDULE**

**PROFESSIONAL STAFF RATES**

Professional .....	\$ 85/ hour
Staff Professional/Engineer .....	\$ 108/ hour
Project Professional/Engineer .....	\$ 137/ hour
Principal Professional .....	\$ 158/ hour
Senior Principal Professional .....	\$ 197/ hour
Expert Witness Testimony .....	\$ 210/ hour
Project Manager .....	\$ 137/ hour
Senior Project Manager/Engineer .....	\$ 197/ hour
Designer/Drafter .....	\$ 78/ hour
Senior Designer/Drafter .....	\$ 103/ hour
Project Controls Professional .....	\$ 95/ hour
Senior Project Controls Professional .....	\$ 147/ hour

**TECHNICAL STAFF RATES**

Technician .....	\$ 56/ hour
Senior Technician .....	\$ 66/ hour
Inspector .....	\$ 78/ hour

**ADMINISTRATIVE STAFF RATES**

Administrator .....	\$ 63/ hour
Project Administrator .....	\$ 78/ hour

**KLEINFELDER FEE SCHEDULE FOR  
GEOTECHNICAL and MATERIALS LABORATORY TESTING SERVICES**

**SOIL TESTS**

<b>SOIL DENSITY TESTS</b>				
<b>Test</b>	<b>Standard Test Method<sup>†</sup></b>	<b>Fee</b>		
Standard Proctor, 4" Mold	D698, T99	\$	235.00	each
Standard Proctor, 6" Mold	D698, T99	\$	235.00	each
Modified Proctor, 4" Mold	D1557, T180	\$	259.00	each
Modified Proctor, 6" Mold	D1557, T180	\$	259.00	each
Proctor Oversize Correction	D4718	\$	50.00	each
Minimum and Maximum Relative Density	D4254, D4253	\$	347.00	each
Moisture/Density, TEX 113-E	TEX113-E	\$	249.00	each
Moisture/Density, TEX 114-E	TEX114-E	\$	249.00	each

<b>SOIL CLASSIFICATION AND INDEX TESTS</b>				
<b>Test</b>	<b>Standard Test Method<sup>†</sup></b>	<b>Fee</b>		
Sieve Analysis, % Finer than 200 Sieve	D1140	\$	78.00	each
Sieve Analysis, Fine	D422, D6913, T88	\$	78.00	each
Sieve Analysis, Coarse	D422, D6913, T88	\$	78.00	each
Hydrometer Analysis ( <i>Requires a Sieve Analysis, not Included</i> )	D422, D7928	\$	175.00	each
Water Content	D2216, D4363, T265	\$	25.00	each
Water Content and Dry Unit Weight	D2216, D2937, D7263	\$	45.00	each
Atterberg Limits, Single Point	D4318-B; T89, T90	\$	80.00	each
Soil Specific Gravity	D854, T100	\$	71.00	each
Soil Organic Content	D2974-C	\$	75.00	each
Soil pH	D4972, G51	\$	46.00	each
Soil Resistivity	G187	\$	215.00	each
Chloride Content		\$	60.00	each
Sulfate Content		\$	60.00	each

<b>SOIL BEARING PRESSURE TESTS</b>				
<b>Test</b>	<b>Standard Test Method<sup>†</sup></b>	<b>Fee</b>		
California Bearing Ratio, Single Point ( <i>proctor not included</i> )	D1883, T193	\$	350.00	each
California Bearing Ratio, 3 Points ( <i>proctor not included</i> )	D1883, T193	\$	650.00	each

<b>SOIL BEARING PRESSURE TESTS (continued)</b>				
<b>Test</b>	<b>Standard Test Method<sup>†</sup></b>	<b>Fee</b>		
Stabilized Soil UC Strength, 1 Point ( <i>proctor not included</i> )	D1633, D5102	\$	175.00	each
Stabilized Soil UC Strength, Set of 3	D1633, D5102	\$	950.00	each
Eades and Grim Test (Opt. Lime Content)	C977	\$	175.00	each

<sup>†</sup>Common ASTM, AASHTO and DOT test methods.

- Those beginning with A, B, C, D, E, F, or G are ASTM methods.
- Those beginning with T are AASHTO methods.

**KLEINFELDER FEE SCHEDULE FOR  
GEOTECHNICAL and MATERIALS LABORATORY TESTING SERVICES**

**SOIL TESTS (continued)**

<b>SOIL STRENGTH AND PERMEABILITY TESTS</b>				
<b>Test</b>	<b>Standard Test Method†</b>	<b>Fee</b>		
Pocket Penetration Value		\$	15.00	each
Unconfined Compressive Strength	D2166, T208	\$	50.00	each
Direct Shear, 1 Point	D3080, T236	\$	300.00	each
Direct Shear, 3 Points	D3080, T236	\$	400.00	each
Direct Shear, Residual Strength, Each Pt	D3080-Modified	\$	210.00	each
Consolidation without Time Rate Plots	D2435-Modified	\$	345.00	each
Consolidation with 2 Time Rate Plots	D2435-A, T216-A	\$	450.00	each
Consolidation, All Loads with Time Rates	D2435-B, T216-B	\$	630.00	each
One Dimensional Free Swell	D4546	\$	155.00	each
One Dimensional Swell, Percent Heave	D4546	\$	250.00	each
One Dimensional Swell with Consolidation	D4546	\$	465.00	each
Expansion Index	D4829	\$	185.00	each
Denver Swell Test		\$	95.00	each
Permeability, Rigid Wall	D2434	\$	420.00	each
Permeability, Flexible Wall	D5084-C	\$	380.00	each
Triaxial Compression, CU, 1 Point	D4767, T297	\$	475.00	each
Triaxial Compression, CU, 3 Points	D4767, T297	\$	1,250.00	each
Triaxial Compression, UU, 1 Point	D2850, T296	\$	210.00	each
Triaxial Compression, UU, 3 Points	D2850, T296	\$	575.00	each
Triaxial Compression, UU Saturated, 1 Point	D2850-Modified	\$	285.00	each
Triaxial Compression, UU Saturated, 3 Points	D2850-Modified	\$	790.00	each
Triaxial Test, TEX117E, Part I	TEX117E	\$	2,250.00	each
Triaxial Test, TEX117E, Part II	TEX117E	\$	2,250.00	each

**AGGREGATE TESTS**

<b>Test</b>	<b>Standard Test Method†</b>	<b>Fee</b>		
Acid Solubility	AWWA B100	\$	115.00	each
Clay Lumps and Friable Particles, per size *(see note below)	C142, T112	\$	75.00	each
Coarse Specific Gravity & Absorption	C127, T85	\$	80.00	each
Fine Specific Gravity & Absorption	C128, T84	\$	105.00	each
Coarse Durability	D3744, T210	\$	140.00	each
Fine Durability	D3744, T210	\$	140.00	each
Flat and Elongated Particles, per size *(see note below)	D4791	\$	110.00	each
Fractured Faces, per size *(see note below)	D5821, T335	\$	105.00	each
Los Angeles Abrasion, Large Aggregate	C535	\$	350.00	each
Los Angeles Abrasion, Small Aggregate	C131, T96	\$	275.00	each
Mortar Sand Strength	C87, CTM515	\$	580.00	each
Organic Impurities	C40, T21	\$	65.00	each
Sand Equivalent, 3 points	D2419, T176	\$	115.00	each
Sieve Analysis, % Finer than 200 Sieve	C117, T11	\$	78.00	each

†Common ASTM, AASHTO and DOT test methods.

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- Those beginning with T are AASHTO methods.

**KLEINFELDER FEE SCHEDULE FOR  
GEOTECHNICAL and MATERIALS LABORATORY TESTING SERVICES**

**AGGREGATE TESTS (continued)**

Sieve Analysis, Fine	C136, T27	\$	78.00	each
Sieve Analysis, Coarse	C136, T27	\$	78.00	each
Soundness of Aggregate* (see note below)	C88, T104	\$	300.00	each
Unit Weight	C29, T19	\$	40.00	each
Water Content	D2216, C566, T255	\$	25.00	each
Texas Wet Ball Mill	TEX116E	\$	250.00	each
Decantation Wash	TEX406A	\$	40.00	each

\*Tests are billed by each size fraction tested. The quantity of fractions tested is dependent on the sample gradation and test method.

**CONCRETE TESTS**

Test	Standard Test Method†	Fee		
Concrete Compression	C39	\$	22.00	each
Concrete Core Compression	C42	\$	40.00	each
Concrete Creep	C512	\$	2,000.00	each
Concrete Cylinder Unit Weight	C567	\$	50.00	each
Concrete Drying Shrinkage, set of 3	C157	\$	500.00	each
Concrete Flexural Strength	C78	\$	50.00	each
Concrete Modulus of Elasticity	C469	\$	300.00	each
Concrete Splitting Tensile Strength	C496	\$	90.00	each
Concrete Core Thickness	C174	\$	20.00	each
Concrete Laboratory Trial Batch	C192	\$	1,250.00	each
RCC Compression	C39	\$	65.00	each
Shotcrete Compression	C1140	\$	80.00	each
Concrete Absorption after 3-Hour Boil	C497	\$	160.00	each
Concrete Absorption after 5-Hour Boil	C497, C642	\$	160.00	each
Concrete Absorption after 10-Minute Soak	C497	\$	105.00	each
CLSM Compression	D4832	\$	22.00	each
Concrete Permeability	COE CRD C 48	\$	2,800.00	each
Concrete Chloride Ion Penetration	C1202	\$	750.00	each

†Common ASTM, AASHTO and DOT test methods.

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**KLEINFELDER FEE SCHEDULE FOR  
GEOTECHNICAL and MATERIALS LABORATORY TESTING SERVICES**

**ASPHALT TESTS**

<b>MIX PROPERTY TESTS</b>				
<b>Test</b>	<b>Standard Test Method†</b>	<b>Fee</b>		
Air Voids Determination ( <i>calculation only</i> )	D3203	\$	50.00	each
VMA Determination ( <i>calculation only</i> )		\$	55.00	each
VFA Determination ( <i>calculation only</i> )		\$	55.00	each
Volumetric Properties ( <i>calculation only</i> )		\$	55.00	each
Gradation of Extracted Aggregate	D5444	\$	120.00	each
AC Core Thickness	D3549	\$	15.00	each
AC Content by Extraction	D2172	\$	210.00	each
Hveem Stability	D1560	\$	340.00	each
Hveem Stability without Compaction	D1560	\$	175.00	each
AC Content by Ignition Oven	D6307, T308	\$	150.00	each
AC Ignition Oven Calibration ( <i>determination of mix correction</i> )	D6307	\$	315.00	each
AC Moisture Content	T329	\$	55.00	each
AC Content by Nuclear Gauge	D4125	\$	220.00	each
Marshall Stability and Flow ( <i>does not include compaction</i> )	D6927	\$	160.00	each
AC Swell	CTM305	\$	110.00	each
AC Core Unit Weight & Thickness	D1188, D2726, D3549	\$	55.00	each

<b>DESIGN AND DENSITY TESTS</b>				
<b>Test</b>	<b>Standard Test Method†</b>	<b>Fee</b>		
Centrifuge Kerosene Equivalent	CTM303	\$	250.00	each
Film Stripping	CTM302	\$	130.00	each
Index of Retained Strength	D1075	\$	1,050.00	each
Unit Weight, Gyrotory Method	T312	\$	370.00	each
Unit Weight, Hveem Method	D1561	\$	300.00	each
Unit Weight, Marshall Method	D6926	\$	220.00	each
Maximum Theoretical Specific Gravity	D2041	\$	85.00	each
Mix Design, Hveem Method W/RAP		\$	7,600.00	each
Mix Design, Hveem Method		\$	5,400.00	each
Mix Design, Marshall Method		\$	3,000.00	each
Mix Design, Superpave Method		\$	6,000.00	each
Caltrans Opt Bitumen Content OGFC	CTM368	\$	1,575.00	each
Hamburg Wheel Track, Set of 2		\$	1,100.00	each

†Common ASTM, AASHTO and DOT test methods.

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- Those beginning with T are AASHTO methods.

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**METAL TESTS**

<b>METAL TESTS</b>				
<b>Test</b>	<b>Standard Test Method<sup>†</sup></b>	<b>Fee</b>		
Bend	A370, E290	\$	40.00	each

**DIMENSION STONE TESTS**

<b>DIMENSION STONE</b>				
<b>Test</b>	<b>Standard Test Method<sup>†</sup></b>	<b>Fee</b>		
Dimension Stone, Absorption/Spec. Grav.	C97	\$	220.00	set/5
Dimension Stone, Compressive Strength	C170	\$	220.00	set/5
Dimension Stone, Flexural Strength	C880	\$	220.00	set/5
Dimension Stone, Modulus Of Rupture	C99	\$	220.00	set/5

**SAMPLE PREPARATION**

<b>SAMPLE PREPARATION</b>				
<b>Test</b>	<b>Standard Test Method<sup>†</sup></b>	<b>Fee</b>		
Rock Sample Preparation	D4543	\$	160.00	each
Sample Crushing		\$	125.00	each
Sample Cutting and Trimming		\$	31.00	each
Sample Mixing and Processing		\$	45.00	each
Sample Preparation		\$	45.00	each
Sample Preparation, per hour		\$	56.00	each
Sample Remolding		\$	80.00	each
Contamination Fee		\$	250.00	each
Sample Disposal Fee		\$	10.00	each

**EQUIPMENT CHARGE**

<b>EQUIPMENT CHARGE</b>				
<b>Equipment / Test</b>	<b>Fee</b>			
Nuclear Density Gauge	\$	160.00		Day
Nuclear Density Gauge	\$	26.00		Test
Lime Depth Check	\$	30.00		each
Vehicle Charge	\$	50.00		each
Vehicle Mileage	\$	Current IRS Rate		Mile

<sup>†</sup>Common ASTM, AASHTO and DOT test methods.

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- Those beginning with T are AASHTO methods.