ENGINEERING SERVICES AGREEMENT

THIS IS AN AGREEMENT made as of October 12, 2017 between the LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT (**OWNER**) and **Palmer Engineering, Inc.** (**CONSULTANT**). **OWNER** intends to proceed with the **Wilson Downing Road Sidewalk** as described in the attached "**Scope of Services**" document (**Exhibit A**). The services are to include surveying, preliminary and final design, and preparation of complete plans and specifications for the Wilson Downing Road Sidewalk. The services are hereinafter referred to as the **Project**.

OWNER and **CONSULTANT** in consideration of their mutual covenants herein agree in respect of the performance of professional engineering services by **CONSULTANT** and the payment for those services by **OWNER** as set forth below.

CONSULTANT shall provide professional consulting services for **OWNER** in all phases of the Project to which this Agreement applies, serve as **OWNER'S** professional engineering representative for the Project as set forth below and shall give professional consultation and advice to **OWNER** during the performance of services hereunder.

SECTION 1 - BASIC SERVICES OF CONSULTANT

1.1. General

CONSULTANT shall perform professional services as hereinafter stated that include customary civil, geotechnical, structural, and traffic engineering services; and customary surveying services incidental thereto.

1.2. Data Collection and Preliminary Design Phase

After written authorization to proceed with the Data Collection and Preliminary Design Phase, **CONSULTANT** shall:

1.2.1. Notify the **OWNER** in writing of its authorized representative who shall act as Project engineer and liaison representative between the **CONSULTANT** and the **OWNER**.

1.2.2. Meet with **OWNER** to discuss the project requirements and proposed Scope of Work, and to conduct a project site visit.

1.2.3. On the basis of the "Scope of Services", review available GIS, mapping, PVA and related documents; conduct field and boundary surveys; and prepare a Preliminary Design Technical Memorandum. The latter shall include preliminary plans and a preliminary opinion of construction costs, accompanied by separate cost opinions for utility relocation and total right-of-way/easement acquisition.

1.2.4. Furnish up to five (5) copies (total TBD) of the above preliminary design documents and present them in person to **OWNER**. After **OWNER'S** detailed review, attend conference with **OWNER** to discuss **OWNER'S** comments.

1.2.5. Furnish one copy of the above preliminary drawings to each of the local utility companies.

1.2.6. Furnish one (1) copy of the above preliminary drawings to the Kentucky Transportation Cabinet.

1.3. Final Design Phase

After written authorization to proceed with the Final Design Phase, **CONSULTANT** shall:

1.3.1. On the basis of the approved preliminary design documents and the preliminary opinion of construction cost, prepare final drawings and specifications consistent with the "Scope of Services", to show the character and extent of the Project.

1.3.2. Prepare such documents and design data as may be required to apply for approvals of such governmental authorities as have jurisdiction over design criteria applicable to the Project, and obtain such approvals by negotiations with appropriate authorities.

1.3.3. Advise **OWNER** of any adjustments to the latest opinion of construction cost resulting from changes in the project extent and/or design requirements, or in changes to unit costs. Furnish a revised opinion of construction cost based on the Drawings and Specifications.

1.3.4. Prepare for review and approval by **OWNER**, contract agreement forms, general conditions and supplementary conditions, bid forms, invitations to bid and instructions to bidders, and other related documents.

1.3.5. Furnish up to five (5) copies (total TBD) of the above documents and present them in person to **OWNER**. After **OWNER'S** detailed review, attend conference with **OWNER** to discuss **OWNER'S** comments.

1.3.6. Furnish one (1) copy of the Final Drawings to each of the local utility companies.

1.3.7. Furnish one (1) copy of the Final Drawings to the Kentucky Transportation Cabinet.

1.4. Easement and Right-of-Way Acquisition

After written authorization to proceed with Easement and Right-of-Way Acquisition, **CONSULTANT** shall:

1.4.1. Prepare plats and legal descriptions as required for acquisition of right-of-way consistent with the "Scope of Services".

1.4.2. Prepare exhibits and legal descriptions as required for acquisition of temporary and permanent easements consistent with the "Scope of Services".

1.4.3. Set corner pins (or offsets) as necessary to define the physical limits of all properties which must be acquired in fee simple consistent with the "Scope of Services".

Note: Negotiations with property owners for acquisitions of easements and right-of-way will be performed by LFUCG personnel.

1.5. Bidding or Negotiating Phase

The Bidding or Negotiation Phase shall be performed solely by the **OWNER**. However, during Bidding, the **CONSULTANT** shall be available to address any questions that arise concerning the accuracy or intent of his work.

1.6. Construction Phase

The Construction Phase shall be performed solely by the **OWNER**. However, during Construction, the **CONSULTANT** shall be available to address any questions that arise concerning the accuracy or intent of his work.

SECTION 2 - EXTRA WORK BY CONSULTANT

2.1. The **OWNER** may desire to have the **CONSULTANT** perform work or render services in connection with this Project other than provided by the expressed intent of this Agreement. Such work shall be considered as "Extra Work", subject to a change order, supplemental to this Agreement, setting forth the character and scope thereof and the compensation therefore. Work under such change order shall not proceed until the **OWNER** gives written authorization. Should the **OWNER** find it desirable to have previously satisfactorily completed and accepted plans or parts thereof revised, the **CONSULTANT** shall make such revisions as directed, in writing, by the **OWNER**. This work shall be considered as "Extra Work" and shall be paid as such.

2.2. All "Extra Work" is subject to prior written authorization of **OWNER** and necessary appropriations made by the Urban County Council.

SECTION 3 - OWNER'S RESPONSIBILITIES

OWNER shall:

3.1. Provide criteria and information as to **OWNER'S** requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations.

3.2. Assist **CONSULTANT** by placing at his disposal available information pertinent to the Project.

3.3. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by **CONSULTANT**, and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of **CONSULTANT**.

3.4. Designate in writing a person to act as **OWNER'S** representative with respect to the services to be rendered under this Agreement. Such person shall have complete authority

to transmit instructions, receive information, interpret and define **OWNER'S** policies and decisions with respect to materials, equipment, elements and systems pertinent to **CONSULTANT'S** services.

3.5. Give written notice to **CONSULTANT** whenever **OWNER** observes or otherwise becomes aware of any development that affects the scope or timing of **CONSULTANT'S** services, or any defect in the work of Contractor(s).

3.6. Furnish, or direct **CONSULTANT** to provide, necessary Extra Work as stipulated in Section Two (2) of this Agreement or other services as required.

SECTION 4 - PERIOD OF SERVICES

4.1. Time is of the essence. See "Scope of Services, Additional Requirements, Part 1, Schedule and Completion" (attached) for the detailed project schedule.

4.2. The provisions of this Section Four (4) and the various rates of compensation for **CONSULTANT'S** services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion.

If delays result by reason of acts of the **OWNER** or approving agencies, which are beyond the control of the **CONSULTANT**, an extension of time for such delay will be considered. If delays occur, the **CONSULTANT** shall within 30 days from the date of the delay apply in writing to the **OWNER** for an extension of time for such reasonable period as may be mutually agreed upon between the parties, and if approved, the Project schedule shall be revised to reflect the extension. Such extension of time to the completion date shall in no way be construed to operate as a waiver on the part of the **OWNER** of any of its rights in the Agreement. Section 6.5, under DISPUTES, of this Agreement, shall apply in the event the parties cannot mutually agree upon an extension of time.

In the event that the overall delay resulting from the above described causes is sufficient to prevent complete performance of the Agreement within six (6) months of the time specified therein, the Agreement fee or fees shall be subject to reconsideration and possible adjustment. Section 6.5 of this Agreement shall apply in the event the parties cannot mutually agree upon an adjustment of fee.

SECTION 5 - PAYMENTS TO CONSULTANT

5.1 Methods of Payment for Services of CONSULTANT

5.1.1 For Basic Services.

OWNER shall pay **CONSULTANT** for Basic Services rendered a fee not exceeding **ninety nine thousand nine hundred and fifty three dollars ($99,953.00)**.

5.1.2. For Extra Work.
"Extra Work" shall be paid for by the **OWNER** on the basis of a fixed fee, the amount of which shall be determined by negotiation. The **OWNER** shall have the right to negotiate alternate methods of payment for "Extra Work" if the **OWNER** determines that the fixed fee basis is not feasible. In the event the **OWNER** and the **CONSULTANT** are unable to agree upon the amount of payment for "Extra Work", then the amount of such payment shall be determined as set forth in Section 6.5, "DISPUTES" of this Agreement.

5.2. Times of Payment.

5.2.1. **CONSULTANT** shall submit monthly statements for Basic Services and Extra Work rendered. The Statements will be based upon **CONSULTANT'S** estimate of the proportion of the total services actually completed at the time of billing. **OWNER** shall respond to **CONSULTANT'S** monthly statements within thirty (30) days, either denying payment or making payment.

5.3. Other Provisions Concerning Payments.

5.3.1. In the event the Agreement is terminated by the **OWNER** without fault on the part of the **CONSULTANT**, the **CONSULTANT** shall be paid for the work performed or services rendered an amount bearing the same ratio to the total Agreement fee; as the amount of work completed or partially completed and delivered to the **OWNER** is to the total amount of work provided for herein, as determined by mutual agreement between the **OWNER** and the **CONSULTANT**.

5.3.2. In the event the services of the **CONSULTANT** are terminated by the **OWNER** for fault on the part of the **CONSULTANT**, the **CONSULTANT** shall be paid reasonable value of the work performed or services rendered and delivered, and the amount to be paid shall be determined by the **OWNER**.

5.3.3. In the event the **CONSULTANT** shall terminate the Agreement because of gross delays caused by the **OWNER**, the **CONSULTANT** shall be paid as set forth in Section 5.3.1 above.

SECTION 6 - GENERAL CONSIDERATIONS

6.1. Termination

6.1.1. The obligation to provide further services under this Agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

6.1.2. The **OWNER** reserves the right to terminate the Agreement at any time upon seven (7) days written notice to the **CONSULTANT**.

6.2. Ownership and Reuse of Documents.

All documents, including Drawings and Specifications, prepared by the **CONSULTANT** pursuant to this Agreement shall be delivered to and become the property of the **OWNER**. The **OWNER** shall have the right to reuse same without restriction or limitation, but without liability or legal exposure to **CONSULTANT**.

6.3. Legal Responsibilities and Legal Relations.

6.3.1. The **CONSULTANT** shall familiarize himself with and shall at all times comply with all federal, state and local laws, ordinances, and regulations which in any manner affect the services of this Agreement.

6.3.2. In performing the services hereunder, the **CONSULTANT** and its sub-**CONSULTANTS**, employees, agents and representatives shall not be deemed or construed to be employees of **OWNER** in any manner whatsoever. Except as otherwise provided in this Agreement, the **CONSULTANT** shall be acting as an independent contractor. The **CONSULTANT** shall not hold itself out as, nor claim to be, an officer or employee of **OWNER** by reason hereof and shall not make any claim, demand or application to or for any right or privilege applicable to an officer or employee of **OWNER**. The **CONSULTANT** shall be solely responsible for any claims for wages or compensation by **CONSULTANT'S** employees, agents and representatives, including sub-**CONSULTANTS**, and shall save and hold **OWNER** harmless therefrom.

6.3.3. The parties hereto agree that causes of actions between the parties shall be governed by applicable provisions of the Kentucky Revised Statues.

6.4. Successors and Assigns.

6.4.1. **CONSULTANT** binds itself and his partners, successors, executors, administrators, assigns and legal representatives to this Agreement in respect to all covenants, agreements and obligations of this Agreement. **CONSULTANT** shall not assign any interest, obligation or benefit in this Agreement, nor transfer any interest in the same, whether by assignment or novation, without prior written consent of **OWNER**.

6.4.2. The **CONSULTANT** shall not subcontract more than fifty percent (50%) of the work, based upon dollar value, to be provided under this Agreement. The **CONSULTANT** shall obtain written approval prior to subletting or assigning any services contained in this Agreement, and consent to sublet or assign any part of this Agreement shall not be construed to relieve the **CONSULTANT** of any responsibility for compliance with the provisions of this Agreement.

6.4.3. Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than **OWNER** and **CONSULTANT**.

6.5. Disputes.

Except as otherwise provided in this Agreement, any dispute concerning the amount of payment due the **CONSULTANT** or any dispute concerning any question of fact of any act to be performed under this Agreement, which is not disposed of by agreement between the Urban County Engineer's Office and the **CONSULTANT**, shall be submitted to the Commissioner, Department of Planning, Preservation and Development, Lexington-Fayette Urban County Government for review. The decision of the Commissioner as to the determination of such dispute shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, capricious, arbitrary or so grossly erroneous as necessarily to imply bad faith. Pending a final decision of a dispute hereunder, the **CONSULTANT** shall proceed diligently with the performance of the Agreement in accordance with the directions of the **OWNER**.

6.6. Accuracy of CONSULTANT'S Work.

The **CONSULTANT** shall be required to perform this Agreement in accordance with the degree of ordinary and reasonable skill and care usually exercised by professional engineers prevailing at the time, place and under similar conditions as the services hereunder are rendered.

The **CONSULTANT** shall be responsible for the accuracy of all work, even though Drawings and Specifications have been accepted by the **OWNER**, and shall make any necessary revisions or corrections resulting from errors and/or omissions on the part of the **CONSULTANT**, without additional compensation. By submission of reports, soils and subsurface information, quantities estimates, calculations and Drawings and Specifications to the **OWNER**, the **CONSULTANT** has made an incontrovertible representation that the information is accurate. Failure on the part of **CONSULTANT** to provide the expected level of accuracy may be grounds for the **OWNER** to disqualify **CONSULTANT** from consideration for future **CONSULTANT** engineering contracts.

6.7. Security Clause.

The **CONSULTANT** certifies that he shall not at any time release or divulge any information concerning the services covered by this Agreement to any person or any public or private organization except the **OWNER** without prior approval of the **OWNER**.

6.8. Access to Records.

The **CONSULTANTS** and his sub-**CONSULTANTS** shall maintain all books, documents, papers, and accounting records, and make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of final payment under the contract for inspection by the **OWNER**, and copies thereof shall be furnished if requested. Failure to maintain such records for three (3) years after the date of final payment may

be grounds for the **OWNER** to disqualify the **CONSULTANT** from consideration for future **CONSULTANT** engineering contracts.

6.9. Risk Management Provisions, Insurance and Indemnification

6.9.1. Definitions

The **CONSULTANT** understands and agrees that the Risk Management Provisions of this Agreement define the responsibilities of the **CONSULTANT** to the **OWNER**.

As used in these Risk Management Provisions, the terms "**CONSULTANT**" and "**OWNER**" shall be defined as follows:

a. **CONSULTANT** means the consultant and its employees, agents, servants, owners, principals, licensees, assigns and subcontractors or subconsultants of any tier.

b. **OWNER** means the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, boards, assigns, volunteers, and successors in interest.

6.9.2. Indemnification and Hold Harmless Provision

a. It is understood and agreed by the parties that **CONSULTANT** hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of **CONSULTANT** under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.

b. **CONSULTANT** shall indemnify, save, hold harmless and defend **OWNER** from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by **CONSULTANT**'s performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the **CONSULTANT**; and (b) not caused solely by the active negligence or willful misconduct of **OWNER**.

c. Notwithstanding, the foregoing, with respect to any professional services performed by **CONSULTANT** hereunder (and to the fullest extent permitted by law), **CONSULTANT** shall indemnify, save, hold harmless and defend **OWNER** from and against any and all liability, damages and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees, for any damage due to death or injury to any

person or injury to any property (including the loss of use resulting therefrom) to the extent arising out of, pertaining to or relating to the negligence, recklessness or willful misconduct of **CONSULTANT** in the performance of this agreement.

d. In the event **OWNER** is alleged to be liable based upon the above, **CONSULTANT** shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by **OWNER**, which approval shall not be unreasonably withheld.

e. These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.

6.9.3. Financial Responsibility

The **CONSULTANT** understands and agrees that the **CONSULTANT** shall, prior to final acceptance of the **CONSULTANT'S** proposal and the commencement of any work; demonstrate the ability to assure compliance with the Indemnity Agreement and other provisions of Section 6.9 of this Agreement.

6.9.4. Insurance Requirements

6.9.4.1 Required Insurance Coverage

CONSULTANT shall procure and maintain for the duration of this Agreement at its cost and expense the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to **OWNER** in order to protect **OWNER** against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by **CONSULTANT**.

Coverage	**Limits**
General Liability (Insurance Services Office Form CG 00 01)	$1 million per occurrence, $2 million aggregate or $2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, $1 million per occurrence
Professional Liability	$1 million per occurrence, $3 million aggregate
Worker's Compensation	Statutory
Employer's Liability	$1 million

The policies above shall contain the following conditions:

a. Policy shall be obtained unless it is deemed not to apply by **OWNER**.
b. The Professional Liability policy shall be maintained for a minimum of three years beyond the completion date of the contract, to the extent commercially available. If not commercially available, **CONSULTANT** shall notify **OWNER** and obtain similar insurance that is commercially available and acceptable to **OWNER**, unless **OWNER** waives requirement.
c. **OWNER** shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
d. Said coverage shall be written by insurers acceptable to **OWNER** and shall be in a form acceptable to **OWNER**. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

6.9.4.2. Renewals

After insurance has been approved by **OWNER**, evidence of renewal of an expiring policy must be submitted to **OWNER**, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

6.9.4.3. Deductibles and Self-Insured Programs

Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of **CONSULTANT'S** financial capacity to respond to claims. Any such programs or retentions must provide **OWNER** with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If **CONSULTANT** satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, **CONSULTANT** agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of bid and the commencement of any work:

a. Latest audited financial statement, including auditor's notes.
b. Any records of any self-insured trust fund plan or policy and related accounting statements.
c. Actuarial funding reports or retained losses.
d. Risk Management Manual or a description of the self-insurance and risk management program.
e. A claim loss run summary for the previous five (5) years.
f. Self-Insured Associations will be considered.

6.9.4.4. Verification of Coverage

CONSULTANT agrees to furnish **OWNER** with all applicable Certificates of Insurance signed by a person authorized by the insurer to

bind coverage on its behalf prior to final award, and if requested, shall provide **OWNER** copies of all insurance policies, including all endorsements.

6.9.4.5. Right to Review, Audit and Inspect

CONSULTANT understands and agrees that **OWNER** may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

6.9.5 Safety and Loss Control

CONSULTANT understands and agrees that **OWNER** is in no way responsible for the safety and property of **CONSULTANT** or its personnel, **CONSULTANT** shall comply with all applicable federal, state and local safety standards related to the performance of its work or services under this Agreement and take reasonably necessary action to protect the life, health and safety and property of its personnel, the public and **OWNER** in the locations and areas in which **CONSULTANT** is performing services under the Agreement.

6.9.6 Default

CONSULTANT understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that **OWNER** may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging **CONSULTANT** for any such insurance premiums purchased, or suspending or terminating the work.

6.10 Resident Services During Construction.

The **OWNER** will furnish a Resident Project Inspector.

SECTION 7 - EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Agreement, the **CONSULTANT** agrees as follows:

7.1 The **CONSULTANT** will not discriminate against any employee or application for employment because of race, color, religion, national origin, sex, age, or handicap. The **CONSULTANT** will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, sex, age, or handicap. 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 apprenticeships. The **CONSULTANT** agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

7.2 The **CONSULTANT** will, in all solicitations or advertisements for employees placed by or on behalf of the **CONSULTANT**, state that all qualified applicants will receive

consideration for employment without regard to race, color, religion, national origin, sex, age (between forty and seventy), or handicap.

SECTION 8 - SPECIAL PROVISIONS, EXHIBITS AND SCHEDULES

8.1. This Agreement is subject to the following provisions.

8.1.1. Limits of Liability, as described in Section 6.9.2., shall be $4,000,000.00.

8.1.2. Pursuant to subparagraph 3.4 of this Agreement, **OWNER** has assigned Thomas Clements, PE, Municipal Engineer Sr., of the Division of Engineering, (the "**OWNER'S** Agent"), as the authorized agent of **OWNER**, to monitor, direct and review the performance of work of the **CONSULTANT**. Documents, data, reports and all matters associated with carrying out this Agreement shall be addressed to the **OWNER'S** Agent or his designee. Questions by the **CONSULTANT** regarding interpretations of the terms, provisions and requirements under this Agreement shall be addressed to the **OWNER'S** Agent or his designee. The **CONSULTANT** shall look only to the **OWNER'S** Agent or his designee for direction in its performance under this Agreement; no other direction shall be binding upon **OWNER**. **OWNER** shall respond to written requests by **CONSULTANT** within thirty (30) days.

8.2. The following Exhibits are attached to and made a part of this Agreement:

8.2.1 Exhibit A "Scope for Engineering Services", consisting of five (5) pages, plus a six (6) page map attachment.

8.2.2 Exhibit B Fee proposal consisting of thirty (30) pages.

8.2.3 Exhibit C "Certificate of Insurance" consisting of one (1) page.

8.3. This Agreement (consisting of pages 1 to 13 inclusive), together with the Exhibits and schedules identified above constitutes the entire Agreement between **OWNER** and **CONSULTANT** and supersedes all prior written or oral understandings. This Agreement and said Exhibits and schedules may only be amended, supplemented, modified or canceled by a duly executed written instrument.

8.3. **NO THIRD PARTY RIGHTS.** This agreement does not create a contractual relationship with or right of action in favor of a third party against either **OWNER** or **CONSULTANT.**

8.4 **UNENFORCEABLE TERMS/SURVIVABILITY**. If any term or provision of this Agreement shall be found to be illegal or unenforceable, this Agreement shall remain in full force and such term or provision shall be deemed stricken. The provisions of Section 6 of this Agreement shall survive its termination.

8.5. **NON-WAIVER.** The failure of either party to enforce any right reserved to it in this Agreement shall not be a waiver of any such right to which the party is entitled.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

OWNER:

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main St.
Lexington, KY 40507

BY: _____
JIM GRAY, MAYOR

ATTEST:

_____ Deputy
URBAN COUNTY COUNCIL CLERK
COMMONWEALTH OF KENTUCKY
COUNTY OF FAYETTE

CONSULTANT:

PALMER ENGINEERING, INC.
400 Shoppers Drive
Winchester, KY 40392

BY: _____
DAVID LINDEMAN, PRINCIPAL

The foregoing Agreement was subscribed, sworn to and acknowledged before me by David Lindeman, as the duly authorized representative for and on behalf of Palmer Eng., on this the 23 day of October, 2017.

My commission expires: 02/02/2021.

_____
NOTARY PUBLIC ID#572797

MELODEE M. CAUDILL
NOTARY PUBLIC
ID#572797
EXPIRES FEBRUARY 2, 2021
COMMONWEALTH OF KENTUCKY

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

OWNER:

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main St.
Lexington, KY 40507

BY: _____
JIM GRAY, MAYOR

CONSULTANT:

PALMER ENGINEERING, INC.
400 Shoppers Drive
Winchester, KY 40392

BY: _____
DAVID LINDEMAN, PRINCIPAL

ATTEST:

_____
URBAN COUNTY COUNCIL CLERK
COMMONWEALTH OF KENTUCKY
COUNTY OF FAYETTE

The foregoing Agreement was subscribed, sworn to and acknowledged before me by _____, as the duly authorized representative for and on behalf of _____, on this the ____ day of _____, 2017.

My commission expires: _____.

_____
NOTARY PUBLIC

Scope of Engineering Services
Wilson Downing Sidewalk

This Scope of Engineering Services provides a minimum set of guidelines, tasks, and activities for professional engineering and registered land surveying services (Consultant), to design sidewalk, curb, gutter and drainage improvements along various sections of Wilson Downing Road. The Scope of Services includes topographic and boundary surveys, preliminary and final design, preparation of easement and right-of-way drawings, and associated funding and regulatory paperwork.

The design project will be overseen by the Lexington-Fayette Urban County Government, Division of Engineering (DOE). The project is primarily funded through a Transportation Alternatives Program (TAP) grant, which is administered through the Kentucky Transportation Cabinet Office of Local Programs (KYTC OLP). Engineering will be procured through the KYTC Statewide Consultant Contract.

Background

Various gaps exist in the sidewalk network on Wilson Downing Rd. creating an inconsistent and often unsafe pedestrian condition. This project will involve the addition of approximately 6,080 feet of sidewalk with curb and gutter along various section of Wilson Downing Rd:

- Nicholasville Rd to Dartmouth Dr (Southern Side)
- Camelot Dr to Midblock Near Creel Ct (Northern Side)
- Midblock Near Allante Brook Ct to Ridgepoint Run (Northern Side)
- Midblock Near Allante Brook Ct to Midblock Near Tates Creek Centre Dr (Southern Side)
- Walden Dr to Tates Creek Centre Dr (Northern Side)

The new sidewalk can likely be constructed within existing ROW. However, it is anticipated that acquisition of approximately fifteen temporary construction easements will be necessary.

Two small sections of the project appear to be within a Zone AE floodplain.

The culvert over Tates Creek adjacent to Tates Creek Centre Drive is currently in the planning and funding stage for replacement. Design will likely incorporate pedestrian facilities on the north side of the bridge. The engineer shall coordinate with the DOE to ensure the designs are contiguous.

The LFUCG Division of Water Quality will be replacing the stream culvert west of Ridgeport Run which will incorporate sidewalks across the culvert on both sides of the street. The Engineer shall coordinate with DWQ to ensure the designs are contiguous.

Scope of Services

1. Project Initiation and Review of Existing Information

1.1. Meet with LFUCG staff (DOE and Traffic Engineering) to discuss the project requirements and proposed Scope of Work. The meeting shall include project site visits with the DOE.

1.2. Review all project related information as provided by DOE. Obtain available LFUCG GIS data for the area, mapping including parcel lines, aerial photography, and existing infrastructure.

2. Field Surveys and Preliminary Design

2.1. Conduct field surveys with appropriate referencing to locate topographic features not shown on existing mapping. Confirm critical locations and elevations necessary for design including but not limited to existing roadway, storm sewer features and other utilities.

2.2. Research all deeds, plats and other property records to identify property lines, right-of-ways and easements.

2.3. Perform boundary surveys and set corner pins (or offsets) as necessary to define the physical limits of properties from which right of way must be purchased (if necessary).

2.4. Prepare a topographic survey of Project area.

2.5. Develop preliminary sidewalk, curb, gutter and drainage improvement plans. Plans shall comply with applicable ADA standards and shall include information on driveway entrance limits, pedestrian crossings, and the extents of construction. Sidewalk plans shall consider the existing drainage to ensure water is not retained behind the new sidewalk, existing property lines, existing utilities/utility conflicts, and/or other features or improvements that may impact construction costs. Design shall include drainage calculations for storm sewer sizing.

2.6. Prepare a Preliminary Design Technical Memorandum documenting the following for each Project:

- Proposed sidewalk, curb, gutter and drainage plan;
- Identification of all utility conflicts and proposed solutions;
- List of impacted properties and property owners;
- List of required easements and road right-of-way taking and encroachment (Determination of existing land rights shall be limited to recorded easements and right-of-way. For these purposes, prescriptive easements will be ignored.);

- List of required permits and respective agencies from which the permit(s) will be secured;
- List of agencies that will require notifications and/or approvals; and
- Preliminary Opinion of Construction Costs.

2.7. If requested, meet with the DOE to review the Preliminary Design Technical Memorandum. Consultant shall be responsible for meeting agendas, handouts, and meeting summaries.

3. Final Design

Note: Task 3: Detailed (final) Design shall not begin until written authorization is received from DOE.

3.1 Prepare Contract Drawings. At a minimum, the drawings shall include the following sheets:

- Cover sheet with location map, sheet index, etc;
- Plans scaled to 1" = 20'. Plans shall show all finalized features and detailed information as required for the preliminary plan;
- Detail sheets, as required to fully convey the intent of the project and how to construct it; and
- Cross sections every 50 feet and at driveway entrances.
- A General Summary Sheet

3.2 Submit drawings to LFUCG DOE and KYTC OLP for review and comment, and revise drawings accordingly.

3.3 Correspond and meet with all impacted utility companies and regulatory agencies as required for this project. The Consultant may attend bi-monthly LFUCG Utility Coordination meetings as deemed useful.

3.4 Prepare an Engineers Estimate (EE).

3.5 Prepare paperwork necessary for TIP funding, including LDA Design Review Checklist (LDRC), Project Development Checklist (PDC), Utility and Rail Note, Traffic Management Plan, etc.

3.6 Prepare a Bid Proposal. Note: LFUCG will furnish the front-end contract documents and their standard technical specifications. Consultant will need to prepare specifications for any special materials if used for this project.

3.7 Coordinate with the KYTC OLP to provide supporting data for the Environmental Review. OLP will take the lead on getting the Environmental Document and Section 106(historic) review.

3.8 Prepare, submit applications, including public notices, and secure all required permits including but not limited to those listed in the Preliminary Design Technical Memorandum, or identified above.

Note: Contractor selection and construction administration will be performed solely by LFUCG. However, at any time during construction, the Consultant shall be available to address any questions that arise concerning the accuracy or intent of his work. Time to address potential questions should be incorporated into the final design fee.

4. Easement and Right-of-Way Acquisition

4.1. Consultant shall prepare all paperwork necessary for temporary easement acquisition, including a metes and bounds description, except for correspondence to affected property owners.

4.2. Consultant shall prepare all paperwork necessary for easement acquisition and right-of-way encroachment and/or taking, except for correspondence to affected property owners.

Notes: LFUCG will take the lead on contact with affected property owners.

At a minimum, Consultant shall comply with all criteria and standards as set forth in 201 KAR 18:150, *Standards of Practice*.

LFUCG will conduct negotiations with property owners for easements and right-of-way, and will bear any associated costs, including appraisals.

Additional Requirements

1. Schedule and Completion

The contract time to complete Tasks 1-2, is 120 calendar days from the date of the Notice to Proceed.

The contract time to complete Tasks 3-4, is 90 calendar days from acceptance of the Preliminary Design.

Within the Price Proposal, the Consultant shall provide a schedule showing milestones, deliverables and the number of calendar days into the contract period that each milestone occurs.

2. Deliverables

- Two (2) copies of the Preliminary Design Technical Memorandum.
- Five (5) full-size (22 x 34) sets of final plans.
- Two (2) half-size (11 x 17) sets of final plans for each Project.
- CD or flash drive with:
  - Bid-Set Plans in AutoCad (.dwg) format
  - Bid-Set Plans (stamped and signed) in Acrobat (.pdf) format
- Easement descriptions and related paperwork.

3. General Notes

- Drawings shall be prepared in AutoCad format and according to LFUCG standards.
- Consultant is not responsible for:
  - Traffic and pedestrian signal design. LFUCG will provide details to be incorporated into the plans as needed.
  - Historical/Cultural Resources studies, Biological Resources studies, etc., if required for the Environmental.

Attachments:

- Plan View of Project Area – Wilson Downing Sidewalk
- GIS Map of Sewers (3 Sheets)
- GIS Map of FEMA Flood Zone
- Clearinghouse Letter 10/3/16
- Plan View of Wilson Downing Road Drainage Improvements

REVISIONS:

PLANS AND SPECIFICATIONS PREPARED BY:

LEXINGTON

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
DEPT. OF PLANNING, PRESERVATION, DEVELOPMENT
DIVISION OF ENGINEERING

WILSON DOWNING
SIDEWALK CONNECTIONS
Lexington, Fayette County, Kentucky

SCALE:	
BID NO.:	
CHECKED BY:	
APPROVED BY:	
DRAWN BY:	EE
DATE:	

SHEET: 1 OF 2

REVISIONS:

PLANS AND SPECIFICATIONS PREPARED BY:

LEXINGTON

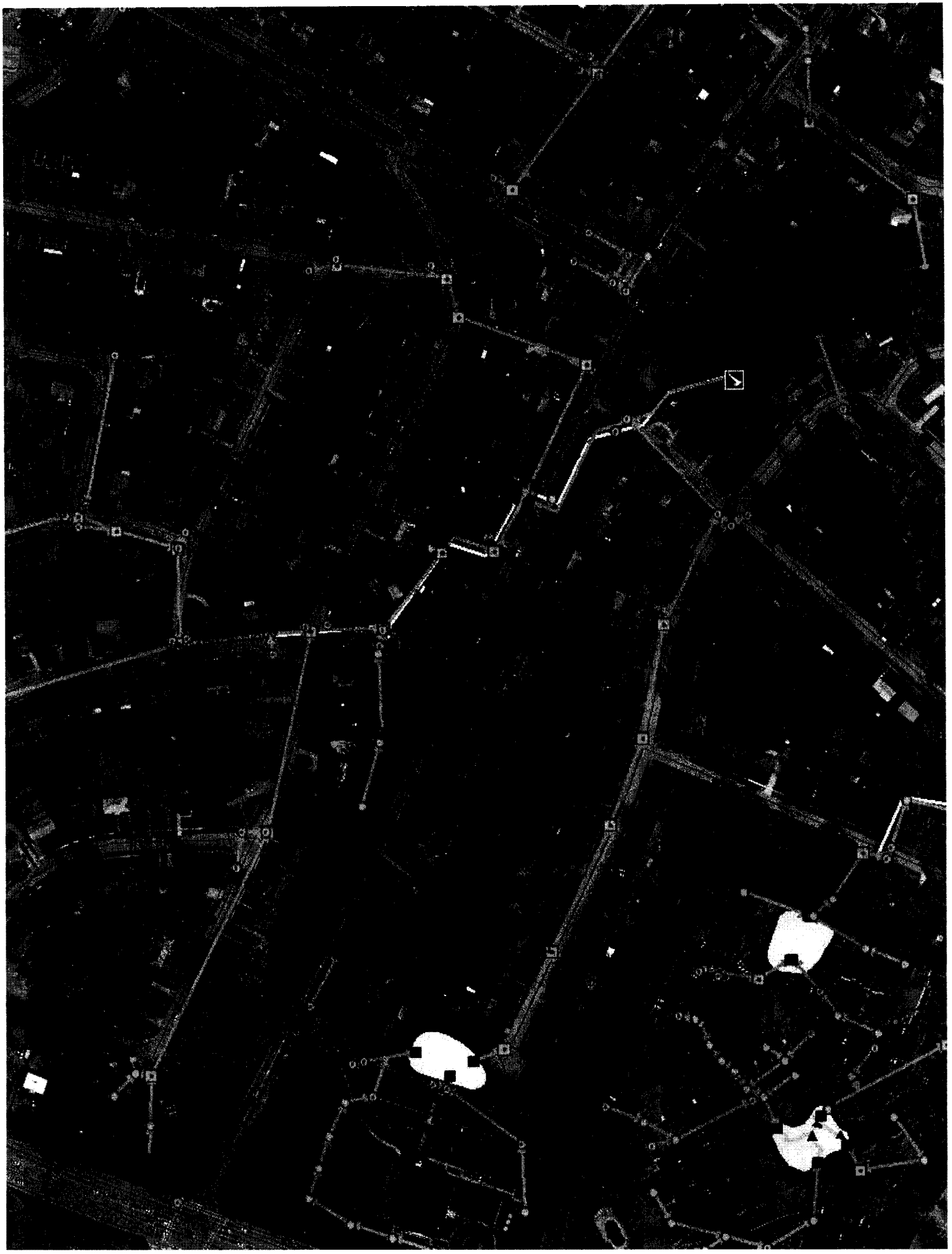
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
DEPT. OF PLANNING, PRESERVATION, DEVELOPMENT
DIVISION OF ENGINEERING

WILSON DOWNING
SIDEWALK CONNECTIONS
Lexington, Fayette County, Kentucky

SCALE:	
BID NO.:	
CHECKED BY:	
APPROVED BY:	
DRAWN BY:	EE
DATE:	

SHEET:

2 OF 2




CAMELOT DR
BELLEAU WOOD DR
GREENFIELD DR
21067C0207E
916
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920
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G
BRIDGE
RIDGEPOINT RUN
909
907
A
FOREST GREEN DR
BELLEAU WOODS PARK
TATES CREEK CENTRE DR
21067C0226E
TATES CREEK RD
K
OLD TATES CREEK PIKE

Palmer
ENGINEERING

September 5, 2017

Eric Pelfrey, P.E.
Director
Division of Professional Services
KY Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

RE: Wilson Downing Sidewalks
Fayette County
Agreement No. 2016-02-2, Letter Agreement No. 5
Fee Proposal

Dear Mr. Pelfrey:

Attached is our negotiated fee for preparing plans for the West Loudon Improvements in Fayette County. This fee proposal under the Statewide LPA contract includes:

- Palmer Engineering Fee Proposal
- Proposed Man-Hour Worksheet
- Description of Project Units
- Negotiation Minutes

Our proposed schedule and milestone dates for this modification include:

Preliminary Plan Review	December 1, 2017	60 percent
Final Plan Review	April 15, 2018	90 percent
Proposal Plans for Letting	May 15, 2018	100 percent

Please contact us at your earliest convenience if you have questions or need additional information.

Sincerely,

Stephen Sewell, PE, PTOE
Project Manager

Attachments

Minutes of Negotiations Meeting
September 5, 2017

Fayette County
Wilson Downing Sidewalks
Item No. 7-3203.00

Participants:

1. Mark Feibes – LFUCG
2. Brad Frazier – KYTC Central
3. Shane Tucker – KYTC D-7
4. Stephen Sewell - Palmer Engineering Company

Palmer Engineering submitted man-hours for the development of Wilson Downing Sidewalks Improvements in Fayette County on August 18, 2017.

The consultant originally proposed the following man-hours on August 18, 2017:

Survey	127 hours
Line and Grade	115 hours
Utility Coordination	4 hours
Right of Way Plans	39 hours
Final Plans	341 hours
Meetings	29 hours
Public Involvement	8 hours
Total Proposed	663 hours

On September 1, 2017, the hours were accepted by KYTC. The following man-hours were accepted by Palmer Engineering:

Survey	127 hours
Line and Grade	115 hours
Utility Coordination	4 hours
Right of Way Plans	39 hours
Final Plans	341 hours
Meetings	29 hours
Public Involvement	8 hours
Total Proposed	663 hours

1. Proposed Fee: $ 99,953.00

2. TIME OF COMPLETION

Preliminary Plan Review	December 1, 2017
Final Plan Review	April 15, 2018
Proposal Plans for Letting	May 15, 2018

3. PERCENTAGE OF PAYMENT

Preliminary Plan Review	60 Percent
Final Plan Review	90 Percent
Proposal Plans for Letting	100 Percent

DEPARTMENT OF HIGHWAYS

DATE

PALMER ENGINEERING COMPANY

September 5, 2017
DATE

KENTUCKY TRANSPORTATION CABINET | TC 40-2
Department of Highways | Rev. 03/2017
DIVISION OF PROFESSIONAL SERVICES | Page 1 of 1

ENGINEERING AND RELATED SERVICES FEE PROPOSAL

SECTION 1: PROJECT INFORMATION

DATE:	September 5, 2017	COUNTY:	Fayette	ITEM #:	N/A
PROJECT:	Wilson Downing Sidewalk				

SECTION 2: BUDGET INFORMATION

FEE CONSIDERATIONS	PROPOSED MAN HOURS	NEGOTIATED MAN HOURS	AVERAGE RATE	ESTIMATED COST
A. SURVEY	127	127	$44.36	$ 5,634
B. PRELIMINARY LINE AND GRADE	115	115	$43.64	$ 5,019
C. UTILITY RELOCATION COORDINATION	4	4	$43.64	$ 175
D. RIGHT OF WAY PLANS	39	39	$43.64	$ 1,702
E. FINAL PLANS	341	341	$43.64	$ 14,881
F. MEETINGS	29	29	$55.16	$ 1,600
G. PUBLIC INVOLVEMENT	8	8	$55.16	$ 441
				$ -
				$ -
				$ -
TOTAL PRODUCTION HOURS	663	663	$ 44.42	
			TOTAL DIRECT PAYROLL	$ 29,452
			OVERHEAD (175.76%)	$ 51,765
			PROFIT (15.00%)	$ 12,183
			COST OF MONEY (0.52%)	$ 153

DIRECT COSTS	AMOUNT
See Attached	$6,400
TOTAL DIRECT COSTS	$ 6,400

SUBCONSULTANTS	AMOUNT
TOTAL SUBCONSULTANTS	$ -
TOTAL PROPOSED FEE	$ 99,953

SECTION 3: SIGNATURE

FIRM NAME: Palmer Engineering | SIGNED BY: Stephen Sewell

CONSULTANT SIGNATURE	TITLE	DATE
	Vice President	9-5-2017
PROFESSIONAL SERVICES SIGNATURE	TITLE	DATE

PRODUCTION-HOUR WORKSHEET (revised 7/14)

COUNTY	Fayette		PROJECT TYPE	
ROUTE	Wilson Downing		CONSULTANT	PALMER
DESC	Wilson Downing Sidewalk		REVIEWED BY	
			PREPARED BY	SDS
ITEM NO.			DATE	

SURVEY

No.	ITEM	CREW	UNIT		HRS/UNIT	
	RECONNAISSANCE					
1	Control - (existing)	1	Mile	1.1	4	4
2	Utilities - (data gathering, identification & contact)	1	No.	6	1	6
3	Drainage - (sink holes, streams, pipes, etc.)	1	Mile	1.1	4	4
	CONTROL					
4	Horizontal	2	Mile	1.1	8	18
5	Vertical	2	Mile	1.1	8	18
6	Process data	1	Mile	1.1	8	9
	PLANIMETRIC SURVEY					
7	Planimetric location *(complete)*	2	Mile	1.1	8	18
8	Subsurface Utility Engineering, Quality Levels C & D	1	Mile	1.1	8	9
9	Subsurface Utility Engineering, Quality Level B	1	LS			0
10	Subsurface Utility Engineering, Quality Level A	1	LS			0
11	Process data	1	Mile			0
	TERRAIN SURVEY					
12	DTM data collection *(Items 11-18 not required if used)*	2	Acre	4	4	32
13	Verify terrain model accuracy	2	Mile			0
14	Tie-ins	2	No.			0
15	Drainage situations survey (Bridge)	2	No.			0
16	Drainage situations survey (Culvert)	2	No.			0
17	Drainage pipe section (non-situation size)	2	No.			0
18	Flood plain data	2	No.			0
19	Railroad Surveys	2	No.			0
20	Additional necessary DTM data *(specify pickup or update)*	2	Acre			0
21	Process data	1	Mile	1.1	4	4
	ESTABLISH PROPERTY LINES & OWNERSHIP					
22	Contact & Interview Property Owners	1	Parcel			0
23	Field tie property lines/corners	1	Parcel	10	0.5	5
	STAKING					
24	Stake centerlines, approaches, detours	2	Mile			0
25	Stake core holes - structures *(unit is per structure)*	2	No.			0
26	Stake core holes - roadway *(unit is per core hole)*	2	No.			0
	SURVEY MISCELLANEOUS					
27	Determine roadway elevations (Crown and EP)	2	Mile			0
28	Environmental areas	2	No.			0
29						0
	SURVEY TOTAL					**127**

PRODUCTION-HOUR WORKSHEET (revised 7/14)

COUNTY	Fayette	PROJECT TYPE		
ROUTE	Wilson Downing	CONSULTANT		PALMER
DESC	Wilson Downing Sidewalk	REVIEWED BY		
		PREPARED BY		SDS
ITEM NO.		DATE		

PRELIMINARY LINE AND GRADE

No.	ITEM	UNIT		HRS/UNIT	
30	Computer setup	LS	1	2	2
31	Prepare existing manuscripts	Mile			0
32	Establish approximate property lines and ownership	Parcel		0.5	0
33	Study and develop typical sections	No.	1	2	2
34	Study and develop horizontal alignments	Mile	1.1	20	22
35	Study and develop vertical alignments	Mile	1.1	20	22
36	Create and evaluate proposed roadway models	Mile	1.1	40	44
37	Design entrances/Tie-ins	No.	12	0.5	6
38	Pre-size pipes (all alternates)	No.	10	0.5	5
39	Pre-size culverts (all alternates)	No.			0
40	Pre-size bridges (all alternates)	No.			0
41a	Conduct Traffic Engineering Analysis (Basic; HCM Procedures)	Int			0
41b	Conduct Traffic Engineering Analysis (Advanced; Micro-simulation)	Int			0
42	Study and development of interchange	No.			0
43	Study and development of intersection	No.			0
44	Study and develop maintenance of traffic plan	LS			0
45	Plot/print copies of plans for team meeting and inspections	LS	1	4	4
46	Calculate preliminary quantities and develop cost estimates	Alt.	1	8	8
47	Revise plans and estimates	LS			0
48	Preliminary Right of Way with taking areas	Parcel			0
49	Prepare Design Executive Summary	LS			0
50	Develop/document "Avoidance Alternatives to Water Related Impacts	LS			0
	PRELIMINARY LINE & GRADE MISCELLANEOUS				
51					0
52					0
53					0
54					0
55					0
	PRELIMINARY LINE AND GRADE TOTAL				**115**

PRODUCTION-HOUR WORKSHEET (revised 7/14)

COUNTY	Fayette		PROJECT TYPE	
ROUTE	Wilson Downing		CONSULTANT	PALMER
DESC	Wilson Downing Sidewalk		REVIEWED BY	
			PREPARED BY	SDS
ITEM NO.			DATE	

UTILITY COORDINATION

No.	ITEM	PERSONS	UNIT		HRS/UNIT	
56	Utility Coordination Meeting	1	No.	2	2	4
57	Develop Utility Relocation Layout Sheets (1"=200')		Mile			0
58	Develop Utility Relocation Plans (1"=50')		Mile			0
	UTILITY COORDINATION MISCELLANEOUS					
59						
	UTILITY COORDINATION TOTAL					**4**

RIGHT OF WAY PLANS

No.	ITEM		UNIT		HRS/UNIT	
60	Deed research		Parcel		0.5	0
61	Establish property and ownership		Parcel		0.5	0
62	Calculate Right of Way		Parcel	5	1	5
63	Prepare legal descriptions		Parcel	5	1	5
64	Complete Right of Way summary sheet		Parcel	5	1	5
65	Generate Right of Way strip map *(scale 1" = 200')*		Sheet	2	4	8
66	Prepare Right of Way Plans Submittal		LS	1	4	4
67	Right of Way revisions after Right of Way submittal		LS			0
68	Deed Research for Existing Alignments		LS			0
69	Deed Research for Existing Parcels		Parcel			0
70	Prepare Legal Descriptions for Right of Way transfer		Parcel			0
	R/W PLANS MISCELLANEOUS					
71	Plat Development			3	4	12
72						0
	RIGHT OF WAY PLANS TOTAL					**39**

PRODUCTION-HOUR WORKSHEET (revised 7/14)

COUNTY	Fayette	PROJECT TYPE		
ROUTE	Wilson Downing	CONSULTANT		PALMER
DESC	Wilson Downing Sidewalk	REVIEWED BY		
		PREPARED BY		SDS
ITEM NO.		DATE		

FINAL PLAN PREPARATION

No.		ITEM		UNIT		HRS/UNIT	
80		Computer setup		LS	1	2	2
81		Update existing topography and terrain model		Mile			0
82		Refine alignments (horizontal & vertical)		Mile	1.1	8	9
83		Develop pavement design		No.			0
84		Finalize templates & transitions		No.			0
85		Develop final roadway model		Mile	1.1	40	44
86		Develop proposed design		Mile	1.1	40	44
87		Generate plan sheets *(scale 1" = 20')*		Sheet	7	4	28
88		Generate profile sheets *(scale 1" = 20')*		Sheet	7	4	28
89		Detail cross sections *(scale 1" = 5')*		No.	120	0.5	60
90		Design entrances		No.	12	1	12
91		Revise roadway plans from soils report		Mile			0
		DRAINAGE					
92		Develop pipe sections (< 54")		No.	5	2	10
93		Develop drainage system map		Mile	1.1	8	9
94		Develop drainage situation (bridge)		No.			0
95		Develop drainage situation (culvert)		No.			0
96		Develop blue line stream channel change (=> 200')		No.			0
97		Drainage analysis (entrance pipes)		No.			0
98		Drainage analysis (A < = 200 acres)		No.	5	2	10
99		Drainage analysis (200 acres < A < 1.0 sq. mile)		No.			0
100		Drainage analysis (A = > 1.0 sq. mile) level 1 analysis		No.			0
101		Drainage analysis (A = > 1.0 sq. mile) level 2 analysis		No.			0
102		Drainage analysis (A = > 1.0 sq. mile) level 3 analysis		No.			0
103		Special drainage studies		No.			0
104		Roadway ditches and channels		Mile			0
105		Develop Erosion Control Plan		Mile	1.1	8	9
106		Inlet spacing calculations		No.		1	0
107		Storm sewers calculations		No.		1	0
108		Perform scour analysis		No.			0
109		Assemble preliminary and final drainage folders		LS			0
110		Prepare advanced situation folder - bridge		No.			0
111		Prepare advanced situation folder - culvert		No.			0
		DRAINAGE MISCELLANEOUS					
112							0
113							0
114							0
115							0

PRODUCTION-HOUR WORKSHEET (revised 7/14)

COUNTY	Fayette		PROJECT TYPE	
ROUTE	Wilson Downing		CONSULTANT	PALMER
DESC	Wilson Downing Sidewalk		REVIEWED BY	
			PREPARED BY	SDS
ITEM NO.			DATE	

FINAL PLAN PREPARATION (Continued)

No.	ITEM		UNIT		HRS/UNIT	
116	Prepare layout sheet		LS	1	2	2
117	Prepare typical sections		No.	1	2	2
118	Prepare Interchange geometric approval		No.			0
119	Prepare intersection geometric approval		No.			0
120	Prepare coordinate control sheet		Mile	1.1	4	4
121	Prepare elevation developments		No.			0
122	Prepare striping plan		Sheet			0
123	Calculate final quantities		Mile	1.1	12	13
124	Complete general summary		LS	1	4	4
125	Complete paving summary		LS			0
126	Complete drainage summary		LS	1	4	4
127	Complete pavement under-drain summary		LS			0
128	Prepare cost estimate		LS	1	4	4
129	Plot/print copies of plans		LS	1	4	4
130	Plan revisions		Mile	1.1	12	13
131	Prepare final construction plans submittal		LS	1	4	4
	MAINTENANCE OF TRAFFIC					
132	Write maintenance of traffic notes (TCP)		LS	1	6	6
133	Prepare construction phasing plans *(traffic control detail sheets)*		Sheet			0
134	Develop diversion plan sheets		Sheet			0
135	Develop diversion profile sheets		Sheet			0
136	Develop diversion cross sections		No.			0
137	Develop temporary drainage		No.			0
	FINAL PLANS MISCELLANEOUS					
138	Prepare bid submittal documents (LDRC, PDC, Specs)		LS	1	16	16
139						0
140						0
141						0
142						0
143						0
	FINAL PLANS TOTAL					**341**

PRODUCTION-HOUR WORKSHEET (revised 7/14)

COUNTY	Fayette	PROJECT TYPE		
ROUTE	Wilson Downing	CONSULTANT		PALMER
DESC	Wilson Downing Sidewalk	REVIEWED BY		
		PREPARED BY		SDS
ITEM NO.		DATE		

MEETINGS

No.	ITEM	PERSONS	UNIT		HRS/UNIT	
150	Prelim. line and grade inspection	2	No.	1	4	8
151	Drainage inspection	2	No.			0
152	Final inspection	2	No.	2	4	16
153	Misc. project coordination meetings	1	No.	5	1	5
154	Project team meetings	2	No.			0
	MEETINGS MISCELLANEOUS					
155	Value Engineering Study		LS			0
156	Constructability Review		LS			0
	MEETINGS TOTAL					**29**

PUBLIC INVOLVEMENT

No.	ITEM	PERSONS	UNIT		HRS/UNIT	
160	Develop and Maintain Mailing List		LS			0
161	Prepare for Advisory Committee/Officials Meeting	1	No.			0
162	Attend Advisory Committee/Officials Meeting	3	No.			0
163	Prepare for Public Meetings/Hearings		No.			0
164	Attend Public Meetings/Hearings	4	No.			0
165	Prepare and Distribute Newsletter		No.			0
166	Property owner coordination		No.			0
	PUBLIC INVOLVEMENT MISCELLANEOUS					
167	Individual meetings with stakeholders (schools, businesses, etc.)			5	1.5	8
168						0
169						0
	PUBLIC INVOLVEMENT TOTAL					**8**

QA/QC

No.	ITEM		UNIT		HRS/UNIT	
180	Plan review		sheet			0
181	Structure review		sheet			0
	QA/QC TOTAL					**0**

PRODUCTION-HOUR WORKSHEET (revised 7/14)

COUNTY	Fayette		PROJECT TYPE		
ROUTE	Wilson Downing		CONSULTANT		PALMER
DESC	Wilson Downing Sidewalk		REVIEWED BY		
			PREPARED BY		SDS
ITEM NO.			DATE		

PRODUCTION-HOUR SUMMARY

SURVEY TOTAL					**127**
LINE AND GRADE TOTAL					**115**
UTILITY COORDINATION TOTAL					**4**
RIGHT OF WAY PLANS TOTAL					**39**
FINAL PLANS TOTAL					**341**
MEETINGS TOTAL					**29**
PUBLIC INVOLVEMENT TOTAL					**8**
QA/QC TOTAL					**0**
GRAND TOTAL					**663**

CLASSIFICATIONS AND PERCENTAGES FOR DESIGN
PALMER ENGINEERING COMPANY

COUNTY Fayette
PROJECT Wilson Downing
UPN
FED. NO.
ITEM NO.

Escalation:
rate = 0.82%
period = 0.4
factor = 0.0033

Begin 6/27/2017
End 4/15/2018
midpoint: 11/20/2017
calculated by (1.05^0.8-1)

* effective 7/5/2017

POSITION	Avg. Rate	Escalated Rate	Survey Item 1A	Preliminary Line and Grade Item 1B	Utility Relocation Coordination Item 1C	Right of Way Plans Item 1D	Final Plans Item 1E	Meetings Item 1F	Public Involvement Item 1G
Principal	$104.45	$104.79	5%	5%	5%	5%	5%	10%	10%
Project Manager	$63.81	$64.02	0%	20%	20%	20%	20%	20%	20%
Professional Sr Engineer	$56.73	$56.92	0%	10%	10%	10%	10%	30%	30%
Professional Engineer	$36.88	$37.00	0%	30%	30%	30%	30%	40%	40%
EIT	$28.75	$28.84	0%	15%	15%	15%	15%	0%	0%
Engineer Tech II	$44.64	$44.79	10%	10%	10%	10%	10%	0%	0%
Survey Crew: (2-man)	$40.63	$40.76	85%	0%	0%	0%	0%	0%	0%
Party Chief $45.75									
Instrumentman $35.50									
TOTAL			**$44.36**	**$43.64**	**$43.64**	**$43.64**	**$43.64**	**$55.16**	**$55.16**

Direct Cost Summary
Palmer Engineering Company

Item	Amount	Unit	Unit Cost	Cost	Totals
SURVEY					$640
Mileage - 4 wheel drive					
6 round trips @ 40 miles	240	mi	$0.53	$127	
meals		days	$30.00	$0	
lodging		nights	$85.00	$0	
computer time @ 10%	13	hours	$15.00	$195	
travel time (6 trips @ x1 hours each)	6	hours	$52.99	$318	
(Ave. Rate $40.76 x 1.3 = $52.99 / hour)					
PRELIMINARY LINE AND GRADE					$1,315
Mileage 0 round trips @ 20 miles		mi	$0.47	$0	
Printing / Copies					
printing	25	prints	$1.00	$25	
computer time @ 75%	86	hours	$15.00	$1,290	
UTILITY COORDINATION					$45
Mileage 0 round trips @ 20 miles		mi	$0.47	$0	
Printing / Copies					
printing		prints	$1.00	$0	
computer time @ 75%	3	hours	$15.00	$45	
RIGHT OF WAY PLANS					$460
Mileage 0 round trips @ 20 miles		mi	$0.47	$0	
Copies / Printing					
printing	25	prints	$1.00	$25	
computer time @ 75%	29	hours	$15.00	$435	
FINAL PLANS					$3,865
Mileage 0 round trips @ 60 miles		mi	$0.47	$0	
Printing / Copies					
printing	25	prints	$1.00	$25	
computer time @ 75%	256	hours	$15.00	$3,840	
MEETINGS					$45
Mileage 0 round trips @ 10 miles		mi	$0.47	$0	
computer time @ 10%	3	hours	$15.00	$45	
PUBLIC INVOLVEMENT					$30
Mileage 0 round trips @ 10 miles		mi	$0.47	$0	
computer time @ 25%	2	hours	$15.00	$30	
					$6,400

DESCRIPTION OF ITEMS
PRODUCTION-HOUR WORKSHEET

(revised December 11, 2012)

SURVEY

Total Length **5550 LF = 1.1 miles**

RECONNAISSANCE

1 Control (existing)

A field and record search for any existing control that may be utilized, including controls established for aerial photogrammetry. Sources of any existing control need to be identified.

1.1 Miles

2 Utilities (data gathering, identification & contact)

Identify all utility companies within the project corridor and maintain a valid contact list of those utility companies and their representatives. Contact utility companies, Kentucky 811, KYTC District Utilities Staff and any other sources for utility facility mapping or other information concerning the location of any utilities. Check with local governments for GIS databases and for other sources of information.

6 Utilities

3 Drainage - (sink holes, streams, pipes, etc.)

Identify drainage features that may require consideration in design and that are necessary to be documented on the plans.

1.1 Miles

CONTROL

4 Horizontal

Establish any new or additional horizontal coordinate control including the monumentation. All control information, including pre-established, shall be documented in a survey report and submitted to the KYTC Project Manager. All horizontal control obtained from Global Positions Systems (GPS) shall comply with the **Geometric Geodetic Accuracy Standards and Specifications for using GPS Relative Positioning Techniques** published by the Federal Geodetic Control Subcommittee dated August 1, 1989. Additional control points set shall be a minimum of 24-inch rebar (#4 or larger) with a plastic or aluminum cap.

1.1 Miles

5 Vertical

Establish any new or additional vertical control, including benchmarks, and including the monumentation. All control information, including pre-established, shall be documented in a survey report and submitted to the KYTC Project Manager. All vertical control obtained from Global Positions Systems (GPS) shall comply with the **Geometric Geodetic Accuracy Standards and Specifications for using GPS Relative Positioning Techniques** published by the Federal Geodetic Control Subcommittee dated August 1, 1989.

1.1 Miles

Note: The Department, through its photogrammetry consultant, will provide horizontal and vertical controls to NGS (National Geodetic Survey) bench marks. Intermediate controls set by the Consultant shall be

tied to the controls provided by the Department. This work is only necessary if the project was not flown or if insufficient controls were established with the aerial photogrammetry. It is expected that with this item of work, any existing controls would be checked for accuracy.

6 Process data

Process data obtained from field survey and check for accuracy and closure. Preparation of survey report of coordinate controls and bench marks.

Note: A complete coordinate control report including existing and new control point information, with traverse information confirming coordinate control accuracy and a bench level report shall be prepared and submitted to the KYTC Project Manager.

1.1 Miles

PLANIMETRIC SURVEY

7 Planimetric location

Locate and/or identify all necessary planimetric features. On projects with aerial photogrammetry available this would require only identification of planimetric features and pick-up of areas not covered by the available photogrammetry, if required. For Phase 2 design this would be for the update of the topography due to new or changed planimetric features since the original survey or aerial photogrammetry was obtained. It should be noted on the production-hour form the extent of work required, for example, complete, pick-up or update.

1.1 Miles

8 Subsurface Utility Engineering, Quality Level C & D

Apply reconnaissance utility data gathered to locate utility facilities on plans. Gather a survey of all visible utility facility features (i.e. poles, valves, manholes, markers, etc.) and provide them on the plans. Utilize both the reconnaissance data and field generated data to assess the approximate location of the utility facilities within the project corridor. This data shall be used to identify potential conflicts between the project and the existing facilities.

1.1 Miles

9 Subsurface Utility Engineering, Quality Level B

Identify specific locations where the road project potentially may conflict with the existing utility facilities and a more precise location of the utility is needed. Quality Level B location is valid if precision is needed to validate the conflict, confirm the facility may remain in situ, or design to avoidance. The Quality Level B location shall be a non-excavation field procedure using surface locating technologies and shall provide a more precise location of the facility without providing elevations. The consultant shall denote the Quality Level B location on the plans and use this information to avoid the facility or establish a plan for relocation as appropriate.

10 Subsurface Utility Engineering, Quality Level A

Identify specific locations where the exact location of the utility is needed. A Quality Level A location is valid if a precise elevation is needed to validate the conflict, confirm the facility may remain in situ, or design to avoidance. For those locations, validate the Quality Level B location, confirm facility type, size, and provide elevations via vacuum excavation or other valid means. The consultant shall communicate with the utility company, providing the utility to be present during the facility location when necessary. The consultant shall denote the Quality Level A location on the plans and use this information to avoid the facility or establish a plan for relocation as appropriate.

11 Process data
Process all necessary data to produce a planimetric map and submit electronic files to the designer.

TERRAIN SURVEY

12 DTM data collection
Collect general terrain data for project (when general terrain data is not already available).
Note: Items 11-18 should not be required if general terrain data is to be collected.
4 acres (LIDAR DATA TO SUPPLEMENT)

13 Verify terrain model accuracy
Check for accuracy of breaklines, random points, contours, etc., including terrain model obtained from aerial photogrammetry.
Note: The density of points taken in the field to check the DTM will be determined at the Predesign Conference.

14 Tie-ins
Field verification of all field data necessary for tying of project to existing features pavements etc. Include all road approaches. Entrances are not generally required and will only be performed if specifically directed by the KYTC Project Manager.

15 Drainage situation survey (Bridge)
Obtain all necessary field data to represent situation survey for bridges, including stream profile and necessary terrain data to merge into the existing terrain model.

16 Drainage situation survey (Culvert)
Obtain all necessary field data to represent situation survey for culverts.

17 Drainage pipe section (non-situation size)
Obtain all necessary field data to define the accuracy of the existing flowlines and inlet and outlet location and elevations of cross drains.
*Note: Does **not** include entrance pipes*

18 Flood plain data
Collect field data necessary for flood plain analysis.

19 Railroad Surveys
Obtain all necessary terrain data to represent railroad survey (top of rail, ballast, ditches, fills, cuts, RR milepost, etc.).

20 Additional necessary DTM data
Collect other necessary data to produce an accurate digital terrain model (obscured areas, field checked areas, areas needing greater accuracy, etc.).

21 Process data
Process all pertinent data necessary to generate digital terrain models and submit electronic files to the designer.
1.1 Miles

ESTABLISH PROPERTY LINES & OWNERSHIP

22 Contact & Interview Property Owners
Contact property owners requesting permission for access and discuss general scope of project, locations of property lines, septic system, drainage and any other pertinent information. A report

is to be generated with a copy of the contact letter and all completed contact information forms from property owners, upon request.

Note: The contact letter and information form is to be reviewed and approved by the KYTC Project Manager prior to contacting the property owners. The contact letter shall include the name of a person from the consultant that may be contacted in case of problems and the KYTC Project Manager.

23 Field tie property lines/corners

Locate all monuments (rebars, pins, etc.) and other evidence of property lines (fences, tree lines, drains, etc.).

10 Parcels

STAKING

24 Stake centerlines, approaches, detours

Accurately stake centerline at intervals determined at the Predesign Conference and process data.

25 Stake core holes - structures

Stake or locate all geotechnical borings required for structural design and process data.

NOTE: The unit is per individual structure, NOT per hole.

26 Stake core holes - roadway

Stake or locate all geotechnical borings required for geotechnical soil/rock analysis and process data.

NOTE: The unit is per individual core hole.

SURVEY MISCELLANEOUS

27 Determine Roadway Elevations (Crown and EP)

This would be necessary on widening and overlay projects where the terrain model is developed from aerial photogrammetry and accurate pavement elevations are required and includes processing data.

NOTE: Unit is per mile of individual roadway sections.

28 Environmental areas

Locate and identify areas and feature that may be considered environmental issues and includes processing data.

29 Reserved for additional miscellaneous survey items required

PRELIMINARY LINE AND GRADE

30 Computer setup

Load and organize project data (manuscripts, mapping, ortho-rectified photographs, etc.) into computer system, the establishment and maintenance of a file management system for project data, including the storage and manipulation of all project files required for plan development.

1 LS

31 Prepare existing manuscripts

Reviewing existing manuscript, if provided from aerial photogrammetry, and modifying any items that need to be corrected in order to conform to current KYTC CADD standards. Incorporate any additional topography picked up by field survey. Depict locations of all existing utility facilities. Manipulation/addition of text and notes identifying topography, planimetrics, drainage structures and utilities. Addresses shall be shown for all parcels, if requested.

32 Establish approximate property lines and ownership
Using field evidence and research documentation, such as plats and PVA records, establish approximate existing right of way and property lines and denote the property ownership, parcel numbers and lines on the plans

33 Study and develop typical sections
Study, develop, and document all necessary typical sections (including alternatives) for the mainline and all other roadways, including creating the Inroads roadway templates for each roadway.
1

34 Study and develop horizontal alignments
Study, develop and document the alternate horizontal alignments including approaches. Generate the necessary graphics depicting the proposed alternative, including disturbed limits, drainage structures, etc.
1.1 Miles

35 Study and develop vertical alignments
Study, develop and document the vertical alignments for each horizontal alignment including approaches and entrances.
1.1 Miles

36 Create and evaluate proposed roadway models
Create, review, modify and finalize the proposed roadway model for each roadway and alternative, including creating the required cut/fill to create the roadway model. Includes depiction of critical cross sections, as discussed in the Predesign Conference.

Note: This would include the various iterations and adjustments required to complete an alternative due to earthwork balancing, intersection sight distance and alignment refinement.

1.1 Miles

37 Design entrances
Determine approximate location, grade, width and type of entrance and depict on the plans of the preliminary alternatives.
12

38 Pre-size pipes
Determine preliminary diameter, length, and end treatment for each drainage pipe.
10

39 Pre-size culverts
Determine preliminary size, length, and end treatment for each culvert.

40 Pre-size bridges
Determine preliminary size (deck width, span arrangement, hydraulic openings, and/or clearances) for each bridge.

41a Conduct Traffic Engineering Analysis (Basic; Highway Capacity Manual Procedures)
Conduct and document traffic engineering analysis for each roadway section and each major intersection, using the appropriate Highway Capacity Manual/Highway Capacity (HCM/HCS) procedures. This analysis will determine the appropriate lane configuration to meet the desired performance of the roadway. Production hours will be based on the number of intersections for the project. Roadway lengths between intersections will be considered incidental to the overall analysis.

Note: Number of major intersections to be analyzed, along with appropriate analysis scenarios and roadway sections will be determined and documented at the Predesign Conference.

41b Conduct Traffic Engineering Analysis (Advanced; Micro-simulation)

Conduct and document traffic engineering analysis for each roadway section and each major intersection, using micro-simulation. This analysis will evaluate the ability of the project to operate as a comprehensive system. Production hours will be based on the number of major intersections on the project. Analysis should account for roadway lengths and minor intersections along the approaches to the major intersections.

Note: Major intersections to be analyzed, along with appropriate analysis scenarios and roadway sections will be determined and documented at the Predesign Conference.

42 Study and development of interchange

Study, develop and document preliminary interchange layouts including capacity analysis for weaving areas and merge/diverge.

Note: The specific scope of work and methodology of analysis will be determined at the Predesign Conference.

43 Study and development of intersection

Study, develop and document preliminary intersection layouts including appropriate capacity analysis, if required, for each intersection. Intersections to be studied will be identified in the Predesign Conference.

Note: The specific scope of work and methodology of analysis will be determined at the Predesign Conference.

44 Study and develop maintenance of traffic plan

Study, develop and document alternative traffic control plans including construction phasing and/or detour routes.

45 Plot/print plans for meetings and inspections

Plot and/or print plans, profiles, drawing, cross sections, schematics, etc. for meetings, inspections or upon request.

Note: The number of sets of prints for meetings and inspections shall be determined at the Predesign Conference.

1 LS

46 Calculate preliminary quantities and develop cost estimates

Develop and document cost estimates for each alternate, including calculating preliminary quantities for each alternative. Includes development of a preliminary pavement design, to be reviewed by the KYTC Project Manager, to use in calculating preliminary pavement quantities. This should include estimating utility relocations costs as a result of the highway project and examination of those costs relative to the road construction costs.

1 ALT

47 Revise plans and estimates

Revise plans and estimates as directed from reviews and inspections. Upon completion of the Preliminary Line and Grade Inspection, the Consultant shall incorporate all significant comments into the preliminary plans and submit the revised plans and electronic files to the KYTC Project Manager.

48 Preliminary Right of Way with taking areas

Layout preliminary Right of Way and calculate approximate Right of Way taking areas from each parcel, for each alternate. Document the areas of taking for each alternate and depict the preliminary Right of Way and easements on the plans.

49 Prepare Design Executive Summary
Prepare and submit Design Executive Summary, including all necessary documentation, location map, typicals, etc.

50 Develop/document "Avoidance Alternatives to Water Related Impacts"
Prepare documentation concerning all blue line streams as denoted on topographic quad maps.

51-55 Reserved for additional miscellaneous PL&G items required

UTILITY COORDINATION

56 Utility Coordination Meeting
Hold a Utility Coordination Meeting for all utility companies identified within the project corridor, KYTC utility and design staff. The intent of this type of meeting is to identify critical conflicts and easement needs, discuss avoidance possibilities, consider relocation placements and costs, phasing and schedule, and identify Quality Level A or Quality Level B location needs. This meeting shall take place prior to the joint inspection but for complex projects and projects with a prevalence of utilities, it is recommended to hold at least two meetings.
2 Meeting

57 Develop Utility Relocation Layout Sheets (1"=200')
Develop preliminary relocation layout sheets that show all existing utility facilities, locations of Quality Level A and Quality Level B subsurface utility engineering information, identified conflicts with the project, and proposed relocation alignments.

58 Develop Utility Relocation Plans (1"=50')
Develop utility relocation plans for utilities that have agreed to have KYTC's consultant perform relocation design services. These plans shall provide a detailed horizontal and vertical alignment of the facilities to be relocated. Plan sheets, profile sheets, and cross sections shall be required. Plans shall adhere to the utility company's standards and specifications.

59 Reserved for additional miscellaneous Utility Coordination items required.

RIGHT OF WAY

60 Deed research
Research of all documents necessary to determine property lines, existing easements, encumbrances and ownership including a copy of the deed with deed book and page number and available plats.
LFUCG TO PREFORM

61 Establish property and ownership
Using field evidence and research documentation to accurately establish property lines, existing Right of Way, existing easements, owner names, lessee names, and parcel numbers. Document on plans.
LFUCG TO PREFORM

62 Calculate Right of Way
Calculate lines and areas of all proposed right of way and easement takings for each parcel.

Depict all right of way and easements, including metes and bounds, on plans.
5 Parcels

63 Prepare legal descriptions
Prepare and check legal descriptions for each area of taking.
5 Parcels

64 Prepare Right of Way summary sheet
Complete Right of Way summary sheet including all affected parcels.
5 Parcels

65 Generate Right of Way strip map
Prepare Right of Way strip map covering all affected parcels. Generate individual strip map sheets.
2 Sheet

66 Prepare Right of Way Plans Submittal
Generate the computer files of the Right of Way plans, plot the original mylars, prepare electronic submittal of plans and deeds and submit plans, computer files, source deeds and proposed deed descriptions to the District Office. Detour runarounds or other maintenance of traffic plans that have impacts to the right of way or utilities shall be included in the Right of Way plans. A set of prints of drainage and cross sections may also be required to be included in the submittal.
Note: A set of prints is to be submitted to the KYTC Project Manager for review prior to submittal of Right of Way plans, if requested.
1 Lump Sum

67 Right of Way revisions after Right of Way submittal
Prepare Right of Way plan revisions as necessary. Post Right of Way Plan submittal and prior to the final construction plan submittal. Includes re-submittal of revised plans (mylars), 1 set of prints with changes marked in red, plats, deed descriptions and electronic files.

68 Deed Research for Existing Alignments
Research to see if any back source deeds exist on existing alignments which will not be reconstructed and are not included in Line 60.

69 Deed Research for Existing Parcels
Investigate old recorded deeds that exist and perform actual research for each parcel necessary to determine property lines, existing easements, encumbrances and ownership including a copy of the deed with deed book and page number and available plats, if any.

70 Prepare Legal Descriptions for Right of Way Transfer
Prepare legal deed descriptions for each parcel to be transferred to local government responsibility.

71-74 Reserved for additional miscellaneous Right of Way items required

71 Prepare Plats for LFUCG Permanent Right of Way
Prepare Plats for ROW acquisition
3 Parcels

FINAL PLAN PREPARATION

80 Computer setup

Load and organize electronic data files (manuscripts, centerline data, coordinates data, terrain models etc.).

Note: In most cases much of this work was completed in Phase 1.

1 Lump Sum

81 Update existing topography and terrain model

Using updated field data, modify and update the existing topography and terrain model.

82 Refine alignments (horizontal & vertical)

Refine, adjust, and document the preferred horizontal and vertical alignments accommodating greater detail in tie-down points, approaches, detours, etc.

1.1 Miles

83 Develop pavement design

Analyze, document and submit for review and approval the proposed pavement design folder for each roadway, including pavement calculations, life cycle costs, typical sections and pavement details.

84 Finalize templates & transitions

Finalize necessary templates and template transitions for all roadways. This includes each instance of a horizontal change in roadway edge of pavement with respect to the centerline.

85 Develop final roadway model

Modify the preliminary roadway model or generate a new roadway model incorporating the proposed design into the initial roadway model, including cut/fill slopes, roadside ditches, etc. as necessary to define ditches and disturbed limits and enable the generation of cross-sections for all roadways.

Note: The extent and degree of accuracy of the "final" roadway model is to correspond with the required guidelines of electronic deliverables. This effort of work is to be discussed at the Predesign Conference.

1.1 Miles

86 Develop proposed design

Design and depict on the plans (manuscript) all proposed construction details and graphics, including pavement, drainage, construction notes, etc.

1.1 Miles

87 Generate plan sheets

Perform necessary work to create individual plan sheets, including dropping of sheet cells, masking, manipulation of text and notes, etc.

7 Sheets

88 Generate profile sheets

Perform necessary work to create individual profile sheets, including dropping profile, annotation of profile, drainage, ditches, notes, etc.

Note: Though depiction of longitudinal storm sewers is generally performed on the profile sheets, they will be paid for as individual pipe sections under Item 92.

7 Sheets

89 Detail cross sections
Drop cross sections onto sheet cells; add yardage quantities, details, notes, etc.
Note: The majority of work required for the development of cross sections is under Item 85.
120 Sections

90 Design entrances
Determine location, grade, type of entrance, width and quantities and depict on the plans.
12 Entrance

91 Revise roadway plans from soils report
Modify the roadway model incorporating geotechnical report recommendations.
Note: Length is based on expected area requiring changes due to geotechnical report, not entire project length.

DRAINAGE

92 Develop pipe sections (< 54")
Create and design pipe sections including quantities, notes and depicting them in the plans.
Note: Includes cross drains, storm sewer, etc.
5 Pipes

93 Develop drainage system map
Create map describing the proposed drainage system and delineates drainage areas. Includes generating the individual sheets.
1.1 Miles

94 Develop drainage situation (bridge)
Develop and prepare drawing of alignment, profiles, sections, and plan to represent bridge situation survey.

95 Develop drainage situation (culvert)
Develop and prepare drawing of alignment, profiles, sections, and plan to represent culvert situation survey.

96 Develop blue line stream channel changes (=> 200')
Develop and prepare drawing of alignment, profiles, sections, and plan to represent channel change, including stream mitigation requirements.

97 Drainage analysis (Entrance pipes)
Conduct and document drainage analysis to determine frequency flows and required structure size of entrance pipes. Includes completion of forms.

98 Drainage analysis (A <= 200 acres)
Conduct and document drainage analysis to determine frequency flows and required structure size. Includes completion of forms.
5 Pipes

99 Drainage analysis (200 acres < A < 1.0 sq. mile)
Conduct and document drainage analysis to determine frequency flows and required structure size. Includes completion of forms.

100-102 Drainage analysis (A => 1.0 sq. mile) -- Levels 1, 2, & 3 Analysis
Conduct and document drainage analysis to determine frequency flows, required structure size,

location, and risk assessment. Includes completion of forms.

103 Special drainage studies
Conduct special drainage studies, which may include HEC-1, TR-20, TR-55, Unsteady Flow Models, FESWMS-2DH, Detention Basin Design, Energy Dissipater Design, Dynamic Culvert Design or other Hydrologic/Hydraulic design as deemed appropriate.

104 Roadway ditches and channels
Determine hydraulic capacity (ditch size) and necessary channel lining of all ditches and channels. Includes documentation of design calculations and completion of forms.
Note: Left and right sides are independent to each other and should be added for a combined total.

105 Develop erosion control plan
Determination of required erosion control items and depiction in the plans, including required calculations and generating the individual sheets. Includes documentation of design calculations and completion of forms.
Note: Specific scope of work and level of effort is to be discussed at the Predesign Conference
1.1 Miles

106 Inlet spacing calculations
Conduct necessary calculations to determine structure types, and inlet spacing for the layout and design of storm sewer systems. Includes documentation of design calculations and completion of forms.

107 Storm sewer calculations
Conduct necessary calculations to determine pipe size, storage volumes, etc. for the layout and design of storm sewer systems. Includes documentation of design calculations and completion of forms.

108 Perform scour analysis
Perform scour analysis as referenced in the FHWA HEC-18 and HEC-20 and the current Drainage Manual. Includes documentation of design calculations and completion of forms.

109 Assemble preliminary and final drainage folders
Copy, fold, bind, and assemble drainage folders.

110 Prepare advanced situation folder - bridge
Prepare required documentation, copy, fold, bind, and assemble the folder.
Note: Folder contents are to conform to requirements outlined in the Drainage and Bridge Manuals.

111 Prepare advanced situation folder - culvert
Prepare required documentation, copy, fold, bind, and assemble the folder.
Note: Folder contents are to conform to requirements outlined in the Drainage and Bridge Manuals.

112-115 Reserved for additional miscellaneous Drainage items required

FINAL PLAN CONTINUATION

116 Prepare layout sheet
Prepare layout sheet for the Construction Plans.
1 Lump Sum

117 Prepare typical sections
Prepare all typical sections including the proposed pavement design and other necessary details for each roadway, detour, and entrance.
1 Typical Section

118 Prepare interchange geometric approval sheet
Prepare geometric approval sheet, including all required alignments, curve data, coordinates, etc. for requesting approval of the interchange geometrics.

119 Prepare intersection geometric approval sheet
Prepare geometric approval sheet, including all required alignments, curve data, coordinates, etc., for requesting approval of the intersection geometrics.

120 Prepare coordinate control sheet
Develop all coordinate control information, including proposed centerlines, event points, control points, and benchmarks with appropriate descriptions, and place into the plans in tabular form and generate individual sheets.
1.1 Miles

121 Prepare elevation developments sheet
Prepare elevation development sheets including all geometric data and elevation data necessary.

122 Prepare striping plan
Prepare details for striping plans as outlined in the Predesign Conference.

123 Calculate final quantities
Calculate and document all quantities required for the construction of the final roadway and maintenance of traffic during construction, including permanent and temporary items.
1.1 Miles

124 Complete general summary
1 Lump Sum

125 Complete paving summary

126 Complete drainage summary
1 Lump Sum

127 Complete pavement under-drain summary

128 Prepare cost estimate
Prepare and document cost estimates including bid prices for each item, using best engineering judgement, for inspections, meetings and final plan submittal.
1 Lump Sum

129 Plot/Print copies of plans

Plot/print copies of plans including the necessary copies of plans for distribution at project milestones (inspections, meetings, etc.).

Note: The number of sets of prints for meetings and inspections shall be determined at the Predesign Conference

1 Lump Sum

130 Plan revisions

Complete any necessary and unexpected plan revisions that arise during the project that are beyond the control of the consultant, including revisions to plans required due to Right of Way Revisions that are not directly shown on the Right of Way Plans.

1.1 Miles

131 Prepare final construction plans submittal

Generate the computer files of the final plans, plot the original mylars, prepare electronic submittal of plans and required files and submit plans, computer files and a list of General Notes to the District Office. Also includes submittal of a set of Review Plans and making any necessary changes identified by the roadway plan review.

1 Lump Sum

MAINTAINENCE OF TRAFFIC

132 Write maintenance of traffic notes (TCP)

Write and submit the required Traffic Control Plan, including the construction phasing for the project.

1 Lump Sum

133 Prepare construction phasing plans

Prepare plans for maintenance of traffic, construction phasing and/or detours necessary for the construction of the project, including all phasing, special notes, signs, temporary pavement markings and quantities. When maintenance of traffic details have been completed, a Traffic Control Plan shall be prepared and submitted to the KYTC Project Manager to obtain the necessary approval signatures. Once approved, the notes and phasing details will be incorporated into the final construction plans.

134 Develop diversion plan sheets

135 Develop diversion profile sheets

136 Develop diversion cross sections

137 Develop temporary drainage

FINAL PLANS MISCELLANEOUS

138 Pre Bid submittal documents (LDRC, PDC, Specs)

1 Lump Sum

140-149 Reserved for additional miscellaneous Final Plans items required

MEETINGS

150 Preliminary line and grade inspection
Preparation and attendance by the project engineer and others, if necessary, to the preliminary line and grade inspection and preparation of the inspection report.
1 Meeting

151 Drainage inspection
Preparation and attendance by the project engineer and drainage engineer to the drainage inspection and preparation of the inspection report.

152 Final inspection
Preparation and attendance by the project engineer and others, if necessary, to the final inspection and preparation of the inspection report.
2 Meeting (Punch List & Final Closeout)

153 Misc. project coordination meetings
Attendance by the project engineer and others, if necessary, to any project coordination meetings scheduled by the Project Manager and preparation of the meeting minutes.
5 Meeting

154 Project team meetings
Attendance by the project engineer and others if necessary, to any project team meetings scheduled by the Project Manager and preparation of the meeting minutes.

155 Value Engineering Study

This item is applicable only for a project requiring a VE study or project where the KYTC project manager specifies that a VE study will be done.

Attendance by the project engineer at the project briefing (normally 2 hours). Attendance by the project engineer at the VE recommendations briefing (normally 2 hours). Preparation of presentation for the project briefing. Preparation and compilation of project plans and documents for the VE team. Meeting attendance by the project engineer with KYTC project manager to review VE recommendations for further implementation.

156 Constructability Review

This item is applicable to any project for which the KYTC project manager determines a standalone constructability meeting is warranted. The constructability review meeting is scheduled so as to facilitate the design decision making process and the development of final plans. Typical projects are those for which the project engineer anticipates a complicated maintenance of traffic plan or unusual construction work restrictions. Attendees should include the project engineer and others as necessary.

Prepare meeting materials, including any constructability related details (draft phasing, maintenance of traffic, seasonal restrictions, as well as standard plan information) prior to the meeting. Write and distribute minutes after the meeting.

157-159 Reserved for additional miscellaneous Meeting items required

PUBLIC INVOLVEMENT

Note: The level of Public Involvement shall be discussed in the Predesign Conference and documented in the minutes.

167 Individual Meetings with Stakeholders (schools, businesses, etc)

Prepare and maintain an up-to-date mailing list consisting of all potential property owners, local officials and other interested individuals.

5 Meetings

167-169 Reserved for additional miscellaneous Public Involvement items required

Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

MEMORANDUM

TO: Eric Pelfrey, Director
Division of Professional Services

FROM: Michael Coffey, Audit Manager MC
External Audit Branch

DATE: August 11, 2017

SUBJECT: Palmer Engineering Company
Fiscal Year Ended January 1, 2017 Indirect Cost Rate

The Kentucky Transportation Cabinet has approved the following rates for Palmer Engineering Company (the Company) for the fiscal year ended January 1, 2017:

Indirect Cost:	175.76%
Facilities Capital Cost of Money (FCCM):	0.52%
CADD Rate	$ 17.18*

*Rate is limited to $15 per 600 KAR 6:070 Section 2 (6) (e)

We also recommend acceptance of the pay rates in the Attachment.

This approval does not constitute "establishment of a rate by a cognizant agency" for the purposes of applying the rules published in Title 23 CFR 172.7. The Kentucky Transportation Cabinet retains the right to audit the above rates or adjust them should a cognizant approval occur after this date.

This memorandum is intended solely for the use and information of the Company and the Kentucky Transportation Cabinet related to contracts employing the cost principles of the Federal Acquisition Regulations and should not be used for any other purpose. This restriction is not intended to limit the distribution of this memorandum, which is a matter of public record.

MC/slb
Attachment

Palmer Engineering Company
Attachment

Average Pay Rates

We have verified Palmer Engineering Company's rates per classification as of July 5, 2017:

Classification	Hourly Rate
Admin. Assistant	$30.67
Consulting Engineer	$16.01
Engineer in Training	$28.75
Engineer Technician I	$30.17
Engineer Technician II	$44.64
Environmental Technician I	$34.50
Environmental Technician II	$41.28
Instrument Man	$35.50
Maintenance	$18.00
Party Chief	$45.75
Principal	$104.45
Professional Engineer	$36.88
Professional Sr. Engineer	$56.73
Project Landscape Architect	$33.00
Project Manager	$63.81
ROW Specialist	$39.00
Support Staff	$30.00

The average pay rates per classification have increased an average of 0.82% over the last two years.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 04/19/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
The Underwriters Group, Inc. 1700 Eastpoint Parkway P.O. Box 23790 Louisville, KY 40223	PHONE (A/C, No, Ext): 502-244-1343	FAX (A/C, No): 502-244-1411
	E-MAIL ADDRESS:	

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	Valley Forge Insurance Company	20508
INSURER B:	Continental Casualty Company	20443
INSURER C:	AM Casualty Co of Reading PA	20427
INSURER D:	National Fire Insurance Co of Hartford	20478
INSURER E:	XL Specialty Insurance Company	37885
INSURER F:		

INSURED

Palmer Engineering Company

P. O. Box 747
Winchester, KY 40392

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [ ] PRO-JECT [ ] LOC OTHER:	X	X	6012733050	05/01/2017	05/01/2018	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$1,000,000 $1,000,000 $10,000 $1,000,000 $2,000,000 $2,000,000 $
B	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS	X	X	6012733078	05/01/2017	05/01/2018	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$1,000,000 $ $ $ $
C	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $ 10,000	X	X	6012733064	05/01/2017	05/01/2018	EACH OCCURRENCE AGGREGATE $	$10,000,000 $10,000,000 $
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [ ] N/A If yes, describe under DESCRIPTION OF OPERATIONS below			6012733047	05/01/2017	05/01/2018	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $1,000,000 $1,000,000 $1,000,000
E	Professional Liability		X	DPR9909028	12/05/2016	12/05/2017	Each Claim aggregate	4,000,000 4,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Lexington-Fayette Urban County Government is included as Additional Insured with respect to General Liability and Automobile Liability for the referenced project. Coverage is primary.
Note: Requirements for Environmental Liability and Pollution Liabiiity: Environmental Liability is basically a contractor designed coverage, rather than for consulting architects and engineers. The professional liability policy does not exclude pollution incidents that arise out of the scope of professional services. (Per Mr. Tom Sweeney, Claims Manager, Dept of Law, LFUCG, this is acceptable.)

CERTIFICATE HOLDER

Lexington-Fayette Urban County Government

Room 338, Government Center
200 East Main Street
Lexington, KY 40507

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Bruce W Ferguson