

**CITY OF FRANKLIN, TENNESSEE  
PROFESSIONAL SERVICES AGREEMENT  
COF Contract No. 2019-0261**

THIS PROFESSIONAL SERVICES AGREEMENT (“Agreement”) is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and **VOLKERT, INC.** hereinafter referenced as Consultant, who mutually agree as follows:

**DECLARATIONS.** City desires to retain Consultant to provide survey, engineering, related technical, and other services in connection with City’s project hereinafter referenced as Project. The Project is described as follows:

**DESIGN OF INTERSECTION IMPROVEMENTS (ROUNABOUT CONCEPT) AT  
LIBERTY PIKE & NORTH ROYAL OAKS BOULEVARD/MALLORY LANE**

1. SCOPE OF SERVICES. Consultant shall provide surveying, engineering, and related technical services for the Project in accordance with the Scope of Services (“Services”) as found in Attachment A which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a monthly basis for work performed based on the Fee Schedule as contained in Attachment A in the Amount Not-to-Exceed Four Hundred Sixty-Six Thousand Two Hundred Ninety-Five and No/100 Dollars (\$466,295.00).
5. Payment of permit fees and third-party review fees, as a direct reimbursable cost, shall be allowed to exceed the above listed not-to-exceed contract ceiling.

**The Board of Mayor and Aldermen Approved this Agreement on the \_\_\_\_\_ Day of \_\_\_\_\_ 201\_\_.**

## **TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES**

### **ARTICLE 1. SERVICES.** Consultant will:

- 1.1 Act for City in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with standards of competent consultants using the standards in the industry:
- 1.2 Consider all reports to be confidential and distribute copies of the same only to those persons specifically designated by the City.
- 1.3 Perform all services under the general direction of a senior professional employee, licensed and/or registered in the State of Tennessee, when appropriate.
- 1.4 Designate, in writing, the sole Project representative to coordinate with City the Services to be provided, including all contact information.
- 1.5 Unless provided for in the Project Scope of Services (Attachment A), Consultant shall perform all Services with his own forces (employees). Should sub-consultants be proposed to be used in the Project, a listing of said sub-consultants with Services to be performed shall be provided. After approval of this Agreement, no substitute for sub-consultants shall be allowed unless approved by City.
- 1.6 Retain pertinent records relating to the services performed for a period of seven (7) years following the completion of the work; during this period the records shall be available for review by City at all reasonable times.

### **ARTICLE 2. CITY'S RESPONSIBILITIES.** City, or its authorized representative, will:

- 2.1 Provide Consultant with all information regarding the Project, which is available to, or reasonably obtainable by, the City.
- 2.2 Furnish right-of-entry onto the Project site for Consultant's necessary field studies and surveys. Consultant will endeavor to restore the site to its original condition and shall remain solely liable for all damages, costs and expenses, including reasonable attorneys' fees, for failure to make such restoration.
- 2.3 Designate, in writing, the sole Project representative to coordinate with and direct the Consultant, including all contact information.
- 2.4 Guarantee to Consultant that it has the legal capacity to enter into this contract and that sufficient monies are available to fund Consultant's compensation.

### **ARTICLE 3. GENERAL CONDITIONS.**

- 3.1 Consultant, by the performance of services covered hereunder, does not in any way assume, abridge or abrogate any of those duties, responsibilities or authorities customarily vested in other professionals or agencies participating in the Project.
- 3.2 Consultant shall be responsible for the acts or omissions of any party involved in concurrent or subsequent phases of the Project acting upon written instruction issued by the Consultant.
- 3.3 Neither City nor Consultant may assign or transfer its duties or interest in this Agreement without written consent of the other party.
- 3.4 **ALLOCATION OF RISK AND LIABILITY; GENERAL.** Considering the potential liabilities that may exist during the performance of the services of this Agreement, the relative benefits and risks of the Project, and the Consultant's fee for the services rendered, and in consideration of the promises contained in this Agreement, the City and the Consultant agree to allocate and limit such liabilities in accordance with this Article.

- 3.5 INDEMNIFICATION. Consultant agrees to indemnify and hold City harmless from and against legal liability for all judgments, losses, damages, and expenses to the extent such judgments, losses, damages, or expenses are caused by Consultant's negligent act, error or omission in the performance of the services of this Agreement. In the event judgments, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
- 3.5.1 SURVIVAL. The terms and conditions of this paragraph shall survive completion of this services agreement.
- 3.6 LIMITATIONS OF RESPONSIBILITY. Consultant shall not be responsible for (a) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project unless specifically undertaken in Attachment A, Scope of Services ; (b) the failure of any contractor, subcontractor, Consultant, or other Project participant, not under contract to Consultant, to fulfill contractual responsibilities to City or to comply with federal, state, or local laws, regulations, and codes; or (c) procuring permits, certificates, and licenses required for any construction unless such procurement responsibilities are specifically assigned to Consultant in Attachment A, Scope of Services.

**ARTICLE 4. TERMINATION BY THE CITY.** The City may terminate this Agreement in accordance with the following terms and conditions:

- 4.1 Termination for Convenience. The City may, when in the interests of the City, terminate performance under this Agreement with the Consultant, in whole or in part, for the convenience of the City. The City shall give written notice of such termination to the Consultant specifying when termination becomes effective. The Consultant shall incur no further obligations in connection with the work so terminated, other than warranties and guarantees for completed work and installed equipment, and the Consultant shall stop work when such termination becomes effective. The Consultant shall also terminate outstanding orders and subcontracts for the affected work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Consultant to assign the Consultant's right, title and interest under termination orders or subcontracts to the City or its designee. The Consultant shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Consultant has in its possession or control. When terminated for convenience, the Consultant shall be compensated as follows:
- (1) The Consultant shall submit a termination claim to the City specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the City. If the Consultant fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Consultant the amount the City deems the Consultant is due.
  - (2) The City and the Consultant may agree to the compensation, if any, due to the Consultant hereunder.
  - (3) Absent agreement to the amount due to the Consultant, the City shall pay the Consultant the following amounts:
    - (a) Contract costs for labor, materials, equipment and other services accepted under this Agreement;

- (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Consultant's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the Consultant would have not profited or would have sustained a loss if the entire Agreement would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

The total sum to be paid the Consultant under this Section shall not exceed the total Agreement Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- 4.2 Termination for Cause. If the Consultant does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Agreement, then the City, in addition to any other rights it may have against the Consultant or others, may terminate the performance of the Consultant, in whole or in part at the City's sole option, and assume possession of the Project Plans and materials and may complete the work.

In such case, the Consultant shall not be paid further until the work is complete. After Completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Consultant. Otherwise, the Consultant shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Agreement.

In the event the employment of the Consultant is terminated by the City for cause pursuant to this Section and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under this Section and the provisions of Section 4.1 shall apply.

- 4.3 Termination for Non-Appropriation. The City may also terminate this Agreement, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Section 4.1.
- 4.4 The City's rights under this Section shall be in addition to those contained elsewhere herein or provided by law.

**ARTICLE 5. SCOPE OF SERVICES.** Consultant shall provide the Services as described in Attachment A, Scope of Services.

5.1 By mutual agreement, this Agreement and scope can be amended by the parties. The scope and fee for any additional tasks or services under such amendment shall be mutually negotiated and agreed to in writing prior to beginning such additional tasks or services.

5.2 ENVIRONMENTAL RESPONSIBILITY.

Where drilling/sampling services are involved, the samples obtained from the Project site are the property of the City. Should any of these samples be recognized by the Consultant to be contaminated, the City shall remove them from the Consultant's custody and transport them to a disposal site, all in accordance with applicable government statutes, ordinances, and regulations. For all other samples, the Consultant shall retain them for a sixty (60)-day period following the submission of the drilling/sampling report unless the City directs otherwise; thereafter, the Consultant shall discard the samples in accordance with all federal, state and local laws.

**ARTICLE 6. SCHEDULE.**

6.1 TIME OF THE ESSENCE. The parties agree that time is of the essence with respect to the parties' performance of all provisions of the Agreement.

6.2 Before executing this Agreement, the Consultant shall have prepared and submitted for approval to the City a Completion Schedule for the Project with milestones for the various stages (tasks) of the Services as outlined in the Scope of Services. The Consultant shall submit and obtain the City's approval for any proposed changes to the logic, durations, sequences, or timing of tasks as approved in the Completion Schedule.

6.3 FORCE MAJEURE. Neither party will be liable to the other for any delay or failure to perform any of the services or obligations set forth in this Agreement due to causes beyond its reasonable control, and performance times will be considered extended for a period of time equivalent to the time lost because of such delay plus a reasonable period of time to allow the parties to recommence performance of their respective obligations hereunder. Should a circumstance of force majeure last more than ninety (90) days, either party may by written notice to the other terminate this Agreement. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, tornadoes, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of either party.

6.4 Should City request changes in the scope, extent, or character of the Project, the fee and the time of performance of Consultant's Services as indicated in Attachment A shall be adjusted equitably.

**ARTICLE 7. USE OF DOCUMENTS, DATA.**

7.1 All Documents, including, but not limited to, reports, drawings, specifications, and computer software prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. Consultant shall retain an ownership and property interest therein (including the right of reuse at the discretion of the Consultant) whether or not the Project is completed.

- 7.1.1 USE OF DATA SYSTEMS: Ownership, property interests and proprietary rights in data systems used by Consultant do not extend to the data created by or supplied to Consultant by the City; all rights to that data (including derivative or hidden data such as metadata) shall vest solely in City at the moment of creation.
- 7.1.2 DISCLOSURE OF DOCUMENTS/DATA. City may be required to disclose documents or data under state or federal law. City shall notify Consultant if a request for data or documents has been made and shall give Consultant a reasonable opportunity under the circumstances to respond to the request by redacting proprietary or other confidential information. Consultant waives any right to confidentiality of any document, e-mail or file it fails to clearly mark on each page as confidential or proprietary. In exchange, Consultant agrees to indemnify, defend, and hold harmless City for any claims by third parties relating thereto or arising out of (i) the City's failure to disclose such documents or information required to be disclosed by law, or (ii) the City's release of documents as a result of City's reliance upon Consultant representation that materials supplied by Consultant (in full or redacted form) do not contain trade secrets or proprietary information, provided that the City impleads Consultant and Consultant assumes control over that claim.
- 7.2 By execution of this Agreement, Consultant and his sub-consultant(s) grant the City a royalty-free, perpetual, irrevocable, and assignable license to use any and all intellectual property interest Consultant or his sub-consultant(s) possess to any drawings, details, specifications, documents, and other information created before each of their first involvement with the Project and subsequently incorporated into the Project's documents. City-furnished data that may be relied upon by Consultant is limited to the printed copies that are delivered to the Consultant pursuant to Article 2 of this Agreement. Any copyrighted electronic files furnished by City shall be used by Consultant only for the Project as described herein. City's posting or publication of such documents created by Consultant for City shall constitute fair use and shall not constitute an infringement of Consultant's copyright, if any.
- 7.3 Documents that may be relied upon by City are limited to the printed copies (also known as hard copies) that are signed or sealed by the Consultant. Files in electronic media format of text, data, graphics, or of other types that are furnished by Consultant to City are only for convenience of City, unless the delivery of the Project in electronic media format has been dictated in Attachment A, Scope of Services. Any conclusion or information obtained or derived from electronic files provided for convenience will be at the user's sole risk.
- 7.4 Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Unless stated otherwise herein, Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by City.
- 7.5 When transferring documents in electronic media format, Consultant makes no representations as to long term compatibility, usability, or readability, of documents resulting from the use of software application packages, operating systems, or computer

- hardware differing from that as required of, and used by, Consultant at the beginning of this Project.
- 7.6 City may make and retain copies of Documents for information and reference in connection with use on the Project by the City, or his authorized representative. Such Documents are not intended or represented to be suitable for reuse by City or others on extensions of the Project or on any other project. Any such reuse or modifications without written verification or adaptation by Consultant, as appropriate for the specific purpose intended, will be at City's sole risk and without liability or legal exposure to the Consultant or to Consultant's sub-consultants.
- 7.7 If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- 7.8 Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle Consultant to further compensation at rates to be agreed upon by City and Consultant.

**ARTICLE 8. INSURANCE.**

- 8.1 During the performance of the Services under this Agreement, Consultant shall maintain the following minimum insurance:
- a) General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
  - b) Automobile Liability Insurance with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.
  - c) Workers' Compensation Insurance Coverage A in accordance with statutory requirements and Coverage B, Employer's Liability Insurance, with a limit of \$500,000 for each occurrence.
  - d) Professional Liability Insurance with a limit of \$1,000,000 annual aggregate.
- 8.2 Consultant shall add the City an additional insured on all policies unless otherwise prohibited.
- 8.3 Consultant shall, upon execution of this Agreement, furnish City certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days' written notice to City.
- 8.4 No insurance, of whatever kind or type is to be considered as in any way limiting other parties' responsibility for damages resulting from their activities in the execution of the Project. City agrees to include, or cause to be included, in the Project's construction contract, such requirements for insurance coverage and performance bonds by the Project's construction contractor as City deems adequate to indemnify City, Consultant, and other concerned parties against claims for damages and to insure compliance of work performance and materials with Project requirements.

**ARTICLE 9. PAYMENT.**

- 9.1 City will pay Consultant for services and expenses in accordance with the Fee Schedule proposal submitted for the Project as part of the Scope of Services. Consultant's invoices will be presented at the completion of the work or monthly and will be payable upon receipt. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. City shall give prompt written notice of any disputed amount and shall pay the remaining amount.

9.2 Consultant shall be paid in full for all services under this Agreement, including City authorized overruns of the Project budget or unforeseen need for Consultant's services exceeding the original Scope of Services.

9.3 TRAVEL; EXPENSES

City shall reimburse reasonable expenses, including travel and meals, when specified in the Scope of Services, but only in accordance with the City's Travel and Expense Policy and Procedures Manual. The maximum amount will be applied as of the date of travel and as listed in the per diem reimbursement rates on the "CONUS" website developed by the United States General Services Administration, located at [www.gsa.gov](http://www.gsa.gov) [click on 'per diem rates' under the 'etools' category].

**ARTICLE 10. MISCELLANEOUS PROVISIONS**

10.1 EQUAL EMPLOYMENT OPPORTUNITY. In connection with this Agreement and the Project, City and Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. City and Consultant will take affirmative action to ensure that the contractor used for the Project does not discriminate against any employee and employees are treated during employment without regard to their race, age, religion, color, gender, national origin, disability or marital status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.

10.1.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.

10.2 TITLE VI – CIVIL RIGHTS ACT OF 1964. City and Consultant shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), 49 C.F.R., Part 21, and related statutes and regulations.

10.2.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.

10.3 NO THIRD PARTY RIGHTS CREATED. City and Consultant each binds itself and its successors, executors, administrators, permitted assigns, legal representatives and, in the case of a partnership, its partners, to the other party to this Agreement and to their successors, executors, administrators, permitted assigns, legal representatives and partners of such other party in respect to all provisions of this Agreement. The Services provided for in this Agreement are for the sole use and benefit of City and Consultant. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Consultant.

10.4 WARRANTIES/LIMITATION OF LIABILITY/WAIVER. City reserves all rights afforded to local governments under law for all general and implied warranties. City does not waive any rights it may have to all remedies provided by law and therefore any attempt by Consultant to limit its liability shall be void and unenforceable.

**ARTICLE 11. EXTENT OF AGREEMENT:**

11.1 APPLICABLE LAW/CHOICE OF FORUM AND VENUE. This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson County, Tennessee. Any provision of this



Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.

11.2 ENTIRE AGREEMENT. This Agreement, including these terms and conditions, represent the entire Agreement between City and Consultant for this Project and supersedes all prior negotiations, representations or agreements, written or oral. This Agreement may be amended only by written instrument signed by City and Consultant.

**ARTICLE 12. DISPUTE RESOLUTION, BREACH.**

12.1 If a dispute should arise relating to the performance of or payment for the Services under this Agreement, the aggrieved party shall notify the other party of the dispute within a reasonable time after such dispute arises. During the pendency of any dispute, the parties shall continue diligently to fulfill their respective obligations hereunder. No arbitration or mediation shall be required as a condition precedent to filing any legal claim arising out of or relating to this Agreement. No arbitration or mediation shall be binding.

12.2 BREACH. Upon deliberate breach of the Agreement by either party, the non-breaching party shall be entitled to terminate the Agreement with notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

**ARTICLE 13. SURVIVAL.**

The provisions contained in this Professional Services Agreement shall survive the completion of or any termination of the Agreement, contract or other document to which it may accompany or incorporate by reference or which subsequently may be modified, unless expressly excepted from this Article upon consent of both parties.

**CONSULTANT:**

**CITY OF FRANKLIN, TENNESSEE:**

\_\_\_\_\_  
*(Signature)*

\_\_\_\_\_  
*(Signature)*

Name: \_\_\_\_\_

Name: Dr. Ken Moore

Title: \_\_\_\_\_

Title: Mayor

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**Approved as to Form:**

\_\_\_\_\_  
Shauna R. Billingsley, City Attorney



302 Innovation Drive, Suite  
100  
Franklin, Tennessee 37067  
615.656.1845

August 9, 2019

Mr. Jonathan Marston, P.E.  
Assistant Director of Engineering  
City of Franklin – Engineering Department  
109 3rd Avenue South  
Franklin, TN 37064

**SUBJECT: Intersection Upgrades at Mallory Lane/N. Royal Oaks Boulevard and Liberty Pike**

Dear Mr. Marston:

This will serve as our proposal to provide professional engineering services related to completion of the design of the Intersection Upgrades at Mallory Lane/N. Royal Oaks Boulevard and Liberty Pike in Franklin, Tennessee.

The scope of work shall include project management; a survey update; development of design plans and contract documents for the roadway, landscape, and utilities; and bidding assistance for the intersection upgrades. A detailed scope of work and proposed fee are attached.

Thank you for the opportunity to provide these services. If you have any questions or comments or require additional information, please contact us at 615.656.1845.

Sincerely,

A handwritten signature in black ink that reads "Justin Eckel". The signature is written in a cursive, slightly slanted style.

Justin Eckel, PE  
Assistant Vice President

Enclosure



## **SCOPE OF SERVICES**

### **Intersection Improvements at Mallory Lane/North Royal Oaks Blvd. and Liberty Pike**

#### **Project Background**

Volkert was selected in 2017 by the City of Franklin to prepare a traffic study and design plans for intersection improvements at Mallory Lane/North Royal Oaks Blvd. and Liberty Pike. The study was completed in 2017 and presented alternatives for a signalized intersection. An alternative was selected and Right-of-Way (ROW) plans were developed which were submitted in January 2018. A public meeting was held on August 30, 2018 at which the intersection options presented in the original study were discussed as well as the option of a roundabout. In November 2018, the City requested that Volkert update the analysis and conceptual figures for three signalized intersection options and one roundabout option. The analysis and figures were finalized in February 2019 and discussed at the BOMA work session on March 26, 2019. A resolution was approved by BOMA at their April 23, 2019 meeting for the selection of the roundabout alternative. This alternative is presented in Exhibit A. A scoping meeting was held between Volkert and City staff on April 29, 2019. The scope of services provided herein is based on Volkert's project understanding based on that meeting.

#### **Task 1 – Survey Update**

Volkert subconsultant, Civil Infrastructure Associates, will perform additional survey to capture areas required for the alternative presented in Exhibit A that were not captured in the original design. These areas are:

- Extension along Liberty Pike for a distance of approximately 450' west of Crossmill Court (200' wide);
- Fifty (50) feet of additional survey width beyond current survey limits along Liberty Pike (south side) from Crossmill Court to the driveway approximately 300' west of Royal Oaks Blvd;
- Additional triangular area in the northeast quadrant of the intersection. The legs of this triangular area extend the original survey approximately 150' east along Liberty Pike and 400' north along Mallory Lane;
- Extension of the survey north along Stanwick Drive (100' wide) to the intersection with Toliver Court.

#### **Task 2 – Roundabout Peer Review**

Volkert subconsultant, MSA Professional services will provide peer reviews at the conceptual, 30%, 60%, and 90% submittals. The review tasks will address the following design elements:

- Operational analysis of build year and design year traffic turning movements
- Review of Horizontal and vertical geometry
- Setting sub-alignments to produce profiles of splitters and central island truck apron curb
- Typical cross-sections
- Staging concept and plans
- Drainage design and driver comfort in vertical grading design
- Cross sections and a roundabout pavement elevation plan
- Bicycle and pedestrian integration and ADA ramp construction details
- Traffic information system – signs and markings
- Intersection illumination – pole placement and photometric modeling
- Landscape considerations – sight distance and clear zone definition



### **Tasks 3 thru 5 – Roadway Plans**

#### **Preliminary Plans (30%)**

Preliminary Plans will be developed to the extent required by the TDOT Design Guidelines. A horizontal alignment and profile grade acceptable to the City of Franklin be developed. Typical sections will be determined for Liberty Pike, Mallory Lane, and Royal Oaks Blvd. Properties will be identified with owner and tract number. Cross drain locations will be identified and sizes determined, but no closed storm sewer system will be designed at this time. Roadway cross sections will be cut at an interval of fifty feet along the centerline and preliminary slopes and retaining wall locations set. Side road and driveway profiles will also be designed. The preliminary plans will include the following sheets: title, typical sections, property map and acquisition table, present layout, proposed layout, profile, right-of-way detail, roundabout geometry, side road profile, driveway profile, drainage map, culvert sections, and roadway cross sections.

**Note:** After the completion of Preliminary Plans, a detailed scope of work for the structural design and geotechnical investigations required for the retaining walls will be developed and presented to the City as a supplement to this contract.

#### **Right-of-Way Plans (60%)**

Right-of-Way Plans will be developed to the extent required by the TDOT Design Guidelines. The closed storm sewer system and special ditches will be designed and incorporated with the cross drains. Cross sections will be finalized showing the proposed roadway template, slopes, and retaining walls along with earthwork cut and fill data. Proposed right-of-way and easements will be determined allowing completion of the acquisition table showing all effected properties with the area to be acquired and any easements needed. NPDES and ARAP permit applications, including a SWPPP, will be prepared at this time. The right-of-way plans will include the following sheets: title, typical sections, details, property map and acquisition table, present layout, proposed layout, profile, right-of-way detail, roundabout geometry, side road profiles, driveway profiles, drainage map, culvert sections, erosion control, draft retaining walls, and roadway cross sections. Preliminary quantities will be calculated for this submittal.

#### **Construction Plans (90%/100%)**

Construction Plans will be developed to the extent required by the TDOT Design Guidelines. All second sheets will be produced including the index, general and special notes, standard drawings, estimated roadway quantities, special details, and tabulated quantities. Traffic control plans, pavement marking and signing plans, and traffic signal plans will all be designed in this phase. The construction plans will include the following sheets: title, index, estimated roadway quantities, general notes, tabulated quantities, typical sections, details, property map and acquisition table, present layout, proposed layout, profile, right-of-way detail, roundabout geometry, side road profiles, driveway profiles, drainage map, culvert sections, erosion control, traffic control, pavement marking and signing, traffic signal, detailed retaining walls, and roadway cross sections. A final engineer's estimate of probable construction cost will also be provided.

### **Task 6 – Landscape Plans**

Deliverables will occur for the landscape plans at the 30%, 60%, 90%, and 100% design phase.

- The 30% design phase shall include initial coordination with the City of Franklin, selection of species, concept design, production of landscape drawings (plans, details, and preliminary cost estimate)



- The 60% design phase shall include responding to review comments and coordination with the client. Production of landscape drawings shall not be included in the 60% submission.
- The 90% design phase shall incorporate the resolutions of the 30% review and coordination completed during the 60% phase. The production of landscape drawings shall include design revisions and refinements for the plans, details, and cost estimates. Special provisions, irrigation design, and site design details shall not be required for this project. Written responses to review comments shall be provided.
- The 100% design phase shall include updating drawings to reflect the review comments provided for 90% design. The 100% submission will be the final design ready for construction. Written responses to review comments shall be provided.

### **Tasks 7 & 8 – Utility Plans**

Deliverables will occur for the water, sewer, and lighting plans at the 30%, 60%, 90%, and 100% design phase. Preliminary quantities will be included at the 60% stage. Final quantities and an engineer's estimate of probable construction cost will be provided at 90% and 100%. The scope of work includes:

- Modify water and sewer lines as needed for new roadway alignment including horizontal alignment, vertical alignment, and details.
- Lighting design will be done in AGI32 using LED luminaires and will be prepared using MTEMC and City of Franklin guidelines.
- Design conduit for ITS along Royal Oaks Blvd, tie to existing ITS at the intersection, and install camera(s) at the intersection.

### **Task 9 – Bidding Assistance**

This task includes the preparation of the project manual (bid book), preparation of the project special provisions (specifications), responding to contractor RFIs during advertisement of construction contract, and verification of contractor bids.

### **Task 10 – Subsurface Drainage Issue Along Royal Oaks Blvd.**

On July 10, 2019, staff of Volkert and the City of Franklin met on-site to discuss a subsurface drainage issue along Royal Oaks Blvd. approximately 500' south of the current project limits. City staff have observed water seeping through the asphalt pavement and requested subsurface exploration to address the issue. The scope of work for this task is as follows:

- Extension of survey approximately 500' south along Royal Oaks Blvd (150' DTM width) = \$3,270
- Subsurface Exploration (see Exhibit B) = \$10,365
- Preparation of Construction Plans = \$9,000

### **Additional Services**

Additional services will be negotiated at the time of need. These services include, but are not limited to Right-of-way acquisition assistance, Construction Engineering and Inspection, geotechnical services, shop drawing review, and structural design of retaining walls.



### COMPENSATION

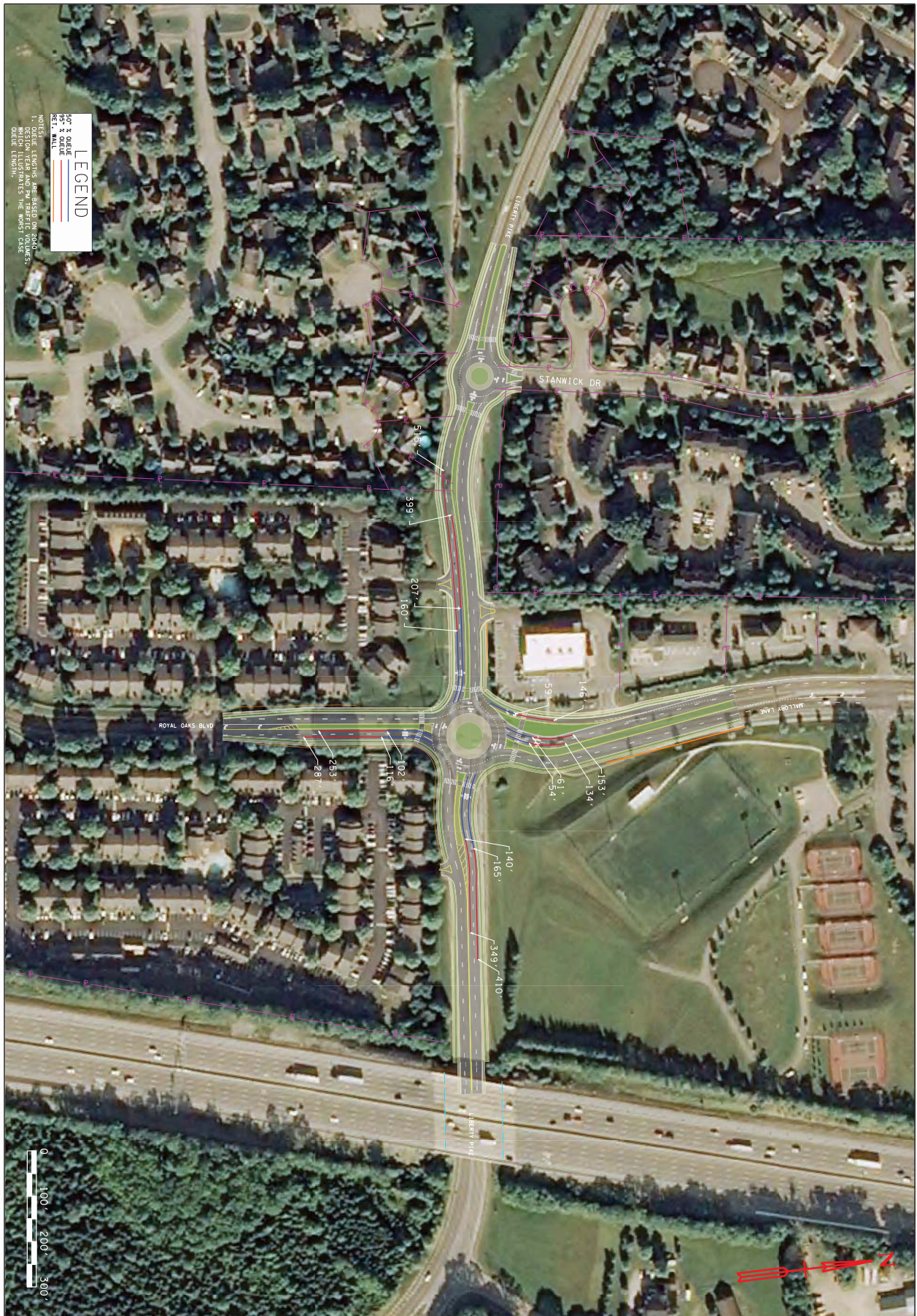
The proposed compensation for completion of the tasks outlined above are reflected in the table below.

Task	Description	Fee
1	Survey Update	\$16,490
2	Roundabout Peer Review	\$14,960
3	Preliminary Roadway Plans	\$116,880
4	Right-of-Way Roadway Plans	\$116,880
5	Construction Roadway Plans	\$57,350
6	Landscaping Plans	\$34,060
7	Water/Sewer Plans	\$43,400
8	Lighting Plans	\$31,640
9	Bidding Assistance	\$12,000
10	Subsurface Drainage Issue	\$22,635
<b>Not-to-Exceed Fee</b>		<b>\$466,295</b>

All work will be invoiced on a monthly basis against the “not-to-exceed” fee for professional services in accordance with the rate schedule below. Subconsultants will be billed at Volkert’s cost incurred.

Classification	Hourly Rate
Principal	\$225
Project Manager	\$205
Senior Engineer 2	\$180
Senior Engineer 1	\$154
Staff Engineer 2	\$142
Staff Engineer 1	\$132
Engineer-in-Training	\$95
Senior Designer	\$130
Designer	\$110
CAD Technician	\$90
Senior Planner	\$145
Planner	\$105
Administrative	\$85

**Note:** The rates above will increase by 2.5% on July 1 of each calendar year starting on July 1, 2020.



DATE:	2/20/2018
DESIGNED BY:	ASD
DRAWN BY:	ASD
SUPERVISOR BY:	ASD
CHECKED BY:	ASD
YEAR:	2019
SHEET NO.:	

ROUNDABOUT DESIGN LAYOUT  
 MALLORY LANE / LIBERTY PIKE  
 FRANKLIN, TENNESSEE

**VOLKERT**  
 302 INNOVATION DRIVE, FRANKLIN, TN 37067  
 PHONE: (615) 656-1845 FAX: (615) 656-1870

REVISIONS		
NO.	DATE	DESCRIPTION

# GEOTEK

Geotek Engineering Company, Inc. • 2909 Elizabeth Street • Nashville, Tennessee 37211-2302  
(615) 833-3800 • Fax (615) 833-4097 • www.geotektn.com

August 2, 2019

Volkert, Inc.  
302 Innovation Drive  
Franklin, TN 37067

ATTN: Justin Eckel

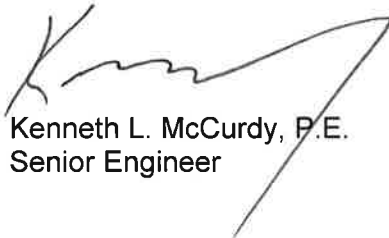
**SUBJ: Royal Oaks Boulevard - Seepage  
Mallory Lane / Liberty Pike Intersection Widening  
Franklin, Tennessee**

Dear Mr. Eckel:

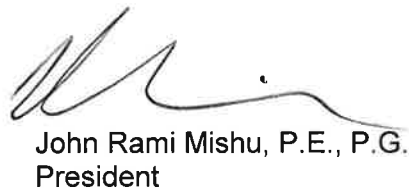
Presented herein is our proposal to provide geotechnical services for the above-referenced project. To verify acceptance of this proposal, please reply by email. Meanwhile, should you have any questions or need additional information, feel free to contact us. We look forward to working with you.

Sincerely,

**GEOTEK ENGINEERING COMPANY, INC.**



Kenneth L. McCurdy, P.E.  
Senior Engineer



John Rami Mishu, P.E., P.G.  
President

Attch: (1) Proposal  
(2) Terms for Services  
(3) GBA Publication  
(4) Fee Schedule

KLM/ds/proposals/Royal Oaks Blvd - Seepage



## PROPOSAL FOR GEOTECHNICAL INVESTIGATION

### SCOPE OF SERVICES

We understand that after periods of heavy rain, seepage occurs through the asphalt pavement at several locations in Royal Oaks Boulevard south of the intersection of Royal Oaks Boulevard and Liberty Pike in Franklin, Tennessee. This seepage occurs somewhere between about 1,000 and 1,400 feet south of the intersection.

Our geotechnical investigation will include 6 borings in the road. We will first meet with City of Franklin representatives to learn first hand their experience with seepage in the area. We will attempt to make a site visit after a rainfall event to observe, for ourselves, the seepage. Based on that discussion and our observations, we will select 6 locations for drilling borings. We will utilize traffic control to close one lane of traffic at a time when drilling borings in that lane.

The borings will first be advanced through the asphalt pavement using a 6- to 8-in. diameter core barrel. The borings will then be advanced by augers through the pavement's base-course and subgrade soils to a typical depth of 6 feet or refusal, whichever is less. The borings will include Standard Penetration testing and groundwater level measurements.

Upon completion of drilling, the borings will be backfilled with auger cuttings and then capped with an oversized cement plug to reduce the chances for borehole settlement to occur.

Laboratory testing will likely include Moisture Contents, Atterberg Limits tests, Sieve Analyses, and Index-Penetrometer tests for soil classification and strength index comparisons.

Upon completion of the investigation, a geotechnical report will be submitted which will include the following:

- A description of the field study and laboratory test results.
- A description of subsurface conditions encountered.
- General recommendations for intercepting water flow beneath the pavement structure to attempt stopping the flow of water through the asphalt.

Our report will not include formal design drawings, but will consist of a conceptual layout and a few details to illustrate our recommendations.

**COST ESTIMATE**

We list below our presently anticipated work items, the estimated quantities, our unit prices, and the estimated total cost.

<b><u>Field Work Items</u></b>	<b><u>Estimated Quantity</u></b>	<b><u>Unit Cost</u></b>	<b><u>Sub-Total Amount</u></b>
Drilling and SPT Sampling	1	\$ 2,500	\$ 2,500.00
Traffic Control	1	Cost + 15%	1,000.00
<b>Field Work Sub-Total</b>			<b>\$3,500.00</b>
<b><u>Laboratory Testing Items</u></b>	<b><u>Estimated Quantity</u></b>	<b><u>Unit Cost</u></b>	<b><u>Sub-Total Amount</u></b>
Index-Penetrometer Test	12	\$ 10.00/ea	\$ 120.00
Natural Water Content	12	10.00/ea	120.00
Atterberg Limits	4	65.00/ea	260.00
Grain-Size Analysis	4	120.00/ea	480.00
<b>Laboratory Work Sub-Total</b>			<b>\$980.00</b>
<b><u>Personnel Items</u></b>	<b><u>Estimated Quantity</u></b>	<b><u>Unit Cost</u></b>	<b><u>Sub-Total Amount</u></b>
Staff Engineer/Geologist	16 hrs	\$ 125.00/hr	\$ 2,000.00
Project Engineer/Geologist	16 hrs	145.00/hr	2,320.00
Project Engineer/Manager	6 hrs	180.00/hr	1,080.00
Support Staff	6 hrs	70.00/hr	420.00
Mileage	100 mi	0.65/mi	65.00
<b>Personnel Sub-Total</b>			<b>\$5,885.00</b>
<b>ESTIMATED GRAND TOTAL COST =</b>			<b>\$ 10,365.00</b>

Based upon these unit prices and quantities, we estimate that the total cost of our study will be \$10,365. We propose to bill you based on these unit prices. We have also attached our complete standard fee schedule for other items not listed above.

Our cost estimate covers the work required to present our findings in report format. This cost estimate does not include time to review the drawings and specifications for compliance with our recommendations, time for meetings and conferences, and time on other activities requested after submittal of our report. We can provide these additional services on a unit-price basis per the attached fee schedule.

Please bear in mind that sites and projects such as this one might require additional geotechnical effort after the geotechnical report is submitted. We recommend allotting additional cost for this work either (a) in this proposal or (b) at the appropriate future time.

**SCHEDULE**

We are currently available to begin work on the site within 7 business days. We will keep you informed of the progress of the exploration. If any changes in the plans are indicated by the initial results, we will consult with you and make any necessary changes. The field work should take 1 to 2 work days to complete. Laboratory testing will take 5 to 7 work days to complete. Our final written report will be submitted approximately 10 work days following completion of the lab work. The total duration, from "authorization-to-proceed" to "report-submittal", is about 25 business days (i.e., about 5 weeks). Should you so request, some preliminary oral recommendations can be provided immediately following the field investigation.

**TERMS AND CONDITIONS**

We assume that all necessary approvals will be obtained by the City of Franklin for working in the road and operating our equipment in the right-of-way. We also assume that all necessary approvals will be obtained by the City of Franklin for closing one lane of traffic at a time.

If any underground utilities or other buried structures are present, their locations should be brought to our attention. Public utilities are located by a free "call-in" service. Geotek will contact Tennessee 811 to located their member underground utility lines to the extent provided by that service. But other underground lines and structures can (and should) be located by some other unambiguous method (e.g., a utility-locating company), if there is any doubt about their presence. Our pricing does not include the time and cost of this work.

~~The attached Terms-for-Services are integral parts of our contract for services. The rates quoted in this proposal will remain valid for acceptance for a period of 90 days.~~



**LABORATORY TESTING****Soil, Aggregate, and Rock-Core**

Nuclear density .....	\$..50.00/day
Static or dynamic cone penetrometer .....	25.00/day
Natural water content .....	10.00/ea
Atterberg limits (liquid and plastic) .....	65.00/ea
Unit weight of soil or rock .....	15.00/ea
Specific gravity of solids .....	50.00/ea
Grain-size analysis - complete .....	120.00/ea
- washed .....	80.00/ea
- material passing No. 200 sieve .....	50.00/ea
Unconfined compression test of soil .....	65.00/ea
Index-penetrometer Test .....	10.00/ea
Proctor - Standard or Modified .....	150.00/ea
- Method C .....	200.00/ea
Swell test w/restraint .....	175.00/ea
Hydraulic conductivity w/ triaxial permeameter - undisturbed .....	250.00/ea
Consolidation - w/ rebound .....	300.00/ea
- w/ rate of consolidation measurements .....	450.00/ea
Triaxial compression - unconsolidated-undrained (3 points) .....	900.00/ea
- consolidated-undrained (3 points) .....	1,200.00/ea
- consolidated-drained (3 points) .....	1,500.00/ea
Remold samples for specialized tests (e.g., hydraulic conductivity, triaxial, and consolidation) .....	50.00/ea
California Bearing Ratio - 3 points .....	400.00/ea
- 1 point .....	200.00/ea
- undisturbed sample .....	150.00/ea
Los Angeles abrasion of aggregate .....	350.00/ea
Sodium Sulfate soundness test for aggregate (5 cycles) .....	450.00/ea
Relative density of cohesionless soil .....	125.00/ea
Sand equivalence test .....	100.00/ea
Flat, elongated, fractured faces of aggregate .....	100.00/ea
Organic content (lost in ignition) .....	50.00/ea
pH of soil (lab method) .....	25.00/ea
Resistivity of soil (lab method) .....	60.00/ea
Point Load Index Test of Rock (Axial) .....	85.00/ea
Splitting Tensile Test of Rock Core (Brazilian) .....	80.00/ea
Compressive Strength of Rock Core .....	60.00/ea

**Concrete**

Concrete Mix Design - standard .....	\$..2,500.00/ea
- 1-pt. verification .....	1,800.00/ea
- verification without testing .....	1,000.00/ea
Flexural strength and/or curing .....	60.00/ea
Compressive Strength of Concrete Cylinder .....	15.00/ea
Petrographic Analysis .....	cost + 15%
Concrete Coring .....	cost + 15%

**Asphalt**

Asphalt Mix Design - Marshall method .....	\$..2,500.00/ea
- per TDOT requirements .....	4,000.00/ea
- 1-pt. verification .....	1,800.00/ea
- verification without testing .....	1,000.00/ea
Extraction/gradation .....	200.00/ea
Unit weight of in-place asphalt cores .....	50.00/ea
Marshall compaction and density (1 set of 3 specimens) .....	250.00/ea
Marshall stability and flow (1 set of 3 specimens) .....	250.00/ea
Nuclear density meter rental .....	50.00/day
Theoretical Specific Gravity (Rice method) .....	75.00/ea
Asphalt Coring .....	cost + 15%

**LABORATORY TESTING** (continued)

**Masonry**

Compressive Strength of Mortar or Masonry Grout .....	\$...40.00/ea
Unit Weight and Absorption of Concrete Masonry Units.....	70.00/ea
Compressive Strength of Concrete Masonry Units .....	70.00/ea5
Compressive Strength of Concrete Masonry Unit Prisms.....	120.00/ea

**Steel**

Visual Weld, Bolt Torque, Shear Stud Monitoring.....	Hourly Rate
Steel Reinforcement and Post-Tensioning Steel Monitoring.....	Hourly Rate
Fireproofing Testing/Monitoring .....	Hourly Rate
Non-Destructive Steel Testing Services.....	Upon Request

- NOTES:**
1. 24-hour notice required for field testing services.
  2. Field testing services charged portal to portal.
  3. Normal work day is any 8-hr period between 7:00 a.m. to 6:00 p.m. Overtime multiplier of 1.5 for technicians will be applicable for services rendered outside of these hours, over 8 hours/day within this period, and on Saturdays, Sundays, and Holidays.
  4. Minimum site visit charge for technician is 4 hours (exception if only for pick-up/delivery of samples, cylinders, letters, etc.)
  5. Technicians, geologists, and engineers for field testing, monitoring, and evaluation (e.g., load tests, test-pit sampling, In-Place-Density testing, preparation of cylinders, core sampling, etc.) are charged at standard hourly rates noted herein.
  6. "Engineer/Manager" and "Support Staff" time spent to produce, review, and submit field reports will, on occasion, be charged.
  7. Special and/or additional laboratory-test procedures or effort might require different cost-basis.
  8. Rates are subject to annual escalation.