

# MIAMI COUNTY

## STAFF REQUEST FOR COMMISSION ACTION

<b>SUBMITTED BY:</b> JR McMahon / Matthew Oehlert	<b>REQUESTED MEETING DATE:</b> 3/25/2015
<b>DEPARTMENT:</b> Road and Bridge	<b>REQUESTED MEETING:</b> <input checked="" type="checkbox"/> STUDY SESSION <input checked="" type="checkbox"/> REGULAR MEETING
<b>CONTACT INFORMATION:</b> 913-294-4377	<b>PROJECT / REFERENCE NUMBER:</b> 15-01-SB (631)

<b>AGENDA ITEM / SUBJECT:</b> Engineering Services Agreement for FAS 10 (Mill Street) Replacement located on 347th Street 0.1 miles east of Osawatomie
<b>ITEM BACKGROUND / DESCRIPTION:</b> Engineering Services agreement between Miami County Kansas and Wilson & Company, Inc. for Bridge Project No. 15-01-SB (631) for replacement of FAS 10 and approach roadway grading. The project is located on 347th Street 0.1 miles east of City of Osawatomie. Agreement includes Survey, Geo-technical, and Design services for preparation of construction plans. Design Fee for this work is \$223,780.00
<b>REQUESTED ACTION / STAFF RECOMMENDATION:</b> Commission Chair to execute Design Agreement with Wilson & Company, Inc. for Project No. 15-01-SB (631) for a fee of \$223,780.00.

<b>BUDGET IMPACT:</b> \$223,780.00		
<b>BUDGET AUTHORITY:</b> \$1,985,000.00	<b>REMAINING BUDGET ALLOCATION:</b> \$1,761,220	
<b>FUND / LINE ITEM:</b> 450-327-3711-631	<b>FUNDS BUDGETED:</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<b>CAPITAL PROJECT:</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

J McMahon

SUBMITTER'S SIGNATURE:

3-20-15

DATE:

**FISCAL REVIEW**

*Stephyn...*  
SIGNATURE:

3/19/15

DATE:

Comments:

**LEGAL REVIEW**

*Dal H...*  
SIGNATURE:

3-19-15

DATE:

Comments:

**ADMINISTRATOR REVIEW**

*Shane M...*  
SIGNATURE:

3-19-15

DATE:

Comments:

**COUNTY CLERK'S OFFICE USE**

Commission Action Taken:

- Accepted     
  Denied     
  Postponed     
  Acknowledged

Date Action Taken:

Required Follow-up Date:

Publication Required:

Submitted to Publication By:

- Yes     
  No

NPG Account Number:

Mail Distribution Required:

Mailed By:

- Yes     
  No

## OWNER-CONSULTANT AGREEMENT

**THIS AGREEMENT** is made this \_\_\_\_\_ day of \_\_\_\_\_, 2015, by and between **Miami County, Kansas** (hereafter "Owner"), and **Wilson & Company, Inc., Engineers & Architects** (hereafter "Consultant"), to perform professional engineering services as described herein. Therefore, for valuable consideration as set forth herein, the Owner and Consultant agree as set forth below.

**PROJECT:** FAS 10 (West 347th Street) Bridge over Marias des Cygnes River  
KDOT Project No. 61 C-4703-01  
Miami County Project No. 15-01-SB (631)

**CONSULTANT'S SCOPE OF SERVICES:** (hereafter referred to as "Services") are fully set out in **Exhibit A** and incorporated herein.

### TERMS AND CONDITIONS

#### ARTICLE 1 GENERAL

**1.1** Owner employs Consultant as an independent contractor, to perform the Services described herein. The Consultant agrees to accept responsibility for the proper conduct of Consultant's Services performed under this Agreement, whether performed by Consultant's employees or sub-consultants. Consultant shall not subcontract any portion of its work without prior written approval of Owner. Owner approves of the subconsultants identified in the attached **Exhibit B**.

**1.2** To the extent required by law, all final documents prepared by Consultant or its sub-consultants shall be sealed by a professional engineer licensed in the State of Kansas.

**1.3** The Consultant shall designate a representative authorized to act in the Consultant's behalf. Consultant reserves the right to change representatives as necessary due to availability.

**1.4** The Consultant shall recommend to the Owner the obtaining of such investigations, surveys, tests, analyses and reports as may be necessary for the proper execution of the Consultant's Services.

**1.5** If the Scope of Services requires Consultant to provide Opinions of Probable Construction Cost, Owner acknowledges that since the Consultant has no control over the

cost of labor, material or equipment, or over Contractor's methods of determining prices, or over competitive bidding or market conditions, the opinions of construction costs provided for herein are to be made on the basis of Consultant's experience and qualifications and represent Consultant's reasonable judgment as a design professional familiar with the construction industry. Consultant cannot, and does not, guarantee that the bids or the project construction costs will not vary from the Opinions of Probable Construction Cost prepared by the Consultant. If Owner desires more accurate information on Project cost, it shall retain the services of a construction estimator.

**1.6** The Consultant represents that it is authorized to practice engineering in the State of Kansas.

#### ARTICLE 2 CONSULTANT'S OBLIGATIONS

**2.1** Consultant agrees to perform its Services in accordance with the standard of care set out in Article 5.1. Unless otherwise provided herein, Consultant agrees to furnish all materials, supplies, tools, equipment, supervision, labor, drawings and anything else necessary to fully perform all of the Services described herein.

**2.2** The Consultant shall (a) cooperate with the Owner and all other consultants or

contractors whose work may relate to the Consultant's Services; and (b) specifically note and promptly advise the Owner of any interference with the Consultant's Services.

### **2.3 DESIGN PHASE**

Based on the program provided by Owner, the Consultant shall prepare a design for approval by the Owner, followed by design development documents, for approval by Owner. These shall consist of drawings, specifications and other documents to fix and describe the Project, including materials, equipment, component systems and types of construction.

### **2.4 CONSTRUCTION DOCUMENTS PHASE**

**2.4.1** When authorized by the Owner, the Consultant shall prepare from the design development documents approved by the Owner final drawings and specifications setting forth in detail the requirements for the construction of the Project, for approval by the Owner.

**2.4.2** The Consultant shall assist the Owner as necessary in connection with the Owner's responsibility for filing the documents concerning the Project required for the approval of governmental authorities having jurisdiction over the Project.

### **2.5 BIDDING OR NEGOTIATION PHASE**

**2.5.1** If required by the Owner, the Consultant shall assist the Owner in obtaining and evaluating bids or negotiated proposals, and in awarding and preparing contracts for construction.

**2.5.2** The Consultant shall prepare Addenda Documents, interpret Bid Documents and assist the Owner as required with questions from bidders. Consultant shall assist Owner in conducting a pre-bid conference.

### **2.6 TIME**

**2.6.1** The Consultant shall commence its Services within five (5) working days of written Notice to Proceed from the Owner and if such Services are interrupted for any reason, the

Consultant shall resume such Services within five (5) working days from the Owner's notice to do so.

**2.6.2** The Consultant shall perform Basic and Additional Services as expeditiously as is consistent with professional skill and care and the orderly progress of the Work. Upon request of the Owner, the Consultant shall submit, for the Owner's approval, a schedule for the performance of the Consultant's services which shall be adjusted as required as the Project proceeds, and which shall include allowances for periods of time required for the Owner's and the Owner's review and approval of submissions and for approvals of authorities having jurisdiction over the Project.

**2.6.3** The Consultant will exercise due diligence in the performance of its professional services, but due to the nature of the work, the Consultant cannot guarantee a specific timetable for completion of the Contractor's Work. The Owner waives any right to make any claims against the Consultant for any damages or expenses claims as a result of delays in the progress of the Work so long as due diligence has been exercised by the Consultant in accordance with Paragraph 5.1, below.

## **ARTICLE 3 OWNER'S OBLIGATIONS**

**3.1** The Owner shall designate a representative authorized to act in the Owner's behalf. Owner reserves the right to change representatives as necessary due to availability.

**3.2** The Owner shall provide the Consultant with a program outlining the scope of the Project, the budget and the schedule.

**3.3** The Owner shall provide timely input and responses to Consultant with regard to approvals of designs or other inquiries. If the Owner detects any error or omission in Consultant's designs or documents, Owner shall give prompt notice to Consultant of same so that it may be corrected in a timely manner.

**3.4** The Owner shall, at the written request of the Consultant, prior to commencement of Consultant's services and thereafter, furnish to the Consultant reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under this Agreement. Furnishing of such evidence shall be a condition precedent to commencement or continuation of the Consultant's services. After such evidence has been furnished, the Owner shall not materially vary such financial arrangements without prior notice to the Consultant.

**3.5** If the Owner requires that any assembly, system, product item of material, or design be included in the Project without (or against) the Consultant's recommendation, or if the Owner selects a contractor, subcontractor, or material fabricator, or any assembly, system, product or item of material, without (or against) the Consultant's recommendation, the Consultant shall have no responsibility for such decision by the Owner or for the performance of such owner-specified items or persons, nor shall the Consultant be required to issue any opinion or certificate with respect to such items or the work of such persons. The Owner shall indemnify and hold the Consultant harmless from all claims, damages, loss and expense, including reasonable attorney's fees and defense costs incurred as a result of any such decision by the Owner.

**3.6** In the event that the Owner furnishes the Consultant with documents showing existing conditions, or prior projects or designs for the Consultant's use in connection with the Project, the Owner represents to the Consultant that with regard to all such documents and designs, including the Architectural Works depicted therein, whether in hard copy or on computer disk format (hereafter collectively referred to as the "documents"), the Owner is the true and legal owner, licensee or assignee of the copyrights in and to all such documents and grants Consultant a royalty-free license to copy such documents. Owner recognizes that the use of such documents by Consultant will be at Owner's sole risk and without any liability, risk or legal exposure to the Consultant, and Owner therefore agrees that, to the fullest

extent permitted by law, the Owner will indemnify, defend and hold harmless the Consultant, its subconsultants, and their respective officers, directors, employees and agents from and against any claim of copyright infringement, trademark infringement, unfair competition or other related claim or cause of action brought or asserted by any person or entity claiming to be the lawful owner, assignee or author of such documents, or claiming some other right that has allegedly been violated by the Consultant's use of these furnished documents on this Project.

## **ARTICLE 4** **PAYMENT**

**4.1 COMPENSATION.** The Owner shall pay the Consultant for the services set forth in Exhibit A.

**4.1.1** An amount equal to the cumulative hours charged to the Project by each classification of Consultant's employees times Standard Hourly Rates for each applicable billing classification for all services performed on the Project, plus reimbursable expenses and the subconsultant's charges, if any.

**4.1.2** The Consultant's Standard Hourly Rates are attached as **Exhibit C**.

**4.1.3** The total compensation for services defined in Exhibit A is estimated to be \$ 223,780.00.

**4.2 REIMBURSABLE EXPENSES.** Reimbursable Expenses include expenses incurred by the Consultant in the interest of the Project, as follows.

**4.2.1** Expenses of transportation in connection with the Project; expenses in connection with authorized out-of-town travel; long-distance communications; and fees paid for securing approvals of authorities having jurisdiction over the Project.

**4.2.2** Expense of reproductions, postage and handling of drawings, specifications, reports and other documents.

**4.2.3** Expense of renderings, models and mock-ups requested by the Owner.

**4.2.4** Expense of additional insurance coverage or limits, including professional liability insurance, in excess of the requirements of Article 8.

**4.3** Applications for monthly progress payments shall be submitted to Owner in writing and shall state the amount of the Consultant's Services that has been performed and expenses incurred during the applicable pay period.

**4.4** Payments to the Consultant shall be made within seven (7) days after receipt by the Owner of the Application for Payment. Amounts due and not paid shall bear interest at the rate of 1.5% per month or the highest legal rate, whichever is less. Consultant shall be entitled to its attorney's fees and costs in any action to recover amounts due and unpaid.

## **ARTICLE 5** **STANDARD OF CARE**

**5.1** Consultant will exercise reasonable skill, care, and diligence in the performance of its services and will carry out its responsibilities in accordance with customarily accepted professional engineering practices in Consultant's community.

**5.2** The Consultant agrees to comply with all federal, state and local laws, ordinances and regulations applicable to the Consultant's Services and the Project, in effect at the time such Services are rendered.

## **ARTICLE 6** **ADDITIONAL SERVICES**

**6.1** If Consultant is requested to perform services not covered by the Scope of Services under this Agreement, then the Contract Amount shall be adjusted and compensation shall be computed in accordance with Consultant's Hourly Rate Schedule, **Exhibit C**,

attached; or by lump sum as agreed by the parties.

**6.1.2** If authorized in advance by the Owner, expense of overtime work, requiring higher than regular rates, shall be paid as Additional Services.

**6.1.3** The following shall constitute Additional Services, which the Owner may assess to Contractor by a deductive Change Order. However, Consultant looks to Owner for payment, not to Contractor for the following:

1. Review of a Contractor's submittal out of sequence from the submittal schedule agreed to by the parties;
2. Responses to the Contractor's requests for information (RFI) where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation;
3. Evaluation of substitutions proposed by the Contractor and making subsequent revisions to the Contract Documents resulting therefrom;
4. Repeated shop drawing reviews of the same submittal, after the initial review and one (1) resubmittal (e.g. "Revise and Re-submit");
5. Site visits beyond the number of regularly scheduled site visits that the Consultant has contracted for when such site visits are due to Contractor defects in Work or failure to meet the schedule;
6. Substantial completion inspections beyond one (1) initial inspection;
7. Final completion inspections beyond one (1) initial inspection.

**ARTICLE 7  
USE OF CONSULTANT'S DOCUMENTS**

7.1 The Consultant shall be deemed the author of all documents and designs created and prepared by the Consultant and shall retain all common law, statutory and other reserved rights, including the copyrights. The Owner shall be permitted to retain copies, including reproducible copies, of the drawings, specifications and other documents for information and reference.

7.2 The Owner shall not use, modify or assign to others the Consultant's documents or designs on other projects without the Consultant's express written consent.

**ARTICLE 8  
INSURANCE**

8.1 Consultant shall procure and maintain in force, Worker's Compensation Insurance, Comprehensive General Liability Insurance and Professional Liability Insurance. Owner agrees to look to the proceeds of insurance to satisfy claims against the Consultant and Owner will not hold payment due to the Consultant for claims that are covered by Consultant's insurance. The Consultant's insurance shall be written with limits of liability not less than those set forth below:

<u><b>TYPE</b></u>	<u><b>LIMITS</b></u>
Workers Compensation Comprehensive	Statutory Amount
Professional Liability	\$1,000,000.
Per Claim and Annual Aggregate	
General Liability:	
Bodily Injury (including death)	
Each Occurrence	\$1,000,000.
Aggregate	\$1,000,000.
Property Damage	
Each Occurrence	\$1,000,000.
Comprehensive Automobile Liability:	
Bodily Injury (including death)	

Each Occurrence      \$1,000,000.

8.2 The Consultant shall maintain in effect all insurance coverage required under this Agreement at the Consultant's sole expense. All insurance policies shall contain a provision that the coverages afforded thereunder shall not be cancelled until at least thirty (30) days prior written notice has been given to the Owner.

**ARTICLE 9  
INDEMNITY**

9.1 To the fullest extent permitted by law, the Consultant shall indemnify and hold harmless the Owner from and against all damages, losses and expenses, including but not limited to reasonable attorney's fees, but only to the extent caused by any negligent act, error or omission of the Consultant or anyone directly or indirectly employed by the Consultant or anyone for whose acts the Consultant may be liable. This obligation is limited by Paragraph 12.1, below.

9.2 Under no circumstances shall Consultant be required to defend or indemnify the Owner for claims caused or alleged to be caused in whole or in part by the acts or omissions of the Owner or other third parties for whom the Consultant is not responsible.

9.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Consultant and the its sub-consultants from and against all damages, losses and expenses, including but not limited to reasonable attorney's fees, but only to the extent caused by any negligent act, error or omission of the Owner or anyone directly or indirectly employed by the Owner or anyone for whose acts the Owner may be liable.

**ARTICLE 10  
DISPUTE RESOLUTION**

10.1 In the event a dispute shall arise between the parties to this Agreement, then as a condition precedent to any legal action by either

party, the parties agree to participate in at least one session of mediation, as needed, in an effort to resolve the dispute. The parties agree to split the mediator's fees equally. The mediation shall be administered by a mutually agreeable mediation service and location.

**ARTICLE 11  
CONTRACT INTERPRETATION**

**11.1** This Agreement shall be governed by the law of the State of Kansas.

**11.2** The partial or complete invalidity of any one or more provisions of this Agreement shall not affect the validity or continuing force and effect of any other provision. The invalid provision shall be deemed stricken and the remainder of this Agreement shall remain in full force and effect.

**11.3** This Agreement is solely for the benefit of the parties hereto and represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations, proposals, bids, or agreements, either written or oral.

**11.4** No modification or amendment of any of the terms and conditions of this Agreement shall be valid unless agreed to in writing and signed by both parties.

**ARTICLE 12  
LIMITATION OF LIABILITY**

**12.1** To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of Consultant, its officers, directors, employees, agents, and sub-consultants, and any of them, to Owner and anyone claiming by, through or

under Owner, for any and all claims, losses, liabilities, costs or damages whatsoever arising out of, resulting from or in any way related to the Project or this Agreement from any cause, including but not limited to the negligence, professional errors or omissions, strict liability, breach of contract, or warranty (express or implied) of Consultant, its officers, directors, employees, agents or sub-consultants or any of them, shall not exceed the total compensation actually received by Consultant from Owner under this Agreement. The Owner agrees that specific consideration has been given by the Consultant for this limitation and that it is deemed adequate.

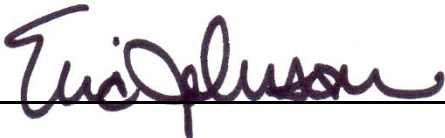
IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the day and year first above written.

**MIAMI COUNTY, KANSAS**

By: \_\_\_\_\_

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

**WILSON & COMPANY, INC.,  
ENGINEERS & ARCHITECTS**

By:  \_\_\_\_\_

Title: Senior Project Manager / Officer



**EXHIBIT A**  
**Scope of Services**

(Attach Proposal here)

**EXHIBIT B**  
**Subconsultants**

Owner approves of the use of the following subconsultants by Consultant:

<u>Name</u>	<u>Discipline</u>
Kleinfelder	Geotechnical Engineering
Vireo	Wetland Mitigation (if required) Wildlife Mitigation (if required) Special Permitting (if required)

**EXHIBIT C**  
**Hourly Rate Schedule**

The following rates are subject to increase once each year based on Consultant's annual rate adjustments.

<u>Employee Classification</u>	<u>Standard Rate</u>	<u>Overtime Rate</u>
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**Exhibit A**  
Scope of Services

**FAS 10 (West 347th Street)  
over Marias des Cygnes River**

**Project Background**

The FAS 10 (Mill Street Bridge) is located on West 347th Street, approximately 0.4 miles east of US-169 Highway over the Marias des Cygnes River. The bridge located just east of Osawatomie was closed to traffic in October 2011 due to advanced deterioration on a critical member of the fracture critical truss. In 2014 the County was approved for a grant through KDOT's Off-System Bridge Program.

This project will replace the existing 270-foot single-lane through truss bridge with a new structure that passes the 25-year (4%) return frequency storm under the structure. The new bridge will have a minimum of 28-foot wide bridge deck providing two-way traffic and have modern crash-tested railing. It is anticipated that the alignment of the new bridge and roadway will be shifted to the north to avoid an apparent undocumented landfill.

The design of the project will need to provide for a "no rise" condition for the 100-year (1%) return frequency storm. As a basis for this agreement, the anticipated embankment necessary to raise the roadway to the new bridge elevation will need to be compensated as open area either under the new structure, over the roadway, or through an opening in the fill area (pipes or reinforced concrete box). The length of the new structure is anticipated to be a 3-span structure of approximately 500-feet.

The overall plan development at Field Check Plans will be 55% complete. However, at the Field Check phase, the bridge plans will only be approximately 25% complete for Type, Size and Location (TS&L). Upon approval of the Field Check Plans by KDOT and the County, the Consultant will develop the Right-of-Way Plans. During this same phase, the Consultant will prepare the Office Check Plans which will be 85% complete. Final Check Plans will be 95% complete and Final Plans, Specifications, and Estimate (PS&E) will be 100% complete.

**Detailed Scope of Services**

**Section 1 – Project Initiation and Communication**

- 1.1 The Consultant will attend a meeting at the Kansas Department of Transportation in Topeka to meet with the Bureau of Local Projects. The intent of the meeting is to discuss the anticipated project schedule and the potential of a payment plan for the County to reimburse the State for the construction of the project. This meeting is "no cost" to the County.
- 1.2 The Consultant will also schedule a meeting in the field with the Kansas Department of Wildlife, Parks and Tourism and the US Army Corps of Engineers to review possible permitting and design issues that could impact the design of the project. This meeting is "no cost" to the County.

- 1.3 The Consultant will prepare a Project Work Plan (PWP) that covers the methodology, design criteria, and other pertinent information that will affect the project design and schedule. Other documents that will be used in the development of the Plans are:
- KDOT's Design Manual
  - KDOT Bridge Manual
  - KDOT Survey Manual
  - KDOT Standard Specifications for State Road and Bridge Construction
  - KDOT Standard Plans
  - KDOT Special Provisions
  - AASHTO's "Manual on Uniform Traffic Control Devices" (MUTCD)
  - AASHTO's "A Policy on Geometric Design of Highways and Streets"
  - AASHTO's "Standard Specifications for Highway Bridges"
  - AASHTO's "Roadside Design Guide"
  - Other publications as directed by the County
- 1.4 Project Kick-off Meeting: The Consultant will attend a kick-off meeting at the County to discuss the PWP, specific design issues, County requirements, and establish the dates of the bi-weekly team meetings during Field Check. It is anticipated that this meeting will be approximately three (3) hours.
- 1.5 Utility Location Report: The Consultant shall submit a Utility Location Report to each of the utility companies identified during the field survey and/or by the County. The report will also have a general location map attached to acquaint each company with the proposed project.
- 1.6 Project Communication: The Consultant's IT staff will coordinate with the County to establish communication with the ProjectWise file system for this project.
- 1.7 Project Updates: The Consultant will prepare a variety of project updates for the County's use in review project progress, budgeting issues, and design issues.
- 1.7.1 Bi-weekly progress plans that will be posted for the County to review using ProjectWise.
  - 1.7.2 Monthly project progress reports that will be submitted with each invoice.
  - 1.7.3 Revise / update the project construction cost estimate as design elements are modified or revised.

## **Section 2 – Data Collection and Field Survey**

- 2.1 Ownership & Encumbrance Research: Our research of the project indicates that the properties are metes and bounds parcels. The Consultant will order Ownership & Encumbrance reports from a local title company. The deliverables from the title company will need to include the ownership name, identification of any encumbrances on the property, a description of the property, and copies of deeds and any easements associated with the property. The Consultant will use this information to develop the right-of-way and property information used in the base mapping. The Consultant has identified a total of eight (8) individual tracts that could be impacted by the proposed improvements.
- 2.2 Establish Control Network: Due to the critical nature of the hydraulic analysis, the Consultant will tie the project to NAVD88. If the section corner and quarter section corner monuments along West 347th Street have record distances and bearings

between them, then they will be used for the project baseline. A minimum of three (3) control points will be set outside the limits of the proposed improvements within the West 347th Street right-of-way. Control monuments will be 5/8" iron bars with aluminum caps. References will be tied to each monument. Benchmarks will be set on in locations that will not be damaged or removed as part of the proposed improvements. Elevations will also be determined for all horizontal control points.

- 2.3 Section Corners and Property Corners: Section tie surveys will be conducted as per KDOT standards. The following section corners will be located: W/4, NW/c, N/4, NE/c, E/4 and Center Corner of Section 12. From our initial field review, we are aware of a potential double corner at the intersection of West 347th Street and Lone Star Road. We will work with the County Surveyor to confirm the correct monument to use for the project. It is assumed that each of these corners are monumented and referenced with the State and the County from past projects. The County shall provide copies of the above reference ties they have on file. The Consultant will contact the State for the same information. All references will be confirmed and additional references will be set if required. State reference forms will be completed and sent to the State and County. A search for existing property corner monuments will be conducted. Any found monuments will be shown in the topography as an unconfirmed corner. A legal boundary survey will NOT be conducted at this time.
- 2.4 Utility Locates: The Consultant will contact utility companies through the Kansas One-Call system and as supplemented by the County for those utility companies not associated with the One-Call system. Utilities will be horizontally field located according to field marks by the utility companies or by a One-Call locator. If there is no response to the initial request, Kansas One-Call will be contacted a second time to re-issue the utility locate. The man-hours for this item are based on all utilities being marked within two (2) weeks of the time of the locate request. If a utility owner does not respond to the locate request, the Consultant will contact the County to discuss a plan of action and estimated cost to complete the survey.
- 2.5 Topographic Field Survey:
  - 2.5.1 Perform field surveys to obtain sufficient detail for the project design. The field information shall include topographic information to clearly identify breaklines, slopes, and terrain issues including; top of drainage channel banks and streambeds within 300' upstream and downstream of the proposed project.
  - 2.5.2 Pavement hard shots will be taken at the edge of pavement, edge of shoulder, centerline of roadway and driveways (paved and non-paved). Hard shots will be taken in cross section fashion at 25-foot intervals.
  - 2.5.3 Locate Storm and Sanitary Sewer Structures. The inflow/outflow elevations for storm and sanitary sewer structures will be located along with the size and type of structure and the size and type of the conduit entering and leaving the structure.
  - 2.5.4 Locate Manmade Objects. Fixed location manmade objects visible on the surface will be located horizontally and vertically (at the ground). This includes the piers and abutments of the existing bridge.

- 2.5.5 Locate Geotechnical Borings. A total of six (6) boring locations will be staked for Kleinfelder's use. Any field adjustments of the boring locations due to accessibility or conflict with utilities will be documented (horizontally and vertically) and submitted to the Consultant.
- 2.6 Field Notes. Field notes will be indexed and bound as per KDOT standards. One (1) hard copy will be submitted to the County for their records.

### **Section 3 – Geotechnical Investigation**

The Consultant will retain a geotechnical engineer (Kleinfelder) to provide a subsurface exploration and analysis for design development of bridge and roadway reconstruction.

- 3.1 Exploratory Borings: The geotechnical engineer will obtain borings at locations described by the Consultant for the proposed bridge structure and elsewhere along the West 347th Street road alignment. The Consultant will stake the location of the borings for Kleinfelder to use. It is understood that field adjustments may be required based on accessibility and/or conflicts. Kleinfelder will provide the Consultant with the necessary field information to tie out the new boring locations in the basemap if adjustments are required. One (1) boring will be located at each abutment and pier location. The abutment borings will be drilled from the existing roadway to a depth of approximately 15-feet into limestone and shale bedrock. The pier borings will be advanced in the area of the existing bridge piers to a depth of approximately 30-feet into limestone and shale bedrock. Based on review of the available geologic information, the geotechnical engineer has assumed the coreable limestone bedrock will be 45-feet below existing grade at the abutment locations and 20-feet below grade at the piers.
- 3.2 Geotechnical / Geotechnical Work Products: Kleinfelder will prepare a report by a Kansas registered professional engineer. The report will address foundation alternatives and provide design parameters for the new bridge. More specifically, the following items will be included:
- A copy of all boring logs and laboratory test results and rock core photos.
  - LRFD foundation design parameters for the bridge including spread footing, driven pile and drilled shaft type foundations, as applicable.
  - Earthwork placement and compaction criteria.
  - Slope recommendations
  - Lateral earth pressures
  - Pavement design, based on provided traffic data.

### **Section 4 – Field Check Plan Development**

- 4.1 Utility Conflict Report: The Consultant will prepare a Utility Conflict report that will log potential conflict locations between the proposed improvements and the existing utilities. The report format will be similar to the KDOT Form 1304.
- 4.2 Develop Basemap: The Consultant will develop a digital terrain model with Geopak using the survey and mapping information for use in the development of the base mapping.
- 4.3 Typical Section(s): The Consultant will develop the typical sections based on information derived from the kick-off meeting. The key elements include:

- Pavement type and thickness
  - Subgrade treatment
  - Backslopes and foreslopes
  - Shoulder type and thickness
- 4.4 Horizontal Alignment: The Consultant is aware of the County's desire to avoid impacting the property located south of West 347th Street. This property was identified as having an undocumented landfill. The horizontal alignment will be developed to maintain all grading within the southerly right-of-way of West 347th Street.
- 4.5 Vertical Alignment: The Consultant will develop the vertical alignment to match the new bridge profile. A design speed of 35 mph and a maximum slope of 8% will minimize the reconstruction of the existing roadway. Adjustments to the roadway profile may be required to "balance" the flow around the proposed bridge to create a "no rise" for the 100-year (1%) return frequency storm event. Modifications to the alignment will be developed based on results of the Marias des Cygnes River model results.
- 4.6 Type, Size and Location (TS&L) Analysis: The Consultant will prepare plans for the bridge in general conformance with the intent to pass the 25-year (4%) return frequency storm event. This elevation will be used set the bottom elevation of the beams. The following tasks will be completed during this phase.
- 4.6.1 Based on the 25-year elevation, the beam types and sizes will be established based on the proposed span lengths for a 3-span bridge structure.
  - 4.6.2 The bridge deck elevations will be coordinated with the design of the vertical alignment for the roadway.
  - 4.6.3 If the hydraulic model of the Marias des Cygnes River indicates that the initial design creates a rise in the 100-year return frequency storm event, the span lengths will be increased and/or a 5-span bridge will be reviewed to increase the open area under the bridge structure.
  - 4.6.4 Once a balance is developed between the open area under the bridge structure and over the roadway to create a "no rise" for the 100-year return frequency storm event, the Consultant will prepare field check plans for the proposed bridge improvements. Plans shall conform to customary KDOT requirements to allow field check of the project and shall include the bridge sheets.
- 4.7 Initial Utility Meeting: A meeting with utilities in the project area will be initiated to organize the location of their services and collect any information regarding company contacts, existing and proposed plans, and provide a schedule for future review of plan submittals and possible relocation of their facilities. The Utility Location Report will be reviewed during this meeting. As part of this meeting, the Consultant will provide a strip map of the proposed project base map to allow each utility company to confirm the accuracy of the field locations of their facilities. Any changes, additions, corrections will be updated in the base map.
- 4.8 Marias des Cygnes River Model (Preliminary Analysis): The Consultant will utilize the model developed for the City of Osawatomie Levee Assessment. Additional sections will be developed on either side of the proposed bridge improvement for the analysis of the "no rise" requirement for this project. The Consultant will prepare a preliminary hydraulic analysis for the proposed bridge improvements including preparation of a preliminary KDOT "Hydraulic Assessment Checklist for Drainage Design" for County records. The hydraulic analysis will be based on the 10, 25, 50, and 100-year (10%, 4%, 2%, and 1%)



flood frequencies. The hydraulic analysis will be in accordance with the guidelines presented in the KDOT Bridge Manual.

- 4.9 Erosion Control Plan: Develop erosion control layout for the proposed improvements. The extent of the drawings will identify the general design for placement of silt fencing, hay bales, sedimentation basins, and other erosion control measures during construction activities. The plan will be in a reduced scale and double-plan sheet format with existing and proposed contours.
- 4.10 Cross Sections: Prepare cross sections at 50-foot intervals. Additional cross sections will be provided at entrances, side streets, roundabouts, and locations of critical interest to depict cuts, fills, or special drainage features.
- 4.11 Traffic Control and Construction Phasing: Prepare a preliminary drawing for the traffic control plan and construction phasing. Although the plan sheets will not be included in the Field Check plan set, the analysis will be completed to develop a cost for temporary signage, barricades, etc. Also, the Consultant is aware that the County will divide this project into two (2) separate phases.
- 4.12 Field Check Plans: The following plan sheets will be prepared for the Field Check plan submittal.
- Title Sheet
  - General Layout Sheet
  - Typical Section Sheets
  - Control and Reference Ties Sheet
  - Plan and Profile Sheets
  - Storm Sewer Plan and Profile Sheets
  - Street Lighting Sheets
  - Environmental Quality Sheets
  - Erosion Control Layout
  - Landscaping Layout
  - Bridge Contour Map
  - Bridge Construction Layout
  - Typical Bridge Section and General Notes
  - Retaining Wall Profile
  - Typical Retaining Wall Section and General Notes
  - Traffic Control Plan Sheet
  - Drainage Area Map
  - Cross Sections
- 4.13 Opinion of Probable Construction Cost: The Consultant shall prepare an Opinion of Probable Construction Cost using standard KDOT bid items and recent bid tabs for the metropolitan area from KDOT quarterly reports in conjunction with local cost information provided by the County.
- 4.14 Utility Meeting at Field Check: The Consultant shall provide one (1) “true” half size (11” x 17”) set of Field Check Plans to each utility company that has facilities located within the project corridor two weeks prior to the utility meeting. The purpose of this plan meeting is to provide the utility companies with a set of plans so they can begin the

process of developing relocation plans as needed based on the design layout and limits of construction and identify any needs for utility easements.

- 4.15 Field Check Meeting: The Consultant will attend a Field Check meeting with the County and KDOT.

## **Section 5 – Right-of-Way Plan Development**

- 5.1 Based on the comments received from KDOT and the County during their Field Check review, the Consultant will revise the construction plans. The proposed right-of-way and easements will be noted on the plans using station/off-set call outs as per KDOT requirements. No additional construction plan sheets or detail sheets will be created for this submittal. The only revisions that will be made are those that will affect the proposed right-of-way and easements. Any other comments will be noted and addressed in the final plan development phases of the project.
- 5.2 Updates to O&E Reports: The Consultant will order updates of the title reports for the eight (8) tracts prior to preparing the Right-of-Way Plans. Changes of ownerships will be modified in the base mapping.
- 5.3 Prepare Legal Descriptions and Exhibits: The Consultant has estimated that a total of eight (8) temporary construction easement and a total of three (3) right-of-way descriptions and exhibits. Fee is based on writing descriptions a single time. Any changes to the exhibit or the legal descriptions will be provided as Additional Services at the hourly rates provided under this Agreement.
- 5.4 Right-of-Way Staking: All proposed right-of-way and temporary easements shall be marked by the Consultant using a 40d nail and lathe with flagging to assist the County with the acquisition process.
- 5.5 Design Progress Utility Meeting (Right-of-Way Plans): The Consultant will attend a meeting with the utility companies to review the relocation decisions that will need to have been made with regard to the relocation of their facilities. Coordination between the various utilities will be discussed. The location of any utility easements will be required for the Right-of-Way Plan preparation.

## **Section 6 – Office Check Plan Development**

- 6.1 Based on the comments received from KDOT and the County during the Field Check review, the Consultant will revise the construction plans and specifications. A written list of the review comments will be assembled into a single document and distributed to the team members for their use during this plan development phase.
- 6.2 Marias des Cygnes River Model (Final Analysis): Finalize the hydraulic analysis for the proposed bridge improvements including preparation of a final KDOT “Hydraulic Assessment Checklist for Drainage Design” for County records. The hydraulic analysis will be based on the 10, 25, 50, and 100-year (10%, 4%, 2%, and 1%) flood frequencies. The hydraulic analysis will be in accordance with the guidelines presented in the KDOT Bridge Manual.
- 6.3 Bridge Geometry: Finalize the horizontal and vertical control geometry for the proposed bridge improvements including abutment and pier stationing; control elevations along

profile and/or crown grade; finished pavement elevations at span tenth points along beam or girder centerlines; and/or finished pavement elevations at customary locations indicated on base detail sheets.

- 6.4 Bridge Superstructure: Prepare final design computations for the bridge superstructure elements including deck, supporting beams or girders, and corral rail.
- 6.5 Bridge Substructure: Prepare final design computations for the bridge substructure elements including abutments, piers and foundations. Foundation design(s) will be based on subsurface investigations and recommendations provided by the geotechnical engineer.
- 6.6 Fencing Plans: The Consultant will develop fencing plans utilizing the standard forms of fencing commonly used by KDOT. Those fencing materials include woven wire, chain link, and barbed wire. The construction of any other fencing materials (i.e. split rail, vinyl coated, wrought iron, etc.) will be negotiated with the property owners as part of the settlement for property acquisition by the County.
- 6.7 Permanent Signing and Pavement Markings: The Consultant will prepare the plans for installation of permanent signing and pavement markings.
- 6.8 Prepare Office Check Plans: The Consultant will prepare office check plans for the bridge and roadway improvements as approved at the Field Check Meeting and if necessary, as amended during the right-of-way plan preparation process for insertion into the plan set. The following plan sheets will be prepared for the Office Check plan submittal.
  - Title Sheet
  - General Location
  - Typical Sections
  - Control and Reference Ties Sheet
  - Plan and Profile Sheets
  - Erosion Control Layout
  - Fencing Plans
  - Bridge Summary of Quantities and Notes
  - Bridge Contour Map
  - Bridge Construction Layout
  - Bridge Geometric Layout
  - Bridge Engineering Geology
  - Abutment Details
  - Pier Details
  - Superstructure Details
  - Corral Rail Details
  - Bill of Reinforcing
  - KDOT Bridge Standards
  - Concrete Bridge Approach Slab Details
  - Concrete Barrier Transition Details
  - Traffic Control and Construction Phasing
  - Pavement Markings and Permanent Signing Plans
  - Summary of Quantities
  - Drainage Area Map
  - Cross Sections

NOTE: The development of a mitigation plan(s) due to impacts into the existing wetlands and/or impacts to the habitat of threatened / endangered species are NOT INCLUDED in this scope of services. Once the Office Check Plans are completed to clearly identify the impacts, the County can work with Vireo directly through the Consultant or contract directly with them for the mitigation tasks.

- 6.9 Opinion of Probable Construction Cost: The Consultant shall prepare an Opinion of Probable Construction Cost using standard KDOT bid items and recent bid tabs for the metropolitan area from KDOT quarterly reports in conjunction with local cost information provided by the County.
- 6.10 Office Check Plan Utility Meeting: The Consultant shall provide one (1) “true” half size (11” x 17”) set of Office Check Plans to each utility company that has facilities located within the project corridor two weeks prior to the utility meeting. The purpose of this meeting is to review any modifications to the plans that may have been made since the previous meeting at Field Check. Copies of the electronic files may be made available to the utility companies with approval of the County. It is anticipated that the County will provide the utility companies with the notice to proceed for the relocation of their facilities, assuming the right-of-way and easements have been acquired.

## **Section 7 – Permitting**

7.1 Permitting: The Consultant will prepare the documentation and application information for the permitting of the project. The following submittals will be prepared for the County’s use.

- Wetland Section 404 permit including Nation Wide Permit (NWP) for road and stream crossings.
- Coordination and mitigation application with the Watershed Land Trust
- Water Quality Section 401 permit.
- State endangered species permit as required.
- Agency correspondence and clearance letters from State Historical Preservation Office, Kansas Department of Wildlife, Parks and Tourism, and Department of Water Resources

## **Section 8 – Final Check Plan Development**

- 8.1 Based on the comments received from KDOT and the County during their Office Check review, the Consultant will revise the construction plans and specifications. A written list of the review comments will be assembled into a single document and distributed to the team members for their use during this plan development phase.
- 8.2 Final Plan Development: The Consultant will provide the following services to prepare the bridge and retaining wall plans for letting.
- 8.2.1 After receiving all comment from KDOT and the County, prepare final original plans of the approved bridge and roadway.
- 8.2.2 Prepare load rating computations and a NBI Structure Inventory and Appraisal (SI&A) form for the proposed bridge for County records. The load ratings for the

new structure should be based on KDOT legal trucks: HS20, T2, T3, 2S1, 3S2, and 3-3.

- 8.3 Opinion of Probable Construction Cost: The Consultant shall prepare an Opinion of Probable Construction Cost using standard KDOT bid items and recent bid tabs for the metropolitan area from KDOT quarterly reports in conjunction with local cost information provided by the County.
- 8.4 Final Check Plan Utility Meeting: The purpose of this meeting is to review the progress of each of the utility companies for the relocation of their facilities.

### **Section 9 – Final Plans, Specifications and Estimate (PS&E)**

- 9.1 Based on the comments received from KDOT and the County, complete the final updates to the construction plans, special provision, and estimate for KDOT's use to bid the project.
- 9.2 Provide consultation and design assistance to KDOT and County personnel during bidding process. This item will involve preparation of written responses to questions; develop engineering sketches and/or revised plan details; and assisting in the preparation of addendums regarding clarification of the design intent.
- 9.3 Final Plan Utility Meeting: The purpose of this meeting is to review the progress of each of the utility companies for the relocation of their facilities.

### **County Responsibilities**

- 1. County will send letters to each of the property owners along the project corridor to inform them that surveyors will need to have access to their property for the purpose of obtaining property line and topographic information.
- 2. Provide copies of all section reference ties from the County Surveyor's records.
- 3. The County will arrange and provide the facilities for the utility meetings.
- 4. The County will provide names and contact information for the utility companies that may have facilities within the project area.
- 5. County will provide any recent bid tabs to assist in the development of the opinion of probable costs.
- 6. The County will acquire all proposed right-of-way and easements, if required.
- 7. The County will obtain all necessary permits from the State or Federal agencies. The Consultant will assist the County as noted in Section 7.
- 8. The County will arrange utility meetings. The Consultant will collect and prepare meeting minutes.
- 9. Project will be prepared in English units, full-size plan sheets are to be 22" x 36".
- 10. No environmental investigations, permits or services are included except as specifically identified.
- 11. The Consultant will not be completing a property survey, nor will he be responsible for setting new property corners if they are missing.
- 12. Any work requested by the County that is not included in the basic services will be classified as supplemental services. Supplementary services shall include, but are not limited to the following:
  - a. Changes in the scope, extent, or character of the project.
  - b. Revisions to the plans when inconsistent with previous approvals or instructions by the County.

- c. Updating plans to reflect development that has occurred after the Final Plans are complete.

### **Items Not Included in the Scope of Services**

1. Survey of potholes for utilities.
2. Preparation of a cultural resources survey.
3. Revisions or modifications to the legal descriptions and/or exhibits created by negotiations between the County and the property owner during property acquisition.
4. Printing and review of bidding documents.
5. Post-design services including, but not limited to, attending the bid letting, review of shop drawings, construction observation, construction staking, and preparation of construction record drawings.
6. Analysis for potential abutment and pier scour will not be required.
7. The hydraulic analysis for the bridge will be in accordance with the guidelines and standard practice presented in the KDOT Bridge Manual.
8. Channel change work, other than directly at the inlet and/or outlet end of roadway drainage structures, will not be required.
9. A KDOT standard superstructure design is not available for the length and span configuration of the proposed bridge.
  
10. Due to the unknown area of impact from grading beyond the existing right-of-way, the mitigation of the wetland is NOT INCLUDED.
  
11. Due to the unknown impacts to the potential habitat for threatened and endangered species, the mitigation improvements are NOT INCLUDED.
  
12. Post-design services are NOT INCLUDED with this scope of services.
  
13. As defined in the County's RFP, review shop drawings, falsework plans and provide services resulting from significant changes in the general scope of the project or its design including, but not limited to, changes in size, revisions of previously accepted studies, reports, or design documents, including preparation of change orders during the construction phase of the project. This work will be paid for on an hourly basis unless resulting from an error or omission by the Engineer.

Project: FAS 10 (West 347th Street) Bridge over Marias des Cygnes River

By: EL Johnson, PE

Date: March 17, 2015

Client: Miami County, Kansas

Notes: County Project No. 15-01-SB (631)

DEPT CODE:

EXHIBIT A

FEE ESTIMATE WORKSHEET



TASK I.D.	WORK TASK DESCRIPTION	TITLE:	4100 Senior Project Manager	4100 Senior Bridge Engineer	4100 Civil Designer	4100 Bridge Designer	4100 CADD Designer	8620 Hydraulic Engineer	8620 Hydraulic Modeler	1221 Professional Surveyor	1221 Party Chief	1221 Surveyor	1221 CADD Technician	TOTAL HOURS	LABOR EFFORT	EXPENSE EFFORT	TOTAL FEE
<b>PHASE 01 - PROJECT INITIATION AND COMMUNICATION</b>																	
1.1	Meeting with KDOT Bureau of Local Projects		0												\$ -	\$ -	\$ -
1.2	Meeting with USACOE and KDWP		0												\$ -	\$ -	\$ -
1.3	Develop the Project Work Plan for this project		2											2.00	\$ 300.00	\$ -	\$ 300.00
1.4	Attend project kick-off meeting at County		4	4										8.00	\$ 1,200.00	\$ 110.00	\$ 1,310.00
1.5	Prepare and submit Utility Location Report form		2											2.00	\$ 300.00	\$ 20.00	\$ 320.00
1.6	Coordinate with County staff to upload ProjectWise software		2											2.00	\$ 162.00	\$ 18.00	\$ 180.00
1.7	Project Update Submittals														\$ -	\$ -	\$ -
1.7.1	Update bi-weekly progress plans into ProjectWise						6							6.00	\$ 486.00	\$ 14.00	\$ 500.00
1.7.2	Monthly project progress reports; submit with invoices		2											2.00	\$ 300.00	\$ 20.00	\$ 320.00
1.7.3	Update construction cost estimate (as needed)		2	2			2							8.00	\$ 978.00	\$ 12.00	\$ 990.00
	Subtotal		12	6	0	2	10	0	0	0	0	0	0	30.00	\$ 3,726.00	\$ 194.00	\$ 3,920.00

<b>PHASE 02 - DATA COLLECTION AND FIELD SURVEY</b>																		
2.1	Coordinate and obtain Ownership & Easement Reports									2	10	10			2.00	\$ 284.00	\$ 2,016.00	\$ 2,300.00
2.2	Establish the project control network; coordinate with County									6	8	8			26.00	\$ 2,712.00	\$ 388.00	\$ 3,100.00
2.3	Locate section corners and property corners										8	8			16.00	\$ 1,488.00	\$ 392.00	\$ 1,880.00
2.4	Contact One-Call; locate existing utilities									2	8	8			18.00	\$ 1,772.00	\$ 388.00	\$ 2,160.00
2.5	Perform topographic survey of project corridor										60	60	80		200.00	\$ 17,240.00	\$ 2,880.00	\$ 20,120.00
2.6	Prepare field notes in KDOT format									10			80		10.00	\$ 1,420.00	\$ 20.00	\$ 1,440.00
	Subtotal		0	0	0	0	0	0	0	20	86	86	80	272.00	\$ 24,916.00	\$ 6,084.00	\$ 31,000.00	

<b>PHASE 03 - GEOTECHNICAL INVESTIGATION</b>																		
3.1	Review site information; obtain subsurface borings			1											2.00	\$ 258.00	\$ 12,002.00	\$ 12,260.00
3.2	Prepare and submit geotechnical report			1										1.00	\$ 150.00	\$ 4,200.00	\$ 4,350.00	
	Subtotal		0	2	0	1	0	0	0	0	0	0	0	3.00	\$ 408.00	\$ 16,202.00	\$ 16,610.00	

<b>PHASE 04 - FIELD CHECK PLAN DEVELOPMENT</b>																		
4.1	Develop utility conflict report (Form 1304)		2												2.00	\$ 300.00	\$ -	\$ 300.00
4.2	Develop basemap in Geopak for use during design														4.00	\$ 324.00	\$ 16.00	\$ 340.00
4.3	Develop typical sections														2.00	\$ 162.00	\$ 28.00	\$ 190.00
4.4	Develop horizontal alignment; shift to north to avoid landfill area		1												5.00	\$ 474.00	\$ 16.00	\$ 490.00
4.5	Develop vertical alignment; adjust based on model report		4	4											32.00	\$ 3,144.00	\$ 36.00	\$ 3,180.00
4.6	Provide preliminary modeling review for proposed bridge		8	46					8						65.00	\$ 6,743.00	\$ 57.00	\$ 6,800.00
4.7	Develop type, size, location of proposed bridge improvements		8	46											222.00	\$ 24,332.00	\$ 78.00	\$ 24,410.00
4.8	Attend initial utility meeting to discuss surveyed information		3												3.00	\$ 450.00	\$ 10.00	\$ 460.00
4.9	Develop erosion control plan as part of future SWPPP														4.00	\$ 380.00	\$ 10.00	\$ 390.00
4.10	Develop cross sections of the proposed improvements		2												34.00	\$ 2,892.00	\$ 18.00	\$ 2,910.00
4.11	Develop traffic control plan to ensure the construction is protected														4.00	\$ 380.00	\$ -	\$ 380.00
4.12	Develop Field Check Plans		56	16											232.00	\$ 25,200.00	\$ 60.00	\$ 25,260.00
4.13	Prepare opinion of probable construction costs		4	4											40.00	\$ 4,336.00	\$ 14.00	\$ 4,350.00
4.14	Attend Field Check meeting with KDOT and County		3	3											6.00	\$ 900.00	\$ 80.00	\$ 980.00
4.15	Attend utility meeting after Field Check with KDOT and County		3												3.00	\$ 450.00	\$ 90.00	\$ 540.00
	Subtotal		86	73	152	96	186	8	57	0	0	0	0	658.00	\$ 70,467.00	\$ 513.00	\$ 70,980.00	



EXHIBIT A

FEE ESTIMATE WORKSHEET

Project: FAS 10 (West 347th Street) Bridge over Marias des Cygnes River

By: EL Johnson, PE

Date: March 17, 2015

Client: Miami County, Kansas

Notes: County Project No. 15-01-SB (631)

DEPT CODE:

TASK ID.	WORK TASK DESCRIPTION	TITLE:	4100 Senior Project Manager	4100 Senior Bridge Engineer	4100 Civil Designer	4100 Bridge Designer	4100 CADD Designer	8620 Hydraulic Engineer	8620 Hydraulic Modeler	1221 Professional Surveyor	1221 Party Chief	1221 Surveyor	1221 CADD Technician	TOTAL HOURS	LABOR EFFORT	EXPENSE EFFORT	TOTAL FEE
PHASE 05 - RIGHT-OF-WAY PLAN DEVELOPMENT																	
5.1	Update plans to reflect adjustments needed for acquisition		2		16		16						8	34.00	\$ 3,116.00	\$ 24.00	\$ 3,140.00
5.2	Update O&E reports									24			16	8.00	\$ 608.00	\$ 1,012.00	\$ 1,620.00
5.3	Prepare legal descriptions and exhibits									2	8	8	2	40.00	\$ 4,624.00	\$ 16.00	\$ 4,640.00
5.4	Stake the easements/right-of-way for acquisition review													20.00	\$ 1,924.00	\$ 416.00	\$ 2,340.00
5.5	Attend Public Information Meeting		3	3										6.00	\$ 900.00	\$ 100.00	\$ 1,000.00
5.6	Attend utility meeting discuss property acquisition and relocation		3											3.00	\$ 450.00	\$ 100.00	\$ 550.00
	Subtotal		8	3	16	0	16	0	0	26	8	8	26	111.00	\$ 11,622.00	\$ 1,668.00	\$ 13,290.00
PHASE 06 - OFFICE CHECK PLAN DEVELOPMENT																	
6.1	Prepare comment resolution for plan revisions		1	2				8	57					1.00	\$ 150.00	\$ -	\$ 150.00
6.2	Finalize modeling based on bridge and roadway improvements				16	48								67.00	\$ 7,043.00	\$ 7.00	\$ 7,050.00
6.3	Finalize the bridge geometry, elevations		1	10	16	48								75.00	\$ 8,354.00	\$ 26.00	\$ 8,380.00
6.4	Prepare final design of bridge superstructure		1	10	16	48								75.00	\$ 8,354.00	\$ 26.00	\$ 8,380.00
6.5	Prepare final design of bridge substructure		1	10	16	48								75.00	\$ 8,354.00	\$ 26.00	\$ 8,380.00
6.6	Prepare fencing plans				8		8							16.00	\$ 1,408.00	\$ 12.00	\$ 1,420.00
6.7	Prepare permanent signing and pavement markings plans		1		16		8							25.00	\$ 2,318.00	\$ 12.00	\$ 2,330.00
6.8	Prepare Office Check Plans		18	10	42	28	42							140.00	\$ 14,616.00	\$ 64.00	\$ 14,680.00
6.9	Prepare opinion of probable construction cost		2	12	4	24	4							46.00	\$ 5,396.00	\$ 24.00	\$ 5,420.00
6.10	Attend utility meeting to review plans and discuss relocations		3											3.00	\$ 450.00	\$ 90.00	\$ 540.00
	Subtotal		28	54	118	196	62	8	57	0	0	0	0	523.00	\$ 56,443.00	\$ 287.00	\$ 56,730.00
PHASE 07 - PERMITTING																	
7.1	Prepare permitting documentation for County's use		20				20							40.00	\$ 4,620.00	\$ -	\$ 4,620.00
	Subtotal		20	0	0	0	20	0	0	0	0	0	0	40.00	\$ 4,620.00	\$ -	\$ 4,620.00
PHASE 08 - FINAL CHECK PLAN DEVELOPMENT																	
8.1	Prepare comment resolution for plan reviews		1											1.00	\$ 150.00	\$ -	\$ 150.00
8.2	Final Check Plans														\$ -	\$ -	\$ -
8.2.1	Prepare final check plans based on plan review comments		18	8	16	50	16							108.00	\$ 12,116.00	\$ 14.00	\$ 12,130.00
8.2.2	Prepare load rating			12										12.00	\$ 1,800.00	\$ -	\$ 1,800.00
8.3	Prepare opinion of probable construction costs		2	2	4	4	4							16.00	\$ 1,736.00	\$ 14.00	\$ 1,750.00
8.4	Attend utility meeting to review plans and discuss relocations		3											3.00	\$ 450.00	\$ 90.00	\$ 540.00
	Subtotal		24	22	20	54	20	0	0	0	0	0	0	140.00	\$ 16,252.00	\$ 118.00	\$ 16,370.00
PHASE 09 - FINAL PLANS, SPECIFICATIONS, AND ESTIMATE																	
9.1	Finalize plans, special provisions, and estimate for bidding		8	8	16	16	16							64.00	\$ 6,944.00	\$ 46.00	\$ 6,990.00
9.2	Assistance during bidding process for KDOT and County		4	4			8							24.00	\$ 2,712.00	\$ 18.00	\$ 2,730.00
9.3	Attend utility meeting to review plans and discuss relocations		3											3.00	\$ 450.00	\$ 90.00	\$ 540.00
	Subtotal		15	12	16	24	24	0	0	0	0	0	0	91.00	\$ 10,106.00	\$ 154.00	\$ 10,260.00
	<b>TOTALS</b>		<b>193</b>	<b>172</b>	<b>322</b>	<b>373</b>	<b>338</b>	<b>16</b>	<b>114</b>	<b>46</b>	<b>94</b>	<b>94</b>	<b>106</b>	<b>1,868.00</b>	<b>\$ 198,560.00</b>	<b>\$ 25,220.00</b>	<b>\$ 223,780.00</b>



**EXHIBIT B  
Subconsultants**

Owner approves of the use of the following subconsultants by Consultant:

<u>Name</u>	<u>Discipline</u>
Kleinfelder	Geotechnical Engineering
Vireo	Wetland Mitigation (if required) Wildlife Mitigation (if required) Special Permitting (if required)

## EXHIBIT C

Project : **FAS 10 (West 347th Street) Bridge over Marias des Cygnes**

Date : February 17, 2015

Client : Miami County, Kansas



CLASS	TITLE	REGULAR BILL RATE	OVERTIME BILL RATE
AD1	Receptionist/File Clerk	\$ 46.00	\$ 69.00
AD2	Administrative Assistant II/Receptionist	\$ 59.00	\$ 88.50
AD3	Administrative Assistant III/Receptionist	\$ 64.00	\$ 96.00
AD4	Administrative Assistant IV/Executive Assistant IV	\$ 74.00	\$ 111.00
AD5	Senior Administrative Assistant V/Executive Assistant V	\$ 98.00	\$ 147.00
FS1	Survey Tech I	\$ 37.00	\$ 55.50
FS2	Survey Tech II	\$ 45.00	\$ 67.50
FS3	Survey Tech III	\$ 64.00	\$ 96.00
FS4	Crew Chief, Senior Crew Chief	\$ 87.00	\$ 130.50
FS5	Chief Surveyor (Licensed)	\$ 99.00	\$ 148.50
FS6	Survey Manager (Licensed)	\$ 142.00	\$ 142.00
FS7	Operations Manager (Licensed)	\$ 272.00	\$ 272.00
OD1	CADD Technician (entry level)	\$ 40.00	\$ 60.00
OD2	CADD Technician	\$ 56.00	\$ 84.00
OD3	CADD Technician	\$ 71.00	\$ 106.50
OD4	CADD Technician	\$ 76.00	\$ 114.00
OD5	Senior CADD Technician/CADD Manager	\$ 104.00	\$ 156.00
OP1	Apprentice Stereo Operator	\$ 49.00	\$ 73.50
OP2	Stereo Operator	\$ 55.00	\$ 82.50
OP3	Stereo Operator/GIS Analyst	\$ 75.00	\$ 112.50
OP4	Stereo Operator/GIS Analyst	\$ 94.00	\$ 141.00
OP5	Chief Photogrammetrist	\$ 125.00	\$ 125.00
OP6	Chief Photogrammetrist	\$ 127.00	\$ 127.00
OP7	Chief Photogrammetrist	\$ 216.00	\$ 216.00
P1	Graduate Engineer (Unlicensed)	\$ 86.00	\$ 86.00
P2	Graduate Engineer (Unlicensed)	\$ 95.00	\$ 95.00
P3	Staff Detail Designer (Unlicensed)	\$ 104.00	\$ 104.00
P4	Staff Detail Designer (Licensed)	\$ 130.00	\$ 130.00
P5	Project Designer (Licensed)	\$ 166.00	\$ 166.00
P6	Project Designer (Licensed)	\$ 202.00	\$ 202.00
P7	Department Head, Principal (Licensed)	\$ 211.00	\$ 211.00
PD1	CADD Designer	\$ 77.00	\$ 115.50
PD2	CADD Designer	\$ 81.00	\$ 121.50
PD3	CADD Designer	\$ 99.00	\$ 148.50
PD4	Senior CADD Designer	\$ 108.00	\$ 162.00
PD5	Senior CADD Designer	\$ 165.00	\$ 247.50