

NOTICE TO ARCHITECTS, ENGINEERS, AND PLANNERS

NOTICE IS HEREBY GIVEN, that the City of Oklahoma City has a certain Capital Improvement project that requires the services of a consulting firm.

In order to be considered, the Consultant must comply with the Resolution establishing procedure for "Selection of Architects, Engineers, and Planners" adopted by the City Council on November 18, 1986, a copy of which may be obtained at <https://www.okc.gov/departments/public-works/engineer-architect-resources/notice-to-a-e> or from the office of the Public Works Department Director.

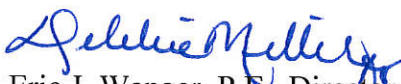
The Project is as follows: MC-0612 – Engineer and Testing Services for Fiscal Year 2018-2019 (Renewable for two additional years upon mutual consent).

Scope of Work: This annual contract will include engineering and testing services for Capital Improvement and non-Capital Improvement construction projects. Up to five (5) firms will be selected. All firms selected must show the ability to perform work shown on the Engineering and Testing Contract located at <http://okc.gov/departments/public-works/engineer-architect-resources/notice-to-a-e>. All contracts with the City or its related Trusts use this contract. Please review the contract to ensure insurance and indemnity requirements will be met.

A part of your Letter of Interest, please provide your understanding of the project, certifications and your expertise and experience on similar projects.

Please include a 254 Form with your Letter of Interest.

Time Schedule for the above project: Preliminary Report required within sixty (60) days and Final Plans and Specifications in ninety (90) days of the issuance of the Work Orders. Last date for submitting Letter of Interest (**two copies of letter and all attachments and an electronic copy**) to the Public Works Department Director, 420 W. Main Street, Suite 700, Oklahoma City, OK 73102: prior to 5:00 p.m. June 5, 2018. Emailed submittals are not being accepted at this time.



Eric J. Wenger, P.E., Director
Public Works/City Engineer

CONTRACT FOR ENGINEERING AND TESTING SERVICES

This contract for engineering and testing services ("Contract") is entered into this ____ day of _____, 2018, by and between the City of Oklahoma City, a municipal corporation ("City"), and _____ ("Engineer").

WITNESSETH:

PROJECT NO. MC-0612 ENGINEERING AND TESTING SERVICES

WHEREAS, the Engineer will provide professional services for the project in accordance with this Contract for Fiscal Year 2018-2019; and

WHEREAS, the Engineer was selected on the basis of a letter of interest, evaluation of available engineering and testing services, examination of staff qualifications and inspection of laboratory analysis equipment by City staff and the approval of the City Engineer of The City of Oklahoma City; and

WHEREAS, the Engineer has been selected under the standards adopted and the procedures prescribed by the resolution establishing procedures for selection of architects, engineers and planners adopted by the City Council on July 23, 1974, amended on December 31, 1974, February 21, 1978, January 22, 1980, and November 18, 1986, which resolution, with its amendments, is made a part of this Contract by reference; and

WHEREAS, it is the intent of the City to renew this Contract annually for a period of two years from the date of execution of the original Contract (July 3, 2018); and

WHEREAS, the City Council may designate the Engineer herein to do certain testing on various Capital Improvement and non-Capital Improvement construction projects; and

WHEREAS, all Trusts who are beneficiaries to the City may utilize this Contract for engineering and testing services for Capital Improvement and non-Capital Improvement construction projects; and

WHEREAS, the parties desire to establish a procedure for the procurement of engineering and testing services which the Engineer may perform for the City and to establish a schedule of compensation for such services.

NOW, THEREFORE, in consideration of the mutual covenants contained hereinafter relating to the project, the parties agree to the following:

1. **Definitions.** All terms and phrases not expressly defined herein shall have their ordinary meanings, consistent with local and state law, except where the context clearly indicates a

different meaning. For purposes of this Contract, the following terms and phrases shall have the meaning subscribed herein:

- A. *Engineering services* Those professional services associated with research, development, design and construction, alteration and/or repair of real property and improvements thereon, as well as incidental services that members of these professions and those in their employ may logically or justifiably perform, including but not limited to studies, investigations, surveys, evaluations, consultations, planning, programming, conceptual designs, design development, plans and specifications, cost estimates, inspections, shop drawing reviews, sample recommendations, assemble operating and maintenance manuals, site visits and other related services.
- B. *City Engineer* The officer of the City, or designee, in charge of engineering, construction and maintenance contracts on public rights-of-way, on public lands and capital improvement projects.
- C. *Term of Contract* The term of this Contract shall run from the date of execution through June 30, 2019.
- D. *Beneficiary Trusts* Any public trust of which the City of Oklahoma City is a beneficiary.

2. **Basic services.** The Engineer is hereby engaged and employed by the City to perform in accordance with good engineering practices and in the best interest of the City all of the work and the various engineering services, including but not limited to the following:

The following schedule of prices established herein are applicable only to those tests performed by the Engineer pursuant to this Contract.

I. Aggregate Testing

- A. Concrete Coarse Aggregates
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|----|--|----------|----------|
| 1. | Abrasion, Los Angeles, AASHTO T96
(including preparation of sample from crushed material) | Per Test | \$184.25 |
| 2. | a. Absorption and Specific Gravity | Per Test | \$ 90.00 |
| 3. | Sieve Analysis
(includes 200 sieve ASTM C-136 and C-117) | Per Test | \$ 60.25 |
- B. Concrete Fine Aggregates

1.	Sieve Analysis (includes 200 sieve)	Per Test	\$ 49.25
2.	Fineness Modulus (calculation only)	Per Test	\$ 18.25
3.	Soundness, Sodium or Magnesium Sulphate (5 cycles @ \$44.25/cycle)	Per Test	\$240.25
4.	a. Absorption and Specific Gravity	Per Test	\$ 90.00
C.	<u>Miscellaneous Aggregates</u>		
	Unit prices will correspond to those prices listed under Concrete Aggregates.		

II. Asphaltic Concrete (fee includes mobilization)

A.	Cutting cores, 8 inch thickness or less		
1.	1 to 3 cores	Per Core	\$ 62.50
2.	4 or more	Per Core	\$ 54.00
3.	Each additional inch over 8 inches	Per Inch	\$ 8.00
4.	9-point length measurement of core	Per Core	\$ 35.00
5.	Patching core hole (if required)	Per Hole	\$ 14.50
B.	Extraction and Gradation		
1.	Ignition Oven Method	Per Test	\$122.75
C.	Asphalt Field Density Test		
1.	Cut-Out Method (set of 3 cores)	Per Set	\$ 56.75
2.	Nuclear Moisture/Density Gauge (2 test minimum) *** (See Section VII.)		
a.	2 test minimum, per trip	Per Test	\$ 49.25
b.	3 or more tests, per trip	Per Test	\$ 43.25
D.	Marshall Stability (3 samples per set, includes sample pick-up)	Per Set	\$172.00
E.	HVEEM (3 samples per set, includes sample pick-up)	Per Set	\$172.00
F.	Sand Equivalent	Per Test	\$ 88.50
G.	Specific Gravity (Rice Method)	Per Test	\$ 90.00
H.	Retained Strength (Mix Design)	Per Test	\$468.00

The maximum allowable time for completing and reporting extraction and gradation tests shall be within four (4) working days of obtaining the sample.

The maximum allowable time for completing and reporting HVEEM or Specific Gravity (Rice Method) tests shall be within five (5) working days of obtain the sample.

III. Base Course Testing

A.	Abrasion, Los Angeles, AASHTO T96-77 (including preparation of sample from crushed material)	Per Test	\$184.25
B.	Field Density Test		
1.	Sand Cone Densimeter Test	Per Test	\$ 93.50
2.	Nuclear Moisture/ Density Gauge (2 test minimum) *** (See Section VII.)		
a.	2 test minimum, per trip	Per Test	\$ 49.25

	b.	3 or more tests, per trip	Per Test	\$ 43.25
C.		*Atterberg Limits (LL, PL, and PI)	Per Test	\$ 80.00
D.		AASHTO T99 Proctor Test (Standard Method)		
	1.	Method "A" to include sampling	Per Test	\$160.00
	2.	Method "B" to include sampling	Per Test	\$160.00
	3.	Method "C" to include sampling	Per Test	\$160.00
E.		*Proctor Test (Modified Method)		
	1.	AASHTO T180 Method "D" to include sampling	Per Test	\$180.25
F.		*Aggregate Base Sieve Analysis (includes 200 sieve)	Per Test	\$ 75.00
G.		Dynamic Cone Penetrometer, ASTM D6951, includes estimated CBR vs. depth interpretation per COE equations		
	1.	Less than 4.0 feet of testing per call out	Per Call Out	\$90.00
	2.	4.0 feet or more of testing	Per Foot	\$30.00

*The maximum allowable time for completing and reporting Atterberg Limits, Proctor Tests, and Sieve Analysis Tests shall be within five (5) working days of obtaining the sample.

IV. Concrete

A.		Concrete Beams, Furnishing Molds, Making Beams, Measuring Slump, Air Entrainment and Transporting Beams (number based on project-specific requirements) (set of three minimum)	Per Set	\$103.25
			Additional Beams	\$ 34.50
B.		Slump additional test	Per Test	\$ 27.50
C.		Air entrainment additional test	Per Test	\$ 40.75
D.		Concrete Beams, Storing and/or Testing	Per Beam	\$ 25.25
E.		Cores, 8 Inch Thickness or Less (fee includes mobilization)		
	1.	Each additional inch over 8 Inches	Per Inch	\$ 10.75
	2.	One core	Per Core	\$ 95.00
	3.	Two or more cores	Per Core	\$ 69.25
	4.	9-point length measurement of core	Per Core	\$ 35.00
	5.	Patching core hole (if required)	Per Hole	\$ 16.00
F.		Coring into non-horizontal surfaces (fee <u>in addition</u> to items listed under IV.E., as appropriate, and includes mobilization):		
	1.	Coring up to 8 inches length	Per Core	\$ 33.25
	2.	Each additional inch over 8 inches	Per Inch	\$ 4.25
G.		Coring through reinforcing steel (fee <u>in addition</u> to items listed under 2.IV.E and 2.IV.F., as appropriate, and includes mobilization):		
	1.	Sum of steel cross sections exposed in core	Per Sq. Inch	\$ 50.00
H.		Concrete Cylinders		
	1.	Concrete Cylinder, Making, Furnishing Molds and Transporting Cylinders		
	a.	Four (6" x 12" cylinders) test specimens minimum for each sampling event (also includes Air Entrainment and Slump Test)	Per Cylinder	\$ 24.50
	b.	Five (4" x 8" cylinders) test specimens minimum for each sampling event (also includes Air Entrainment and Slump Test)	Per Cylinder	\$ 19.50

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| 2. Concrete Cylinder, Storing and/or Testing | | |
| a. 6" x 12" cylinder | Per Cylinder | \$ 15.50 |
| b. 4" x 8" cylinder | Per Cylinder | \$ 12.50 |

Note: Payment for pick up of cylinders outside normal working hours or for unusual circumstances will be made when prior authorization is obtained from the City Engineer; however, cylinders made on Friday, which require pick up on Saturdays or Sundays, are assumed to have prior authorization from the City Engineer. (See testing item XII.C. for specific rate to be claimed for "additional compensation" outside normal duty hours.)

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| I. Compressive Strength, Concrete Cores (4 inch min. diameter) Each | | \$ 28.50 |
| J. Trim Concrete Cores for Compressive Strength Testing: | | |
| 1. One end | | \$ 16.75 |
| 2. Both ends | | \$ 33.50 |
| K. Concrete Laboratory Trial Batch | | |
| Including 4 Test Cylinders | Per Design | \$491.50 |
| L. Flowable Fill (set of 3 cylinders plus flow test) | Per Test | \$ 92.00 |
| M. Flowable Fill (if additional cylinders are required) | Per Cylinder | \$ 23.25 |
| N. Mortar Compressive Strength Testing (set of 3 cubes) | Per Test | \$122.75 |
| O. Grout Compressive Strength Testing (set of 3 prisms) | Per Test | \$144.50 |

Note: Casting of Beams and Cylinders to include one set of slump and air content tests per each set of specimens made; casting of grout prisms to include a slump test per each set of specimens made.

V. Metallic Materials

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| A. Billet Steel Bars for Concrete Reinforcement | | |
| Bend and Tensile Test | Per Test | \$ 55.75 |

VI. Pipe Inspection

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| A. Concrete Pipe Inspection (any size) | Per Hour | \$ 61.50 |
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VII. Soil Testing

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| A. California Bearing Ratio, ASTM D1883 | Per Test | \$200.00 |
| B. Classification | | |
| 1. ASTM D2487 and OSI | Per Sample | \$115.00 |
| 2. ASTM D2488 Visual | Per Hour | \$ 94.50 |
| C. Field Density Test | | |
| 1. Sand Cone Densimeter Test | Per Test | \$ 78.50 |
| 2. Nuclear Moisture/Density Gauge (2 test minimum)***see Note | | |
| a. 2 Test Minimum, Per Trip | Per Test | \$ 49.25 |
| b. 3 or More Tests, Per Trip | Per Test | \$ 43.25 |

*****Note:** All Nuclear Moisture/Density Gauges used on City-related work shall be inspected daily to ensure the device is within the manufacturer’s specified tolerances for moisture and density standards. Additionally, each gauge shall be calibrated and/or verified at the frequency and in the manner specified in ASTM D7759 and D7013 and/or AASHTO T310 Annexes A1 and A2. Documentation of such certification and/or verification, along with the operating technician’s safety training record and laboratory’s Oklahoma Department of Environmental Quality license, is to be delivered to the City Engineer **with the executed copy of this contract.**

D.	Field Soil Resistivity (to include 3 locations)	Per Test	\$184.25
	1. Each additional location over 3 locations	Per Sample	\$ 46.75
	2. Laboratory Soil Resistivity Test	Per Test	\$ 56.75
E.	pH Test	Per Test	\$ 39.75
F.	Atterberg Limits (LL, PL, and PI)	Per Test	\$ 77.50
G.	Proctor Tests (see listing under Base Course)		
H.	Moisture determination only	Per Test	\$ 11.25
I.	Volumetric Density with Moisture	Per Test	\$ 19.50
J.	Test Borings, Soil Bearing Tests		
	1. Test Boring, Soil	Per Foot	\$ 11.25
	2. Test Boring, Sandstone, Limestone or Shale	Per Foot	\$ 16.00
	3. Coring Sandstone, Limestone or Shale	Per Foot	\$ 54.75
	4. Penetration Tests	Per Test	\$ 31.25
	5. Mobilization Charge		\$228.75
	6. Soil Boring Grouting (including preparation and submittal of well boring logs) in accordance with Oklahoma Water Resources Board Regulations	Per Project	\$ 73.75 plus \$3.50/foot of grouted length
K.	Unconfined Compressive Strength	Per Sample	\$ 72.00
L.	One-dimensional Swell Test ASTM D4546	Per Test	\$421.75
M.	Consolidation, ASTM D2435	Per Test	\$437.00
N.	Permeability	Per Test	\$240.25
O.	Sampling (Shelby Tube samples)	Per Test	\$ 37.75
P.	Pressure Meter Test (3 Test Minimum per Boring)	Per Test	\$516.00
Q.	Sieve Analysis (includes 200 sieve)	Per Test	\$ 57.25
R.	Soluble Sulfate Testing (OHD L-49)	Per Test	\$ 45.00

VIII. Modified Soil Base Course, Design

Sub-items B and C each include sieve analysis, Proctor, and three strength tests on laboratory-molded, cured, and conditioned test specimens. Sub-items A, B and C also include Atterberg limits. Sub-item B also includes the test under sub-item D; and lime pre-treatment requires both items C and D.

A.	Soil-Cement, PCA Short Method	Per Design	\$549.00
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B.	Soil-Lime, Lime Association Method (MDTP)	Per Design	\$736.75
C.	Soil-Fly Ash or Soil-CKD, CBR Method	Per Design	\$642.75
D.	Soil-Lime, pH Method	Per Design	\$187.25
E.	Sieve Analysis of Lime (2 sieve sizes)	Per Test	\$ 46.75

The maximum allowable time for completing testing and reporting the recommendation for soil modification shall be within seven (7) working days of obtaining the sample if the pH method is used. If using the PCA short method or Lime Association Method, the results are to be reported within sixteen (16) days of obtaining the sample.

IX. Foundation Report

Shall include information requested by the Architect or Engineer, including recommendation of loading of foundation material. Six (6) copies of the report shall be furnished at a rate to be paid as follows:

Engineer	Per Hour	\$104.00
Technician	Per Hour	\$ 51.75

Field Sampling, drilling and laboratory tests required in connection with the report shall be paid for in accordance with the applicable provisions of this Contract.

X. Pre-stressed Concrete Bridge Member

Complete Engineering Inspection, Testing and Reporting in accordance with the 1999 Edition Standard Specification for Highway Construction, Oklahoma State Highway Commission, "Section 503 – Pre-stressed Concrete Bridge Members" and all subsequent Revisions.

Inspection	Per Hour	\$ 61.50
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XI. International Building Code (IBC) Testing/Inspection

The Engineer shall provide testing/inspection services as authorized for such work as required by the IBC, Chapter 17, Section 1704, as follows:

Engineer	Per Hour	\$104.00
AWS Certified Welding Inspector	Per Hour	\$ 98.00
Technician	Per Hour	\$ 59.25

Structural Steel

1.	Shop Inspection (only) (AWS/CWI)#1	Per Hour	\$ 98.00
2.	Field Inspection (AWS/CWI)#1	Per Hour	\$ 98.00
3.	Ultrasonic (Man/Equipment)	Per Hour	\$ 98.00
4.	Mag or Penetrant (Inspector)	Per Hour	\$ 98.00
5.	Shear Stud Bend Test	Per Hour	\$ 72.75
6.	Turn-of-Nut Tightening Test	Per Hour	\$ 72.75

XII. Resident Engineer, Mileage, Additional Compensation and Traffic Control Devices

A. Resident Engineer

At locations outside the City of Oklahoma City where the City Engineer may deem it necessary to assign a resident engineer, the engineering fee will be negotiated as outlined below in sub-paragraph “Tests or Services Not Included In Schedule of Prices”, plus mileage invoiced at the current IRS rate per mile to and from the job site.

B. Mileage

Sampling charges set forth in this Contract apply only within a twelve (12) mile radius of the Municipal Building located at 200 N. Walker, Oklahoma City, Oklahoma. For sampling or testing beyond this area, a mileage charge invoiced at the current IRS rate per mile and \$51.75 per hour will apply based on driving time and mileage from the twelve (12) mile radius to the site and return to the twelve (12) mile radius.

C. Additional Compensation

Additional compensation, when engineering and testing services cannot be performed during normal working hours (6:00 A.M. to 6:00 P.M.) and when authorized by the City Engineer, shall be paid at a rate of \$26.00 per hour. Additional compensation is defined as being other than normal working hours including Saturday, Sunday and City recognized holidays. “Additional compensation” for engineering and testing services accomplished during other than normal working hours can only be claimed when the City has issued prior approval authority.

D. Traffic Control

Traffic Control, including but not limited to flagmen, barricades, cones, etc., in accordance with the uniform manual on traffic control devices, shall be paid at a rate of: (1) for a “major” roadway or street lane closure wherein the Engineer must subcontract the traffic control duties, the rate shall be \$95.00 per hour/per person; or, (2) when traffic control duties are performed by the Engineer’s personnel, the rate shall be \$77.00 per hour for the first flag person with a minimum charge of one (1) hour (when a second flag person is needed, compensation for the second flag person shall be at a rate of \$51.75 per hour). When the Engineer deems traffic control necessary, a written request shall be submitted to the City Engineer. Included in this request shall be an estimate of the time required and the number of flag persons needed. Traffic Control shall be compensated only when authorized by the City Engineer and in amount designated by the same. **Note:** Whether employees of the Engineer or subcontractor, flag persons used by the Engineer for traffic control services must be certified in accordance with the American Traffic Safety Services Association (see <http://atssa.com/TrainingCertification/NationalFlagger/Database.aspx>).

E. Work Zone Permits

Obtaining and processing work zone permits related to testing services under the auspices of this contract shall be paid at the rate of \$50.00 per work zone permit.

XIII. Tests or Services Not Included In Schedule of Prices

For tests not covered by the schedule of prices in this Contract, a price will be negotiated by City staff in charge of the project and approved by the City Engineer and City Council or responsible Trust before the services are performed.

XIV. Prices

It is understood by and between the parties that prices (in effect at the time a work order is issued to perform engineering and testing services under this contract) shall be based on the date of the work order and engineering and testing services contract prices in effect at the time of the work order, i.e., testing work orders written during the design phase of a project shall reflect testing prices in effect at the time of the initial testing work order and remain the same prices charged (invoiced) until completion of design work (regardless of duration); testing work orders written during the construction phase of that same project shall reflect testing prices in effect at the time of the testing work order and remain the same prices charged (invoiced) until completion of construction work (regardless of duration). All testing prices include mobilization except where indicated otherwise.

XV. Effective Prices

The prices established in this Contract for Engineering and Testing Services between the City and the Engineer shall remain in full force and effect until both parties execute a new contract.

XVI. Failed Tests

It is understood by and between the parties that any tests ordered by the City Engineer that fail to meet the construction contract documents, plans or specifications are the responsibility of the Contractor(s) and said failed tests will be deducted by the City's project engineer/manager from pay applications submitted to the City by the Contractor(s).

All test failures are to be reported within 24 hours of the occurrence. Reports are to be faxed to the Field Services Division of the Public Works Department at (405) 682-7067, or sent via e-mail to daniel.witthuhn@okc.gov

Failed field tests are to be reported to the Contractor's project manager, superintendent, foreman or other contractor person in charge immediately upon completion of the test(s). The "Field Report of Non-Compliance" (see Contract Exhibit C attached hereto) is to indicate that the Contractor was notified and the report is to list the name of the Contractor's representative receiving the verbal notification.

A copy of the "Field Report of Non-Compliance" and the "Laboratory Report of Non-Compliance" forms are attached to this Contract as "Exhibit C" and "Exhibit D", respectively.

Field Reports of Non-Compliance (Exhibit C) should be sent when criteria do not meet specification requirements or Exhibit E testing guidelines (whichever applies – see last paragraph of this section below):

- A. Densities do not meet the minimum requirement for compaction (soil & asphalt) and aggregate base.
- B. Concrete slump does not meet specification requirement.
- C. Concrete air content does not meet specification requirement.

Lab Reports of Non-Compliance (Exhibit D) should be sent when criteria do not meet specification requirements or Exhibit E testing guidelines (whichever applies – see last paragraph of this section below):

- A. Asphalt extraction and gradations do not meet the specification requirement.
- B. Aggregate Base gradations do not meet specification requirements.
- C. Concrete strength tests do not meet specification requirements.

Guidance for sampling, testing, and acceptance criteria for routine Oklahoma City construction materials testing is attached as “**Exhibit E – Sampling, Testing, and Acceptance Guide for Routine Oklahoma City Construction Materials Testing**”. This Exhibit provides a guideline for testing routine items, which have no project-specific plans and specifications to dictate acceptance criteria. Acceptance criteria for major projects with project-specific specifications should be clearly delineated in those specifications and acceptance criteria stated therein apply (Exhibit E guidelines do not apply wherein project specifications state acceptance criteria).

XVII. Testing on Airports (Federal Aviation Agency Requirements)

When performing any engineering/testing services within “secure areas” of airfield projects, the Engineer must have at least one security-badged person with the crew on-site at all applicable times. If the Engineer has equipment entering and leaving the airfield, an additional security-badged person must escort the vehicles on and off of the airfield. Acquisition of security badges for the Engineer and/or the Engineer’s personnel requires the successful completion of a 5 year background FBI criminal history check and other requirements as outlined by the respective airport authority.

Additionally, if the project is FAA-funded the Engineer must be currently accredited by a nationally-recognized accreditation authority in accordance with the following:

- A. For asphalt testing ASTM D3666
- B. For concrete testing ASTM C1077 and ASTM C78

XVIII. Testing Laboratory Accreditation

The Engineer shall submit (**with this Contract**) evidence of AASHTO Materials Reference Laboratory accreditation. If the Engineer is not currently accredited, submit evidence (with this contract) demonstrating that the firm’s testing laboratory has submitted application for

accreditation and a statement that the laboratory is on track for accreditation (also provide a specific date by which accreditation is anticipated).

3. **Work Orders.** The Engineer shall proceed with the provision of work and/or services for this Contract upon receipt of work orders from the City Engineer. If the Engineer cannot perform the work and/or services within the time provided, and upon the submission by the Engineer of a request in writing to the City Engineer, indicating the length of extension required to perform a task, the City Engineer may at their sole discretion grant a reasonable extension of time. The request from the Engineer shall state the reason for the extension request, along with evidence showing that the Engineer is unable to complete this work in the time specified in the work order for reasons beyond its control. The Engineer is prohibited from claiming damages for delays and extensions of time.

Upon designation of the Engineer as a project testing firm by the City Engineer (and as approved by the City or its beneficiary trusts), the Engineer will be provided a written notice to proceed (work order), which will include the project name/number, City's assigned project engineer/manager, architect or engineer of record, prime contractor of record, and a copy of the project plans and specifications.

4. **No Extra Work.** No claims for extra work of any kind or nature or character shall be recognized by or be binding upon the City unless the City Engineer first approves such work or service in writing.
5. **Stop work.** Upon notice to the Engineer, the City Engineer may issue a stop work order suspending the performance of work and/or services under this Contract. The stop work order shall not terminate or suspend any of the required provisions of the Indemnity and/or Insurance paragraphs of this Contract.
6. **Registered Professional Engineer/Personnel.** All final testing reports submitted by the Engineer shall bear the signature and seal of a Registered Professional Engineer of the State of Oklahoma certifying all tests performed. Such Registered Professional Engineer must be a full-time (not part-time) employee of the Engineer.
7. **Compensation.** Under the terms of this Contract, the Engineer agrees to perform the work and services described in the scope of work and the body of the Contract. The City agrees, in accordance with the limitations and conditions set forth in the body of the Contract and below, to pay an amount outlined in the work order provided to the Engineer for such testing.

Compensation for basic services shall be computed, based on the fee schedule as outlined in the Basic Services paragraph of this Contract; but, in no event may the Engineer receive compensation in excess of the prices listed in the fee schedule.

8. **Payments.**

- A. Invoices shall be submitted monthly to:

The City of Oklahoma City of Oklahoma
Department of Public Works (or project department owner)
Attn: (Insert Name of City or Trust's Project Manager)
420 W. Main Street, Suite 700 (or project department address)
Oklahoma City, Oklahoma 73102

The City will endeavor to pay all invoices within thirty (30) calendar days of date of receipt of the invoice. Invoices for the amount and value of the work and services performed by the Engineer shall meet the standards of quality as established under this Contract. The City agrees to pay the Engineer, as compensation for such Engineering services as listed. The invoices shall be prepared by the Engineer and be accompanied by all supporting data required by the City (copy of the test report and any other documentation deemed necessary to substantiate the invoice). Payment of any invoice for any work or services may not be deemed to be recognition of satisfactory performance of said work or services or a waiver of any right of the City or any obligation of the Engineer should it be determined later that said work or services were negligently performed or provided or were not performed or provided in accordance with the standards required by this Contract.

- B. The Engineer shall present two (2) copies of the invoice with two (2) properly executed claim vouchers to the City for compensation and payment. The City will review the invoice and claim voucher for payment and the approved elements of the invoice or claim in accordance with this Contract. Should the City question or request additional documentation or disapprove all or a portion of any invoice, the Engineer will be notified so that it may provide additional documentation sufficient to permit the invoice and claim to be paid, in whole or in part. Provided; however, no invoices or claims shall be paid the aggregate of which is in excess of the not to exceed amounts or limitations established in the Compensation paragraph of this Contract.
- C. Final payment shall not be deemed to waive any rights or obligations of the parties to this Contract.

9. **Indemnity.** To the fullest extent permitted by law, the Engineer agrees to release, defend, indemnify and save harmless the City and its beneficiary trusts, their officers, agents and employees, from and against any and all loss of or damage to property, injuries to or death of any person or persons and/or all claims, damages, suits, costs, expenses, liability, actions or proceedings of any kind or nature whatsoever, including, without limitation, Worker's Compensation claims of or by anyone whomever, in any way resulting from or arising out of the Engineer's operations, negligent acts, errors and/or omissions under or in connection with this Contract, or the Engineer's use and occupancy of any portion of the project site, including, without limitation, operations, negligent acts, errors and/or omissions of the

Engineer's officers, employees, representatives, suppliers, invitees, contractors, subcontractors or agents. The Engineer shall promptly advise the City and its beneficiary trusts, in writing, of any action, administrative or legal proceeding or investigation as to which this indemnification may apply, and the Engineer, at its expense, shall assume the defense of the City and its beneficiary trusts, with counsel satisfactory to the City and its beneficiary trusts. This section shall survive the expiration of the Contract. Provided, however, the Engineer need not release, defend, indemnify or save harmless the City and its beneficiary trusts, or their officers, agents and employees, from damages or injuries resulting from the negligence of the City and its beneficiary trusts, their officers, agents or employees. It is understood that this indemnity and hold harmless provision is not limited by the insurance required under the provisions hereof.

10. **Insurance.** Prior to approval of this contract, the Engineer shall obtain insurance coverage as provided below. The Engineer must provide, pay for, and maintain the types of insurance policies provided herein, in amounts of coverage not less than those set forth below. Certified, true and exact copies of all insurance policies required and endorsement pages shall be provided to the City and its participating trusts on a timely basis if requested by City staff.

All insurance must be from responsible insurance companies which are authorized to do business in the state of Oklahoma and are acceptable to the City and its participating trusts. The required insurance coverage and policies shall be performable in Oklahoma City, Oklahoma, and shall be construed in accordance with the laws of Oklahoma.

Nothing in this Section shall define or limit the rights of any party to this Contract under any other provision of this Contract, including but not limited to any indemnification provision.

- A. **Additional Insureds:** All liability policies (except professional liability and worker's compensation and employer's liability policies) shall provide that the City and its participating trusts are named additional insureds without reservation or restriction.

All insurance coverage of the Engineer shall be primary to any insurance or self-insurance program carried by the City and its participating trusts.

All insurance policies shall include a severability of interest provision wherein claims involving any insured hereunder, except with respect to limits of insurance, interests shall be deemed separate from any and all other interest herein, and coverage shall apply as though each such interest was separately insured.

Subrogation as to any additional insured shall be waived.

- B. **Deductibles:** All policies must be fully insured with any single policy deductible not exceeding \$25,000. All deductibles must be declared on the certificate of insurance. If no deductible is declared, the Engineer is stating a deductible does not

exist and thus a deductible is not approved or accepted. If the Engineer's deductible is different than declared, then the City and its participating trusts will hold an equal amount from pay claims until corrected.

Self-insured retentions will not be accepted unless accompanied by a bond (financial guarantee bond) or irrevocable letter of credit guaranteeing payment of the losses, related investigations, claim administration and defense expenses not otherwise covered by the Engineer's self-insured retention.

- C. Policy Limits: The insurance coverage and limits required of the Engineer under this Contract are designed to meet the minimum requirements of the City and its participating trusts. Such coverage and limits are not designed as a recommended insurance program for the Engineer. The Engineer alone shall be responsible for the sufficiency of its own insurance program. Should the Engineer have any question concerning its exposures to loss under this Contract or the possible insurance coverage needed therefore, the Engineer should seek professional assistance.

Except for professional liability insurance, all policies shall be in the form of an "occurrence" insurance coverage or policy. If any insurance is written in a "claims-made" form, the Engineer shall also provide tail coverage that extends a minimum of two years from the expiration of this Contract.

The minimum aggregate limits of such insurance policies and continuing coverage shall be:

- (1) Worker's Compensation and Employer's Liability Insurance. The Engineer shall provide and maintain, during the term of the Contract, worker's compensation insurance as prescribed by the laws of the state of Oklahoma and employer's liability Insurance in an amount not less than One Hundred Thousand Dollars (\$100,000.00) each for all its employees employed at the site of the Project, and in case any work is subcontracted, the Engineer shall require the subcontractor similarly to provide worker's compensation and employer's liability insurance for all the subcontractor's employees, unless such employees are covered by the protection afforded by the Engineer. In the event any class of employees engaged in work performed under the Contract or at the site of the Project is not protected under such insurance heretofore mentioned, the Engineer shall provide and shall cause each subcontractor to provide adequate insurance for the protection of the employees not otherwise protected.
- (2) Commercial General Liability Insurance. The Engineer shall provide and maintain commercial general liability insurance coverage sufficient to meet the maximum cumulative liability of all parties to this Contract, including the City and any public trust participating in the Project, under the Governmental

Tort Claims Act, 51 O.S. § 151 *et seq.*, (GTCA) and any amendment or addition thereto, as provided herein.

Property damage liability in an amount not less than Two Hundred Thousand Dollars (\$200,000.00) per claimant for loss, damage to or destruction of property, including but not limited to consequential damages arising out of a single accident or occurrence.

All other liability in an amount not less than One Hundred Seventy Five Thousand Dollars (\$175,000.00) per claimant for claims including death, personal injury, and all other claims arising out of a single accident or occurrence.

Single occurrence or accident liability in an amount not less than One Million Dollars (\$1,000,000.00) for any number of claims arising out of a single accident or occurrence.

- (3) Automobile Liability Insurance. The Engineer shall provide and maintain comprehensive automobile liability insurance coverage as to the ownership, maintenance, and use of all owned, non-owned, leased or hired vehicles sufficient to meet the maximum cumulative liability of all parties to this Contract, including the City and any public trust participating in the Project, under the Governmental Tort Claims Act, 51 O.S. § 151 *et seq.*, (GTCA) and any amendment or addition thereto, unless otherwise specifically and expressly provided herein.

Property damage liability in an amount not less than Two Hundred Thousand Dollars (\$200,000.00) per claimant for loss, damage to or destruction of property, including but not limited to consequential damages arising out of a single accident or occurrence.

All other liability in an amount not less than One Hundred Seventy Five Thousand Dollars (\$175,000.00) per claimant for claims including death, personal injury, and all other claims arising out of a single accident or occurrence.

Single occurrence or accident liability in an amount not less than One Million Dollars (\$1,000,000.00) for any number of claims arising out of a single accident or occurrence.

- (4) Professional Liability Insurance. The Engineer shall provide and maintain professional liability insurance coverage in an amount not less than \$1,000,000 aggregate annual limit liability. Such insurance coverage shall be maintained during this Contract, during the construction of the Project, and

for a period of two (2) years after the final, formal acceptance of this Project by the City.

- D. Certificates: The insurance coverage and limits required must be evidenced by properly executed certificates of insurance on the form furnished by The City or on forms approved by the Oklahoma Insurance Commissioner. Copies of these certificates have been provided to the City Engineer prior to execution of this Contract and are attached hereto. The certificate(s) must be signed by the authorized representative of the insurance company(s) shown in the certificate(s). The certificate must include the Project number and Project description or name.
- E. Cancellation. There may be no termination, non-renewal, reduction in coverage, or modification of such insurance coverage.

The Engineer authorizes the City and its participating trusts to confirm all information so furnished as to the Engineer's compliance with its bonds and insurance requirements with the Engineer's insurance agents, brokers, surety and insurance carriers. The lapse of any insurance policy or coverage required by this Contract is a breach of this Contract for which the Engineer shall repay and reimburse all payment made under the Contract and such other damages, losses, and costs incurred by the City and its participating trusts. The City and its participating trusts may at their option suspend this Contract until there is full compliance with this paragraph, or may cancel or terminate this Contract and seek damages for the breach of this Contract. The remedies in this paragraph shall not be deemed to waive or release any remedy available to The City and its participating trusts. The City and its participating trusts expressly reserve the right to pursue and enforce any other cause or remedy in equity or at law.

In the event of a reduction in any aggregate limit, the Engineer shall immediately notify the City and its participating trusts and shall make reasonable efforts to have the full amount of the limits appearing on the certificate reinstated. If at any time the City and its participating trusts request a written statement from the insurance company(s) as to any impairments to or reduction of the aggregate limit, the Engineer hereby agrees to promptly authorize and have delivered to the City and its participating trusts such statement.

- F. Duration of Coverage. All insurance coverage required under this Contract except professional liability insurance shall be maintained in full force and effect until completion and formal acceptance of the Project by the City and its participating trusts. The Engineer shall maintain in full force in effect the required professional liability insurance stated above during this Contract, during the construction of the Project, and for a period of two (2) years after the final, formal acceptance of this Project by the City and its participating trusts.

The requirements of the insurance provisions listed above shall survive the completion, expiration, cancellation or termination of this Contract.

- 11. Cancellation for convenience.** The City may cancel this Contract, in whole or in part, for the City's convenience or for the failure of the Engineer to fulfill or promptly fulfill the obligations under this Contract. The City may cancel by delivery of a notice to the Engineer pursuant to the Notices paragraph of this Contract.

Upon receipt of the notice of cancellation, the Engineer shall (i) immediately discontinue all work and services affected unless the notice directs otherwise, and (ii) upon payment for work performed, deliver to the City all documents, data, drawings, specifications, reports, calculations, field notes, tracings, plans, models, computer files, estimates, summaries and other information and materials accumulated in performing this Contract, whether complete or incomplete, unless the notice directs otherwise.

If the cancellation is for the convenience of the City, the City shall pay the Engineer for all expenses incurred and all work and services rendered up to the time of the notice of cancellation, in accordance with the terms, limits and conditions of this Contract and as further limited by the not to exceed amounts set out in this Contract.

If the cancellation is due to the failure of the Engineer to fulfill a Contract obligation, the City may complete the work and services itself or otherwise, and the Engineer shall be liable for resulting or additional costs incurred by the City due to the failure of the Engineer.

The rights and remedies of the City provided in this paragraph are in addition to any other rights and remedies provided by law or under this Contract.

Cancellation shall not terminate or suspend any of the required provisions of the Indemnity paragraph of this Contract.

- 12. Notices.** All notices and orders given pursuant to this Contract shall be in writing, delivered or mailed by United States certified mail, return receipt requested, postage prepaid and addressed as follows:

To the City:

The City of Oklahoma City
Department of Public Works
420 West Main Street, Seventh Floor
Oklahoma City, Oklahoma 73102
Attn: Eric J. Wenger, P.E., Director of Public Works/City Engineer
Phone Number: (405) 297-2581 Fax Number: (405) 297-2117

To the Engineer:

Attn: _____

Phone Number: _____ Fax Number: _____

The address of any person or party may be changed by notice to the other party given in the manner described above. All such notices and orders shall be deemed received when delivered or when deposited in the United States mail.

13. **Compliance with laws, ordinances, specifications and regulations.** The Engineer shall comply with all existing federal, state and local laws, standards, codes, ordinances, administrative regulations and all amendments and additions thereto, pertaining in any manner to the work and/or services provided by this Contract.
14. **Records and accounts.** During the term of this Contract and continuing for a period of five (5) years after the completion of construction and final acceptance of the completed project by the City, the Engineer shall maintain all documents, notes, drawings, specifications, reports, estimates, summaries, computer files, renderings, models, photographs, field notes, as-built drawings, information, survey results, plans, computer files and any other materials produced, created or accumulated in performing this Contract that have not been submitted to the City subsequent to final completion of the project and its internal accounting records and other supporting documents pertaining to the claims and/or invoices for costs of work and/or services and reimbursable expenses for this Contract. The Engineer must maintain its accounting records in accordance with generally accepted accounting principles applied on a consistent basis. The Engineer shall permit periodic audits by the City and the City's authorized representative. The periodic audits of the records in support of claims and invoices for the Contract shall be performed at times and places mutually agreed upon by the City and the Engineer. Agreement as to the time and place for audits may not be unreasonably withheld.
15. **Reporting.** When requested by the City, the Engineer shall report to the City through the City Engineer as outlined below.

All final test reports will contain the names of the Architect or Engineer of Record and Contractor of Record performing the work on the listed project

All final test reports will be sent via e-mail to marty.barris@okc.gov and kim.owen@okc.gov within three (3) business days of completion of the test.

Also, e-mail one (1) copy each of the completed final test report to the following:

- A. The Architect or Engineer of Record

- B. The Contractor of Record
- C. The material supplier for testing of all asphalt and concrete materials.

All reporting of testing performed with a pass/fail criteria will indicate on the report that the test(s) “passed” or “failed”. Retesting of a failed test will be indicated as such on the report (also see Paragraph 2.XVI “Failed Tests” of this Contract for additional requirements).

16. **Prohibition against collusion.** The Engineer warrants that it has not employed or retained any company or person other than a bona fide employee working solely for the Engineer to solicit or secure this Contract. The Engineer further warrants that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for the Engineer, any fee, commission, percentage, gift or any other consideration contingent upon or resulting from the award or making of this Contract. In addition, the Engineer must execute the Noncollusion Affidavit, attached as Exhibit A, prior to the effective date of this Contract.
17. **Ownership of documents.** All documents, notes, drawings, specifications, reports, estimates, summaries, computer files, renderings, models, photographs, field notes, as-built drawings, information, survey results, plans, computer files and any other materials produced, created or accumulated in performing this Contract, are and shall remain the property of the City and may be reproduced, distributed and published in whole or part without permission or any additional payments or fees to the Engineer. Reuse of said documents by the City shall be at the City's risk and responsibility and not that of the Engineer. The parties may use any portions of said documents at their own risk and responsibility.
18. **References not incorporated.** The use of language or definitions from the Federal Acquisition Regulations (“FAR”), the American Institute of Architects (“AIA”) or any other publication is not intended to adopt by reference or otherwise any or all of the language, definitions, regulations or publications or any interpretation thereof.
19. **Standard of care.** In providing the work and services herein, the Engineer shall maintain during the course of this Contract the standard of reasonable care, skill, diligence and professional competency for such work and/or services. The Engineer agrees to require all of its consultants, by the terms of its consultants' contracts, to provide services at the same standard of reasonable care, skill, diligence and professional competence required of the Engineer.
20. **Backup Required.** In accordance with good engineering practices, the Engineer must back up all data, surveys, tests, work, plans, specifications, notes, calculations, RFI, records, reports, documents (collectively referred to as “data”) in the form of an electronic file on a USB drive, data storage, or to an offsite electronic storage facility. Should any data become lost, corrupted, inaccessible, or unusable (collectively “loss”), the Engineer must timely recreate all data within the original time frame of the engineering contract at its sole cost. No extensions or additional time will be granted the Engineer for loss of data. No additional

payment or reimbursement will be made to the Engineer for loss of data. The Engineer will be responsible for any and all costs, expenses, or lost opportunities incurred by The City, Trust, and construction contractor resulting from the failure to meet schedules, milestones, performance standards, or performance requirements related to loss of data.

21. **Sub-consultants.** The Engineer agrees to submit for approval by the City Engineer, prior to their engagement, a list of any sub-consultants or subcontractors the Engineer intends to engage to perform work and/or services related to this Contract. Such approval will not be unreasonably withheld. The Engineer shall notify the City Engineer and seek pre-approval of any substitutions or changes in sub-consultants or subcontractors.

22. **Nondiscrimination.** In connection with the performance of work and/or services under this Contract, the Engineer agrees as follows:
 - A. The Engineer shall not discriminate against any employee or applicant for employment because of age, race, creed, color, sex, national origin, ancestry or disability as defined by the Americans with Disabilities Act of 1990, Section 3(2). The Engineer shall take affirmative action to insure that employees or applicants for employment are treated without regard to their age, race, creed, color, national origin, sex, ancestry or disability as defined by the Americans with Disabilities Act of 1990, Section 3(2). Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff, termination or cancellation, rates of pay or other forms of compensation and selection for training, including apprenticeship. The Engineer shall agree to post, in a conspicuous place available to employees and applicants for employment, notices to be provided by the City Clerk of the City of Oklahoma City setting forth provisions of § 25-41 of the Oklahoma City Municipal Code, 2010.

 - B. In the event of the Engineer's noncompliance with this nondiscrimination clause, this Contract may be suspended, canceled or terminated by the City. The City may declare the Engineer ineligible for further contracts or agreements until compliance, and/or satisfactory proof of intent to comply shall be made by the Engineer.

 - C. The Engineer agrees to include this nondiscrimination clause in any subcontracts connected with the performance of this Contract. The Engineer shall also execute the Nondiscrimination Certificate, attached and incorporated as Exhibit B, prior to the effective date of this Contract.

23. **Assignment.** Inasmuch as this Contract is a personal and professional service agreement which relies upon the personal and professional integrity, financial standing and unique ability and expertise of the Engineer to provide professional and personal services to the City, the parties agree that the Engineer may not assign its obligations, rights or interest in this Contract except as set forth in the Termination for default paragraph of this Contract.

24. Termination for default.

- A. After due notice and thirty (30) days within which to correct the default, this Contract may be terminated by either party for default upon fourteen (14) days written notice should the other party fail substantially to perform in accordance with the Contract terms through no fault of the party initiating the termination.
- B. If this Contract is terminated by reason of a default of the Engineer prior to the completion of this project, regardless of the reason for said termination, the Engineer shall immediately assign to the City any Contracts and/or agreements relative to this project entered into between the Engineer and its subcontractors and sub-consultants, as the City may designate in writing and with the consent of the subcontractors and sub-consultants so designated. With respect to those contracts and/or agreements assigned to and accepted by the City, the City shall only be required to compensate such subcontractors and sub-consultants for compensation accruing to such parties under the terms of their agreements with the Engineer from and after the date of such assignment to and acceptance by the City. All sums claimed by such subcontractor or sub-consultants to be due and owing for services performed prior to such assignment and acceptance by the City shall constitute a debt between the Engineer and the affected subcontractors or sub-consultants, and the City shall in no way be deemed liable for such sums. The Engineer shall include this provision and the City's rights and obligations hereunder in all agreements or contracts entered into with the Engineer's subcontractors and sub-consultants.
- C. In the event of the termination of this Contract by default of the Engineer, the Engineer further agrees that all of its obligations and duties contained in this Contract shall survive such termination for default and shall not, in any way, relieve the Engineer of the obligations provided for in this Contract.
- D. If this Contract is terminated by reason of default on the part of the Engineer, upon final determination by a court that the termination was improper, the termination will be deemed converted to a cancellation for convenience and the Engineer's remedy shall be limited to the recovery of compensation set out in the Cancellation for convenience paragraph of this Contract.

25. Time is of the essence. Both the City and the Engineer expressly agree that time is of the essence with respect to this Contract, and the time for performance of each task established by the work orders shall be made a part of this Contract and shall be strictly observed and enforced. Any failure on the part of the City to timely object to the time of performance shall not waive any right of the City to object at a later time.

26. No damage for delay. No payment, compensation or adjustment of any kind other than an approved extension of time shall be made to the Engineer for damages because of hindrances or delays from any cause in the progress of the work, whether such hindrances or delays be

avoidable or unavoidable. The Engineer agrees that it will make no claim for compensation or damages for any such delays and will accept as full satisfaction for such delays the extensions of time.

27. **Severability.** In the event that any provision, clause, portion or section of this Contract is unenforceable or invalid for any reason, such unenforceability or invalidity may not affect the enforceability or validity of any other paragraph or the remainder of this Contract.
28. **Entire agreement.** This Contract, including its exhibits and any other documents or certificates incorporated herein by reference, expresses the entire understanding of the City and the Engineer concerning the Contract. Neither the City nor the Engineer has made or shall be bound by any agreement or any representation to the other concerning this Contract, which is not expressly set forth herein.
29. **Amendment.** This Contract may be modified only by a written amendment of subsequent date hereto, approved by the City and the Engineer. In the event the Engineer's scope of work is increased or changed so as to materially increase the need for Engineering services in excess of the not to exceed total compensation, the Engineer may seek to amend this Contract.
30. **Execution in counterparts.** This Contract may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.
31. **Descriptive headings.** The descriptive headings of the sections of this Contract are inserted or annexed for convenience of reference only and shall not affect the meaning, construction, interpretation or effect of this Contract.
32. **Construction and enforcement.** This Contract shall be construed and enforced in accordance with the laws of the State of Oklahoma. In the event of ambiguity in any of the terms of this Contract, it shall not be construed for or against any party on the basis that such party did or did not author the same.
33. **Survival of representations.** All representations and covenants of the parties shall survive the expiration of the Contract.
34. **Parties bound.** This Contract shall be binding upon and inure to the benefit of all parties. This Contract is solely for the benefit of the parties and their successors in interest, and none of the provisions hereof are intended to benefit third parties.
35. **Venue of actions.** The parties agree that if any legal action is brought pursuant to this Contract, such action shall be instituted in the district court of Oklahoma County.

36. **Effective date.** The effective date of this Contract shall be the execution of this contract by the City.

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REVIEWED for form and legality.

Assistant Municipal Counselor

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EXHIBIT C
FIELD REPORT OF NON-COMPLIANCE
PROJECT NO. MC-0612
ENGINEERING AND TESTING SERVICES

Name of Engineering & Testing Firm/Laboratory: _____

Oklahoma City Project Number: _____

Contractor: _____

Date Tested: _____

Specific Location: _____

Type of Material (check below or write in): _____

Concrete_____ Asphalt_____ Soil_____ Aggregates _____

Stabilized Subgrade_____

Test Results: _____

Specified Limits: _____

Type of Test: _____

Test Method: _____

Enter Name of Contractor's Representative Notified: _____

Contractor's Signature: _____

Field Technician Signature: _____

This report is for information only.

Fax this report to: (405) 682-7067 or e-mail to: daniel.witthuhn@okc.gov

EXHIBIT D
LABORATORY REPORT OF NON-COMPLIANCE
PROJECT NO. MC-0612
ENGINEERING AND TESTING SERVICES

Name of Engineering & Testing Firm/Laboratory: _____

Oklahoma City Project Number: _____

Contractor: _____

Date Sampled: _____

Date Tested: _____

Specific Location: _____

Type of Material (check below or write in): _____

Concrete _____ Asphalt _____ Soil _____ Aggregates _____

Stabilized Subgrade _____

Test Results: _____

Specified Limits: _____

Type of Test: _____

Test Method: _____

Laboratory Technician: _____

This report is for information only.

Fax this report to: (405) 682-7067 or e-mail to: daniel.witthuhn@okc.gov

EXHIBIT E
SAMPLING, TESTING, AND ACCEPTANCE CRITERIA FOR ROUTINE OKLAHOMA CITY CONSTRUCTION MATERIALS
TESTING
PROJECT NO. MC-0612
ENGINEERING AND TESTING SERVICES

Test	Frequency	Method	Acceptance Criteria
Asphalt Cement Extraction on Asphaltic Concrete	One set of test for each 500 tons of each mix design produced, but not less than one set of tests per day for each mix design used on that day	ASTM D6307 or AASHTO T308	Tolerance from approved mix design job mix formula AC content, rounded to nearest 0.1%: +/- 0.4% for individual sample; +/- 0.2% for average for a particular mix design on the project
Gradation of Extracted Aggregate from Asphaltic Concrete		ASTM D5444 or AASHTO T30	Tolerance from approved mix design job mix formula gradation, rounded to nearest 1% for sieves larger than #200 or to nearest 0.1% for #200 sieve: +/- 7% for No. 4 & Larger Sieves +/- 4% for No. 10, 40, and 80 Sieves +/- 2.0% for No. 200 Sieve
Maximum Theoretical Specific Gravity of Asphaltic Concrete (MTSG)		ASTM D2041 or AASHTO T209	None - used in other density evaluations
Laboratory-Molded Density of Asphaltic Concrete		OHD L8 & L14	Range of allowable ratio of lab-molded density to MTSG determined for the sample, rounded to nearest 0.01: 0.94 to 0.96 for 3 million ESALs or more 0.95 to 0.97 for 0.3 to less than 3 million ESALs 0.96 to 0.98 for less than 0.3 million ESALs
Hveem Stability of Asphaltic Concrete		ASTM D1560 or AASHTO T246	Minimum Hveem stability, rounded per test method requirements 40

Test	Frequency	Method	Acceptance Criteria
Roadway Density of Asphaltic Concrete	4 nuclear density tests or one set of 3 core specimens per 500 Tons or fraction thereof for each mix design used	ASTM D2950 (nuclear) or ASTM D1188, D2726, or D6752 or AASHTO T166, T275, or T331 (cores)	Range of allowable ratio of roadway density to MTSG, rounded to nearest 0.01: 0.92 to 0.96 For nuclear density method, use mix design MTSG at JMF AC content. For roadway core method use MTSG determined for test representing the particular lot in question.
Asphalt Pavement Thickness	As directed by City Engineer	ASTM C174 Modified for Asphalt	Tolerance from specified pavement thickness, rounded to nearest 0.1 inch (reporting precision of method): up to 0.3 inch deficiency in thickness

Test	Frequency	Method	Acceptance Criteria
Concrete Compressive Strength	One set of four 6"x12" or five 4"x8" concrete cylinders plus slump, air, and temperature tests on a sample of concrete for each 600 SY of pavement, 800 LF or curb and gutter, 5000 SF of structural slab or wall less than 9.75" thick, or 150 CF of other concrete, or fraction thereof, for each class of concrete produced, but not less than one set per day for each class of concrete produced on that day	ASTM C172, C31, C39, and C1231 or C617; or AASHTO R60, T22, T23, and T231 or ASTM C1231	<p>Test two specimens at 7-days for information only -- no pass/fail to be indicated.</p> <p>Test two specimens for 6"x12" or three specimens for 4"x8" at 28-days and use the average as the test result for acceptance evaluation, rounded per test method requirements, using the following two criteria:</p> <ol style="list-style-type: none"> 1. No individual test result (average of two specimens) shall be less than minimum class strength (3000 psi for class A or AP; 4000 psi for class AA, or 2400 psi for class C). 2. The average of any three consecutive tests on the same class of concrete, from the same supplier, on the same project, must be at least 500 psi <u>more</u> than the minimum class strength. <p>Criterion #2 generally requires that three different averages of five test results be considered. Two of those averages utilize test results, which may not yet be complete at the time the test result in question is first available.</p>
Concrete Slump		ASTM C143 or AASHTO T119	<p>Range of test results reported in 0.25 inch increments:</p> <p>4" to 6" for drilled shaft concrete</p> <p>3" to 5" for an approved concrete mix design using mid range water reducer</p> <p>4" to 8" for an approved concrete mix design using high range water reducer</p> <p>1" to 4" for all other concrete</p>

Test	Frequency	Method	Acceptance Criteria
Concrete Air Content		ASTM C231 or AASHTO T152	Range of test results reported in 0.1% increments to 6.0% and in 0.2% increments over 6.0%: 4.5% to 7.6% for all concrete unless specified otherwise in the project plans or directed otherwise by the City's Engineer
Concrete Temperature		ASTM C1064 or AASHTO T309	50 deg. F or more in all cases No more than 85 deg. F for concrete used in bridge superstructures other than for diaphragms, parapets, railing, curbs, and sidewalks.
Ambient Temperature			More than 40 deg. F, or greater than 35 deg. F and rising.
Concrete Pavement Thickness	As directed by City's Engineer	ASTM C174	Tolerance from specified pavement thickness, rounded to nearest 0.1 inch: Up to 0.3 inch deficiency in thickness
Soil Moisture-Density Relationship Test (standard Proctor)	As necessary to adequately define materials used	ASTM D698 or AASHTO T99	None - used in other density and moisture evaluations
Soil Compacted Density	One test per 1200 SY of subgrade under planned structures, pavement, or fill; one test per 2400 SY per lift of embankment or backfill;	ASTM D6938 or AASHTO T310	Percent of referenced maximum dry density (standard Proctor) value, rounded to nearest whole number: 95% or more under planned structures or pavement 90% or more outside of planned structure and pavement areas

Test	Frequency	Method	Acceptance Criteria
Soil Compacted Moisture Content	one test per 400 LF per lift of trench backfill (see above for additional "Frequency" information)		Deviation of percent moisture from referenced optimum moisture content (standard Proctor) value, rounded to nearest whole number: -4% to +1% for AASHTO A-4, A-5, A-6 with group index of 5 or less, and A7-5 classification soils -4% to +2% for AASHTO A-1, A-2, and A-3 classification soils -2% to +2% for AASHTO A-6 classification soils with group index of 6 or more. -0% to +4% for AASHTO A7-6 classification soils.
Stabilized Subgrade Moisture-Density Relationship Test (standard Proctor)	As necessary to adequately define materials used	ASTM D698 or AASHTO T99	None - used in other density and moisture evaluations obtain sample(s) from mixed material on roadway when compaction starts
Stabilized Subgrade Compacted Density	One test per 350 LF of roadway	ASTM D6938 or AASHTO T310	Percent of referenced maximum dry density (standard Proctor) value, rounded to nearest whole number: 95% or more
Stabilized Subgrade Compacted Moisture Content			Deviation of percent moisture from referenced optimum moisture content (standard Proctor) value, rounded to nearest whole number: -2% to +2%
Aggregate Moisture-Density Relationship Test (modified Proctor)	As necessary to adequately define materials used	AASHTO T180 Method D	None - used in other density and moisture evaluations
Aggregate Base Compacted Density	One test per 250 LF of roadway, taken under the extent of the proposed pavement	ASTM D6938 or AASHTO T310	Percent of referenced maximum dry density (modified Proctor) value, rounded to nearest whole number: 98% or more
Aggregate Base Compacted Moisture Content			None – utilize moisture as required to achieve density requirement