City of Kyle, Texas

Request for Statement of Interest and Qualifications

For

GEOTECHNICAL AND CONSTRUCTION MATERIALS TESTING SERVICES ROTATION LIST

"K20-21.4"

REQUEST FOR QUALIFICATIONS (RFQ)

Geotechnical and Construction Materials Testing
Services Rotation List
"K20-21.4"

Five (5) complete bound copies of the qualifications and one (1) electronic authenticated copy (CD or flash drive) are required. Qualifications are to be delivered by 5:00 p.m., Wednesday March 4, 2020 to:

Leon Barba, P.E.
City Engineer
City of Kyle
100 W. Center Street
Kyle, TX 78640

The complete unpriced submittal shall be enclosed in an envelope and plainly marked on the outside of the envelope or on any carrier's envelope:

Professional Engineering Services for
Geotechnical and Construction Materials Testing
Services Rotation List
Kyle, Texas
"K20-21.4"

The City reserves the right to negotiate with any and all persons or firms. The City also reserves the right to reject any or all submittals, or to accept any submittal deemed most advantageous, or to waive any irregularities or informalities in the submittal received, and to revise the process schedule as circumstances arise.

No fax submissions will be accepted. No late submissions will be accepted. All submissions received after the deadline will be returned unopened.

Leon Barba, P.E.
City Engineer

Publish: Wednesday February 12, 2020

Wednesday February 19, 2020

TERMS AND CONDITIONS

Submission of Bid

Five (5) complete bound copies of the qualifications are required and one (1) electronic authenticated copy (CD or flash drive). The City is not responsible for discrepancies between the submitting firm's electronic version and 'Original' hard copy submittal. The City reserves the right to use the electronic version as an 'Original'.

The complete submittals shall be enclosed in an envelope and plainly marked on the outside of the envelope or on any carrier's envelope:

Professional Engineering Services for
Geotechnical and Construction Materials Testing
Services Rotation List
Kyle, Texas
"K20-21.4"

Deadline

Qualifications are to be delivered by 5:00 p.m., Wednesday, March 4, 2020 to:

Leon Barba, P.E.
City Engineer
City of Kyle
100 W. Center Street
Kyle, TX 78640

Qualifications delivered after the deadline will not be accepted.

Addenda

To submit written technical questions concerning the RFQ, you may contact:

Leon Barba, P.E.
City Engineer
City of Kyle
100 W. Center Street
Kyle, TX 78640
or by email at cityengineer@cityengineer.com

The submission date for questions, clarifications, or **request for general information will be 2:00 pm, February 24, 2020**. Any requests received after this date will be returned and not addressed. Note that all questions, clarifications, or request for general information are to **be in writing via email or other mail carrier to the City Engineer**.

Any interpretation, correction or change of the RFQ will be made by written ADDENDUM. Changes or corrections will be issued by the City Engineer

Addenda will be issued as expeditiously as possible. It will be the responsibility of all respondents to contact the City prior to submitting a response to the RFQ to ascertain if any addenda have been issued, and to obtain any and/or all addenda(s), execute them, and return addenda with the response to the RFQ. Addenda will be posted on the City's website: www.cityofkyle.com.

Proposals

Firms shall provide all information simply and economically as required by this RFQ. Failure to provide this information may result in rejection of the proposal. Qualifications shall provide a straightforward, concise description of the respondent's ability to meet the requirements. Emphasis shall be on quality, completeness, clarity of content, responsiveness to the requirements, and understanding of City's needs. The City requests the submittal be limited to fifteen (15) sheets front and back (total 30 sides), including required forms, resumes, and excluding cover letter/transmittal letter.

Scope of Services

The scope of services will include geotechnical engineering, testing of soils and construction materials, field and laboratory services, and reports, as required, for the purpose of quality control and assurance of construction activities of the City of Kyle.

Testing shall primarily involve the following materials and services:

a. Soils
b. Base Materials
c. Flexible base stockpiles
d. Subsurface investigations for streets, parking lots, utilities, buildings and other engineered facilities
e. Aggregate
f. Concrete
g. Asphaltic Concrete
h. Portland cement
i. Coring Services
j. Structural Steel
k. Non-Destructive Testing

Technical Expertise

Interested firms must have an established in-house laboratory that meets the standards of the America Standard Testing Materials (ASTM) requirements and be pre-certified through TxDOT's Consultant Certification Information System or must be accredited/certified with exception to Forensic Engineering by the American Association for Laboratory Accreditation (A2LA) or the American Association of State Highway and Transportation Officials (AASHTO) Accreditation Program (AAP). Under the category of ***Soils and Portland Cement Concrete,*** laboratories are to meet the requirements of ASTM E329, D3740 and C1077 and to be accredited in the tests and procedures listed under Appendix A. Forensic Engineering will be performed by petrographers and other specialists.

The services performed will be under the direction of a Professional Engineer who has a minimum of 5 years' experience in construction materials testing similar in type and scope to services described herein.

Technicians performing work under the Soils and Portland Cement Concrete will be identified on the Technician Certification form provided under Appendix B. Technicians will be certified under:

- the National Institute for Certification in Engineering Technologies, (NICET) at the time of the submittal Level II or higher Associate Engineering Technician in soils technology.
- the American Concrete Institute, (ACI) Concrete Field Testing Technician Grade I and/or NICET Level II Associate Engineering Technician in Concrete.
- the Texas Hot Mix Asphalt Pavement Association Level 1A, HMA Plant Operations Specialist, or higher for Asphaltic Cement Concrete.
- NICET, Level III Engineering Tech, or higher for Flex Base stockpile testing.
- The American Welding Society (AWS) Welding Inspectors and/or Nondestructive Testing (ASNT) NDT Level II, or higher for structural steel inspecting and testing
- NICET – Level II or higher Associate Engineering Technicians in soils technology.

The selected firms shall document that they have provided services for a minimum of three (3) years prior to the date of this RFQ, of the same type as specified in the selected category.

MINIMUM STANDARDS FOR RESPONSIBLE PROSPECTIVE FIRMS

PERSONS AND FIRMS PRACTICING ENGINEERING SERVICES IN THE STATE OF TEXAS MUST POSSESS A PROPER REGISTRATION IN ACCORDANCE WITH TEXAS LAWS.

Introduction

The City is seeking three qualified firms to provide all geotechnical engineering, construction materials, and non-destructive forensic testing services on rotation for individual work assignments made. One firm will be assigned to testing materials associated with the construction of the wastewater treatment plant expansion. The remaining two firms will be assigned to all other construction testing activities. The City requires the selected firms to provide "call-out" sampling, laboratory and field investigations and preparation of reports indicating whether the materials meet the requirements of the Construction Documents. The City anticipates contracting with qualified firms for an approximate two (2) year period with an option to renew the contract at the end of the contract period for the same timeframe and dollar amount. The total fee for services rendered by firm is estimated to not exceed $300,000 per year but could be substantially less if the service is not needed. Engineering and testing services are to be provided in the following categories:

- **Category 1: Geotechnical Engineering**
  Perform subsurface investigations for streets, parking lots, utilities, buildings and other engineered facilities.
- **Category 2: Site Development and Building Construction Materials Testing**
  Conduct investigations, evaluations and testing of soils, aggregates, asphaltic concrete and Portland cement concrete, structural steel welding and erection, and other building construction materials as needed for roadways, parking lots, utilities, buildings and other engineered facilities.

- **Category 3: Soils and Portland Cement Testing**
  Conduct investigations, evaluations and testing of soils, aggregates, and Portland cement concrete.
- **Category 4: Asphaltic Cement Concrete Testing**
  Conduct investigations, evaluations and testing of asphaltic concrete.
- **Category 5: Specialized Testing**
  Perform testing and inspection of flexible base stockpiles, structural steel, coatings and corrosion control.
- **Category 6: Forensic Engineering**
  Perform special tests including petrography, scanning electron microscopy, x-ray defractometry, and x-ray spectroscopy evaluations for streets, parking lots, utilities, buildings and other engineered facilities.

In responding to this request, firms will prioritize the categories of work in which they wish to provide services. It is anticipated that each firm will generally be selected to provide services in up to two of the above categories. Firms will be advised to designate/prioritize only those categories in which they are qualified/certified to provide services. In order to meet project needs and to pursue a balanced workload distribution under this contract, some firms may be selected to provide services in a category(s) outside of their two primary choices, so long as the firm meets all of the category qualifications. When a firm designates/prioritizes a specific category, the firm must be able to document a capability to provide all of the services required in the designated category(s).

General

The proposed project scope is multifaceted to address a variety of City material testing needs. The selected firms performing testing services in Categories 1 through 5 must be stationed within a fifty (50) mile radius of the City of Kyle City Hall, 100 W. Center Street, Kyle, Tx, 78640 and be capable of responding routinely to "call out" services within 18 hours when a request is made before noon of a workday. The following items represent the general scope of work to be completed by the successful respondent (items include both general and specific descriptions of tasks):

• *Category 1: Geotechnical Engineering*

Services which are related to subsurface exploration, laboratory and field-testing of soil and rock, and geotechnical engineering analyses and recommendations for City-funded projects. The City expects the selected firms 1) to conduct standard laboratory tests to identify and classify the materials and determine strength and deformation characteristics, 2) to perform special tests such as hardness and abrasively as required, and 3) to prepare written reports that contain facts (such as laboratory test results and subsurface exploration observations), interpretations (such as shrink/swell potential, stratigraphy, geologic structural features and the presence of groundwater) and recommendations (such as excavation methods, preferred pipe bedding materials, influence of groundwater, influence of adjacent structures, preferred types of foundations, allowable loads, and permissible slopes) appropriate for the type of investigation. The City expects the reports to contain project location maps, boring location maps, geotechnical (geological) profiles, boring logs and other exhibits, as required, and to be presented in electronic format as well as bound paper documents. Typical projects will involve sampling, laboratory and field-testing, and geotechnical engineering analyses and street pavement structural design, wastewater and drainage tunnels, utility trenches, roadway embankments, and embankment dams. Other services, such as field inspections of drilled piers and other foundation excavations, may also be required under this category as determined on a project-by-project basis.

• ***Category 2: Site Development and Building Construction***

A combination of services required for designated site-specific development and building construction projects. The services associated with this category will typically include a combination of the following: 1) Laboratory and field testing of soils, 2) laboratory and field testing of Portland cement concrete, and 3) laboratory and field testing of other materials such as mortar, rock, Hot Mix Asphalt Concrete (HMAC) welding and flexible base stockpiles. The City expects the selected firms to provide "call-out" sampling, laboratory and field testing and materials engineering evaluations, investigations and recommendations for trench backfill, subgrade, embankment, flexible base, and Portland cement concrete pavements, sidewalks and structures. Other services, such as field inspections of drilled piers and other foundation excavations, may also be required under this category as determined on a project-by-project basis.

• ***Category 3: Soils and Portland Cement Concrete***

Services which are related to laboratory and field-testing of soils and Portland cement concrete on City-funded projects. The City expects the selected firms to provide "call-out" sampling, laboratory and field testing and materials engineering evaluations, investigations and recommendations for trench backfill, subgrade, embankment and flexible base, as well as Portland cement concrete pavements, sidewalks and structures. Other services, such as field inspections of drilled piers and other foundation excavations, may also be required under this category as determined on a project-by-project basis.

• ***Category 4: Asphaltic Cement Concrete***

Services which are related to laboratory and field-testing of asphaltic cement concrete on City-funded projects. The City expects the selected firms to provide "call-out" sampling, laboratory and field testing and materials engineering evaluations, investigations and recommendations for asphaltic cement concrete bases and surface courses used in street and parking lot pavements.

• ***Category 5: Specialized Testing***

Services which are related to laboratory and field-testing of flexible base stockpiles, structural steel installations, site utility piping (field welding tests which may include x-ray, dye penetration, and other techniques), corrosion control coatings, and other special coatings (surface preparation and mil thickness tests by NACE Intl. Level 2 or higher certified inspector). The City expects the selected firms to provide "call-out" sampling, laboratory and field testing, and materials engineering evaluations, investigations and recommendations for stockpiled flexible base used for pavements, for corrosion control coatings used in water facilities, and for non-destructive evaluation of the steel components used in buildings and other project structures.

• ***Category 6: Forensic Engineering***

Services which are related to determining the causes of failure of constructed facilities and engineering structures. The City expects the selected firms to provide sampling, laboratory and field-testing, and materials engineering evaluations and investigations using petrography, x-ray defractometry, scanning electron microscopy, x-ray spectroscopy and other analytical test methods.

In some cases, firms will be provided street construction and utility plans for review and determination of minimum testing required per established governmental guidelines.

RFQ Schedule

The City anticipates the following schedule associated with this RFQ:

Issue RFQ	February 12, 2020
Deadline for accepting questions or clarifications	February 24, 2020 (2:00 pm)
Submittals Due	March 4, 2020 (5:00 pm)
City Council Approval	March 17, 2020

Selection Process

The review committee will be selected by the City Engineer. The committee will analyze and evaluate the submittals. Firms shall completely respond to all components of this RFQ or firm will not be considered.

By submitting a response to this RFQ, firm accepts the evaluation process as outlined in the following section and acknowledges and accepts the determination of the "most qualified" firm may require subjective judgments by the City.

Requirements for Submittal

The submittal shall be limited to fifteen (15) sheets front and back (total 30 sides), including resumes, forms, and excluding cover letter/transmittal letter.

Respondents shall carefully read the information in the following evaluation criteria and submit a complete submittal to all questions in this RFQ as formatted below:

Item 1: Qualifications and Availability (35%):

a) Provide the following information:
- Legal name of firm.
- Location of office that will be conducting the work.
- Distance between the office conducting the work and the City of Kyle City Hall Building.
- Contact persons.
- Date of firm formation.
- Legal business description (Individual, Corporation, Joint Venture, etc.).

b) Provide a statement on the availability and commitment of the firm, its principal(s) and assigned professionals to undertake the project, reporting responsibilities and how the firm will interface with the City. Daily communication may be required and meetings on an as needed basis.

c) Provide a statement of interest for the project including a narrative describing the firm's specific expertise and unique qualifications as they pertain to this particular project.

d) Prioritize the categories the firm wishes to provide services for.

Item 2: Proposed Staff (25%):

a) Organizational chart for personnel (including sub-consultants) who are to work on this project including licensure information.
b) Names and roles of key personnel proposed to work on this project and their primary office location. Indicate who will be the primary manager for each work order.
c) Percentage of staff located in office conducting work.
d) Include resumes for all key personnel and indicate any individuals who have had previous experience on similar projects.
e) Provide staffing size by area of expertise.
f) Provide current workload of prime firm.
g) Provide staff availability to perform services.
h) Provide certification forms.

Item 3: Laboratory Testing Experience (30%):

a) Provide an overview and brief history of the firm and sub-consultants.
b) Provide verifiable examples of at least three (3) similar contracts/projects completed in the last five (5) years by the principal and sub-consultants, including:
    - Contract/Project name and location.
    - Name of Project Manager.
    - Services provided.
    - Description of the contract/project highlighting similarities with the proposed project.
    - Date of completion or contract/project status.
    - Client name and contact person.
    - History of meeting contract/project schedules.

Item 4: Project Approach (10%):

a) Explain how the firm will manage the contract.
b) Explain how the firm will analyze project testing requirements.
c) Explain how the firm will report/track project testing requirements.
d) Provide the firms' inventory of applicable equipment to be used on this contract.
e) If any operations, such as drill rig dispatching or laboratory testing, are to be done from an office outside of the 40-mile radius, indicate whether or not positioning staff or equipment delivery and travel charges, other, will be applied and on what basis it would be applied.

2. RESPONSE INSTRUCTIONS

The submittal must follow the format established within this RFQ. Adherence to these rules will ensure a fair and objective analysis of all proposals. Failure to complete any portion of this request may result in rejection of a proposal.

3. CONTACT WITH CITY COUNCIL AND AGENCY EMPLOYEES

Firms submitting statements of qualifications, including their agents and representatives, shall not undertake any activities or actions to promote or advertise their statement of qualifications to any member of the Kyle City Council or City staff except in the course of City-sponsored inquiries, briefings, interviews, or presentations between the statement of qualifications submission date and award by City Council. Any violations of this provision may result in disqualification of the firm. Firms are to direct all inquiries to the project contact person noted in this RFQ.

4. W-9 Form

Submit a completed and signed W-9 Form with your proposal. Respondents may go to http://www.irs.gov/formspubs/index.html?portlet=3 to download this form, if needed. Please also include an email address or fax number.

5. COSTS OF PREPARATION AND SUBMISSION

Each firm shall bear responsibility for all costs incurred in order to prepare and submit their response to this RFQ.

6. PROPOSAL REVIEW

All applicable information will be subject to public disclosure in accordance with the Freedom of Information Act, at award of contract, cancellation of this RFQ, or within 180 days, whichever occurs first.

7. PRESENTATIONS

Firms may be required to make presentations and/or provide written clarifications of their responses at the request of the City.

LABORATORY ACCREDITATION

- The City require the laboratories that provide services under all categories to be accredited/certified by the American Association for Laboratory Accreditation (A2LA) or the American Association of State Highway and Transportation officials (AASHTO) Accreditation Program (AAP) at time of submittal of Proposal.
- The City requires the laboratories that provide services under Category (1) Geotechnical Engineering) and Category 2 (Site Development and Building Construction Materials Testing) to meet the requirements of American Society for Testing and Materials (ASTM) E329, D3740, and C1077, and to be accredited in the tests and procedures listed in all Tables below.
- The City requires the laboratories that provide services under Category 6 (Forensic Engineering) to meet the requirement of the American Society for Testing and Materials (ASTM) 543, to be accredited by a laboratory accreditation authority, to be nationally recognized for the expertise of the professional and technical staff as evidenced by publication of articles in industry technical journals and magazines concerning forensic studies of construction materials or must have fully-documented, comparable demonstration of qualifications and experience.
- The City requires the laboratories that provide service in the specific area of HMAC testing to meet the requirements of American Society for Testing and materials (ASTM) E329 and D3666 and to be accredited in those tests and procedures listed in all applicable Tables.
- The City requires the laboratories that provide flexible base stockpile testing services be accredited in TxDOT 116E and 117E.

FORM A: Category 1: Geotechnical Engineering – Testing, Procedures & Laboratory Accreditation Checklist.

LABORATORY ACCREDITATION (Circle all that apply)

1. TxDOT 2. A2LA 3. AASHTO

Table 1. Soil Tests and Procedures

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
D421	T87	Tex-101-E	Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D422	T88	Tex-110-E	Test Method for Particle-Size Analysis of Soils	
D698	T99	Tex-113-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Base Materials and Cohesionless sand	
D698	T99	Tex-114-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Subgrade & Embankment Soils	
D1140	T11	Tex-111-E	*Determination of Amount of Material in Soils Finer Than the 75-μm (No. 200) Sieve	
D2216	T265	Tex-103-E	*Determination of Moisture Content in Soil Materials	
D1557	T180		Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 lbf/ft^3 (2,700 kN/-m/m^3))	
D2217	T146	Tex-101-E	Practice for Wet Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D2487		Tex-142-E	Classification of Soils for Engineering Purposes (Unified Soil Classification System)	
D2488		Tex-141-E	Practice for Description and Identification of Soils (Visual-Manual Procedure)	
D6938-10			Standard Test Method for In-Place Density and Water Content of Soil-Aggregate by Nuclear Methods (Shallow Depth)	
D4318	T89	Tex-104-E	*Determination of Liquid Limit of Soils	
D4318	T90	Tex-105-E	*Determination of Plastic Limit of Soils	
D4318	T90	Tex-106-E	*Method of Calculating the Plasticity Index of Soils	
		Tex-121-E	*Soil Lime Compression Test	
D5084			Permeability of Silt or Clay	
		Tex-145-E	Soluble Sulfates	

***Titles from TxDOT Manuals.**
On all Forms Circle all Tests that apply.

FORM B: Category 2: Site Development and Building Construction – Testing & Procedures Checklist

Circle each testing procedure that the firm is accredited in.

Table 1: SOIL TESTS and PROCEDURES (PAGE 1 OF 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
D421	T87	Tex-101-E	Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D422	T88	Tex-110-E	Test Method for Particle-Size Analysis of Soils	
D698	T99	Tex-113-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Base Materials and Cohesionless sand	
D698	T99	Tex-114-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Subgrade & Embankment Soils	
D1140	T11	Tex-111-E	*Determination of Amount of Material in Soils Finer Than the 75-μm (No. 200) Sieve	
D2216	T265	Tex-103-E	*Determination of Moisture Content in Soil Materials	
D1557	T180		Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 lbf/ft^3 (2,700 kN/-m/m^3))	
D2217	T146	Tex-101-E	Practice for Wet Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D2487		Tex-142-E	Classification of Soils for Engineering Purposes (Unified Soil Classification System)	
D2488		Tex-141-E	Practice for Description and Identification of Soils (Visual-Manual Procedure)	
D6938-10			Standard Test Method for In-Place Density and Water Content of Soil-Aggregate by Nuclear Methods (Shallow Depth)	
D4318	T89	Tex-104-E	*Determination of Liquid Limit of Soils	
D4318	T90	Tex-105-E	*Determination of Plastic Limit of Soils	
D4318	T90	Tex-106-E	*Method of Calculating the Plasticity Index of Soils	
		Tex-121-E	*Soil Lime Compression Test	
D5084			Permeability of Silt or Clay	
		Tex145- E	Soluble Sulfates	

FORM B: Category 2: Site Development and Building Construction – Testing & Procedures Checklist

Table 2: CONCRETE TESTS and PROCEDURES (Page 2 of 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
C29			Unit Weight of Aggregate	
C31	T23	Tex-447-A	Practice for Making and Curing Concrete Test Specimens in the Field	
C39	T22	Tex-418-A	Test Method for Compressive Strength of Cylindrical Concrete Specimens	
C42			Drilled Core Compressive Strength	
C78	T97	Tex-448-A	Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	
C138	T121	Tex-417-A	Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete	
C140			Concrete Masonry Unit Strength	
C143	T119	Tex-415-A	Test Method for Slump of Hydraulic Cement Concrete	
C172	T141	Tex-407-A	Practice for Sampling Freshly Mixed Concrete	
C173			Test Method for Air Content of Freshly Mixed Concrete	
C231	T152	Tex-416-A	Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method	
C617	T231	Tex-450-A	Practice for Capping Cylindrical Concrete Specimens	
C780			Mortar Cube Compressive Strength	
C1019			Grout Specimen Compressive Strength	
C1064		Tex-422-A	Test Method for Temperature of Freshly Mixed Portland Cement Concrete	
C1314			Concrete Masonry Unit Prism Strength	

FORM B: Category 2: Site Development and Building Construction – Testing & Procedures Checklist

Table 3: AGGREGATE TESTS and PROCEDURES (Page 3 of 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
C40	T21	Tex-408-A	Test Method for Organic Impurities in Fine Aggregates for Concrete	
C88	T104	Tex-411-A	Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	
C117	T11	Tex-406-A	Test Method for Materials Finer than 75-&#181m (No. 200) Sieve in Mineral Aggregates by Washing	
C127	T85	Tex-403-A	Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate	
C128	T84	Tex-403-A	Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate	
C131	T96	Tex-410-A	Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	-
C136	T27	Tex-401-A	Test Method for Sieve Analysis of Fine and Coarse Aggregates	
C142	T112	Tex-413-A	Test Method for Clay Lumps and Friable Particles in Aggregates	
C566	T255		Test Method for Total Evaporable Moisture Content of Aggregate by Drying	
C702	T248		Practice for Reducing Samples of Aggregate to Testing Size	
D75	T2	Tex-400-A	Practice for Sampling Aggregates	
D2419	T176	Tex-203-F	Test Method for Sand Equivalent Value of Soils and Fine Aggregate	

FORM C: Category 3: Soils and Portland Cement Concrete – Testing, Procedures and Laboratory Checklist

LABORATORY ACCREDITATION (Circle all that apply)

ASTM - Accredited

1. **E329 - YES / NO**
2. **D3740 - YES / NO**
3. **C1077 - YES / NO**

Table 1: SOIL TESTS and PROCEDURES (PAGE 1 OF 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
D421	T87	Tex-101-E	Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D422	T88	Tex-110-E	Test Method for Particle-Size Analysis of Soils	
D698	T99	Tex-113-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Base Materials and Cohesionless sand	
D698	T99	Tex-114-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Subgrade & Embankment Soils	
D1140	T11	Tex-111-E	*Determination of Amount of Material in Soils Finer Than the 75-μm (No. 200) Sieve	
D2216	T265	Tex-103-E	*Determination of Moisture Content in Soil Materials	
D1557	T180		Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 lbf/ft^3 (2,700 kN/-m/m^3))	
D2217	T146	Tex-101-E	Practice for Wet Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D2487		Tex-142-E	Classification of Soils for Engineering Purposes (Unified Soil Classification System)	
D2488		Tex-141-E	Practice for Description and Identification of Soils (Visual-Manual Procedure)	
D6938-10			Standard Test Method for In-Place Density and Water Content of Soil-Aggregate by Nuclear Methods (Shallow Depth)	
D4318	T89	Tex-104-E	*Determination of Liquid Limit of Soils	
D4318	T90	Tex-105-E	*Determination of Plastic Limit of Soils	
D4318	T90	Tex-106-E	*Method of Calculating the Plasticity Index of Soils	
		Tex-121-E	*Soil Lime Compression Test	
D5084			Permeability of Silt or Clay	
		Tex-145-E	Soluble Sulfates	

FORM C: Category 3: Soils and Portland Cement Concrete – Testing, Procedures and Laboratory Checklist

Table 2. CONCRETE TESTS and PROCEDURES (Page 2 of 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
C29			Unit Weight of Aggregate	
C31	T23	Tex-447-A	Practice for Making and Curing Concrete Test Specimens in the Field	
C39	T22	Tex-418-A	Test Method for Compressive Strength of Cylindrical Concrete Specimens	
C42			Drilled Core Compressive Strength	
C78	T97	Tex-448-A	Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	
C138	T121	Tex-417-A	Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete	
C143	T119	Tex-415-A	Test Method for Slump of Hydraulic Cement Concrete	
C172	T141	Tex-407-A	Practice for Sampling Freshly Mixed Concrete	
C173			Test Method for Air Content of Freshly Mixed Concrete	
C231	T152	Tex-416-A	Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method	
C617	T231	Tex-450-A	Practice for Capping Cylindrical Concrete Specimens	
C1064		Tex-422-A	Test Method for Temperature of Freshly Mixed Portland Cement Concrete	

FORM C: Category 3: Soils and Portland Cement Concrete – Testing, Procedures and Laboratory Checklist

Table 3. AGGREGATE TESTS and PROCEDURES ASTM (Page 3 of 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
C40	T21	Tex-408-A	Test Method for Organic Impurities in Fine Aggregates for Concrete	
C88	T104	Tex-411-A	Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	
C117	T11	Tex-406-A	Test Method for Materials Finer than 75-&#181m (No. 200) Sieve in Mineral Aggregates by Washing	
C127	T85	Tex-403-A	Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate	
C128	T84	Tex-403-A	Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate	
C131	T96	Tex-410-A	Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	-
C136	T27	Tex-401-A	Test Method for Sieve Analysis of Fine and Coarse Aggregates	
C142	T112	Tex-413-A	Test Method for Clay Lumps and Friable Particles in Aggregates	
C566	T255		Test Method for Total Evaporable Moisture Content of Aggregate by Drying	
C702	T248		Practice for Reducing Samples of Aggregate to Testing Size	
D75	T2	Tex-400-A	Practice for Sampling Aggregates	
D2419	T176	Tex-203-F	Test Method for Sand Equivalent Value of Soils and Fine Aggregate	

FORM D: Category 4: Asphaltic Cement Concrete – Testing & Procedures Checklist

LABORATORY ACCREDITATION

ASTM : Specify Yes or No if Laboratory Accredited

A. E329 - YES / NO
B. D3666 - YES / NO

Table 3. AGGREGATE TESTS and PROCEDURES (Page 1 of 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
C40	T21	Tex-408-A	Test Method for Organic Impurities in Fine Aggregates for Concrete	
C88	T104	Tex-411-A	Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	
C117	T11	Tex-406-A	Test Method for Materials Finer than 75-&#181m (No. 200) Sieve in Mineral Aggregates by Washing	
C127	T85	Tex-403-A	Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate	
C128	T84	Tex-403-A	Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate	
C131	T96	Tex-410-A	Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	-
C136	T27	Tex-401-A	Test Method for Sieve Analysis of Fine and Coarse Aggregates	
C142	T112	Tex-413-A	Test Method for Clay Lumps and Friable Particles in Aggregates	
C566	T255		Test Method for Total Evaporable Moisture Content of Aggregate by Drying	
C702	T248		Practice for Reducing Samples of Aggregate to Testing Size	
D75	T2	Tex-400-A	Practice for Sampling Aggregates	
D2419	T176	Tex-203-F	Test Method for Sand Equivalent Value of Soils and Fine Aggregate	

Table 4. ASPHALTIC MATERIAL TESTS and PROCEDURES (Page 2 of 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
D4318	T90	Tex-106-E	*Method of Calculating the Plasticity Index of Soils	
		Tex-107-E	*Determination of Bar Linear Shrinkage of Soils	
		Tex-200-F	*Sieve Analysis of Fine and Coarse Aggregates	
D5	T49		Test Method for Penetration of Bituminous Materials	
D36	T53		Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)	
D113	T51		Test Method for Ductility of Bituminous Materials	
D140	T40	Tex-222-F	Practice for Sampling Bituminous Materials	
D244	T59		Test Methods for Emulsified Asphalts	
D402	T78		Test Method for Distillation of Cut-Back Asphaltic (Bituminous) Products	
D1754	T179		Test Method for Effect of Heat and Air on Asphaltic Materials (Thin-Film Oven Test)	
D1856	T170	Tex-211-F	Test Method for Recovery of Asphalt From Solution by Abson Method	
D2170	T201		Test Method for Kinematic Viscosity of Asphalts (Bitumens)	
D2171	T202		Test Method for Viscosity of Asphalts by Vacuum Capillary Viscometer	
D3142	T227		Test Method for Density of Liquid asphalts (Hydrometer Method)	
		Tex-236-F	Asphalt content and correction factors	

FORM D: Category 4: Asphaltic Cement Concrete – Testing & Procedures Checklist

Table 5. HOT MIX ASPHALT TESTS and PROCEDURES (Page 3 of 3)

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
D979	T168	Tex-222-F	Practice for Sampling Bituminous Paving Mixtures	
D1560	T246	Tex-208-F	Test Methods for Resistance to Deformation and Cohesion of Bituminous Mixtures by Means of Hveem Apparatus	
D2041	T209	Tex-227-F	Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures	
D2172	T164	Tex-210-F	Test Methods for Quantitative Extraction of Bitumen From Bituminous Paving Mixtures	
D2726	T166	Tex-207-F	Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Saturated Surface-Dry Specimens	
D3203	T269		Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures	-
D5444			Test Method for Mechanical Size Analysis of Extracted Aggregate	
		Tex-206-F	Molding Test Specimens	

FORM E: Category 5: Specialized Testing – Testing & Procedures Checklist

Table 1. SOIL TESTS and PROCEDURES

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
D421	T87	Tex-101-E	Practice for Dry Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D422	T88	Tex-110-E	Test Method for Particle-Size Analysis of Soils	
D698	T99	Tex-113-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Base Materials and Cohesionless sand	
D698	T99	Tex-114-E	* Laboratory Compaction Characteristics and Moisture-Density Relationship of Subgrade & Embankment Soils	
D1140	T11	Tex-111-E	*Determination of Amount of Material in Soils Finer Than the 75-µm (No. 200) Sie0e	
D2216	T265	Tex-103-E	*Determination of Moisture Content in Soil Materials	
D1557	T180		Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 lbf/ft3 (2,700 kN/-m/m3))	
D2217	T146	Tex-101-E	Practice for Wet Preparation of Soil Samples for Particle-Size Analysis and Determination of Soil Constants	
D2487		Tex-142-E	Classification of Soils for Engineering Purposes (Unified Soil Classification System)	
D2488		Tex-141-E	Practice for Description and Identification of Soils (Visual-Manual Procedure)	
D6938-10			Standard Test Method for In-Place Density and Water Content of Soil-Aggregate by Nuclear Methods (Shallow Depth)	
D4318	T89	Tex-104-E	*Determination of Liquid Limit of Soils	
D4318	T90	Tex-105-E	*Determination of Plastic Limit of Soils	
D4318	T90	Tex-106-E	*Method of Calculating the Plasticity Index of Soils	
		Tex-121-E	*Soil Lime Compression Test	
D5084			Permeability of Silt or Clay	
		Tex-145-E	Soluble Sulfates	

ASTM	AASHTO	TxDOT	TITLE	Check Box if Firm Accredited
		Tex-115-E Part 1	Field Method for determining in place density of soils and Base Materials	
		Tex-116-E	Ball Mill Method for Determining the Disintegration of Flexible Base Material	
		Tex-117-E	Triaxial Compression for Disturbed Soils and Base Materials	
E1155			Floor Flatness/Floor Levelness Equipment	

FORM F: Technician Certification

	Subcategory	Requirement	Person Performing Work	Certification Title
Soils and Portland Concrete				
	Soils	NICET Level II or Higher Associate Engineering Technician in soils technology		
	Portland Cement	Certified as an American Concrete Institute Grade 1 or		
		NICET Level II or Higher Associate Engineering Technician in Concrete		
Asphaltic Cement Concrete				
		Texas Hot Mix Asphalt (HMA) Pavement Association		
		Texas Hot Mix Asphalt (HMA) Pavement Association Plant Operations Specialist or Higher		
Specialized Testing				
	Structural Steel	American Welding Society(AWS) Welding Inspectors		
		Certified American Society for Nondestructive Testing (ASNT) NDT Level II, or Higher		
	Corrosion Coatings	National Association of Corrosion Engineers (NACE) Corrosion Inspector		
		Documented comparable, demonstrated qualifications and experience.		
Geotechnical Engineering				
		NICET Level II or Higher Associate Engineering Technicians in soils technology		
Site Development and Building Construction				
		NICET Level II or Higher Associate Engineering Technician in soils technology		
		American Concrete Institute Concrete Field Testing Technician Grade 1		
		NICET Level II or Higher Associate Engineering Technician in Concrete and certified as American Welding Inspectors and/or American Society for Nondestructive Testing (ASNT) NDT Level II, or higher		