

**CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2017-0076**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and **KIMLEY-HORN AND ASSOCIATES, INC.**, hereinafter referenced as Consultant, who mutually agree as follows:

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

**DOWNTOWN FRANKLIN
TRAFFIC SIGNAL TIMING**

1. **SCOPE OF SERVICES.** Consultant shall provide engineering and 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 **Sixty-Eight Thousand Five Hundred and No/100 Dollars (\$68,500.00)**.

**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 [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.

BY: _____

BY: _____

Printed Name: _____

Dr. Ken Moore

TITLE: _____

Mayor

Date: _____

Date: _____

Approved as to Form:

Bethany A. Heuer, Staff Attorney



ATTACHMENT A – FRANKLIN DOWNTOWN SIGNAL TIMING

Kimley-Horn and Associates, Inc. (“Kimley-Horn” or “the Consultant”) is pleased to submit Scope of Services and Fee to the City of Franklin (“the Client”) for professional consulting services for the Franklin Downtown Signal Timing project.

PROJECT UNDERSTANDING

Based on the information provided, Kimley-Horn understands that the City of Franklin wishes to improve traffic operations through signal timing improvements for the fifteen (15) signalized intersections in the Downtown Franklin area.

1. East Main Street at 1st Avenue
2. East Main Street at 2nd Avenue
3. East Main Street at 4th Avenue
4. West Main Street at 5th Avenue / Columbia Avenue
5. 5th Avenue North at Fair Street
6. 5th Avenue North at Bridge Street / New Highway 96 West
7. 5th Avenue North at 3rd Avenue North
8. Hillsboro Road at Del Rio Pike / Farrier Lane
9. Columbia Avenue at 7th Avenue South
10. Columbia Avenue at 9th Avenue South / South Margin Street
11. Columbia Avenue at Fowlkes Street
12. Bridge Street at 3rd Avenue North
13. 3rd Avenue South at Church Street
14. 3rd Avenue South at South Margin Street
15. New Highway 96 West at 11th Avenue North

SCOPE OF SERVICES

Task 1 – Project Management

Consultant will:

- Perform project management, administrative, and accounting activities for the project
- Develop a Project Schedule
- Attend up to two (2) project meetings
- Coordinate with Client during the project regarding progress

Task 2 – Data Collection

Client will provide Consultant with 24-hour turning movement counts in Excel format. Consultant will use this traffic data to determine peak hour traffic volumes, peak hour factor, and the fluctuation in traffic volumes during a 24-hour timeframe.



Client will provide Consultant with the existing signal timing data as coding sheets in Excel format as well as the controller reports in PDF format.

Consultant will perform a field inventory at each of the signalized intersections to confirm signal phasing and sequencing, vehicle signal heads, pedestrian signal heads, existing intersection geometry, turn-lane storage lengths, intersection approach grades, posted speed limits, and other features deemed appropriate by Consultant. Photographs will be taken at each intersection, to document the existing conditions. Client shall provide Consultant permission to access the traffic signal cabinets and controllers.

Consultant will prepare a *Synchro* model using the roadway geometry, intersection geometry, traffic volume data, signal timing data, and features documented during the field inventory. The *Synchro* model will be developed using aerial imagery as the background.

Task 3 – Timing Plan Development

Using the criteria set forth in the Institute of Transportation Engineer's (ITE) *Manual of Traffic Signal Design* and the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices*, Consultant will calculate and recommend values for the following local controller settings:

- Minimum vehicular green
- Yellow clearance interval
- All-red clearance interval
- Pedestrian 'walk' time
- Pedestrian 'flashing don't walk' time

These values will be documented and submitted to Client for review and approval.

Consultant will evaluate signal system boundaries, and will use the following criteria when choosing boundaries:

- Traffic data and patterns
- Spacing of traffic signals
- Cycle length requirements
- Driver expectancy
- Coordinatability factors provided by Synchro
- Coupling Index ($I = V/D$, where D = distance, V = link volume, and I = coupling index). The need for coordination between any two signals is directly proportional to the traffic volume and inversely proportional to the distance between the two signals.
- Information gathered during field observations



Consultant will prepare up to four (4) timing plans, which are anticipated to be:

- Weekday AM Peak timing plan
- Weekday Midday Peak timing plan
- Weekday PM Peak timing plan
- Off-Peak or Weekend timing plan

Consultant will perform peak hour cycle length evaluations in *Synchro* by evaluating the natural cycle lengths and coordinatability factors for each signal. Using evaluations from *Synchro* along with knowledge gained via observations in the field, a cycle length will be recommended for each timing plan. Preliminary cycle length recommendations will be documented for review and approval by Client.

Once the cycle lengths have been approved by Client, Consultant will evaluate each intersection to determine the recommended splits times for each vehicle phase. Next, phase sequencing and offset timings will be analyzed to maximize the arterial greenbands. The recommended timing plans (consisting of cycle lengths, splits, offsets) will be documented for review and approval by Client.

Consultant will prepare a Time-of-Day (TOD) clock for the timing plans for Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday.

Task 4 – Field Implementation

Consultant will input the recommended timings for each intersection into coding sheet spreadsheets (originally provided by Client). Consultant will input the recommended timings into the traffic signal controllers within the cabinets, and will perform a field implementation.

The field implementation will consist of up to three (3) consecutive weekdays of performing field observations of traffic patterns and signal timings, evaluating the time space diagrams developed in *Synchro*, and driving through the study network to compare the time space diagram progression with actual conditions.

The recommended signal timings will be further evaluated during the field implementation, and fine-tuning adjustments will be implemented as deemed appropriate by Consultant. These adjustments will be communicated to Client so that any revisions from the original recommended timings can be documented and summarized. The *Synchro* files and coding sheet spreadsheets will be updated accordingly.

Task 5 – Travel Time Studies

Consultant will compile travel time, delay, and air quality data for six (6) hours during one (1) weekday: 7:00 AM – 9:00 AM, 11:00 AM – 1:00 PM, and 4:00 PM – 6:00 PM. Two (2) iterations of the travel time data collection effort will be performed: “before”, prior to the implementation of the new timings; and “after”, following implementation and fine-tuning of the recommended signal timings.



Travel time data will be collected electronically using a laptop computer equipped with global positions system (GPS) technology. A minimum of four (4) successful travel time runs will be completed in each direction for the following four (4) origin/destination routes:

1. Between East Main Street at 1st Avenue, and West Main Street at 5th Avenue / Columbia Avenue
2. Between East Main Street at 1st Avenue, and Columbia Avenue at Fowlkes Street
3. Between Hillsboro Road at Del Rio Pike / Farrier Lane, and West Main Street at 5th Avenue / Columbia Avenue
4. Between Hillsboro Road at Del Rio Pike / Farrier Lane, and Columbia Avenue at Fowlkes Street

Using the travel time data collected in the field, Consultant will prepare “before” and “after” comparisons using the following parameters:

- Total travel time
- Running time
- Stopped time
- Average speed
- Running speed
- Number of stops
- Fuel consumption
- Vehicle emissions
 - Carbon monoxide (CO)
 - Mono-nitrogen oxides (NOx)
 - Volatile organic compounds (VOC)

Task 6 – Documentation

Upon completion of Task 4 and Task 5, Consultant will prepare a final report summarizing the signal timing effort. The final report will summarize the following:

- Project overview
- Project results
- Summary of all data collected
- Recommended improvements
- Timing plan data
- Results of field implementation / fine-tuning
- Before and After results
- Benefit / Cost comparisons for the project

Consultant will provide up to four (4) hard copies of the final report, as well as one (1) electronic copy in PDF format.

Consultant will develop a two-page 11” x 17” bi-fold summary brochure. The summary brochure will summarize the intent and results of the project, to inform the general public and non-technical City staff



(e.g. Planning Commission, Board of Mayor and Aldermen). Up to ten (10) hard, glossy, color copies of the brochure will be submitted along with one (1) electronic copy in PDF format.

INFORMATION PROVIDED BY CLIENT

- 24-hour turning movement counts in Excel format, at each of the fifteen (15) signalized intersections in the Downtown Franklin area
- Existing signal timing data as coding sheets in Excel format as well as the controller reports in PDF format
- Permission to access the traffic signal cabinets and controllers

SCHEDULE

Once given notice to proceed, Consultant will complete the services listed in Tasks 1 – 6 based upon a schedule to be mutually determined by Client and Consultant.

Tuesday, May 23 is the last day for Williamson County Schools on the 2016-2017 calendar.
Thursday, August 10 is the first day for Williamson County Schools on the 2017-2018 calendar.

FEE

Kimley-Horn will perform the Scope of Services in Task 1 through 6 on a labor fee plus expense basis with the maximum fee shown below based upon the attached hourly rate schedule. Individual task amounts are informational only, and Consultant reserves the right to reallocate amounts among tasks as necessary.

<i>Task 1 – Project Management</i>	<i>\$7,500</i>
<i>Task 2 – Data Collection</i>	<i>\$12,500</i>
<i>Task 3 – Timing Plan Development</i>	<i>\$14,500</i>
<i>Task 4 – Field Implementation</i>	<i>\$13,000</i>
<i>Task 5 – Travel Time Studies</i>	<i>\$12,000</i>
<i>Task 6 – Documentation</i>	<i>\$9,000</i>
Project Total:	\$68,500

Labor fee will be billed on an hourly basis per the attached hourly rate schedule. As to these tasks, direct reimbursable expenses such as express delivery services, fees, and other direct expenses will be billed at cost. A percentage of labor fee will be added to each invoice to cover certain other expenses as to these tasks such as telecommunications, in-house reproduction, postage, supplies, project related computer time, and local mileage. Payment will be due within 25 days of your receipt of the invoice and should include the invoice number and Kimley-Horn project number.



*Franklin Downtown Signal Timing Project
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HOURLY RATE SCHEDULE

Category	Hourly Billing Rate
Professional	\$100 – \$140
Senior Professional	\$145 – \$200
Senior Project Manager / Principal	\$185 – \$230
Senior Technical Support	\$110 – \$120
Technical Support	\$75 – \$100
Support Staff	\$60 – \$80