

**ENGINEERING AGREEMENT**  
**FOR**  
**GEOTECHNICAL SITE EVALUATION OF COUNTY BRIDGE D-88**

**THIS AGREEMENT** entered into this \_\_\_\_ day of March, 2018, by and between **Schemmer Associates Inc.**, hereinafter referred to as the "**ENGINEER**", and **Lancaster County**, hereinafter referred to as the "**COUNTY**".

**WHEREAS**, the **COUNTY** desires to employ the **ENGINEER** to render professional engineering services and such other services as may be required and as hereinafter set forth in the scope of work for the exploration and analyses of soils at County Bridge C005500615 (D-88) located on W. Agnew Rd., 1400 feet East of NE HWY 79 in the SW ¼ of Section 12, Township 12 North, Range 5 East, of the 6<sup>th</sup> P.M. (see Exhibit "A" attached); and

**WHEREAS**, the **ENGINEER** is willing to perform such work in accordance with the terms hereinafter provided and does represent it is in compliance with the Nebraska Statutes relating to the registration of professional engineers;

**NOW, THEREFORE**, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

I. **SCOPE OF WORK**

A. **GEOTECHNICAL EXPLORATION**

The **COUNTY** agrees to provide the following information and services to the **ENGINEER** in connection with the work at no charge:

1. Horizontal and vertical control points for any survey work including bench marks, ties to land corners, and other control points as deemed necessary by the **ENGINEER**.
2. Limits of existing County owned ROW and Permanent Easements at the existing bridge site (see Exhibit "B" attached).
3. As-built plans of the existing bridge, including the log of borings.
4. Scour mitigation plans of work previously performed at the existing bridge site.
5. Historical photo documentation.
6. Historical scour assessments.

7. Removal of snow, fences or other access restrictions.

The **ENGINEER** agrees to provide the following services generally described, but not necessarily limited to those services described hereinafter:

1. Project preparation services consisting of:
  - a) A plan of the boring location with ground surface elevations at the borings will be determined.
  - b) Prior to drilling the soil boring locations will be staked in the field by the **ENGINEER**.
  - c) Area underground utility service representatives will be contacted by the **ENGINEER** through the One-Call system to mark area public utilities in order to remove conflicts between drilling and utilities in accordance with State law.
  - d) Site characteristics will be noted and the boring locations adjusted as necessary.
    - (1) The drill truck cannot work on very steep ground, on soft ground, near buried utilities, immediately along roadway barriers, or near overhead power lines and trees.
  - e) Proper barricades will be placed around the boring locations in accordance with public safety requirements and the most current edition of the "Manual on Uniform Traffic Control Devices" prior to and during boring advancement.
2. The **ENGINEER** will obtain subsoil data through:
  - a) Using a truck-mounted drilling and sampling rig, the **ENGINEER** will advance four borings, two borings to the west and two borings to the east of the channel, within the south roadway ditch.
    - (1) All boring samples shall be taken in a manner to minimize damage to area ground surfaces from rutting
  - b) Borings will not be advanced to bedrock, but to a sufficient depth for proper slope stability analyses.
    - (1) The borings nearest the creek channel will be advanced to a depth of 40 feet.
    - (2) The other two borings will be advanced to a depth of 35 feet at a distances of about 100 to 150 feet from the channel.
    - (3) A total of 150 lineal feet of soil sample boring will be advanced.
    - (4) The **ENGINEER** will obtain four soil samples within the upper 10 feet and additional samples at 5-foot intervals below 10 feet to the maximum proposed depth at each drill location.

- (5) Based on the 1961 bridge borings, the **ENGINEER** will obtain additional samples within the near surface clay and silt soils for triaxial compression tests.
- (6) Undisturbed samples of cohesive soil will be obtained using a thin-walled sampler tube in accordance with ASTM 01587, Standard Method for Thin-Walled Tube Sampling of Soils, using an open-tube (Shelby Tube) sampler having an outside diameter of 3.0 inches.
- (7) Retrieving sand or other granular soil samples will be obtained using a split-barrel sampler. Standard Penetration Test (SPT) measurements will be made during the retrieval of each split-barrel sample in accordance with ASTM 01586, Standard Method for Penetration Test and Split-Barrel Sampling of Soils to determine the relative density of the granular materials.
- c) Borings will be immediately filled with drill cuttings after drilling for safety concerns.
- d) Any surface concrete will be replaced with hand-mixed Portland cement at locations where borings are advanced through existing pavement.
- e) Extra soil will be removed from the drill locations and thinly spread out thinly on nearby roadside areas.
- (1) If additional soil is needed, clean soil will be brought to the bore hole to fill it.

## **B. GEOTECHNICAL LABORATORY TESTING**

The **ENGINEER** agrees to provide the following services generally described hereinafter:

- 1. Appropriate geotechnical laboratory testing of representative recovered samples will be completed at the direction of the **ENGINEER** including but not limited to:
  - a) Unconfined Compression Test
  - b) Triaxial Compression Test
  - c) Sieve Analysis
- 2. Measured and derived values/limits including:
  - a) Visual soil classification
  - b) In-situ water content
  - c) Unit weight
  - d) Unconfined compressive strength
    - (1) Soil cohesion
    - (2) Angle of internal friction

- e) Atterberg limits including:
  - (1) Plastic Limit
  - (2) Liquid Limit
  - (3) Plasticity Index
  - (4) Liquidity Index
  - (5) Consistency Index
- f) Sieve analysis including
  - (1) Percent retained #10
  - (2) Percent retained #40
  - (3) Percent retained #200
- g) Any additional soil properties necessary to determine the slope factor of safety
- h) Any additional soil properties necessary to determine the Nebraska Group Index (NGI) for compaction testing using a Light Weight Deflectometer
- i) Laboratory tests will be completed in accordance with ASTM procedures by trained technicians using calibrated test equipment.
  - (1) Training and calibration documentation shall be made available by the ENGINEER upon request.

C. **WRITTEN REPORT AND RECOMMENDATIONS**

The **ENGINEER** agrees to provide the following services generally described, but not necessarily limited to those services described hereinafter:

1. A field log of the soil types and characteristics encountered at the boring locations and recorded in the field by the drilling crew.
  - a) A field log of each boring will be written by a qualified person and will contain:
    - (1) Personnel used for the drilling.
    - (2) Date of field work.
    - (3) Plan of the boring locations with ground surface elevations
    - (4) Thicknesses of existing pavement, existing fill or other disturbed soil layers, where encountered.
    - (5) Approximate locations of changes in soil type with depth.
    - (6) Groundwater levels when encountered during drilling within the depth of boring.
    - (7) Identification of the subsurface materials described in accordance with ASTM D2488, Standard Practice for Description and Identification of Soils (Visual- Manual Procedure).

- (8) Any other observed site conditions that in the **ENGINEERS** opinion may affect engineering recommendations.
2. A summary of the results of the geotechnical laboratory testing
3. An experienced geotechnical engineer employed by the **ENGINEER** will analyze the data and prepare a written report containing project data and recommendations relative to the following :
  - a) Description of site soil conditions and significance of area geology.
  - b) A detailed stratigraphic cross-section perpendicular to the creek channel determined for both sides of the creek with groundwater elevations included.
  - c) Determination of applicable soil stability calculation parameters.
  - d) Calculation of slope stability on the proposed slopes using the Ensoft STABLPro v2015 computer program or equivalent software
- (1) The **ENGINEER** will complete internal quality control review of recommendations
- e) Determination of a best practice long-term repair solution to the current slope stability issues of the embankments within the county ROW and existing permanent easements based on sound geotechnical principles.
- f) Presentation of findings to the Lancaster County Engineering Department.
- g) The final report and recommendations shall bear the signed and dated professional seal of the **ENGINEER** and be submitted to the **COUNTY** electronically, including computations and any special provisions that may be required, in 8.5x11 pdf format. CADD files shall be submitted in the format in which they were created when applicable.

#### **E. RELATED SERVICES**

The **COUNTY** and the **ENGINEER** agree that a supplemental agreement may be negotiated and entered into to provide this service and any compensatory mitigation that may be required. These services will be provided based on an hourly rate and equipment fee basis as agreed to at the time such services are requested. The **ENGINEER** will invoice these approved services with in accordance with the Schedule of Hourly Rates in effect at the time the additional services are requested plus reimbursable expenses.

1. Additional site inspections during site preparation and/or construction
2. Additional soils testing during site preparation and/or construction
3. Additional recommendations during site preparation and/or construction

## II. TIME OF BEGINNING AND COMPLETION OF THE WORK

- A. The **ENGINEER** will complete the work as follows:
1. The **ENGINEER** shall commence the selected geotechnical exploration services on the project within 10 working days after receipt of Notice-to-Proceed.
    - i Receipt of the signed proposal will be considered Notice-to-Proceed.
  2. Preliminary verbal results will be available within 20 days after drilling. The geotechnical report will be provided within five weeks after the completion of the subsoil sample collection field work.
- B. This completion time or period will not be extended because of any unwarranted or avoidable delay attributed to the **ENGINEER**.
- C. Amendments or changes in the scope of work which entail a significant increase in the number of man hours expended by the forces of the **ENGINEER** or any unavoidable delays caused by the **COUNTY** or other governmental agencies which are beyond the control of the **ENGINEER** may form the basis of the **COUNTY** granting an extension of time. In the event that the scope of work is altered as described above, the County Engineer and the **ENGINEER** will determine through negotiation the additional time period to be added to the Agreement. This Agreement may be amended only by a written instrument executed by both parties.

## III. OWNERSHIP OF ENGINEERING DOCUMENTS

All CADD drawings, plans, specifications, maps, design computations, sketches, charts and other data prepared or obtained under the terms of this Agreement shall become the property of the **COUNTY** and may be used by the **COUNTY** without restrictions or limitations on projects funded using federal and state aid or locally funded projects.

## IV. ABANDONMENT CHANGE OF SCOPE, SUSPENSION OR TERMINATION

- A. It is mutually agreed the services to be performed by the **ENGINEER** may not be assigned, sublet, or transferred without the written consent by the **COUNTY**. Any assignment without the **COUNTY'S** written consent shall be absolutely void
- B. It is mutually agreed the **COUNTY** has the right to terminate this Agreement at any time upon written notice.
- i) In the event the improvement is to be abandoned or indefinitely postponed;
  - ii) Because of the **ENGINEER'S** disability or death; provided in any such case the **ENGINEER** shall be paid the reasonable value of his services rendered up to the time of termination as determined by the **COUNTY**; or

iii) In the judgement of the **COUNTY**, such services provided by **ENGINEER** are unsatisfactory or **ENGINEER** has failed to abide by the conditions of this Agreement in all respects. In such cases, the **ENGINEER** shall be paid the reasonable value of his services up to the time of termination as determined by the **COUNTY**.

C. It is mutually agreed no material change in the scope of the work as set forth herein will be made unless provided for by a separate written supplemental agreement executed by the parties herein. Said supplemental agreement shall specify whatever adjustment of the **ENGINEER'S** fee is to be made.

D. If any part of this Agreement is held invalid, the remainder hereof shall not be affected thereby if such remainder would then continue to conform to the terms and requirements of applicable law.

V. **GENERAL PROVISIONS**

A. Each party agrees to indemnify and hold harmless, to the fullest extent allowed by law, the other party and its principals, officers, and employees from and against all claims, demands, suits, actions, payments, liabilities, judgments and expenses (including court-ordered attorneys' fees), arising out of or resulting from the acts or omissions of their principals, officers, or employees in the performance of this Agreement. Liability includes any claims, damages, losses, and expenses arising out of or resulting from performance of this Agreement that results in any claim for damage whatsoever including any bodily injury, civil rights liability, sickness, disease, or damage to or destruction of tangible property, including the loss of use resulting therefrom. Further, each party shall maintain a policy or policies of insurance (or a self-insurance program), sufficient in coverage and amount to pay any judgments or related expenses from or in conjunction with any such claims. Nothing in this Agreement shall require either party to indemnify or hold harmless the other party from liability for the negligent or wrongful acts or omissions of said other party or its principals, officers, or employees.

B. The **ENGINEER** warrants he is not employed or retained by any company or person, other than a bona-fide employee working for the **ENGINEER**, to solicit or secure this Agreement, and he has not paid or agreed to pay any company or person, other than a bona-fide employee any fee, commission, percentage, brokerage fee, gift or any other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the **COUNTY** shall have the right to annul this Agreement without liability or, in its discretion, to deduct from the

Agreement price of consideration or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

- C. It is the express intent of the parties that this Agreement shall not create an employer-employee relationship. Employees of the **ENGINEER** shall not be deemed to be employees of the **COUNTY**, and employees of the **COUNTY** shall not be deemed to be employees of the **ENGINEER**. The **ENGINEER** and the **COUNTY** shall be responsible to their respective employees for all salary and benefits. Neither the **ENGINEER'S** employees nor the **COUNTY'S** employees shall be entitled to any salary or wages from the other party or to any benefits made to their employees, including, but not limited to, overtime, vacation, retirement benefits, workers' compensation, sick leave or injury leave. Each party shall also be responsible for maintaining workers' compensation insurance, unemployment insurance and any applicable railroad insurance coverage for its employees, and for payment of all federal, state, local and any other payroll taxes with respect to its employees' compensation.
- D. The parties agree that the **ENGINEER**, its officers, employees and agents shall be available for any in-court testimony as requested by the Lancaster County Attorney's Office. The **ENGINEER** also agrees to make themselves, its officers, employees and agents available to attend any necessary meetings or conferences in preparation of testimony as requested by the Lancaster County Attorney's Office. Should the County Attorney's Office require conferences, meetings or in court testimony of the **ENGINEER**, its officers, employees or agents, the **ENGINEER** shall bill the **COUNTY** at its current standard billing rates.
- E. The **ENGINEER** further agrees he and his subcontractors, if any, will maintain books, documents, papers, accounting records and other evidence pertaining to costs incurred, and to make such materials available at their respective office at all reasonable times during the Agreement period and for three (3) years thereafter from the date of final payment under the Agreement for inspection by the **COUNTY**. Copies of these records will be furnished by the **ENGINEER** to the **COUNTY**, if required.
- F. The **ENGINEER** hereby agrees to affix the seal of a registered professional engineer employed by the **ENGINEER** and licensed to practice in the state of Nebraska on all documents prepared hereunder.



- G. The **ENGINEER** further agrees not to employ personnel presently employed by the **COUNTY** or the State of Nebraska in an engineering capacity for work under this Agreement on either a full or part-time basis.
- H. The **ENGINEER** agrees to abide by the provisions of the Nebraska Fair Employment Practices Act of 1965, R.R.S. 1943, Sections 48-1101 through 48-1125 which is made a part of this Agreement and is included in this Agreement by this reference.
- I. **COUNTY'S** failure or neglect to enforce any of its rights under this Contract will not be deemed to be a waiver of **COUNTY'S** rights.
- J. In accordance with Neb. Rev. Stat. § 4-108 through § 4-114, **ENGINEER** agrees to register with and use a federal immigration verification system, to determine the work eligibility status of new employees performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. § 1324a, otherwise known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee pursuant to the Immigration Reform and Control Act of 1986. **ENGINEER** shall not discriminate against any employee or applicant for employment to be employed in the performance of this section pursuant to the requirements of state law and 8 U.S.C.A § 1324b. **ENGINEER** shall require any subcontractor to comply with the provisions of this section.
- K. This Agreement constitutes the entire agreement between the parties with respect to the subject matter herein and merges all prior discussions between them. It shall not be modified except by written agreement dated subsequent to the date of this Agreement and signed by all parties.

VI. **FEES AND PAYMENTS**

- A. In consideration of the performance of the services under this Agreement, the **ENGINEER** will be compensated by the payment of the lump sum fee(s) specified herein.

The **ENGINEER** agrees said fee(s) shall be full and complete compensation for the work performed, equipment and materials used, and services rendered in connection with the work specified herein.

**Fees (Lump Sum Costs).**

1. The **ENGINEER** will provide the geotechnical exploration services enumerated above for the Lump Sum amount of Nine Thousand, Seven Hundred, Fifty Dollars and No Cents (\$9,750.00) (including travel, and expenses) in accordance with the terms of the attached General Conditions and Supplemental General Conditions.
  - a. This fee will be considered due and payable in monthly invoices submitted by the **ENGINEER**.

VII. **INSURANCE**

- A. **ENGINEER** shall, prior to beginning work, provide proof of insurance coverage in a form satisfactory to the County, which shall not withhold approval unreasonably. The coverages and minimum levels required by this contract are set forth below and shall be in effect for all times that work is being done pursuant to this Contract. No work on the Project or pursuant to this Contract shall begin until all insurance obligations herein are met to the satisfaction of the County, which shall not unreasonably withhold approval. Self-insurance shall not be permitted unless consent is given by the County prior to execution of the Agreement. Deductible levels shall be provided in writing from the **ENGINEER's** insurer and will be no more than \$10,000.00 per occurrence. Said insurance shall be written on an OCCURRENCE basis, and shall be PRIMARY, with any insurance coverage maintained by the County being secondary or excess.
- B. **Workers' Compensation** The **ENGINEER** shall provide proof of workers' compensation insurance of not less than minimum statutory requirements under the laws of the State of Nebraska and any other applicable State. The **ENGINEER** shall provide the County with an endorsement for waiver of subrogation. The **ENGINEER** shall also be responsible for ensuring that all subcontractors have workers' compensation insurance for their employees before and during the time any work is done pursuant to this Contract.
- C. **Commercial General Liability** The **ENGINEER** shall provide proof of Commercial General Liability Insurance with the coverages and at the minimum limits set forth herein. These minimum limits can be met by primary and umbrella liability policies. Coverage shall include: Premises-Operations, Products/ Completed Operations, Contractual, Broad Form Property Damage, and Personal Injury and shall be no less than \$1,000,000 Each Occurrence and \$2,000,000 Aggregate. Such coverage shall

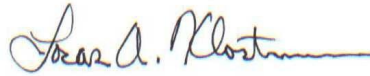
be endorsed for the general aggregate to be on a **PER PROJECT** basis, and the **ENGINEER** shall provide an additional insured endorsement acceptable to the County. The description of operations must state "Blanket coverage for all projects and operations of **ENGINEER**" or similar language that meets the approval of the County, which approval shall not be unreasonably withheld.

- D. Automobile Liability** The **ENGINEER** shall provide proof of Automobile coverage, which shall include: Comprehensive Form, Owned, Hired and Non-Owned. Bodily Injury and Property Damage Combined Single Limit shall be at least \$1,000,000 Per Accident.
- E. Professional Liability** Professional Liability Insurance covering damages arising out of negligent acts, errors, or omissions committed by **ENGINEER** in the performance of this Agreement, with a liability limit of not less than \$1,000,000 each claim. **ENGINEER** shall maintain this policy for a minimum of two (2) years after completion of the work or shall arrange for a two year extended discovery (tail) provision if the policy is not renewed. The intent of this policy is to provide coverage for claims arising out of the performance of professional Services under this contract and caused by any error, omission, breach or negligent act for which the **ENGINEER** is or could be liable.
- F. Additional Insured** An Additional Insured endorsement shall be provided to County naming County as additional insureds using ISO additional insured endorsement (CG20 10), edition date 11/85, or an equivalent (e.g. CG 2010, edition date 10/93, plus CG 20 37, edition date 10101), under the commercial general liability policy and automobile liability policy.
- G. Certificates** The Engineer shall provide certificates of insurance and endorsements evidencing compliance with these requirements. Upon request, the Engineer shall furnish a full and complete copy of any policy of insurance (other than workers' compensation), required by this Contract, to the County within a reasonable time, not to exceed thirty days. The certificates of insurance shall provide for at least thirty (30) days' firm written notice in the event of cancellation. Intent to notify is not acceptable. During the term of the Agreement and during the period of any required continuing coverages, the Engineer shall provide, prior to expiration of the policies, certificates and endorsements evidencing renewal insurance coverages. The parties agree that the failure of County to object to the form of a certificate and/or additional insured endorsement provided shall not constitute a waiver of this requirement.

- H. **Minimum Scope of Insurance** All Liability Insurance policies shall be written on an "Occurrence" basis only. All insurance coverage are to be placed with insurers authorized to do business in the State of Nebraska and must be placed with an insurer that has an A.M. Best's Rating of no less than A:VII unless specific approval has been granted otherwise.
- I. Nothing contained in this Section or other Sections of this Agreement shall be construed to waive the Sovereign Immunity of the County

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed in duplicate on the day and year first mentioned above.

**EXECUTED** by the **ENGINEER** this 7th day of March, 2018.



Loras A. Klostermann, PE, Manager Geotechnical Engineering

Name & Title

The Schemmer Associates Inc

Firm Name

1044 North 115th Street, Suite 300

Address

Omaha Nebraska 68154-4436

City

State

Zip

**EXECUTED** by the **COUNTY** this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

LANCASTER COUNTY BOARD OF COMMISSIONERS

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Approved as to form

This \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Deputy County Attorney