

**LPA – CONSULTANT  
PROFESSIONAL SERVICES AGREEMENT  
PRELIMINARY AND FINAL DESIGN AND NEPA DOCUMENTATION SERVICES**

CITY OF LINCOLN, NEBRASKA  
E & A CONSULTING GROUP, INC.  
PROJECT NO. LCLC-5241(5)  
CONTROL NO. 13141  
S 56<sup>TH</sup> ST, SHADOW PINES DR – OLD CHENEY RD

THIS AGREEMENT, made and entered into by and between the City of Lincoln, Nebraska, hereinafter referred to as the Local Public Agency or LPA, and E & A Consulting Group, Inc., hereinafter referred to as the Consultant.

WITNESSETH

WHEREAS, the LPA used a qualification based selection process to select the Consultant to render professional services for the above named project at the location shown on EXHIBIT "F", which is attached and hereby made a part of this agreement, and

WHEREAS, the Consultant is qualified to do business in Nebraska and has met all requirements of the Nebraska Board of Engineers and Architects to provide consultant engineering services in the State of Nebraska, and

WHEREAS, Consultant is willing to perform the services in accordance with the terms hereinafter provided, is presently in compliance with Nebraska law, and hereby agrees to comply with all federal, state, and local laws and ordinances applicable to this agreement, and

WHEREAS, the Consultant and LPA intend that the services provided by Consultant comply with all applicable federal-aid transportation related program requirements, so that LPA's project will be fully eligible for federal reimbursement, and

WHEREAS, the LPA and Consultant intend that the services under this agreement be completed in accordance with the terms and conditions of the Nebraska LPA Guidelines Manual for Federal Aid Projects; hereinafter referred to as LPA Manual; the LPA Manual is a document approved by the Federal Highway Administration (FHWA) that sets out the requirements for local federal-aid projects to be eligible for federal reimbursement; the LPA Manual can be found in its entirety at the following web address:

<http://www.transportation.nebraska.gov/gov-aff/lpa/lpa-guidelines.pdf>, and

WHEREAS, the Consultants primary contact person for LPA will be the LPA's representative, who has been designated as being in responsible charge of the project, and who is referred to herein as RC or Responsible Charge.

WHEREAS, the parties understand that the State of Nebraska, Department of Roads is involved in this federal-aid project on behalf of the FHWA only for issues related to the eligibility of the project for reimbursement of project costs with federal-aid funds.

WHEREAS, work associated with portions of the water line relocation/reconstruction will be non-participating and will not be eligible for Federal-aid participation.

NOW THEREFORE, in consideration of these facts, the parties hereto agree as follows:

SECTION 1. DEFINITIONS

Wherever in this agreement the following terms are used, they will have the following meaning:

"CONSULTANT" means the firm of E & A Consulting Group, Inc. and any employees thereof, whose business and mailing address is 330 N 117<sup>th</sup> Street, Omaha, NE 68154, and

"SUBCONSULTANT/SUBCONTRACTOR" means the firm of The Schemmer Associates, Inc., whose business and mailing address is 1044 N 115<sup>th</sup> Street, Suite 300, Omaha, NE 68154 and Mainelli Wagner & Associates, Inc. whose business and mailing address is 6920 Van Dorn Street, Suite A, Lincoln, NE 68506 and Midwest Right-of-Way Services, Inc. whose business and mailing address is 13425 A Street, Omaha, NE 68144 and PB Americas, Inc., 1111 Lincoln Mall, Suite 308, Lincoln, NE 68508, and

"LPA" stands for Local Public Agency, and in this agreement means the City of Lincoln, Nebraska unless the context otherwise requires. LPA may also be used to refer generally to other Local Public Agencies. Local Public Agencies include, but are not necessarily limited to; Nebraska Cities, Villages, Counties, Political Subdivisions, Native American Tribes, and other entities or organizations found to be eligible sub recipients of federal funds for transportation projects, and

"LPA MANUAL" shall mean the Nebraska Department of Roads' LPA Guidelines Manual for Federal-Aid Projects. The LPA Manual can be found in its entirety at the following web address: <http://www.transportation.nebraska.gov/gov-aff/lpa/lpa-guidelines.pdf>, and

"RESPONSIBLE CHARGE" or "RC" shall mean LPA's representative for the project whose duties and responsibilities are identified in federal law and in the LPA Manual, and

"STATE" means the Nebraska Department of Roads in Lincoln, Nebraska, its director, or authorized representative. The State represents the United States Department of Transportation on federally funded transportation projects sponsored by a sub recipient of federal funds and

any reference to the "State" in this agreement shall mean the State on behalf of the United States Department of Transportation.

"FHWA" means the Federal Highway Administration, United States Department of Transportation, Washington, D.C. 20590, acting through its authorized representatives.

"DOT" means the United States Department of Transportation, Washington, D.C. 20590, acting through its authorized representatives.

To "ABANDON" the services means that the LPA has determined that conditions or intentions as originally existed have changed and that the services as contemplated herein is to be renounced and deserted for as long in the future as can be foreseen.

To "SUSPEND" the services means that the LPA has determined that progress is not sufficient, or that the conditions or intentions as originally existed have changed, or the services completed or submitted are unsatisfactory, and that the services as contemplated herein should be stopped on a temporary basis. This cessation will prevail until the LPA determines to abandon or terminate the services or to reinstate it under the conditions as defined in this agreement.

To "TERMINATE" or the "TERMINATION" of this agreement is the cessation or quitting of this agreement based upon action or failure of action on the part of the Consultant as defined herein and as determined by the LPA.

## SECTION 2. SCOPE OF SERVICES

The Consultant shall provide preliminary design, final design and NEPA documentation services for Project No. LCLC-5241(5), Control No. 13141 in Lancaster County, Nebraska. Upon receiving a written notice to proceed from the State, the Consultant shall complete the services required under this agreement as set out in Exhibit "A", Scope of Services, which are attached and hereby made a part of this agreement. Any services performed by the Consultant prior to written approval of the State will be solely at the expense of the Consultant.

The State has the absolute right to add or subtract from the scope of services at any time and such action on its part will in no event be deemed a breach of this agreement. The State will give the Consultant seven days written notice of such addition or subtraction. Any necessary addition or subtraction in the "General Scope of Services" shall follow the Consultant Work Order Process outlined in the FEES AND PAYMENTS section below.

## SECTION 3. CHANGES TO PERSONNEL

The Consultant has provided LPA with a staffing plan that identifies the employees of the Consultant who will be part of the primary team for this project. The primary team members will

be agreed upon and identified in each Task Order. The primary team is expected to be directly responsible for providing the field services for the work under this agreement. This document shall specify the role that will be assigned to each member of the primary team. This document is attached hereto as EXHIBIT "D" and is incorporated herein by this reference. During design, the Consultant may make occasional temporary changes to the primary team. However, any permanent change to the primary team will require prior written approval from the LPA. Personnel who are added to the Staffing Plan as replacements must be persons of comparable training and experience. Personnel added to the Staffing Plan as new personnel and not replacements must be qualified to perform the intended services. Failure on the part of the Consultant to provide acceptable replacement personnel or qualified new personnel to keep the services on schedule will be cause for termination of this agreement, with settlement to be made as provided in the SUSPENSION, ABANDONMENT, OR TERMINATION section of this agreement.

#### SECTION 4. NEW EMPLOYEE WORK ELIGIBILITY STATUS

The Consultant agrees to use a federal immigration verification system to determine the services eligibility status of new employees physically performing services within the State of Nebraska. The Consultant hereby agrees to contractually require any subconsultants to use a federal immigration verification system to determine the services eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the services authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, 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 services eligibility status of a newly hired employee.

The undersigned duly authorized representative of the Consultant, by signing this agreement, hereby attests to the truth of the following certifications, and agrees as follows:

**Neb.Rev.Stat. § 4-114.** I certify compliance with the provisions of Section 4-114 and, hereby certify that this Consultant shall register with and use a federal immigration verification system to determine the services eligibility status of new employees physically performing services within the State of Nebraska. I agree to require all subconsultants, by contractual agreement, to require the same registration and verification process.

If the Consultant is an individual or sole proprietorship, the following applies:

1. The Consultant must complete the United States Citizenship Attestation form, and attached it to this agreement. The form is available on the Department of Roads website at [www.transportation.nebraska.gov/projdev/#save](http://www.transportation.nebraska.gov/projdev/#save).
2. If the Consultant indicates on such Attestation form that he or she is a qualified alien, the Consultant agrees to provide the US Citizenship and Immigration Services documentation required to verify the Consultant lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
3. The Consultant understands and agrees that lawful presence in the United States is required and the Consultant may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108.

#### SECTION 5. NOTICE TO PROCEED AND COMPLETION

The LPA will issue the Consultant a written Notice-to-Proceed when LPA determines that federal funding approval has been obtained for the project, upon full execution of the agreement and upon State concurrence that the form of this agreement is acceptable for federal funding eligibility. Any services performed by Consultant on the project prior to the date specified in the written Notice-to-Proceed will be solely at the Consultant's expense.

The Consultant shall complete all the services according to the schedule in attached EXHIBIT "B" and shall complete all work required under this agreement in a satisfactory manner by August, 2013.

Any costs incurred by Consultant after the completion date are not eligible for reimbursement unless the Consultant has received an extension of time in writing from the LPA.

The completion time will not be extended because of any avoidable delay attributed to the Consultant, but delays attributable to the LPA may constitute a basis for an extension of time.

#### SECTION 6. FEES AND PAYMENTS

Work associated with portions of the water line relocation/reconstruction will be non-participating and will be funded solely with LPA funds and will not be eligible for Federal-aid participation. Cost of this work is estimated to be \$17,031.30. The consultant is responsible for identifying these costs on all invoicing documents containing costs for the water line relocation/reconstruction.

The general provisions concerning payment under this agreement are set out on the attached Exhibit "E". The following provisions also apply:

- A. For performance of the services as described in this agreement, the Consultant will be paid a fixed-fee-for-profit of \$66,074.76, as defined in paragraph "E" of the attached Exhibit "E" and up to a maximum amount of \$546,717.26 for actual costs as defined in paragraph "F" of the attached Exhibit "E". The agreement amount is \$612,792.02. Progress and final payments will be based on receipted invoices or certified billings and compensation will be in accordance with all requirements and limitations of the federal cost principles contained in the Federal Acquisition Regulation (48 CFR 31).
- B. Occasionally, the conditions of this agreement may change. This may be due to a change in scope which may require an adjustment of costs. For any services beyond what are shown in the scope of services of this agreement, the Consultant shall describe the proposed services, provide justification for the proposed services, estimate the cost to complete the services, and receive written approval from the LPA before the Consultant begins the proposed services. Before written approval will be given by the LPA, the LPA must determine that the situation meets the following criteria:
- That the additional work is beyond the scope of services initially negotiated with Consultant; and
  - That the proposed Services are within the scope of the Request for Proposal under which Consultant was selected and contract entered into; and
  - That it is in the best interest of the LPA that the services be performed under this agreement.

Once the need for a modification has been established, a supplemental agreement will be prepared.

If the additional work requires the Consultant to incur costs prior to execution of a supplemental agreement for Federal-Aid project, the LPA shall use the process set out below:

- Consultant Work Order Form (CWO) - DR Form 250 shall be used to describe and provide necessary justification for the modification of the scope of services, the deliverables, the schedule, and to document the estimated total additional fee. CWO form is available on the Nebraska Department of Roads website at: [www.transportation.nebraska.gov/gov-aff/lpa-guide-man.html#forms4](http://www.transportation.nebraska.gov/gov-aff/lpa-guide-man.html#forms4). The CWO must be executed to provide authorization for

the additional work and to specify when that work may begin. This agreement will be supplemented after one or more CWOs have been authorized and approved for federal funding.

- C. The LPA is not responsible for costs incurred prior to the Notice-to-Proceed date or after the completion date stated in the NOTICE TO PROCEED AND COMPLETION Section of this agreement or as provided in a written time extension notification.

#### SECTION 7. PROFESSIONAL PERFORMANCE

The Consultant understands that the LPA will rely on the professional training, experience, performance and ability of the Consultant. Examination by the LPA, State or FHWA, or acceptance or use of, or acquiescence in the Consultant's services product, will not be considered to be a full and comprehensive examination and will not be considered an approval of the Consultant's services product which would relieve the Consultant from any liability or expense that would be connected with the Consultant's sole responsibility for the propriety and integrity of the professional services to be accomplished by the Consultant pursuant to this agreement. The Consultant further understands that acceptance or approval of any of the services of the Consultant by the LPA or of payment, partial or final, will not constitute a waiver of any rights of the LPA to recover from the Consultant, damages that are caused by the Consultant due to error, omission, or negligence of the Consultant in its services. That further, if due to error, omission, or negligence of the Consultant, the plans, specifications, and estimates are found to be in error or there are omissions therein revealed during the construction of the project and revision or reworking of the plans is necessary, the Consultant shall make such revisions without expense to the LPA. The Consultant shall respond to the LPA's or State's notice of any errors or omissions within 24 hours and give immediate attention to necessary corrections to minimize any delays to the project. This may involve visits by the Consultant to the project site, if directed by the LPA. If the Consultant discovers errors in its services, it shall notify the LPA and State of the errors within seven days. Failure of the Consultant to notify the LPA will constitute a breach of this agreement. The Consultant's legal liability for all damages incurred by the LPA caused by error, omission, or negligent acts of the Consultant will be borne by the Consultant without liability or expense to the LPA.

#### SECTION 8. SUSPENSION, ABANDONMENT OR TERMINATION

The LPA has the absolute right to suspend or abandon the work, or terminate the agreement at any time and such action on its part will in no event be deemed a breach of this agreement. The LPA will give the Consultant seven days written notice of such suspension,

abandonment, or termination. Any necessary change in Scope of Services shall follow the Consultant Work Order Process outlined in the FEES AND PAYMENTS section above.

If the LPA suspends or abandons the work or terminates the agreement as presently outlined, the Consultant shall be compensated in accordance with the provisions of 48 CFR 31 provided however, that in the case of suspension, abandonment or termination for breach of this agreement, the LPA will have the power to suspend payments, pending the Consultant's compliance with the provisions of this agreement. Payment to Consultant will be prorated based on the percentage of work completed by the Consultant prior to abandonment or termination compared to the total amount of work contemplated by this agreement.

#### SECTION 9. OWNERSHIP OF DOCUMENTS

All surveys, plans, specifications, maps, computations, charts, electronic data, and other project data prepared or obtained under the terms of this agreement are the property of the LPA and the Consultant shall deliver them to the LPA without restriction or limitation as to further use.

LPA acknowledges that such data may not be appropriate for use on an extension of the services covered by this agreement or on other projects. Any use of the data for any purpose other than that for which it was intended without the opportunity for Consultant to review the data and modify it if necessary for the intended purpose will be at the LPA's sole risk and without legal exposure or liability to Consultant.

#### SECTION 10. CONFLICT OF INTEREST

Generally, federal conflict of interest laws prohibit a full or part-time public employee, public official or agent who negotiates, approves, accepts, administers, or is otherwise involved with, any Consultant contract or subcontract on a federal-aid project, from having a direct or indirect financial or personal interest, real or apparent, in such Consultant contract with the public entity for which he or she is a public official, employee or agent. Conflicts of Interest can also arise when someone associated with a public employee or official has an interest in an LPA Consultant contract, or if Consultant's owners or employees own real estate that may be needed for the project. Therefore, Consultant agrees to appoint an appropriate person from its staff to be responsible for Consultant's federal-aid project conflict of interest duties. This person, on behalf of Consultant, shall:

- (1) Become knowledgeable about federal-aid project Conflict of Interest laws including 23 CFR Section 1.33, 49 CFR 18.36(b)(3), other state provisions and

the Conflict of Interest Guidance Document, found on the Nebraska Department of Roads' website.

- (2) Create an internal process for Consultant to:
  - (a) identify in advance its employees or owners (or others with a financial or personal interest in Consultant), that are also employees, official or agents of a Nebraska LPA,
  - (b) identify whether any of those people have duties for that LPA as to the negotiating, approving, accepting, administering (or have influence over the persons handling those duties) or other duties involved in the Consultant contract process for federal-aid transportation projects, and
  - (c) identify whether any employees or owners of Consultant own any real estate that may be acquired or used as a part of a federal-aid project of LPA.
- (3) Properly complete and submit all required conflict of interest forms; and disclose to the State any actual or potential conflicts of interest it has identified.

#### SECTION 11. USE AND/OR RELEASE OF PRIVILEGED OR CONFIDENTIAL INFORMATION

Certain information provided by the LPA or State to the Consultant is confidential information contained within privileged documents protected by 23 U.S.C. §409. "Confidential information" means any information that is protected from disclosure pursuant to state and federal law and includes, but is not limited to, accident summary information, certain accident reports, diagnostic evaluations, bridge inspection reports, and any other documentation or information that corresponds with said evaluations or reports, and any other information protected by 23 U.S.C. §409. "Privileged document" means any document pertaining to any file or project maintained by the LPA or State that is privileged and protected from disclosure, pursuant to appropriate state and federal law, including any document containing attorney-client communications between an LPA or State employee and Legal Counsel. This confidential and privileged information is vital and essential to the Consultant in order that the Consultant adequately design the project at hand on behalf of the LPA or State.

The Consultant agrees it will only use any information or documentation that is considered to be privileged or confidential for the purposes of executing the services by which it has agreed to render for the LPA or State for the project at hand only. The Consultant agrees not to reveal, disseminate, or provide copies of any document that is confidential and privileged to any individual or entity. The LPA agrees that any information or documentation that is considered to

be privileged or confidential that is provided to Consultant will be marked with the following information (Approved 3/16/11):

**“CONFIDENTIAL INFORMATION:** Federal Law, 23 U.S.C §409, prohibits the production of this document or its contents in discovery or its use in evidence in a State or Federal Court. The LPA has not waived any privilege it may assert as provided by that law through the dissemination of this document and has not authorized further distribution of this document or its contents to anyone other than the original recipient.”

The Consultant agrees to obtain the written approval of the Consultant Coordinator prior to the dissemination of any privileged or confidential information or documentation if it is unclear to the Consultant whether such information or documentation is in fact privileged or confidential.

The Consultant and the LPA agree that any unauthorized dissemination of any privileged or confidential information or documentation on the part of the Consultant will create liability on the part of the Consultant to the LPA for any damages that may occur as a result of the unauthorized dissemination. The Consultant agrees to hold harmless, indemnify, and release the LPA for any liability that may ensue on the part of the LPA for any unauthorized dissemination of any privileged or confidential information or documentation on the part of the Consultant.

#### SECTION 12. FORBIDDING USE OF OUTSIDE AGENTS

The Consultant warrants that it has not employed or retained any company or person, other than a bona fide employee working for the Consultant, to solicit or secure this agreement, and that it 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 LPA has the right to annul this agreement without liability or, in its discretion, to deduct from the agreement price or consideration, or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

#### SECTION 13. NON-RAIDING CLAUSE

The Consultant shall not engage the services of any person or persons presently in the employ of the State for services covered by this agreement without the prior written consent of the employer of the persons.

#### SECTION 14. GENERAL COMPLIANCE WITH LAWS

The Consultant hereby agrees to comply with all federal, state, and local laws and ordinances applicable to the services.

SECTION 15. DISPUTES

Any dispute concerning a question of fact in connection with the work covered under this agreement will be addressed in accordance with LPA Manual Section 4.4.3.5 DISPUTE RESOLUTION.

SECTION 16. RESPONSIBILITY FOR CLAIMS AND LIABILITY

The Consultant agrees to save harmless the LPA from all claims and liability due to the activities of the Consultant or those of the Consultant's agents or employees in the performance of services under this agreement. In this connection, the Consultant shall for the life of this agreement, carry insurance as outlined in Exhibit "C" and attached hereto, and hereby made a part of this agreement. In any contract Consultant has with a subconsultant, Consultant shall require that the insurance requirements outlined in Exhibit "C" must be met by the subconsultant.

SECTION 17. PROFESSIONAL REGISTRATION

The Consultant shall affix the seal of a registered professional engineer or architect licensed to practice in the State of Nebraska, on all plans, documents, and specifications prepared under this agreement as required by the Nebraska Engineers and Architects Regulations Act, Neb.Rev.Stat §81-3401 et. seq.

SECTION 18. SUCCESSORS AND ASSIGNS

This agreement is binding on successors and assigns of either party.

SECTION 19. DRUG-FREE WORKPLACE POLICY

The Consultant shall have an acceptable and current drug-free workplace policy on file with the State.

SECTION 20. FAIR EMPLOYMENT PRACTICES ACT

The Consultant agrees to abide by the Nebraska Fair Employment Practices Act, as provided by Neb.Rev.Stat. 48-1101 through 48-1126, which is hereby made a part of and included in this agreement by reference.

SECTION 21. DISABILITIES ACT

The Consultant agrees to comply with the Americans with Disabilities Act of 1990 (P.L. 101-366), as implemented by 28 CFR 35, which is hereby made a part of and included in this agreement by reference.

SECTION 22. DISADVANTAGED BUSINESS ENTERPRISES

The Consultant shall ensure that disadvantaged business enterprises, as defined in 49 CFR 26, have the maximum opportunity to compete for and participate in the performance of subagreements financed in whole or in part with federal funds under this agreement. Consequently, the disadvantaged business requirements of 49 CFR 26 are hereby made a part of and included in this agreement by reference.

The Consultant shall not discriminate on the basis of race, color, sex, or national origin in the award and performance of FHWA-assisted contracts. Failure of the Consultant to carry out the requirements set forth above will constitute a breach of this agreement and, after the notification of the FHWA, may result in termination of this agreement by the LPA or such remedy as the LPA deems appropriate.

#### SECTION 23. NONDISCRIMINATION

- A. Compliance with Regulations: During the performance of this agreement, the Consultant, for itself and its assignees and successors in interest, agrees to comply with the regulations of the DOT relative to nondiscrimination in federally-assisted programs of the DOT (49 CFR 21 and 27, hereinafter referred to as the Regulations), which are hereby made a part of and included in this agreement by reference.
- B. Nondiscrimination: The Consultant, with regard to the work performed by it after award and prior to completion of this agreement, shall not discriminate on the basis of race, color, sex, or national origin in the selection and retention of Subconsultants, including procurements of materials and leases of equipment. The Consultant shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR 21.5, including employment practices when the agreement covers a program set forth in Appendixes A, B, and C of 49 CFR 21.
- C. Solicitations for Subagreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Consultant for work to be performed under a subagreement, including procurements of materials or equipment, each potential Subconsultant or supplier shall be notified by the Consultant of the Consultant's obligations under this agreement and the Regulations relative to nondiscrimination on the basis of race, color, sex, or national origin.
- D. Information and Reports: The Consultant shall provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and

shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the LPA, State or FHWA to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Consultant is in the exclusive possession of another who fails or refuses to furnish this information, the Consultant shall certify to the LPA, State or FHWA, as appropriate, and set forth what efforts it has made to obtain the information.

- E. Sanctions for Noncompliance: In the event of the Consultant's noncompliance with the nondiscrimination provisions of this agreement, the LPA will impose such agreement sanctions as it or the State and FHWA may determine to be appropriate, including but not limited to withholding of payments to the Consultant under this agreement until the Consultant complies, and/or cancellation, termination, or suspension of this agreement, in whole or in part.
- F. Incorporation of Provisions: The Consultant shall include the provisions of paragraphs A through E of this section in every subagreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, orders, or instructions issued pursuant thereto. The Consultant shall take such action with respect to any subagreement or procurement as the LPA, State or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided however, that in the event a Consultant becomes involved in or is threatened with litigation with a Subconsultant/ Subcontractor as a result of such direction, the Consultant may request that the LPA enter into such litigation to protect the interests of the LPA and, in addition, the Consultant may request that the State and United States enter into such litigation to protect the interests of the State and United States.

#### SECTION 24. SUBLETTING, ASSIGNMENT, OR TRANSFER

The Subconsultant/Subcontractor will provide geotechnical evaluation, traffic study/signal design, hydrologic/hydraulic analysis, wetland delineation, retaining wall design, bridge plan sheets, roadway lighting plans, pavement marking and signage plans, ROW cost estimate and NEPA documentation and review.

Any other subletting, assignment, or transfer of any professional services to be performed by the Consultant is hereby prohibited unless prior written consent of the LPA is obtained.

The Consultant shall enter into an agreement with its Subconsultants/Subcontractors for work covered under this agreement. All Subconsultant/Subcontractor agreements for work covered under this agreement, in excess of \$10,000, must contain similar provisions to those in this agreement. No right-of-action against the LPA will accrue to any Subconsultant/Subcontractor by reason of this agreement.

As outlined in the DISADVANTAGED BUSINESS ENTERPRISES Section of this agreement, the Consultant shall take all necessary and reasonable steps to ensure that disadvantaged business enterprises have the maximum opportunity to compete for and perform subagreements. Any written request to sublet any other work must include documentation of efforts to employ a disadvantaged business enterprise.

#### SECTION 25. CONSULTANT CERTIFICATIONS

The undersigned duly authorized representative of the Consultant, by signing this agreement, hereby swears, under the penalty of law, to the best of my knowledge and belief, the truth of the following certifications, and agrees as follows:

- A. **Neb.Rev.Stat. § 81-1715(1)**. I certify compliance with the provisions of Section 81-1715 and, to the extent that this contract is a fixed-price or cost reimbursement type professional services contract, I hereby certify that wage rates and other factual unit costs supporting the fees in this agreement are accurate, complete, and current as of the date of this agreement. I agree that the original contract price and any additions thereto shall be adjusted to exclude any significant sums by which the LPA determines the contract price had been increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. Neb.Rev.Stat. §§ 81-1701 through 81-1721.
- B. Neb. Rev. Stat. §§ 81-1717 and 1718. I hereby certify compliance with the provisions of Sections 81-1717 and 1718 and, except as noted below neither I nor any person associated with the firm in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor, or any position involving the administration of federal funds:
1. Has employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above Consultant) to solicit or secure this agreement, or

2. Has agreed, as an express or implied condition for obtaining this agreement, to employ or retain the services of any firm or person in connection with carrying out this agreement, or
3. Has paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above Consultant) any fee, contribution, donation, or consideration of any kind for, or in connection with procuring or carrying out this agreement, except as here expressly stated (if any).

**C. Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Covered Transactions.** Section C1 below contains 10 instructions that consultant agrees to follow in making the certifications contained in C2.

**1. Instructions for Certification**

- a. By signing this agreement, the Consultant is providing the certification set out below.
- b. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this project. The Consultant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the LPA's determination whether to enter into this agreement. However, failure of the Consultant to furnish a certification or an explanation will disqualify the Consultant from participation in this agreement.
- c. The certification in this clause is a material representation of fact upon which reliance was placed when the State determined to enter into this agreement. If it is later determined that the Consultant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal government, the LPA may terminate this agreement for cause or default.
- d. The Consultant shall provide immediate written notice to the LPA if at any time the Consultant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

- e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549.
- f. The Consultant agrees that should the proposed covered transaction be entered into, it will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the LPA before entering into this agreement.
- g. The Consultant further agrees to include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," provided by the State without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- h. The Consultant in a covered transaction may rely upon a certification of a prospective Subconsultant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A Consultant may decide the method and frequency by which it determines the eligibility of its principals.
- i. Nothing contained in the foregoing will be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the Consultant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- j. Except for transactions authorized under paragraph (f) of these instructions, if the Consultant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from

participation in this transaction, in addition to other remedies available to the federal government, the LPA may terminate this agreement for cause or default.

**2. Certification Regarding Debarment, Suspension, and Other**

**Responsibility Matters - Primary Covered Transactions**

- a. By signing this agreement, the Consultant certifies to the best of its knowledge and belief, that it and its principals:
  - i. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
  - ii. Have not within a three-year period preceding this agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - iii. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph A.(ii) of this certification; and
  - iv. Have not within a three-year period preceding this agreement had one or more public transactions (federal, state, or local) terminated for cause or default.
- b. Where the Consultant is unable to certify to any of the statements in this certification, such Consultant shall attach an explanation to this agreement. I acknowledge that this certification is to be furnished to the State and the FHWA in connection with this agreement involving participation of federal-aid highway funds and is subject to applicable, state and federal laws, both criminal and civil.

SECTION 26. LPA CERTIFICATION

By signing this agreement, I, Chris Beutler, do hereby certify that, to the best of my knowledge, the Consultant or its representative has not been required, directly or indirectly as an express or implied condition in connection with obtaining or carrying out this agreement to:

- (a) employ or retain, or agree to employ or retain, any firm or person, or
- (b) pay or agree to pay to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind.

I acknowledge that this certification is to be furnished to the FHWA, upon their request, in connection with this agreement involving participation of Federal-Aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

SECTION 27. ALL ENCOMPASSED

This instrument embodies the whole agreement of the parties. There are no promises, terms, conditions, or obligations other than contained herein, and this agreement supersedes all previous communications, representations, or other agreements or contracts, either oral or written hereto.



**Scope of Services**  
**So. 56<sup>th</sup> Street, Shadow Pines Drive to Old Cheney Road**  
**City of Lincoln, NE**  
**Project No. LCLC-5241(5), CN 13141**  
**City No. 701923**  
**Engineering Design Services**

**PROJECT DESCRIPTION**

The scope of the project consists of the reconstruction of So. 56<sup>th</sup> Street from Shadow Pines Drive to approximately 150 feet south of Old Cheney Road in the City of Lincoln, Nebraska. The existing pavement will be removed and replaced with full depth concrete pavement from a point immediately north of Shadow Pines Drive north to the intersection of Old Cheney Road. All intersections along the corridor will have traffic signal warrants developed. Access will be maintained at all times through the use of phased construction or temporary surfacing as needed for adjacent residents and businesses. A 5 foot concrete sidewalk is proposed on the east and west side of So. 56<sup>th</sup> Street along the entire project corridor. A grade-separated trail undercrossing shall connect to the sidewalk system at Beal Slough. The new structure at Beal Slough shall incorporate the trail into the design. Stormwater facilities will be designed and constructed to maintain proper drainage. In addition to the paving work, signing and striping will be installed to facilitate traffic flow through the project area and the roadway will have lighting installed along the entire project corridor. Sanitary sewer reconstruction will be completed as necessary if conflicts exist with other project features. Existing portions of water main will be reconstructed. The exact location of the water main reconstructions will be determined during final scope negotiations. A reevaluation of the previous Environmental Assessment (EA) signed September 9, 1998 as part of the South Fringe Roadway's EA under project STPAA-5231(9), CN 12223 will be needed. Plans are to be developed to NDOR standards for bid letting by NDOR.

Construction engineering tasks such as answering design related questions during construction, reviewing shop drawings, and attending pre-construction and construction progress meetings are not a part of this contract unless directed otherwise by the RC. A supplemental agreement will be required prior to this work commencing.

**LPA/NDOR TO PROVIDE OR COMPLETE**

1. Sample plans on a similar project.
2. As-built plans of existing facility.
3. Accident Data.
4. Electronic Aerial photos
5. Identify railroad utilities.
6. Public Meeting brochure format and samples
7. Adjacent property ownership data.
8. Deeds for previous R.O.W. projects (including railroad maps, railroad leases and city plats, if applicable).
9. Control points, ties, and benchmark information.

Project No: LCLC-5241(5), CN 13141  
 City No. 701923  
 Location: So. 56<sup>th</sup> Street, Shadow Pines Dr. to Old Cheney Rd.

Exhibit A  
 Sheet 1 of 39

10. Existing Right-of-way plans, plats and/or maps.
11. LIDAR DTM (DAT or TIN) on DVD, if available.
12. Information available on the Department's website ([www.dor.state.ne.us](http://www.dor.state.ne.us))
  - a. Geopak downloads (includes criteria files)
  - b. CADD Policy
  - c. Design drafting cell libraries
  - d. State of Nebraska Minimum Design Standards 2008
  - e. NDOR Design Process Outline (DPO), which also includes the plan-in-hand report outline, summary of quantities list, and checklists for design, plan-in-hand, earthwork, public hearing, and cost estimate.
  - f. NDOR Pipe Policy. (<http://www.dor.state.ne.us/docs/pipe-policy-english.pdf>)
  - g. Nebraska Highway Reference Log Book 2010. (<http://www.transportation.nebraska.org/docs/logbook.pdf>).
  - h. NDOR Access Control Policy, 2006  
<http://www.nebraskatransportation.org/roway/pdfs/accesscontrol.pdf>
  - i. Standard item list.
  - j. Roadway Standard Plans/Standard Special Plans
  - k. Border sheets (MicroStation files) ([http://www.nebraskatransportation.org/roadway design/microstation.htm](http://www.nebraskatransportation.org/roadway%20design/microstation.htm)).
  - l. MicroStation bridge design files, including base sheets, current design standards, libraries, etc.
  - m. Traffic signing cell library.
  - n. Nebraska Topography Labeling Application (mdl application for use with Geopak).
  - o. NDOR Roadway Design Manual, 2006  
(<http://www.transportation.nebraska.gov/roadway-design/pdfs/rwydesignman.pdf>).
  - p. Survey & Planimetric Info & Guidelines  
(<http://www.nebraskatransportation.org/roadway-design/planimetric.htm>)
  - q. NDOR Drainage Design and Erosion Control Manual  
(<http://www.transportation.nebraska.gov/roadway-design/dd-ec-manual.htm>).
  - r. NDOR Bridge Office Policies and Procedures Manual. (BOPP)  
(<http://www.transportation.nebraska.gov/design/bridge/downloads-manuals.html#bopp>).
  - s. NDOR ROW Manual.
  - t. NDOR Hydraulic Analysis Guidelines, 2009
  - u. NDOR Consultant Manual.
  - v. Environmental Reevaluation Form.
13. NDOR survey manual.
14. Survey traffic control policy.
15. Traffic safety signs (survey/inspection).
16. Information on USC and GS and/or USGS bench marks.

17. USGS Quad map(s) for the project.
18. State Plane Coordinate Manual.
19. NDOR Policy for Accommodating Utilities on Highway Right-of-Way.
20. Names of known utilities, addresses and permits listing use and occupancy permit data.
21. Traffic Study Traffic Engineering Recommendations.
22. Current Beal Slough flood study.

#### **APPLICABLE PUBLICATIONS**

The Consultant shall follow the criteria of the current applicable publications. These publications and others which the Consultant may use in this work are:

1. AASHTO LRFD Bridge Design Specifications, 4th Edition.
2. Nebraska Minimum Design Standards – Counties, Municipalities, State, 2008 (<http://www.transportation.nebraska.gov/gov-aff/pdfs-docs/MinDesStds.pdf>).
3. A Policy on Geometric Design of Highways and Streets 2004 (AASHTO).
4. State of Nebraska 2006 Roadway Design Manual (<http://www.transportation.nebraska.gov/roadway-design/pdfs/rwdesignman.pdf>).
5. Nebraska Department of Roads' Bridge Office Policies and Procedures Manual (BOPP). (<http://www.transportation.nebraska.gov/design/bridge/downloads-manuals.html#bopp>).
6. Highway Capacity Manual - Transportation Research Board Special Report HCM2010.
7. State of Nebraska, Department of Roads, Standard Specifications for Highway Construction 2007. (<http://www.transportation.nebraska.gov/ref-man/specbook-2007.pdf>).
8. NDOR Policy for Accommodating Utilities on State Highway Rights-of-Way.
9. A Guide for Design of Structural Supports for Highway Signs, Luminaries and Traffic Signals (AASHTO).
10. IES Lighting Handbook (Illuminating Engineering Society).
11. An Informational Guide for Roadway Lighting (AASHTO).
12. Roadway Lighting Handbook (USDOT, FHWA).
13. National Electric Code (NFPA).
14. National Electric Safety Code (IEEE).
15. Guide for Standardized Highway Lighting Pole Hardware (AASHTO, ARTBA, AGC).
16. Manual on Uniform Traffic Control Devices (FHWA). [http://www.mutcd.fhwa.dot.gov/2009/pdf\\_index.htm](http://www.mutcd.fhwa.dot.gov/2009/pdf_index.htm)
17. Traffic Control Devices Handbook (FHWA).
18. NDOR Crew Traffic Control Policy.
19. NDOR Instructions to Flaggers.
20. Nebraska State Plane Coordinate System Datum Adjustment Computations Lambert Conformal System Manual.

## ENVIRONMENTAL DOCUMENTATION AND REVIEW

- A. Environmental Determination. A reevaluation of the Environmental Assessment (EA) signed September 9, 1998 for this project as part of the South Fringe Roadways EA under project STPAA-5231(9), CN 12223 will be needed. Consultant shall prepare a NEPA Reevaluation Form with supporting documentation in compliance with the *NDOR LPA Manual*, and in compliance with the National Environmental Policy Act (NEPA), and all applicable State and Federal laws, Executive Orders, and regulations. The Reevaluation Form and supporting documentation will provide a level of analysis commensurate with the level of impact of the proposed action and its alternatives. Reevaluation will need to document apparent changes to and update all observed existing conditions and data supporting the purpose and need. Technical reports, including a noise study to follow new policies, will also need to be updated. The scope of services includes addressing up to one combined set of review comments from the City, NDOR, and FHWA from the submittal of the draft reevaluation for the final reevaluation document. NDOR Forms current as of the date of the initial submittal will be used for all submittals; any rework required due to changes in these forms will be considered for compensation by supplemental agreement. All resource review information and analysis will be summarized in the NDOR reevaluation form with the actual document attached as an exhibit.

Sections in the Reevaluation Form to document changes include:

1. Purpose and Need
  - a. Traffic/Safety information will be summarized and included in P&N. No additional exhibits or attachments are to be developed or distributed.
2. Socio-Economic
  - a. Census 2010 review and analysis of five census tracts in/adjacent to project area. Findings will only include text—no maps are to be provided.
3. Historic and Cultural Resources (Section 106)
  - a. Scope of services includes desktop resource review only, and submittal of NDOR 106 Concurrence Form. No revisions to the concurrence request are included, or analysis of 1998 EA. Concurrences will be described in reevaluation form and attached as exhibits.
4. Section 4(f) and Section 6(f)
  - a. Review Property Ownership and Use; Scope does not include deminimus, Individual or Programmatic 4(f) Evaluation. Desktop review of LWCF Resource Review Update only.
5. Threatened and Endangered Species
  - a. Desktop review only, no individual species surveys, with documentation on NDOR Forms using attachments which have been created from other Tasks.
6. Farmland
  - a. Document FCIR score of <60, no NRCS agency coordination is required.
7. Wetlands/Waters of the United States/Waters of the State (Title 117)
  - a. Incorporate wetland information into NDOR Biological Evaluation Checklist and submit to NDOR.
8. Floodplains
  - a. Floodplain information and permits will be included in the reevaluation form.

9. Regulated Materials

- a. No stand alone technical report is included in this scope of services. Scope of services is limited to a review of the 1998 Hazardous Material Report and updating the report with the database findings of the EDR database report, field review of current and new sites, and documenting the findings in a technical memorandum for the reevaluation.

This scope of services does not include a review of historical aerial photography, city directories, property ownership research, and other tasks recommended by ASTM.

10. Noise

- a. Noise study will consist of analyzing and evaluating noise sensitive sites, which include parts of two subdivisions (residences at London Road and Shadow Pines Drive), multiple isolated residences, undeveloped properties and businesses. Scope of services does not include NAC Category G evaluations.

11. Water Quality

- a. 404 permits are anticipated to be required for this project and therefore this scope of services for reevaluation does not include 401 activities.

12. Wild and Scenic Rivers

- a. Existence or non-existence only will be noted in the reevaluation.

13. Maintenance of Traffic During Construction

- a. Traffic maintenance plan description will be included in the reevaluation. Scope of services does not include generation of graphic displays for the reevaluation.

14. Construction Impacts

- a. Construction impacts will be described in the reevaluation. Scope of services does not include generation of graphic displays for the reevaluation.

15. Aesthetics

- a. Aesthetic review is not included in the reevaluation scope of services

16. Alternative Analysis (intersection designs)

- a. Information on alternative intersection designs will be included in the reevaluation

The focus of these reevaluations will be on important impacts and issues (i.e. resources with a reasonable likelihood of being affected to some extent), with less important areas only briefly discussed (i.e. resources with no potential to be affected to any extent). Based on the extent of impacts, mitigation will be identified as required.

Consultant will contact various agencies and interested stakeholders, except as noted in Section 1 through 16 above, including U.S. Department of Defense, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, Nebraska State Historic Preservation Officers, Nebraska Department of Environmental Quality, Nebraska Department of Natural Resources, Nebraska Game and Parks Commission, and any other applicable agencies, and any other applicable stakeholders. The Consultant shall obtain necessary permits as required.

Consultant will gather information from the City of Lincoln, agencies listed above, and other sources, including site visits. If necessary, the Consultant will arrange for an agency scoping meeting and site tour.

Wetland Delineation. *Note:* The person completing the wetland determination and/or delineation for the project must meet the qualifications in the wetland guidance found on the NDOR website at the following link: <http://www.dor.state.ne.us/gov-aff/downloads.htm>.

- B. Complete a jurisdictional wetland evaluation of the wetland and waters of the U.S. for the project site. Field work associated with this evaluation has been completed under a separate City of Lincoln contract in order to complete wetland delineations prior to November 1, 2011. A wetland report will be prepared documenting the findings.
- C. 404 Permitting Assistance. This project is assumed to qualify for a Nationwide Permit.
- D. Complete NEPA Forms and documentation for the EA reevaluation on forms current as of the date of initial submittal. Any rework required due to changes in these forms will be considered for compensation by supplemental agreement.
- E. The Consultant will schedule and attend three environmental review progress meetings. The Consultant will create and distribute a meeting agenda at least 48 hours prior to all progress meetings and will prepare meeting minutes.
- F. Prepare NDOR Green Sheets and revisions required.
- G. Storm Water Plan, SWPPP, NOI to be completed by the selected consultant and authorized by City of Lincoln staff as appropriate.

#### **ENVIRONMENTAL/HISTORICAL REVIEW**

Consultant shall review the Probable Class of NEPA Action for Local Federal-Aid Projects (DR Form 53). The document addresses the existing environmental conditions and concurrence from FHWA with the NDOR recommended probable class of action. This form states this project will reevaluate the previously approved Environmental Assessment.

#### **FORMAT OF PROJECT PLANS**

- 1. The Consultant shall prepare plan and profile plan sheets on a scale of 1" = 100', and "2L" (enlarged detail) sheets on a scale of 1" = 50' or 1" = 20'.
- 2. All full-sized plan sheets must be 24" x 36". The border sheet information is on the Department's website (See Sheet 2). The border will measure 20.9" x 31.7". All half-size plan sheets must be on 11" x 17" paper.
- 3. Any material which does not produce an acceptable reproduction will be returned to the Consultant for rectification.
- 4. The Consultant shall follow the State's CADD drafting procedures and guidelines in preparing the project plans.
  - a. Sheets must be set up according to the State's procedures.
  - b. File names must follow the State's CADD naming convention.
  - c. Line weights, line styles, text size and leveling must follow the State's guidelines.

The CADD files must also conform to the following standards and conventions:

- d. Working units must be:
  - 1. Master Units = Ft

2. Sub Units = 1000 TH
3. Position Units = 1
- e. Coordinates must be in the Lancaster County Modified Grid System.  
*Alternatively*, Global origin of the graphics design plane will be located at x= 0.0000,  
y= 0.0000.

#### **PLAN ORDER FOR PLAN PACKAGES.**

Title Sheet  
2T Typical Sections  
2S Summary of Quantities  
2K Summary of Soils and Geotechnical Information  
2W plans with Wetland Delineation  
2H Horizontal Alignment and Orientation  
2N General Information  
2P Phasing Information  
2L Large sheets for detail (construction and removals, geometrics, joints, grades, drainage, sediment and erosion control)  
P&P Plan and Profile  
Temporary Roads  
Traffic Pavement Markings and Signing  
Lighting  
Earthwork Data  
Drainage Cross-Sections  
Bridge Plans  
Special Plans  
R.O.W. Plans  
Roadway Cross-Sections

#### **PROJECT MANAGEMENT**

*a. Project Management*

The Consultant Project Manager will serve as point of contact, maintain project schedule and budget, and be responsible for coordinating work of sub-Consultants. Provide regular progress reports with invoices.

*b. Coordination with Others*

The Consultant will coordinate their design with agencies and/or Consultants that are involved with this project or adjacent projects. Coordination includes one-on-one meetings with the agencies or Consultants. This task does not include coordination with utilities. See Sheet 10 for coordination with utilities.

*c. Design Memorandum*

The Consultant will prepare a design memorandum using DR Form 190, "Principle Controlling Design Criteria" establishing the design criteria to be used on the project and submit the information to Responsible Charge (RC) for concurrence.

Project No.: LCLC-5241(5), CN 13141  
City No. 701923  
Location: So. 56<sup>th</sup> Street, Shadow Pines Dr. to Old Cheney Rd.

Exhibit A  
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## **GENERAL PROJECT MEETINGS**

### **Kick-Off Meeting**

Upon notice from the RC, the Consultant will schedule and attend a kick-off meeting with the Local Public Agency (LPA) staff. The RC will supply a list of invitees and the Consultant will be responsible for notifying the attendees.

### **Progress Meetings**

The Consultant will schedule and attend monthly design progress meetings. The Consultant will create and distribute a meeting agenda at least 48 hours prior to all progress meetings.

### **Review Meetings**

The Consultant will schedule and attend review meetings to receive the RC's review comments from the submittals.

### **Plan-in-Hand**

The Consultant will schedule and attend a plan-in-hand field inspection. This field inspection will follow the review of the plan in hand plans by the RC and NDOR.

### **Public information meetings**

The Consultant will schedule and attend all public meetings and prepare necessary displays for the meeting.

### **Utility Review Meetings/Coordination**

Any utility review meeting should be scheduled to coincide with a regular project progress meeting. The scope of services will include time for coordination via the phone and one-on-one meetings with affected utilities, depending on the complexity of the project.

## **TOPOGRAPHIC SURVEY**

### **Topographical Survey**

A topographic ground survey was completed for this project in 2004 and it is anticipated that the majority of this survey is still valid. The Consultant shall assume new survey will be required near Shadow Pines to cover new construction of 56th Street, at Beal Slough to verify the channel conditions and grading operations east of 56th Street, new development near both Waltz Road and Cumberland Drive, and for a current tree count. The Consultant shall review the project during a walk-through and recommend other additional survey needs.

The Consultant will perform the necessary topographic ground survey including the existing centerline, intersecting streets, alleys and drives, tying the location of land monuments to the existing centerline, cross-sections and profiles necessary for the hydrologic study and hydraulic design of the drainage system. A topographic survey will be performed using electronic 'Total Station' technology in MicroStation/GEOPAK format. Copies of field book records and electronic records will be submitted to the RC at the completion of final design. Natural topographic features and man-made features, will be recorded by coordinates to the nearest one-tenth (0.1) of a foot. All such topographic features, which are pertinent to the design or are necessary to properly show the effect of the proposed work upon the adjoining property and/or improvements, will be recorded. The topographical survey will include an exact and detailed tree count, noting the size, type and location (station and offset will be noted on the plans).

The limits of the survey are to be at least 150 feet on each side of the existing centerline or to corners of structures on tracts, and must include enough information to build the proposed typical cross-section and show the limits of construction. The survey limits will extend 500 feet before the start of the project and 500 feet beyond the end of the project to accurately show the vertical and horizontal alignment of the roadway and the topographic features 150 feet either side of the centerline. The topographic survey will extend along intersecting streets a minimum distance of 300 feet and will be at least 100 feet in width. Channel meanders will be identified and surveyed along their flow lines for 500 feet from roadway centerline.

#### Base Map Preparation

Consultant will create the base map using the topographic survey data.

#### Horizontal Control

The Consultant shall provide a list of horizontal control points with coordinates, descriptions, station and offset. Horizontal control will be referenced to the Lancaster County Modified Grid Coordinate System using known land survey monuments.

#### Vertical Control

Vertical control will be completed by differential level circuit referenced to NGVD 88. Ties to control used for City of Lincoln projects in the area can be done for "design-fit" confirmation.

#### Locate Section Corners

The Consultant will survey section corners in order to assemble the geometry to create the right-of-way drawings.

#### Bench Level Run

Bench levels will be run by direct leveling methods, (no "side shots" will be permitted). Levels will close within an allowable error of five-hundredths (0.05) of a foot times the square root of the length of the level loop in miles. The Consultant will run a closed level circuit, establishing intermediate benchmarks along the project and on intersecting streets beyond the limits of the project. This level circuit will be tied benchmarks provided by the LPA in NGVD 88.

#### Utility Locates

Utilities will be drawn from surveying above ground features, including markings by utility companies resulting from the locate request. Information supplied by utility companies will be used to complete the placement of existing utilities on the plans. Locations from utility plans will be transferred into the topographic survey. Where available, above-ground features will be used to improve accuracy. The Consultant will add a disclaimer to the drawings with respect to the undetermined location of underground utilities.

### **RIGHT-OF-WAY SURVEY**

#### Right-of-Way Survey

The Consultant shall provide a complete Right-of-Way survey which must include the locating of land corners, lot corners, and to establish coincidence of these corners with the project centerline alignment or coordinate control. Where corners can not be found, the Consultant will rely on the City's land base files to complete the Right-of-Way survey.

The Consultant shall make sure the survey notes and accuracy are done according to professional land surveying practices, and must include sufficient data to compute and

draft accurate metes and bounds descriptions of Right-of-Way and easement takings for deeds and eminent domain proceedings.

In urban areas, the Consultant shall locate and/or establish block corners or street monuments sufficient to determine existing Right-of-Way limits of the street, and to determine existing Right-of-Way limits and direction of intersecting streets. The Consultant shall include the descriptions of each corner, or monument, tie each corner or monument to project centerline or the coordinate control in the survey notes, and establish witnesses as necessary under good land survey practices.

The Consultant shall qualify discrepancies or deviations from existing plat data.

The Consultant shall tie the necessary land monuments (section and quarter section line monuments) to the project's coordinate control or to the survey baseline by station, plus and distance right or left to the nearest one-hundredth (0.01) foot.

The Consultant shall furnish a copy of the survey plat in accordance to professional land surveying laws and practices.

## **UTILITY COORDINATION**

### **Utility Location/Verification**

The Consultant will review the utility locations shown on the plans, and verify these locations during field inspections. After survey is complete, plans will be printed and distributed to the Utility Companies for verification of ownership, type, size, location, and cased or uncased.

The Consultant will request that the Utility Companies return to the Consultant marked up plans with utility verification. The Consultant will incorporate the information into the topography. All utilities identified in the topographic survey and verified by the individual utility will be incorporated into the plans.

Identification and verification by the Utility Companies of major utility conflicts such as fiber optic lines, gas pipelines, crude oil pipelines, high-pressure waterlines, transmission lines, etc., will be accomplished at the earliest possible time. The Consultant and the RC will discuss major conflicts and attempt to avoid them. If avoidance is not possible, the Consultant will then request the Utility Company to verify the conflict and provide a preliminary estimate of reimbursable costs associated with the utility relocation.

### **Utility Plan Submittals**

With each plan submittal to the LPA the Consultant will distribute plans to public and private utilities within the project limits for review and comment.

## **NOTE REDUCTION AND PRELIMINARY PLOTTING**

The Consultant shall prepare project base files and plan sheets in accordance with the NDOR CADD standards. Plan sheets to be included in the first submittal may include the following:

- Preliminary Title Sheet
- Typical Cross-Section Sheets (2T)
- Wetland Sheets (2W)
- Construction Phasing Plans (2P)
- Geometric Sheets (2L)

- Storm Drainage Plan Sheets (2L)
- Construction Sheets (2L)
- Removal Sheets (2L)
- Sediment and Erosion Control Sheets (2L)
- Roadway Plan and Profile Sheets (Start with sheet 3)
- Traffic Control Sheets
- Lighting Plan Sheets
- Culvert/Channel Cross-Section Sheets
- Storm Water Cross-Section Sheets
- Bridge (SP-)
- Detail Sheets (SP-)
- Retaining Wall Plan and Profile Sheets (SP-)
- Wastewater Plan and Profile Sheets
- Water Main Plan and Profile Sheets
- Traffic Signal Plan Sheets
- Right-of-Way Sheets (Existing right-of-way and ownerships identified)
- Roadway Cross-Section Sheets

#### **PRELIMINARY/FUNCTIONAL DESIGN**

The Consultant will prepare project base files and plan sheets in accordance with the NDOR CADD standards. In general, the Consultant shall provide preliminary and functional roadway design services for (but not be limited to):

1. The Consultant shall prepare a video and still photo log to be used to document preconstruction conditions. This information shall be submitted at the time of the first plan submittal.
2. The Consultant shall schedule and conduct a project walk-through to locate changes which could affect the current project design. This walk-through can be held in conjunction with the kick-off meeting.
3. The Consultant's evaluation of possible alternatives will be limited to a review of previously considered design options.
4. The Consultant shall prepare preliminary plans for the Plan-in-Hand and submit one set to the LPA three weeks prior to Plan-in-Hand along with preliminary quantities with the appropriate forms filled out. This must include 2A's, typical sections, plan and profile with drainage and driveway build notes, and earth work summary, or 2L's (whichever is applicable), roadway cross-sections, drainage cross-sections with recommendations, wetland impacts, R.O.W. information (ownerships), and preliminary L.O.C.'s.
5. Three weeks prior to Plan-in-Hand, the Consultant shall complete and submit to the LPA an avoidance and minimization analysis and preliminary estimate of wetland impact, if applicable.
6. In addition to the above, the Consultant shall make revisions to the preliminary plans from the Plan-in-Hand, and submit them as Functional plans.

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Exhibit A  
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The Consultant will develop the following plans sheets with the following information, unless previously developed:

- a. Preliminary Title Sheet:
- Project name, location and control number.
  - Design standard
  - Design traffic data
  - Design speed
  - Legend
  - Index of sheets
  - Project length
  - Location map
  - North arrow
  - Miscellaneous notes, i.e. referencing the 2007 NDOR Standard Specifications for Highway Construction.

b. Typical Section Sheet

c. Wetland Sheets (2W) will show the pavement outline, north arrow, scale and identify wetlands and channels.

d. Horizontal/Vertical Control Sheets (2H)

e. General Notes Sheet (2N)

f. Construction Phasing Plans (2P) The construction phasing plan is to be reviewed by the NDOR District Construction Engineer for constructability.

2L sheets (Large Scale) will be developed as needed to show project details which cannot be shown on a smaller scale. The following is a list of 2L sheets needed for plan in hand plan set submittal:

g. Geometric Sheets (2L) will show stations and offsets or coordinate points.

h. Storm Sewer Plan Sheets (2L) The hydrologic and hydraulic computations used to design the system will be submitted with plan in hand plans.

i. Construction Sheets (2L) build notes will use NDOR standard bid items and units of measure. Non-standard bid items will need to be reviewed and approved by NDOR. A summary of quantities mirroring the bid items on the construction sheets will be submitted with the plan in hand plans on DR forms 342 and 343 for NDOR's use in preparing the opinion of probable cost (Cost Update 30).

j. Removal Sheets (2L) removal notes will use NDOR standard bid items and units of measure. Non-standard bid items will need to be reviewed and approved by NDOR. A summary of quantities mirroring the items on the removal sheets will be submitted with the plan in hand plans on DR forms 342 and 343 for NDOR's use in preparing the opinion of probable cost (Cost Update 30).

k. Sediment and Erosion Control Sheets SWPPP (2L)

l. Plan and profile sheets will show the following information:

- Vertical and horizontal curve information
- Roadway stationing
- Geometric information, if space allows

- Bench marks
  - Roadway grades
  - Existing topography (manmade and natural)
  - Existing known above and below ground utilities
  - Build and removal notes if space allows (tabular or box notes).
  - North Arrow
  - Scale
  - Elevations of the existing roadway along centerline and finished grade elevations.
  - Preliminary limits of construction
  - Improvements to intersections and drives
  - Sidewalk construction (ADA Compliant)
  - Existing right of way
- m. Roadway Lighting Plan Sheets
- n. Earthwork Data Sheets will show cut and fill quantities by station.
- o. Culvert/Channel Cross-Section Sheets
- p. Storm Sewer Cross-Section Sheets
- q. Structural/Bridge Plan Sheets (SP-)
- r. Retaining Wall Plan and Profile Sheets (SP-)
- s. Right-of-way Plans these plans will show the existing topographic features, the limits of construction, existing right-of-way, easements, ownerships, property lines and consist of the following plans:
- Sheet (R-1) will show the location of the project, existing right-of-way, permanent and temporary easements, property, sub-division and section lines and information. A legend showing the patterning used to show existing right-of-way, easements, etc. the patterning used will conform with the patterning used by NDOR. The standard NDOR title block will be used showing the scale, north arrow and title block.
  - Sheet (R-2) is a tabular summary sheet listing the tract number, owner, property description, records (area owned, areas of taking, area of temporary and permanent easements, etc.) and their locations sheet numbers and tracts.
  - Sheet (R-3 thru R-) will be detailed plans showing the existing topographic features, the limits of construction, existing right-of-way, easements, ownerships, property lines, station and offsets of break points in the right-of-way, and easements.
- t. Roadway Cross-sections these plans will are to show the existing and proposed roadway cross-section, stationing, grade elevations, the location of the right-of-way and easements.

### **WATER LINE AND SANITARY SEWER RELOCATION/RECONSTRUCTION**

Water Line Reconstruction Plan Sheets. The Consultant shall identify existing water mains or sanitary sewers that are in conflict with project improvements. Project improvements are to be designed around existing water mains and sanitary sewer lines;

Project No.: LCLC-5241(5), CN 13141  
 City No. 701923  
 Location: So. 56<sup>th</sup> Street, Shadow Pines Dr. to Old Cheney Rd.

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however, in some situations relocating the water main or sanitary line will produce an improved engineering design. Engineering judgment shall be used to determine when to relocate a public utility. This task involves minor reconstruction or relocation involving a public utility due to a roadway improvement and not a project initiated by the utility. Sometimes it is beneficial for municipalities (LPAs) to upgrade existing facilities concurrently with a transportation construction project. Federal aid Highway Transportation funds may not be used for betterments to water or wastewater systems. Only portions of the system directly impacted by improvements to the roadway may receive Federal-aid Highway Transportation funds. The pay items for improvements to the water and waste water systems will need to be separated out from the pay items for which Federal participation is allowed.

The Consultant shall also design the replacement of an existing 16 inch water main which is currently under 56th Street from just south of Cumberland Drive to just south of Old Cheney Road. The Consultant shall assume the location of the proposed water main will be outside the proposed back of curb line along the west side of 56th Street. This work will be considered a betterment and will be funded by the City of Lincoln.

- Water Main Reconstruction, Plan Sheets. The design of water mains, water distribution systems, valves, backflow preventers, fire hydrants, etc. shall comply with the Federal and State *Safe Drinking Water Acts*. The design of the system shall generally follow the standards of the American Water Works Association (AWWA) and the *Recommended Standards for Water Works*, a Report of the Committee of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers (10-State Standards). The design and construction of the improvement shall comply with LPA's Standard Specifications for Construction and Standard Plans if applicable. Fire flow requirements shall generally follow those in the *Fire Suppression Rating Schedule* published by the Insurance Services Office. All plans for the construction of water system improvements shall be reviewed and approved by the LPA's Public Works and Utilities Department, the Local Fire Department and if applicable the State of Nebraska Department of Health and Human Services, prior to construction. The Nebraska Safe Drinking Water Act and regulations require plans and specifications for all major construction related to public water systems be prepared by a registered professional engineer and be approved by the Department of Health and Human Services before construction costs are committed by the system owner. The law defines major construction as structural changes that affect the source of supply, treatment processes, or transmission of water to service areas, but it does not include the extension of service mains within an established service area.

- Horizontal Alignment
- Vertical Alignment
- Detail Drawings
- Utility Conflict Verification and Resolution

- Wastewater Reconstruction Plan Sheets. The design of the wastewater collection system shall comply with the requirements of the Federal and State *Clean Water Acts*. Design and construction of facilities for the City's the design of the system shall generally follow the *Recommended Standards for Sewage Works*, a Report of the Committee of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers (10- State Standards). Details of construction shall conform to the LPA's *Standard Specifications for Municipal Construction and Standard Plans* if applicable. All plans for construction of wastewater system improvements shall be

reviewed and approved by the LPA's Public Works and Utilities Department and the State of Nebraska Department of Environmental Quality prior to construction.

- Horizontal Alignment
- Vertical Alignment
- Detail Drawings
- Utility Conflict Verification and Resolution

#### **PUBLIC INVOLVEMENT**

##### *a. Public Involvement Planning Meetings ( 2 Meetings)*

The Consultant will meet with the LPA to develop public involvement strategies. The Consultant will be responsible for distributing meeting invitations, coordinating meeting locations, and preparing meeting minutes.

##### *b. Public Involvement Plan*

The Consultant will develop a public involvement plan for review and approval by the RC. The plan should include dates of anticipated meetings, anticipated forms of communication with the public (i.e. website, newsletter, door hangers, etc.), and a database of adjacent property owners and other project stakeholders. All information to be sent to the public or posted to the web shall be reviewed by the RC prior to distribution. The information will be submitted for review a minimum of one week prior to publication.

##### *c. Database Development/ Maintenance*

The Consultant will develop and maintain a database of project stakeholders to include residents, property owners, organizations, agencies, LPA staff and officials, project team members and other parties who may be interested in or impacted by the project. The database shall identify stakeholder names, telephone numbers, addresses, tract numbers, conversation dates and other pertinent information. A copy of the database will be given to the RC upon request. The Consultant will also serve as the point of contact for public involvement and information, and will keep a record of all public contacts and inquires regarding this project.

##### *d. Key Stakeholder Outreach ( 3 Meetings)*

The Consultant and LPA staff will identify key project stakeholders for participation in focus group meetings prior to the public meetings. The Consultant shall be responsible for distributing meeting invitations, coordinating meeting locations, facilitating, and preparing meeting minutes.

##### *e. City Council/County Board ( 1 pre-council/Board, 1 regular meeting)*

At the request of the RC, the Consultant will attend 1 pre-council/board meeting and 1 council/board meeting to report on project progress and answer council/board member questions.

##### *f. Open Houses ( 2 Meetings)*

The Consultant will schedule, arrange, and facilitate 2 public open houses to be held in conjunction with the NEPA phase and pre-construction. The Consultant will draft a newspaper notice of the open house to be reviewed by the RC. The notice of the open houses will be published 10 days prior to the event in a local newspaper as well as the City of Lincoln website.

During the public meeting, LPA staff and the Consultant will be available to answer questions and receive comments. The Consultant will provide and maintain a sign-in list and comment forms for the open houses and prepare a written summation of the oral and written comments received. Consultant shall compile public comments and prepare responses for review. It is assumed that up to two revisions will be made to the responses and each will be resubmitted for review.

*g. One-on-One, Small Group Meetings (30 Meetings)*

The Consultant will meet with individuals who are significantly affected by the project. These meetings will be conducted prior to public open house meetings.

*h. Newsletters/Informational Materials*

The Consultant will develop and reproduce 2 newsletters throughout the course of the project. Newsletters shall be mailed to all project stakeholders and posted to the LPA's web site. The Consultant shall also develop other informational material such as door hangers, postcards, or individual letters to property owners as requested by the RC. All informational materials shall be reviewed and approved by the RC prior to printing and distribution.

*i. Public Involvement Report/Documentation*

The Consultant will write a report documenting the public involvement process following each of the two public open houses. The reports shall include tools and techniques utilized, numbers of citizens participating, meeting minutes, a list of meeting attendees, and general description of public reaction.

## **PAVEMENT DETERMINATION**

The Consultant shall provide complete documentation of the structural pavement design analysis used for the project.

The pavement analysis must be a nationally recognized method, such as AASHTO, AIM, PCA, etc.

The Pavement Determination Data Sheet (supplied by NDOR) shall be completed by the Consultant and included as part of the documentation.

## **DRAINAGE ANALYSIS**

*a. Hydraulic/Hydrologic Analysis*

The Consultant shall design open and closed drainage systems in accordance with the most current edition of the City of Lincoln Drainage Criteria Manual. NDOR and FHWA are still refining their policy for storm sewer participation and updated guidance will be included in the NDOR LPA Manual. Only those portions of the system directly impacted by the transportation project may receive Federal-aid Highway Transportation funds. The pay items for components related to the storm water drainage system need to be separated out, so that the amount of Federal-aid participation can be determined. The Consultant shall research, to the extent possible, the original drainage patterns to determine which areas did or did not drain to the roadway in order to estimate participating and non-participating percentages.

*b. Floodplain Study*

The Consultant shall coordinate with the local regulatory agencies (Natural Resources District, Corp of Engineers, etc.) when designing items or fill within the flood plain. The design shall be in accordance with current backwater standards.

c. *Preliminary Drainage Studies*

The Consultant shall review available drainage studies, identify overland flow paths and sumps. At the request of the RC, hydraulic design calculations and GEOPAK drainage models will be submitted for review.

**TRAFFIC STUDY AND SIGNAL DESIGN**

*Traffic Data Collection*

Traffic counts along the project corridor have been taken under a separate City of Lincoln contract in order to complete this effort prior to winter weather and the holiday season.

*Traffic Analysis (20 Year Projection)*

The Consultant will develop traffic forecasts for the corridor and will evaluate signal warrants (if necessary) for the construction year and the horizon year.

With the exception of the 56th & Old Cheney Road intersection, the Consultant will analyze and design appropriate improvements to all legs of intersections along the project. The analysis will include turn lane locations and lengths, U-turn movements for passenger vehicles, sidewalk ramp locations and turning movement radii based on the design vehicle. The 56th & Old Cheney Road intersection shall be analyzed as described above, but there will be no design work required unless directed by the RC and approval by a supplemental agreement is established.

The Consultant shall analyze and submit a memo regarding the use of roundabouts as an alternative method of traffic control at signalized and possible future signalized intersections (Waltz and London Roads).

The Consultant shall analyze and report on when the Old Cheney Road intersection could be expected to fail. This will be compared to when Highway 2 improvements could be implemented.

Upon completion of the traffic analysis the Consultant will prepare a report, to be reviewed by the RC, that contains graphics as needed to reflect the recommendations, geometrics, and design alternatives studied.

*Traffic Signal/ITS Design and Street Lighting*

Signal design is not a part of this contract unless directed otherwise by the RC. A supplemental agreement will be required prior to this work commencing.

For purposes of future ITS systems, 4" Conduit and 12-fiber single-mode shall be placed along the length of the project. Also, permanent changeable message signs and traffic monitoring cameras may be designed in conjunction with this project.

Lighting for this project was previously designed by LES and incorporated into the project plan set. Any updates to make the plans current will be completed by the Consultant and furnished to LES for review. The Consultant shall not be responsible for the layout or lighting levels previously established by LES.

City of Lincoln signal specifications are to be used and included as part of the project special provisions. A public interest letter will be issued as needed. There will be similar requirements for street lighting. Public interest letters must be of sufficient detail to support the use of proprietary items.

The Consultant shall prepare a letter to be submitted with PS&E plans indicating that traffic devices are in conformance with regional architecture

The Consultant will schedule and attend three traffic analysis/design related progress meetings. The Consultant will create and distribute a meeting agenda at least 48 hours prior to all progress meetings and will prepare meeting minutes.

#### *Pavement Marking & Signing*

The Consultant shall prepare plan sheets showing pavement marking and signage layouts. In addition, temporary signage and pavement markings will be shown, if applicable.

### **FUNCTIONAL PLANS (60%)**

The Consultant shall utilize the design plans which were previously developed but have been converted to NDOR specifications and standards.

Functional plans incorporate review comments and needed revisions identified during the plan in hand and serves as a mid point check of the design (60% complete). The work items to be completed and the level of detail at this stage of the design may be found on Checklist 06-45, Functional Design Review Checklist at the following website (<http://www.dor.state.ne.us/gov-aff/lpa/lpa-checklists/index.html>).

The following plans with the limits of construction are to be submitted at the completion of the functional design:

- Preliminary Title Sheet (by Consultant)
- Title Sheet (Prepared by NDOR PS&E)
- Typical Cross-Section Sheets (2-T)
- Summary Of Soil and Materials Information (2K)
- Wetland Sheets (2W)
- Horizontal/Vertical Control Sheets (2H)
- General Notes Sheet (2N)
- Construction Phasing Plans (2P)
- Geometric Sheets (2L)
- Joints and Grades Sheets (2L)
- Storm Drainage Plan Sheets (2L)
- Construction Sheets (2L)
- Removal Sheets (2L)
- Sediment and Erosion Control Sheets (2L)
- Roadway Plan and Profile Sheets (Start with sheet 3)
- Traffic Control Sheets
- Pavement Marking & Signing Sheets
- Lighting Plan Sheets
- Earthwork Data Sheets
- Culvert/Channel Cross-Section Sheets

- Sediment and Erosion Control Sheets (2L)
- Roadway Plan and Profile Sheets (Start with sheet 3)
- Traffic Control Sheets
- Pavement Marking & Signing Sheets
- Lighting Plan Sheets
- Earthwork Data Sheets
- Culvert/Channel Cross-Section Sheets
- Storm Water Cross-Section Sheets
- Bridge (SP-)
- Detail Sheets (SP-)
- Retaining Wall Plan and Profile Sheets (SP-)
- Retaining Wall Details (SP-)
- Wastewater Plan and Profile Sheets
- Water Main Plan and Profile Sheets
- Traffic Signal Plan Sheets
- Right of Way Title Sheet (R-1)
- Right of Way Summary Sheet (R-2)
- Right-of-Way Plans (R-)
- Roadway Cross-Section Sheets (X-)

After the review and approval of the final plans, the LPD Project Coordinator will issue a notice to proceed with the right of way design to the LPA.

#### **GEOTECHNICAL EVALUATION**

##### *a. Data Research*

Based upon current site topography, the site grading is expected to be moderate, with centerline grade generally maintained and cuts and fills required to widen the roadway expected to be generally 15 feet or less. Fill may be more at the Beal Slough crossing. Several feet of cut and a cast-in-place retaining wall will be required south of London Road, west of 56th Street.

It is anticipated 4 soil test borings will be taken along the project. The fee associated with these borings assumes the project site is easily accessible for truck-mounted drilling equipment and rights of access can be obtained from adjacent owners. These test borings will be in accordance with schedules located in the most recent NDOR Geotechnical Policy and Procedures Manual.

The location and number of borings needed is anticipated as follows:

- 2 borings near Beal Slough (90 foot depth)
- 1 boring on the southwest corner of the 56<sup>th</sup> & London Rd. intersection (15 foot depth)
- 1 boring south of the 56<sup>th</sup> & Old Cheney intersection (15 foot depth)

*b. Design Recommendations*

The Consultant shall prepare geotechnical recommendations for the primary purpose of developing geotechnical design criteria for use in designing retaining walls, drainage structures, pole foundations, bridges, and pavements for the project.

*c. Previous Geotechnical Report*

The Consultant shall review the data contained in the Geotechnical Report prepared by PSI, Inc. dated January 27, 2005.

*d. Site Visit*

The Consultant shall make one trip to the site for visual inspection of the site and to determine proper soil boring locations.

*e. Laboratory Tests*

It is anticipated that the Consultant shall perform the following tests:

1. Twelve (12) unconfined tests
2. One (1) consolidation test
3. Ten (10) water content tests
4. Eight (8) dry density tests
5. Four (4) soil classification tests.

*f. Geotechnical Report*

The Consultant shall prepare and submit 2 copies of a geotechnical report to the RC for review.

**BOX CULVERT STRUCTURE DESIGN**

*a. Structure Alternative Analysis*

The Consultant shall investigate structural alternatives. Items to consider during analysis shall include span length, pier location, constructability, impact on surrounding properties, aesthetic features, cost, and operation of roadways or channels crossing the bridge. The following bridge alternatives shall be analyzed at the Beal Slough crossing:

1. Conventional" structure with steel girder superstructure
2. Conventional" structure with concrete girder superstructure
3. Standard Reinforced Concrete Box Culvert

*b. Bridge Design and Plan Preparation*

The Consultant shall prepare a report of conceptual design information, which details all pertinent design features for each structural alternative. This information shall be included in the project design memorandum. The City will select one structure design to be carried forward to final design.

During preliminary bridge design the Consultant shall analyze the impacts of fill slopes vs. MSE walls at the bridge abutments. This project assumes fill slopes will be designed. The Consultant shall investigate the soil types for the bridge design. (See Sheet 22 - Geotechnical Evaluation)

Once the preliminary design sheets (Bridge Type, Size, and Location (TS&L) and data sheets) are complete, they shall be submitted for review by the RC and the NDOR Project Coordinator. Prior to submitting TS&L sheets, the Consultant shall recommend the type of median or center barrier to construct as well as identify pedestrian needs on or under the bridge. A trail shall be designed under the bridge to connect to the street-grade sidewalk.

After the preliminary design is approved, the Consultant shall prepare final design plans in accordance with NDOR bridge design policies and procedures as well as the most recent edition of AASHTO Standard Specifications for Highway Bridges. If pedestrians are to travel underneath the bridge, the Consultant shall investigate and recommend solutions for bird control on the under-side of the bridge.

The Consultant shall have an independent design check for each alternative per NDOR requirements. A copy of the design check and comments made during the design check shall be submitted to the RC.

The Consultant shall provide shim shot calculations for use during construction.

If more than one structure design is to be prepared for final design and bids; this will be considered additional work and a supplemental agreement shall be executed prior to the start of any related work.

*c. Box Culvert Design and Plan Preparation*

For standard reinforced concrete box culvert design, the Consultant shall prepare a report of conceptual design information, which details all pertinent design features. This information shall be included in the project design memorandum.

The Consultant shall design a standard NDOR box culvert section in order to utilize NDOR design information for replacement structures. If a non-standard NDOR design is determined to be necessary during the design process, then a supplement shall be prepared for the non-standard box culvert design.

*d. Guardrail*

Guardrail design is not anticipated if a box culvert is utilized for the Beal Slough crossing. If a bridge design is used, guardrail design shall be added by a supplemental agreement.

*e. Lighting*

The Consultant shall design lighting along the bridge as follows:

- Standard Lighting
- Lighting Above the Bridge Deck
- Lighting Below the Bridge Deck for Bike Trail Undercrossing

The Consultant shall include the design of circuits and wiring as well as future conduit location in the bridge design.

*f. Retaining Wall*

The Consultant shall investigate various retaining wall designs and recommend a wall type. Example retaining wall options include modular block walls, "stone-strong" walls, and cast-in-place walls. A memo shall be prepared which indicates the findings from the wall investigation and a proposed final selection. The Consultant shall prepare retaining wall profiles for each wall along the project. This scope of services assumes all retaining walls are cast-in-place walls and the Consultant is responsible for all design and details associated with the cast-in-place walls.

The Consultant shall investigate the soil types for retaining walls. See Geotechnical Evaluation.

#### **FINAL PS&E PLAN SUBMITTAL**

##### *a. Final PS&E plans*

The Consultant shall incorporate review comments and revisions identified during the review of the final plans and right-of-way negotiations. The PS&E plan sheets include but are not limited to following sheets:

- Preliminary Title Sheet (by Consultant)
- Title Sheet (Prepared by NDOR PS&E)
- Typical Cross-Section Sheets (2-T)
- Summary of Quantities Sheet (Prepared by NDOR PS&E)
- Summary Of Soil and Materials Information (2K)
- Wetland Sheets (2W)
- Horizontal/Vertical Control Sheets (2H)
- General Notes Sheet (2N)
- Construction Phasing Plans (2P)
- Geometric Sheets (2L)
- Joints and Grades Sheets (2L)
- Storm Drainage Plan Sheets (2L)
- Construction Sheets (2L)
- Removal Sheets (2L)
- Sediment and Erosion Control Sheets (2L)
- Roadway Plan and Profile Sheets (Start with sheet 3)
- Traffic Control Sheets
- Pavement Marking & Signing Sheets
- Lighting Plan Sheets
- Earthwork Data Sheets
- Culvert/Channel Cross-Section Sheets
- Storm Water Cross-Section Sheets
- Bridge (SP-)
- Detail Sheets (SP-)
- Retaining Wall Plan and Profile Sheets (SP-)
- Retaining Wall Details (SP-)
- Wastewater Plan and Profile Sheets
- Water Main Plan and Profile Sheets
- Traffic Signal Plan Sheets
- Right-of-Way Title Sheet (R-1)

- Right-of-Way Summary Sheet (R-2)
  - Right-of-Way Plans (R-)
  - Roadway Cross-Section Sheets (X-)
1. List of standard plans
  2. Individual Summary of Quantities (DR Form 355 and Horse Blankets DR Form 137)
  3. Special Provisions
  4. PS&E Required Sheet DR Form 280

**QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)**

The Consultant will provide a copy of their QA/QC plan to the RC at the start of the project. The Consultant will submit in writing that this plan has been used during the project at each submittal with the name of the person responsible for performing the QA/QC the review.

**PERMIT APPLICATIONS/AGREEMENTS**

The Consultant shall prepare and submit on behalf of the LPA ALL necessary permits, agreements, certifications, and forms. The Consultant shall copy the RC on all applications being submitted. Permits that may be needed are as follows but are not limited to:

- Corps of Engineers 404 Permit
- Floodplain Permit
- SWPPP - NPDES Permit
- Railroad Permit
- Railroad Agreement
- Railroad Insurance
- NDOR Use of Right-of-Way Permit
- NDOR Agreement
- Utility Permits
- Nebraska Department of Environmental Quality (NDEQ)
- City/County Health Department Permits

**PS&E SUBMITTALS**

*a. Draft PS&E Submittal*

The Consultant shall submit a draft PS&E package, along with all project checklists, to the RC for final review. The package will include the plan set, special provisions, and total project quantities. The Consultant shall prepare an updated total estimate of quantities and project cost estimate. This shall include, but not be limited to, Preliminary Engineering, ROW acquisition, Private Utility Relocations, Railroad Expenses, Public Utility Relocations, Construction, and Construction Engineering on the appropriate forms.

*b. Final PS&E Submittal*

Upon incorporating review comments into the plan set and special provisions, the Consultant shall prepare and submit all drawings, special provisions, and an estimate of quantities to the RC for their review. After the RC has completed their review

of the PS&E plans and specifications, the RC will instruct the Consultant to submit the bid package to the NDOR PC. The bid package includes horse blankets, summary of quantity sheets (DR 342 and DR 343) sealed drawings and special provisions.

### **GENERAL INFORMATION**

#### **Reports, Studies and Technical Information:**

The Consultant shall prepare and submit the following items to the RC:

1. Technical memos for all pertinent meetings
2. Meeting minutes from all meetings
3. Traffic Analysis report for all intersections as requested
4. Drainage computations, culverts and storm drainage design
5. Miscellaneous correspondence and information related to the project
6. Summary of quantities
7. Permit applications
8. Special Provisions will be developed for items not covered in the 2007 edition of the Nebraska Department of Roads Standard Specifications and Special Provisions for Highway Construction.
9. Intersection Sight Distance Study for all side streets along the main roadway.

### **CROSS-SECTIONS**

1. The Consultant shall:
  - a. Plot all cross-sections. This includes labeling stations on the right side of the sheet, labeling existing and design centerline elevations at centerline and labeling offset distances every 5 or 10 feet at the bottom of each sheet.
  - b. Plot cross-sections on standard size sheets (same size as project plan sheets) according to the State's standards.
  - c. Stamp or plot in the upper right corner of each sheet the project number (no prefix), sheet number, the control number, horizontal and vertical scale. Plot the roadway cross-sections at the scale of 1" = 10' H&V, or 1" = 20' H&V.
  - d. Plot cross-sections with stations progressing upward from the bottom to the top of the sheet.
  - e. Plot the cross-sections so that there is room for the design cross-section. Do not overlap cross-sections.
  - f. Cut cross-sections at 25 foot intervals (maximum) and at key locations such as driveways.
  - g. Plot a cross-section at each location where there may be a drainage structure needed and at driveways, intersections, guardrail grading break points, existing culverts, or other unusual features.
  - h. Plot drainage structure cross-sections and keep them separate from roadway cross-sections.
  - i. Plot drainage structure cross-sections at the following scales:
    - j. Storm Sewer 1" = 10' H&V.
    - k. Roadway Culverts 1" = 10' H&V.

- I. Plot computer roadway cross-sections in the following manner:
  - i. Plot original ground with a dashed line.
  - ii. Plot design template with a solid line.
- m. Indicate railroad right-of-way and highway right-of-way on cross-sections.
- n. Plot the right-of-way and easements on each cross section.
- o. Label the cut and fill quantities for each section.

#### **RIGHT-OF-WAY**

The City of Lincoln will perform a title search to establish ownership. The Consultant shall develop final right-of-way plans for submittal to PS&E and for the City's use to perform appraisals and negotiations for the needed right-of-way or easements.

Right-of-way plans are to be prepared after final construction plans have been developed. Final construction plans are considered 90% complete; the remaining 10% would be any revisions resulting from right-of-way negotiations.

Existing land base files and title research developed by the Consultant or provided by the RC will be used to determine the existing right-of-way and to design the easements and additional right-of-way. Encroachments on existing right-of-way will be noted on the plans.

Care is to be given by the Consultant when preparing right-of-way plans and the right-of-way cost estimate. Any revisions of these documents, subsequent to their submittal will require additional review by the NDOR's Right-of-Way Division, the appraiser and review appraiser, causing delays in project delivery.

**a. The LPA/NDOR will provide or make a available the following items:**

1. LIDAR DTM file (DAT or TIN), if available.
2. Deeds for previous R.O.W. projects (including railroad maps, railroad leases and city plats, if applicable).
3. Additional Title Research and property titles, if titles are updated by appraisers/negotiators.
4. Aerial photos in .TIF format (digital ortho), if available.
5. Prepare R.O.W. contracts.
6. Access control decisions list.
7. Information available on the NDOR Website ([www.transportation.nebraska.gov](http://www.transportation.nebraska.gov)):
  - a) Blank R-2 Sheet.
  - b) Standard Right of Way plan Border Sheet.
  - c) Standard Right of Way Plan Title Sheet.
  - d) Computer drafting levels convention and naming convention.
  - e) Previous Right of Way Pattern reference file.
  - f) Preliminary Right of Way area estimate form.
  - g) Nebraska Department of Roads Certificate of Title Report Form.
  - h) Sample of filled out Department of Roads Certificate of Title Report Form.
  - i) Right of Way Design Checklist.
  - j) Roadway Design Manual (<http://www.transportation.nebraska.gov/roadway-design/pdfs/rwydesignman.pdf>).

- k) Right of Way Design Consultant manual  
(<http://www.transportation.nebraska.gov/roway/pdfs/des-consult/row-des-cons-man.pdf>).
- l) Right of Way Manual (<http://www.transportation.nebraska.gov/roway/doc-pub.htm#rowman>).
- m) LPA Manual "Real Estate Acquisition Guide for Local Public Agencies"  
(<http://www.transportation.nebraska.gov/roway/doc-pub.htm#pubagman>).
- n) NDOR Access Control Policy to the State Highway System.
- o) MicroStation Standards for Right of Way – Cell Libraries  
(<http://www.transportation.nebraska.gov/roway/file-dwnld.htm#microstation>).
- p) MicroStation Standards for Right of Way – MDL Files  
(<http://www.transportation.nebraska.gov/roway/file-dwnld.htm#microstation>).
- q) GEOPAK files for Right of Way – Right of Way Staking  
(<http://www.transportation.nebraska.gov/roway/file-dwnld.htm#geo>).
- r) GEOPAK files for Right of Way – Right of Way Staking Station Order Report  
(<http://www.transportation.nebraska.gov/roway/file-dwnld.htm#geo>).
- s) GEOPAK files for Right of Way – Station and Offset Label File  
(<http://www.transportation.nebraska.gov/roway/file-dwnld.htm#geo>).
- t) GEOPAK Downloads (includes criteria files).
- u) CADD Policy.
- v) Design Drafting Cell Libraries.
- w) NDOR Design Process Outline DPO).
- x) Nebraska Highway Reference Log Book 2010  
(<http://www.transportation.nebraska.gov/docs/logbook.pdf>).
- y) Roadway Standards Plans/Standard Special Plans
- z) Nebraska Topography Labeling Application (mdl application for use with Geopak).
- aa) Nebraska Minimum Design Standards – 2008 – Counties Municipalities, State, (<http://www.transportation.nebraska.gov/gov-aff/pdfs-docs/MinDesStds.pdf>).
- ab) NDOR Policy for Accommodating Utilities on State Highway Rights-of-Way.
- ac) Right of Way Design AQ/QC checklist.

**b. Applicable Publications**

The Consultant shall follow the criteria of the current versions of the following publications.

1. Evidencing Nebraska Land Titles (Nebraska Land Title Association)
2. Right of Way Design Consultant Manual  
(<http://www.transportation.nebraska.gov/roway/pdfs/des-consult/row-des-cons-man.pdf>).
3. Right of Way Manual (<http://www.transportation.nebraska.gov/roway/doc-pub.htm#rowmanual>).
4. Access Control Policy to the State Highway System  
(<http://www.transportation.nebraska.gov/roway/pdfs/accesscontrol.pdf>).

5. Nebraska Minimum Design Standards – 2008 – Counties, municipalities, State, (<http://www.transportation.nebraska.gov/gov-aff/pdfs-docs/minidesstds.pdf>).
6. Roadway Design Manual, 2006. (<http://www.transporation.nebraska.gov/rowadway-design/pdfs/rwydesignman.pdf>).
7. NDOR Policy for Accommodating Utilities on State Highway Right-of-Way.
8. NDOR Publication "So You Want Access to the Highway."
9. Federal Highway Administration 49 CFR Part 24 – Uniform Relocation Assistance and Real Property Acquisition for Federally Assisted Programs.

**c. Format of Project Plans**

The Consultant shall submit all Right-of-Way plans as half-size plans plotted at the appropriate scale. They must measure the standard 11"x17" paper that is used in any normal Xerox machine. The margins must measure as follows: left margin must be approx. 1 inch, right margin must be approx. 5/16 inch, and the top and bottom margins must be approx. 3/8 inch. The border used must be the one supplied with the ROW cell file. It measures approximately 15 5/8 inches x 10 3/8 inches when plotted at 1" = 200' scale. The scale of the R.O.W. plan sheets will match the scale of the roadway plan sheets.

Any materials submitted to the State by the Consultant must be on or equivalent to white bond.

Any material which does not produce an acceptable reproduction will be returned to the Consultant for rectification.

The Consultant shall follow the State's "CADD Drafting procedures and guidelines" in preparing the project plans.

Sheets must be set up according to the State's procedures.

File names must follow the State's CADD naming convention.

Line weights, line styles, text size and leveling must follow the State's guidelines.

The CADD files must conform to the following standards and conventions:

Graphic elements must be placed in accordance with the State MicroStation Right-of-Way element attributes standards (erow.ma).

Working units must be:

1. Master Units = Ft
2. Sub Units = 1000 TH
3. Position Units = 1

File names must use State CADD naming convention.

**d. Data Transfer**

It shall be the Consultant's responsibility to obtain the necessary software to translate to and from the specified format for all electronic files supplied by the State and for all electronic files prepared by the Consultant and supplied to the LPA/State.

The State and the Consultant shall transfer all Graphic files in a 2D MicroStation V8 format. A data sheet must accompany all electronic file submittals listing the file names and detailing the method of placement so the State will know how to restore the data in our system.

All computer files shall be provided on compact disk (CD) unless otherwise specified.

**e. Right-of-Way Cost Estimate**

The Consultant is to prepare a Right-of-Way Cost Estimate; the following items are required in the estimate:

- 1) *Land Value* - The land value for all fee takings and easements shall be calculated on a square foot cost basis. Each tract shall be evaluated as to zoning and type of use, such as business, residential, and public use. Not all tracts will be valued at the same square foot price.
- 2) *Damage Costs* - Damage costs must be determined for each tract. These will include cost to cure items and damages to the remainder of the property.
- 3) *Relocation Costs* - Any residential properties or businesses that will be acquired as part of the project needs to be included in the ROW Estimate. The estimated value of the home or business and the additional relocation costs (relocation payments to the owner, tenant, and Consultant fees) for each tract will be identified on the Estimate as Relocation Costs.
- 4) *Administrative Costs and Incidental Expenses* - These costs will include the fees for the Appraisal, Appraisal Review, and Consultant negotiation fees. An incidental cost should be included for each tract on the project.
- 5) *Demolition Contracts* - should also include any costs associated with hazardous materials removal.
- 6) *Advertising Sign Cost* if applicable
- 7) *Condemnation Costs/Administrative Settlements* - indicate the anticipated percent of parcels affected by either condemnation costs or administrative settlements.

This is the cost to research and acquire right-of-way for the project, including easements. Include right-of-way costs for storm water management, wetland mitigation, and other work outside of the roadway prism. This includes the contractual obligations with property owners to relocate fencing, reconstruct gates, reconstruct road approaches, etc., if not included in the engineer's estimates. This includes the cost of any required relocation of residents and businesses, as well as the administration costs of right-of-way activities. These administrative costs are typically understated; labor costs for environmental assessments, title research, appraisals or updated appraisals, lengthy negotiations and closings, as well as the hiring and managing of right-of-way Consultants.

If the extent of the right-of-way acquisition is not known, then a contingency should be added based upon historical settlements and awards for condemnation cases, which must include costs for attorneys, engineering research, witness research, survey, and staff time. The right-of-way acquisition schedule needs to be considered. Right-of-way acquisition costs will increase quickly in rapidly developing areas. Early acquisition of right-of-way based on environmental documents may save money and protect the right-of-way development. Costs must include relocation assistance and benefits for displaced individuals, families, businesses, governments, and nonprofit organizations. Special acquisitions, such as those from government sites can be time consuming and costly. The LPA recognizes right-of-way estimates the estimates are dependent upon the accuracy and reliability of information concerning the locations of the right-of-way limits on a project. A small change in the locations of the right-of-way line, or a change in access control or drainage retentions placement, particularly in commercial areas, can affect the right-of-way cost estimate by millions of dollars because of required damage payments such as severance or business damages.

**f. Title Search**

The City of Lincoln shall research records of ownership. The consultant shall record on NDOR Certificate of Title report form, or other state-supplied or approved form. The following information should be noted:

- a. The current owner's current mailing address and telephone numbers.
- b. Current ownership
- c. If an estate-name heirs, share of each and name spouses.
- d. Include active encumbrances (Mortgage, Deeds of Trust, etc.) and any reassignments of unreleased mortgages.
- e. List of five year chain of ownership documents.
- f. Include other liens, agreements, conditions, limitations, restrictions, or covenants affecting title.
- g. Include easements such as water, sewer, ingress/egress, irrigation, or anything that might influence the project or right-of-way design, except utilities (power, gas, telephone and telegraph).
- h. Include leases still in effect.
- i. Transcribe legal on approved form or use generic legal description.
- j. Comments.

Provide copies of all supporting documentation (deeds, easements, etc.)

Provide copies of all subdivision plats and surveys of irregular tracts and County Cadastral Maps and tax lots with metes and bounds field notes.

Do not need State highway deeds.

**g. Ownership**

The Consultant shall place the right of way survey on the topographic survey, adding the section lines, 1/4 section lines, subdivision lots, block, and names, etc., section-township-range, etc.

The Consultant shall check all previous right of way plans against existing right-of-way deeds to verify ownership and place on plans. Station and offset all Right-of-Way break points including section lines and 1/4 section lines (show in small text size). All Existing right-of-way, and permanent easements shown on the plans must be supported by deed. If no deed is provided by the LPA, the Consultant shall inform the LPA of any missing deeds. A supplement to this agreement is needed for any out of scope work. The Consultant is not to attempt to locate any missing deeds until the agreement is supplemented and notice to proceed is given by the NDOR Local Project Coordinator, any out of scope work performed by the Consultant prior to the notice to proceed is non-compensable. All existing Permanent Easements with their usage descriptions and project number must also be shown on the plans.

The Consultant shall place the current ownership names and locations with the property lines labeled on the plans. The Consultant shall assume 32 ownerships.

The ROW plans will show existing right-of-way, easements control of access, property lines, section lines, lot-lines, subdivisions, ownership information, topography, etc.

Review and attach ROW Survey

The Consultant is to review the ROW survey files for coverage, points referenced in deeds, lot corners which are needed for accuracy, and completeness. Clean up survey files to include removing extraneous information, label survey features as needed,

format line attributes (weights, levels, colors), format text attributes (weights, levels, colors, heights, fonts), label section-township-ranges, etc. Attach survey files to ROW design file.

Check, input, and label, previous ROW

Establish boundaries of existing public ROW and easements. Hatch and/or label existing ROW and easements. Generate coordinate geometry points from previous ROW and easements.

Check, input, and label, existing property boundaries.

Establish boundaries of existing property and easements affected by the project, but not currently held as public ROW. Show lot lines. Label property lines. Label and/or hatch easements. Generate coordinate geometry points for existing property boundaries.

Label Ownership's on plans

Place ownership information on the plans. Information includes name(s) of owner(s), how property held (joint tenants, husband and wife, tenants in common, etc.), property description (section-township-range, lot and block, subdivision, etc), and any other information as necessary.

Label Station and Offsets for Existing ROW Break Points

Work effort is to label all existing ROW and easement break points with station and offsets. Station and offsets will also be placed at points where the existing ROW or easement lines intersect with property lines, lot-lines, section lines, quarter section lines, etc. The ends of all existing ROW and easement lines will also be labeled.

Create Situation Plan Sheet

Create plan sheet that identifies the location and boundaries of both the project, and the individual tracts within the project. Plan sheet should show a map of the area encompassing the project with the boundaries of the project clearly identified on it. In order to orientate the user the map should be of sufficient size, scale, and coverage so that landmarks such as streets, highways, towns, named waterways, or other such items can readily identified. Property lines for each tract affected by the project should be shown on the plan sheet so the extent of each tract, as well as their approximate location within the project, can be easily identified. Each tract should be labeled with their corresponding tract number.

Right of way plans and electronic files.

Information shown on the ROW plan sheets include a ROW sheet border, project number, project name, control number, scale bar, north arrow, city or town name, ROW survey, ROW survey labels, topography, proposed alignment, existing public ROW, existing public ROW patterning, station and offsets of existing ROW break points.

Property lines, lot-lines, lot numbers, block numbers, subdivision names, out lots, ownership information, street names, utility station and offsets, city boundaries, state lines, county lines, section-township-range. A title sheet shall also be prepared. Submit half size paper plan. Submit all electronic ROW files including CADD, GEOPAK, and reference on CD.

Plan revisions or adjustments

Revise and/or update right of way plans due to recent property transactions, ownership changes, or project boundary changes. Update plan sheets as needed to reflect most current design files (topography, alignment, survey, etc). Also included changes to Ownership plans due to information obtained during plan-in-hand field inspections, public information meetings, or public hearings.

#### QA/QC

Perform quality control/quality assurance checks to ensure plans and CADD files are complete, accurate, readable, and follows all plan requirements. Fill out and submit QA/QC checklist.

#### **h. Design**

The Consultant shall label all streets and highways on the plans.

The Consultant shall prepare a title sheet (R-1) with centerline, property lines, section lines, 1/4 section lines, lots, blocks, etc., displayed.

The Consultant shall place the limits of construction (L.O.C.'s) and new design (pavement, sidewalks, sewers, drives, culverts, dikes, retaining walls, alignment geometrics, etc.) on the plans.

The Consultant will determine the easements (temporary and permanent) and right-of-way needed for construction and maintenance of the roadway. Temporary construction easements will be acquired in cut and fill areas outside the proposed right-of-way acquisition.

Temporary construction easements will be acquired to construct driveways or make improvements on personal property beyond the existing or proposed right of way.

The Consultant shall design the new R.O.W. according to these general guidelines:

- (a) Fifty feet east and west of project centerline

The Consultant shall prepare legal descriptions (distances and deflections, no bearings or azimuths) for all R.O.W. takings, permanent easements, temporary easements, and railroad easements (permanent and temporary).

The Consultant shall place all R.O.W. break points on the plans by station and offset distance from the project design centerline to be used. This must include but is not limited to all points of new R.O.W., existing R.O.W., points of intersection with all section lines, 1/4 section lines, and property lines, and new P.E., T.E., and R.O.W. break points. Computed stations and offsets must be to nearest 0.01 foot. All text must be legible and not overlapping other text or topography.

All Permanent and Temporary Easement areas must be labeled separately and include their respective purposes on the plans, i.e., TE1, PE1. If more than one easement description occurs per tract, a consecutive number will be given, i.e., TE2, PE2. The areas are to be shown compiled on the R-2 sheet.

The Consultant shall prepare a summary of areas sheet, identified as the R-2 sheet. The R-2 sheet must display areas of all takings

After the final right-of-way design is complete, the Consultant shall provide one copy of the R.O.W. Design plans.

For the purpose of reviewing the plans, it is helpful (but not required) to have the limits of construction offsets shown on the plans. These will be removed or the level shut off for the final PS&E plan submittal. Limits of construction will be shown for the new right-of-way and easements (temporary and permanent).

The plans must include the following:

- (a) One set of plans (as described in project plans format).
- (b) The legal descriptions. The Consultant shall provide the descriptions to the State in ASCII format.

- (c) The Title Research performed by the City with Tract Numbers labeled as "Tract Number" or "Not Needed" along the bottom of the form provided by the State.
- (d) Titles must be organized from the beginning of the project to the end of the project in numerical order.

After the review meeting, the Consultant shall:

- (a) Make all the necessary Revisions, Corrections, etc.
- (b) Submit plan and legal description(s) for early acquisition(s), if required, by the scheduled date.
- (c) Provide an updated title sheet (R-1) with tract numbers added.

The Consultant shall compute and record the area computations for:

- (a) Existing R.O.W.
- (b) New R.O.W.
- (c) Temporary easements.
- (d) Permanent easements.
- (e) Other (wetlands, railroad easements, etc.)

Note: Compute urban areas in square feet and rural areas in acres. Calculate to nearest 0.01.

Each time a revision is made after submittal of the right-of-way plans, the date of the revision will be shown in the lower right corner of the revised sheet(s) by using the revision stamp included in the cell library. Each time a revision to the plans are made, the Consultant shall submit updated versions of all affected CADD files to the LPA on CD or via electronic mail.

***i. Appraisals***

The right-of-way plans are used to appraise the takings, the plans need to show the proposed construction elements and the amount and type of ROW and easements that are needed to construct, operate and maintain the facility without being excessive. The plans provide the basis for establishing an opinion of value for each parcel during the appraisal process. Construction elements include items such as limits of construction (LOC's), grading limits, pavement edges, sewers, drives, culverts, dikes, retaining walls, bridges, guardrail, wetland mitigation sites, construction staging areas, temporary roads, erosion control, etc. Any additional ROW and/or easements needed to accommodate these construction elements are also shown on the plans.

The plans begin with the development of preliminary ROW review plans by using information contained in the roadway design files (alignment, feature, loc, etc.) to establish the boundaries of the new ROW needs. These ROW plans show the newly designed ROW and easements, which will be used to geographically describe and measure the new takings through the creation of a legal description. Early acquisitions on individual parcels will receive priority during the appraisal plan process in order to accommodate special project needs.

Early Acquisition Appraisal Plans

Included with this effort is the creation of the final ROW plans for individual parcel(s) approved for early acquisition. Work involves referencing the construction elements contained in the design files (alignment, feature, loc, etc.) to the ownership plans for the

early acquisition parcel(s) only, and then designing the ROW and easements needed to accommodate the project in accordance with established general guidelines. Construction elements include items such as limits of construction (LOC's), grading limits, pavement edges, sewers, drives, culverts, dikes, retaining walls, bridges, guardrail, wetland mitigation sites, construction staging areas, temporary roads, erosion control, etc. This task requires an accelerated timeline outside of the overall workflow design process.

#### Early Acquisition Computations

This task identifies the effort required to generate the coordinate geometry points for the new ROW and easements on the early acquisition parcel(s). This task calculating the areas of existing ROW, new ROW, permanent easements and temporary easements. This task also includes work effort needed to make any revisions to the geometry points and computations on the early acquisition parcel(s). This task requires an accelerated timeline outside of the overall workflow design process.

#### Early Acquisition Legal Descriptions

This task includes the effort required to prepare legal descriptions (distances and deflections) to geographically describe all ROW acquisitions, permanent easements, and temporary easements for the early acquisition parcels(s). The legal description will include the caption (sometimes called the preamble), the body (metes and bounds, etc), exceptions (mineral rights, etc.) and any reservations or reversions necessary for the preparation of the instrument of conveyance. The coordinate geometry database should be used for this task. The legal descriptions will be delivered in an ASCII text file (.txt) format. This task also includes work effort needed to revise the legal descriptions on the early acquisition parcel(s). This task requires an accelerated timeline outside of the overall workflow design process.

#### Design of new ROW and Easements

Included with this effort is the creation of the ROW design for all tracts other than early acquisition parcels. Work involves referencing the construction elements contained in the design files (alignment, feature, loc, etc.) to the ownerships, and then designing the ROW and easements to accommodate the project in accordance with established general guidelines. Construction elements include items such as limits of construction (LOC's), grading limits, pavement edges, sewers, drives, culverts, dikes, retaining walls, bridges, guardrail, wetland mitigation sites, construction staging areas, temporary roads, erosion control, etc. Also included in this task is the effort required to generate the coordinate geometry points for the new ROW and easements for all tracts other than the early acquisition parcel(s). This task also includes the effort needed to compute areas of existing ROW, new ROW, permanent easements, temporary easements, and other special easements for use by the NDOR to develop the ROW cost estimate.

#### Add notes to ROW plans

This task involves placing notes on the ROW plans. Notes include items such as construction, build, do not disturb, driveway, bridge, culvert, alignments, associated alignment data, etc.

#### Adjust New ROW Design After Review Meeting

This task identifies the effort to make the changes and adjustments identified in the Design Review meeting to the ROW design CADD file. Included with this effort are any revisions to be made to the coordinate geometry points to reflect these changes.

#### Label Station and Offsets for New ROW Break Points on Plans

Work effort is to label all new ROW and easements with station and offsets. Station and offsets will also be placed at points where the new ROW or easements intersect with property lines, lot-lines, section lines, quarter section lines, etc. The ends of all new ROW and easements lines will also be labeled.

#### Prepare legal descriptions and/or plats

This task includes the effort required to prepare legal descriptions (distances and deflections) to geographically describe all ROW acquisitions, permanent easements, temporary easements, and railroad easements for each acquisition parcels. The legal description will include the caption (sometimes called the preamble), the body (metes and bounds, etc), exceptions (mineral rights, etc.) and any reservations or reversions necessary for the preparation of the instrument of conveyance. The coordinate geometry database should be used for this task. The legal descriptions will be delivered in an ASCII text file (.txt) format.

#### ROW Design Computations and staking report

The effort for this task includes creating the chains and parcels using a coordinate geometry database, and calculating the areas of existing ROW, new ROW, permanent easements, and temporary easements. Work also includes creating and submitting the ROW staking report for all permanent and temporary easements. Hard copy and electronic copy will be delivered.

#### Update Sheets with Tract Numbers and Labels

This task identifies the effort required to update the plan sheets with tract numbers for each parcel. Work also includes labeling each acquisition within each parcel with a note identifying the type of acquisition (New ROW acquisitions: ROW1, ROW2, etc. Permanent Easement acquisitions: PE1, PE2, etc. Temporary Easement acquisitions: TE1, TE2, etc.)

#### Create Summary of Areas Sheet (2 Sheet)

This task involves placing tract numbers, ownership information, page reference numbers, and the computed areas of all acquisitions for each tract on the #2 sheet.

#### Prepare, plot, and submit plans, legal descriptions and electronic files.

This task includes the effort to prepare, plot, and submit Plans in accordance with NDOR policy for plan submittal. Work is to prepare, plot, and submit individual ROW plan sheets to include early acquisition plans, preliminary ROW plans, and summary of areas sheet (2 Sheet). Plan sheets will submitted on half size paper plan. Submit all electronic ROW files including CADD, GEOPAK, reference, staking report, and legal descriptions on CD.

#### Appraisal Plan Revisions

This task includes making changes to the plans as a result of the appraisal process. Changes include revising and submitting the ROW plan sheets, legal descriptions, row areas, CADD files, 2 sheet, computations, and staking report. These changes are needed to enable ROW appraisals to be completed.

#### QA/QC

Perform quality control/quality assurance checks to ensure plans, legal description, and CADD files are complete, accurate, readable, and follows all requirements. Fill out and submit QA/QC checklist.

**j. Negotiations**

Negotiations occur after the right-of-way appraisals are complete. The ROW plans are used by the negotiators, to explain the offers to acquire ROW to the landowners. Condemnation plats and legal descriptions will also be developed as they are requested from the LPA.

Each time there is a revision to the plans as a result of the negotiations, the date of the revision will be shown in the lower right corner of the revised sheet(s). When submitting the plans, the Consultant shall include an electronic transmittal sheet listing all revisions made to the plans and/or legal descriptions and provide red lined plan sheets.

Prepare, plot, and submit Negotiation plans, legal descriptions and electronic files.

This task includes the effort to prepare, plot, and submit Negotiation Plans in accordance with NDOR policy for Negotiation Plan submittal when notified by the NDOR that the negotiation process is ready to commence. Negotiation plans are prepared by changing the ROW plan stamp from "Appraisal Plans" to "Negotiation Plans". Submit all electronic ROW files including CADD, GEOPAK, reference, staking report, and legal descriptions on CD.

ROW Staking

The Consultant shall stake right-of-way and easements as requested by the City. Staking shall be completed within three working days of each request. The Consultant shall assume seven tracts to be staked and that they will be staked only once.

Negotiation plan revisions or adjustments

This task includes the ROW design revisions or changes as a result of the ROW negotiations. Changes include revising the ROW plan sheets, legal descriptions, row areas, CADD files, 2 sheet, and staking reports. These changes are needed to enable ROW negotiations to be completed.

<http://www.nebraskatransportation.org/roway/pdfs/lpa/Attachments/ap-22.pdf>

Prepare Condemnation Plats/Descriptions

This task outlines the effort involved in preparing and submitting condemnation plats and legal descriptions for specific tracts when requested by the Department of Roads. The plat is a unique plan sheet that shows the condemned tract along with the metes and bounds reflected in the legal description. A reduced drawing of the section(s) and how the tract in question is situated in that section is also included as part of the plat. Emphasis should be made to keep the plats to a manageable size yet easily readable. A CADD file of the condemnation plat and an electronic version of the legal descriptions will also be submitted as part of this task.

QA/QC

Perform quality control/quality assurance checks to ensure plans and CADD files are complete, accurate, readable, and follows all plan requirements. Fill out and submit QA/QC checklist.

**k. Condemnations**

If needed, the Consultant will prepare right-of-way condemnation plats including legal descriptions as requested by the RC within ten working days of the request. An estimated 3 condemnation plats will be needed.

The Consultant will, at the request of the RC attend all condemnation hearings, an estimated 3 hearings will be conducted.

The agreement will be supplemented if the number of estimated tracts, revisions, condemnation plats and or condemnation hearing are exceeded. The Consultant is not to perform the work until the agreement is supplemented and notice to proceed is given by NDOR.

***I. Final Plans***

The Final Plans are requested by the LPA or archiving after the project has been completed (designed, appraised, acquired, and construction has been completed).

Calculate and draft metes and bounds on plans

This task includes the effort to place the metes and bounds from the legal descriptions for all acquisitions, except temporary easements, on the PS&E plans. Temporary easement areas will not be displayed on the plans. All CADD files will be submitted on CD.

Plot and submit Final plans and electronic files.

This task includes preparing, plotting, and submitting half size final ROW plans in accordance with NDOR policy for PS&E submittal. All information contained in the PS&E plans will be shown except for temporary easements. Metes and bounds for all ROW and permanent easements will be shown. Plans do not need to be stamped or signed by a Professional Civil Engineer or a Registered Land Surveyor. Submit all electronic ROW files including CADD, GEOPAK, reference, staking report, and legal descriptions on CD.

QA/QC for tasks F1 through F2

Perform quality control/quality assurance checks to ensure plans and CADD files are complete, accurate, readable, and follows all plan requirements. Fill out and submit QA/QC checklist.

***m. PS&E Plans***

The Consultant, upon request, shall submit a set of full sized PS&E right-of-way plans and a set of half sized PS&E right-of-way signed or unsigned plans. These plan sets shall consist of all Plan sheets, omitting the title sheet and any summary of areas sheet(s) the following changes made:

The construction notes will be removed from the plan sheets by shutting off the level(s) in which they are placed. "Do Not Disturb" and Cattle Pass notes to remain on the plans.

The Consultant shall stamp, sign, and date PS&E right-of-way plans. The seal of the Consultant should be a rubber stamp facsimile or CADD generated that is then signed and dated by the professional civil engineer or registered land surveyor registered in Nebraska.

The Consultant shall also submit a right-of-way staking listing with the PS&E right-of-way plans. The listing must provide station offsets to the design centerline and coordinates at all right-of-way break points, P.E. and T.E. points. The listing should be every 100 feet or even stations.

The Consultant shall submit all PS&E right-of-way plan CADD files, on CD, to the LPA at the time of PS&E right-of-way plans submittal.

Half size plans do require stamping, but no signature.

The Consultant shall submit a right-of-way design PS&E Checklist, marking each relevant plan check items.

ENGINEERING DESIGN SERVICES

PROJECT NO.: LCLC-5241(5)

CONTROL NO.: 13141

LOCATION: So. 56th Street, Shadow Pines Drive to Old Cheney Road

SCHEDULE

1. 12-20-2011, Notice to Proceed (NTP)
2. 01-10-2012, Kickoff/Plan-in-Hand Meeting
3. 03-05-2012, Draft EA Reevaluation submittal
4. 03-12-2012, Submit Functional Plans with ROW Appraisal Plans
5. Monthly Progress Meetings, as needed
6. 04-04-2012, 1st Public Open House
7. 05-11-2012, Final EA Reevaluation Submittal
8. 10-08-2012, Final Plan Submittal
9. Review Meetings, as needed
10. 12-10-2012, Submit Draft PS&E Plans with PS&E ROW Plans
11. 02/04/2013, Final PS&E Submittal
12. July, 2013, Letting Date
13. August, 2013, Pre-construction Open House

**EXHIBIT "C"**  
**INSURANCE REQUIREMENTS FOR  
PROFESSIONAL SERVICE PROVIDERS  
LPA PROJECTS**

**Consultant agrees to:**

- (1) Make a detailed review of its existing insurance coverage,
- (2) Compare that coverage to the expected scope of the work under this contract,
- (3) Obtain the insurance coverage that it deems necessary to fully protect Consultant from loss associated with the work. Also, Consultant shall have at a minimum the insurance described below:

**General Liability –**

Limits of at least:

\$ 1,000,000 Per Occurrence

\$ 2,000,000 General Aggregate

\$ 2,000,000 Completed Operations Aggregate (if applicable)

\$ 1,000,000 Personal/Advertising Injury

- Consultant shall be responsible for the payment of any deductibles.
- Coverage shall be provided by a standard form Commercial General Liability Policy covering bodily injury, property damage including loss of use, and personal injury.
- General Aggregate to apply on a Per Project Basis.
- The LPA shall be named as Additional Insured on a primary and non-contributory basis including completed operations (the completed work/product) for three (3) years after the work/product is complete.
- Consultant agrees to waive its rights of recovery against the LPA. Waiver of Subrogation in favor of the LPA shall be added to, or included in, the policy.
- Contractual liability coverage shall be on a broad form basis and shall not be amended by any limiting endorsements.
- If work is being done near a railroad track, the 50' railroad right of way exclusion must be deleted.
- In the event that this contract provides for consultant to construct, reconstruct or produce a completed product, products and completed operations coverage in the amount provided above shall be maintained for the duration of the work, and shall be further maintained for a minimum period of five years after final acceptance and payment.

- Policy shall not contain a total or absolute pollution exclusion. Coverage shall be provided for pollution exposures arising from products and completed operations (as per standard CG0001 Pollution Exclusion or equivalent). (If the standard pollution exclusion as provided by CG0001 has been amended, please refer to the following section entitled "Pollution Coverage.")
- **Pollution Coverage –**
- In the event that the standard pollution exclusion as provided by CG0001 has been amended, coverage may be substituted with a separate Pollution Liability policy or a Professional Liability policy that includes pollution coverage in the amount of \$1.0 million per occurrence or claim and \$1.0 million aggregate. If coverage is provided by a "claims made" form, coverage will be maintained for three years after project completion. Any applicable deductible is the responsibility of the Consultant.

**Automobile Liability –**

Limits of at least: \$ 1,000,000 CSL Per Accident

- Coverage shall apply to all Owned, Hired, and Non-Owned Autos.

**Workers' Compensation –**

Limits: Statutory coverage for the State where the project is located.

Employer's Liability limits: \$100,000 Each Accident

\$100,000 Disease – Per Person

\$500,000 Disease – Policy Limit

- Consultant agrees to waive its rights of recovery against the LPA. Waiver of Subrogation in favor of the LPA shall be added to, or included in, the policy

**Professional Liability –**

Limits of at least: \$ 1,000,000 Per Claim and Annual Aggregate

- Coverage shall be provided for three years after work/project completion.

**Electronic Data and Valuable Papers –**

Limits of at least: \$100,000 Electronic Data Processing Data and Media

\$25,000 Valuable Papers

**Umbrella/Excess –**

Limits of at least: \$1,000,000 Per Occurrence and Annual Aggregate

- Policy shall provide liability coverage in excess of the specified Employers Liability, Commercial General Liability and Auto Liability.
- The LPA, shall be an "Additional Insured".
- Consultant agrees to waive its rights of recovery against the LPA. Waiver of subrogation

in favor of the LPA shall be provided.

**Additional Requirements –**

- Any insurance policy shall be written by a reputable insurance company acceptable to the LPA or with a current Best's Insurance Guide Rating of A – and Class VII or better, and authorized to do business in Nebraska.
- Evidence of such insurance coverage in effect shall be provided to the LPA in the form of an Accord certificate of insurance executed by a licensed representative of the participating insurer(s).
- For so long as insurance coverage is required under this agreement, the Consultant shall have a duty to notify the LPA and the State of Nebraska Department of Roads (State) when the Consultant knows, or has reason to believe, that any insurance coverage required under this agreement will lapse, or may be canceled or terminated. The Consultant must forward any pertinent notice of cancelation or termination to the LPA and to the State by mail (return receipt requested), hand-delivery or facsimile transmission within 2 business days of receipt by Consultant of any such notice from an insurance carrier. Copies of notices received by the Consultant shall be sent to the LPA, in care of the LPA's Responsible Charge and to the State at the following address:

Nebraska Department of Roads  
Construction Division – Insurance Section  
1500 Highway 2, P. O. Box 94759  
Lincoln, NE 68509-4759  
Facsimile No. 402-479-4854

- Failure of the owner or any other party to review, approve, and/or reject a certificate of insurance in whole or in part does not waive the requirements of this agreement.
- The Limits of Coverage's set forth in this document are suggested minimum limits of coverage. The suggested limits of coverage shall not be construed to be a limitation of the liability on the part of the consultant or any of its subconsultants/tier subconsultants. The carrying of insurance described shall in no way be interpreted as relieving the consultant, subconsultant, or tier subconsultant of any responsibility of liability under the contract.
- If there is a discrepancy of coverage between this document and any other insurance specification for this project, the greater limit or coverage requirement shall prevail.

# NEPA Categorical Exclusion and Preliminary Engineering Labor Rates

Project Name: So. 56th Street, Shadow Pines Drive to Old Cheney Road  
 Project Number: LCLC-5241(5)  
 Control Number: 13141  
 Location (City, County): Lincoln, Lancaster County  
 Firm Name: E & A Consulting Group, Inc.  
 Consultant Project Manager: Fred Beck, P.E.  
 Phone/Email: 402 420-7217 fbeck@eacg.com  
 LPA Responsible Charge: Kris Humphrey  
 Phone/Email: 402 326-1176 khumphrey@lincoln.ne.gov  
 NDOR Project Coordinator: Raitis Tigeris  
 Phone/Email: 402 479-3843 raitis.tigeris@nebraska.gov  
 Date: November 9, 2011



E&A CONSULTING GROUP, INC.  
ENGINEERING • PLANNING • FIELD SERVICES

Code	Classification Title	Hours	Blended Rate	Amount
PR	Principal		\$55.97	
SENV	Senior Environmental Scientist			
ENV	Environmental Scientist			
SENG	Associate/ Senior Engineer		\$40.40	
ENG	Engineer		\$36.94	
SDES	Senior Designer/Technician			
DES	Designer/Technician		\$24.81	
ADM	Administrative			
RLS	Registered Land Surveyor		\$32.00	
SCC	Survey Crew Chief		\$23.72	
SCM	Survey Crew Member		\$20.19	
<b>TOTALS</b>				

Overhead Rate: 162.11%      Fixed Fee: 12.30%

CLASSIFICATIONS:  
 PR = Principal      SENG = Associate/ Senior Engineer      UD1 = User Defined 1  
 SENV = Senior Environmental Scientist      ENG = Engineer      UD2 = User Defined 2  
 ENV = Environmental Scientist      SDES = Senior Designer/Technician      UD3 = User Defined 3  
 ADM = Administrative      DES = Designer/Technician

### Blended Rates Worksheet

STAFFING PLAN				
EMPLOYEE NAME	CLASSIFICATION <sup>1</sup>	SALARY RATE	% ASSIGNED <sup>2</sup>	
<b>Principal</b>				
Jeff Elliott, P.E.	President	\$55.97	100.0%	
		Blended Rate:	\$55.97	
<b>Senior Environmental Scientist</b>				
		Blended Rate:		
<b>Environmental Scientist</b>				
		Blended Rate:		
<b>Associate/ Senior Engineer</b>				
Fred Beck, P.E.	Project Manager	\$40.40	100.0%	
		Blended Rate:	\$40.40	
<b>Engineer</b>				
Angie Schmidt, P.E.	Engineer V	\$35.92	80.0%	
Rick Onnen, P.E.	Engineer VII	\$40.03	15.0%	
Doug Walter, P.E.	Engineer VIII	\$43.92	5.0%	
		Blended Rate:	\$36.94	
<b>Senior Designer/Technician</b>				
		Blended Rate:		
<b>Designer/Technician</b>				
Hal Dellert	Technician V	\$25.20	85.0%	
Chris Siebken	Technician IV	\$23.83	10.0%	
Frank Elder	Survey Tech III	\$20.11	5.0%	
		Blended Rate:	\$24.81	
<b>Administrative</b>				
		Blended Rate:		
<b>Registered Land Surveyor</b>				
Eric Schaben, RLS	RLS II	\$32.00	100.0%	
		Blended Rate:	\$32.00	
<b>Survey Crew Chief</b>				
Eric Mickellunas	Party Chief	\$23.72	100.0%	
		Blended Rate:	\$23.72	
<b>Survey Crew Member</b>				
Craig Morton	Surveyor	\$20.19	100.0%	
		Blended Rate:	\$20.19	

<sup>1</sup> Input actual employee classification as designated by firm.

<sup>2</sup> Total of % Assigned must equal 100% for each personnel classification category. If one person in classification, list them as 100% for % Assigned.

Consultant Independent Cost Estimate  
Labor Rates

Exhibit "D"

# NEPA SERVICES Labor Rates

Project Name: South 56th Street, Shadow Pines Drive to Old Cheney Road  
 Project Number: LCLC-5241(5)  
 Control Number: 13141  
 Location (City, County): Lincoln  
 Firm Name: Parsons Brinckerhoff  
 Consultant Project Manager: Karl Fredrickson  
 Phone/Email: 402-323-6572 or 402-525-4720  
 LPA Responsible Charge: Kris Humphrey  
 Phone/Email: 402-441-7592  
 NDOR Project Coordinator: Raitis Tigeris  
 Phone/Email: 402-479-3843  
 Date: November 9, 2011



Blended Rates Worksheet			
EMPLOYEE NAME	CLASSIFICATION	SALARY RATE	% ASSIGNED
<b>Principal</b>			
Jane Jordan	Principal	\$72.19	100.0%
		Blended Rate:	\$72.19
<b>Senior Environmental Scientist</b>			
Alice Lovegrove	Env Sci IV	\$67.72	50.0%
Arthur Morrone	Env Sci IV	\$62.22	50.0%
		Blended Rate:	\$64.97
<b>Environmental Scientist</b>			
Kevin Keller	Env Scientist		50.0%
David Van Goethem	Env Scientist		50.0%
		Blended Rate:	
<b>Project Manager</b>			
Karl Fredrickson	Project Mgr	\$58.07	100.0%
		Blended Rate:	\$58.07
<b>Engineer</b>			
		Blended Rate:	
<b>Senior Design/Technician</b>			
		Blended Rate:	
<b>Designer/Technician</b>			
Lorenzo Sanchez	Des Tech	\$42.31	20.0%
Todd Channer	Des Tech	\$39.83	80.0%
		Blended Rate:	\$40.33
<b>Administrative</b>			
Linda Minten	Sr Admin	\$46.52	10.0%
Nicole Henning	Admin	\$24.46	30.0%
Donna Owbey	Admin	\$23.21	30.0%
Valerie Morris	Admin	\$24.85	30.0%
		Blended Rate:	\$26.41
<b>Environmental Planner</b>			
Ray Magsanoc	Env Planner I	\$40.87	40.0%
Valerie Robbins		\$35.08	40.0%
Jason Miles		\$32.68	10.0%
Todd Channer		\$39.83	10.0%
		Blended Rate:	\$37.63
<b>Senior Environmental Planner</b>			
Steve Lane	Env Planner II	\$49.68	50.0%
Rhonda Boyer	Cultural Res. Spec.	\$66.45	30.0%
Jennifer Graf	Env Planner IV	\$69.78	10.0%
James Hamilton	Env Planner II	\$40.09	10.0%
		Blended Rate:	\$55.76
<b>Senior Professional Engineer</b>			
		Blended Rate:	



PROJECT TOTALS

Project Name: South 58th Street, Shadow Pines Drive to Old Orchard Road  
 Project: LDC-204193  
 City of Lincoln #701623

Estimate by: E&A Consulting Date: 1/18/2011

PHASE	AMOUNT
<b>PRELIMINARY/FUNCTIONAL DESIGNS</b>	
E&A	\$ 152,667.59
Schematic	\$ 43,755.84
MVA	\$ 35,122.16
<b>FINAL DESIGN</b>	
E&A	\$ 100,786.48
Schematic	\$ 46,977.17
MVA	\$ 24,346.25
<b>ENVIRONMENTAL EVALUATION</b>	
E&A	\$ 138,453.46
<b>ROW</b>	
E&A	\$ 52,388.54
Medians ROW	\$ 2,892.44
<b>SUB-TOTAL</b>	\$ 643,393.03
<b>NON-PARTICIPATING (Prelim)</b>	\$ 11,568.54
<b>NON-PARTICIPATING (Final)</b>	\$ 5,972.76
<b>PARTICIPATING PROJECT TOTAL</b>	\$ 595,760.73

PRELIMFUNC ROADWAY DESIGN

Project Name: South 86th Street, Shadow Pines Drive to Old Craney Road  
 Project No.: LCLC-5241(5)  
 Contract Number: 13141  
 City of Lincoln #701923

Estimate by: E&A Consulting Date: 11/8/2011  
 Type of Work: Urban arterial design  
 Urban: f./mi. Rate: f./hr.  
 Station: f./mi. Sta.

Task	Task Description	PR	PM	PE	EI	CAD Tech	Drafter	RLS	Survey Chief	Survey Crew	Total											
1	SOSAC Preliminary/Functional Design																					
2	Construction and Removal Sheets (2)			10		6					16											
3	Construction Right-of-Way Plans (2)			10		6					16											
4	Utility/Channel Cross-sections										0											
5	Data Collection and Review		10	28		8					36											
6	Interior Plan			4		3					7											
7	Drainage Plan Sheets			8		3					11											
8	Earthwork Cuts Sheets			8		3					11											
9	Grades Information Sheets (2)			4		2					6											
10	Geometric Sheets (2)			4		8					12											
11	Geotechnical Evaluation:										0											
12	Data Research										0											
13	Design Recommendations			2							2											
14	Geotechnical Report										0											
15	Subdrain Design and Other Special Plans (Specify special plans needed for this project)			2		6					8											
16	Horizontal Alignment and Control Points (2)			48		6					54											
17	Hydrologic/Hydraulic Analysis for Culverts and Storm Sewers			4		48					52											
18	Hydrologic/Hydraulic Analysis for Road Slough										0											
19	Loops and Grades Sheets (2)			6		6					12											
20	Meetings (Monthly, weekly, other)		58	73		10					139											
21	Note revision preliminary plotting										0											
22	Pavement Design (Concrete computations)										0											
23	Pavement Markings and Station Plans										0											
24	Permitting Applications/Agreements (404 permit, Flood Plain, Railroad, Utility, etc.)		0	0		0					0											
25	Plan & Profile Plans (Limits of Construction, Horizontal and Vertical Alignment)			9		120					129											
26	Plan Conversion to NODR Stencils										0											
27	Preliminary Title Sheet										0											
28	Project Management		4	113							117											
29	Public Information Meeting			30		20					50											
30	Public Involvement			80		27					107											
31	Quality Assurance/Quality Control		24	8							32											
32	Retaining Wall and/or Special Design			6		4					10											
33	Revisions			0		8					8											
34	Right-of-Way Survey			8		16		5	32	32	81											
35	Roadway Cross-Sections			14		6					20											
36	Roadway Lighting (plans and computations)										0											
37	Segment/Erosion Control Plans (SWPPP)			8		8					16											
38	Sidewalk Design (ADA Compliant)			8		12					18											
39	Storm Sewer Design (Cross Section Sheets)			10		16					26											
40	Structural/Edge Plan Sheets			4		30					34											
41	Summary of Quantities/Estimates (Estimate No. 30 Pre-PIH and 40 Functional)			26		20					46											
42	Summary of Soils and Materials Information (2)										0											
43	Topographic Survey			8		52		24	75	75	232											
44	Traffic Study/Signal Design (plans, computations and special provisions)										0											
45	Traffic Data Collection										0											
46	Traffic Analysis										0											
47	Traffic Study/ITS Design and Plan Sheets										0											
48	Typical Sections (2)			2		6					8											
49	Utility Coordination/Verification		2	18		8					28											
50	Verify Right-of-Way is free of encroachments			4		4					8											
51	Waste Water Design (plan and profile)			16		16					32											
52	Water Line Design (Participating plan and profile)			48		30					78											
53	Water Line Design, Non-Participating (plan and profile)		8	54		58					120											
54	Wetland 2W Sheets			2		6					8											
55	Wetlands (Avoid, Anal., Impacts, Mitigation Doc.)			2		2					4											
Totals											4	318	646	0	512	0	0	0	29	107	107	1723

DIRECT LABOR COST SUMMARY

Category	Rate	Hours	Rate	Amount
PR - Principal	\$ 56.67	4	\$ 226.68	\$ 223.88
PM - Project Manager	\$ 40.40	318	\$ 12,847.20	\$ 12,847.20
PE - Professional Engineer	\$ 38.94	646	\$ 24,863.24	\$ 24,863.24
EI - Engineer Intern		0	\$ 0.00	\$ 0.00
CAD Tech	\$ 24.81	512	\$ 12,702.72	\$ 12,702.72
Drafter		0	\$ 0.00	\$ 0.00
ENV - Environmental Scientist		0	\$ 0.00	\$ 0.00
SENV - Senior Environmental Scientist		0	\$ 0.00	\$ 0.00
C - Clerical		0	\$ 0.00	\$ 0.00
RLS - Registered Land Surveyor	\$ 32.00	29	\$ 928.00	\$ 928.00
Survey Crew Chief	\$ 23.72	107	\$ 2,538.04	\$ 2,538.04
Survey Crew	\$ 20.19	107	\$ 2,160.33	\$ 2,160.33
TOTAL DIRECT LABOR			1723	\$ 55,293.41

OVERHEAD	182.11%	Overhead Rate	\$ 31,687.51
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TOTAL LABOR AND OVERHEAD \$ 144,850.92

Category	Unit	Rate	Amount
Mileage: Survey Vehicle	mi	\$0.50/mi	\$0.00
Mileage: Survey Vehicle	mi	\$0.53/mi	\$0.00
Staking Materials	each	\$0.10/each	\$0.00
Photocopies	copies	\$0.10/copy	\$0.00
Equipment Rental	days	\$80.00/day	\$0.00
Lodging & Meals	days	\$118.00/day	\$0.00
Printing: 24 x 36 Sheets (Reproducible Paper)	copies	\$3.00/copy	\$0.00
TOTAL DIRECT PROJECT EXPENSES \$0.00			

SUBCONSULTANTS	Cost
Subcontractor	\$ 2,538.04
Wages/Water	\$ 2,538.04
TOTAL LABOR AND OVERHEAD \$ 144,850.92	

FIXED FEE	Fixed Fee for Profit	Range 10% - 15%	\$ 17,816.66
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DIRECT PROJECT EXPENSES	\$ 76,878.00
SUBCONSULTANTS	\$ 241,945.39
TOTAL FEE	\$ 241,945.39

Distance traveled to site, miles		Non-Participating Fee	\$ 11,068.54
Travel time to site in hours (44.3 mph)		TOTAL PARTICIPATING FEE	\$ 230,876.85

Category	Hours	Rate	Amount
PR Trips	8	\$ 40.40	\$ 323.20
PM Trips	54	\$ 38.94	\$ 1,994.76
PE Trips	58	\$ 24.81	\$ 1,438.98
EI Trips	120		\$ 0.00
Survey Crew Chief Trips			\$ 3,756.94
Survey Crew Member 1 Trips			\$ 6,892.38
RC Trips			\$ 9,847.32
PR			\$ 1,211.22
PM			\$ 11,068.54
PE			\$ 1,994.76
EI			\$ 0.00
RLS			\$ 928.00
Survey Crew Chief			\$ 3,756.94
Survey Crew Member 1			\$ 6,892.38
RC			\$ 9,847.32
PR Time Hours			\$ 323.20
PM Time Hours			\$ 1,994.76
PE Time Hours			\$ 1,438.98
EI Time Hours			\$ 0.00
RLS Hours			\$ 928.00
Survey Crew Chief Time Hours			\$ 3,756.94
Survey Crew Member 1 Time Hours			\$ 6,892.38
RC Time Hours			\$ 9,847.32

Category	Hours	Rate	Amount
PM	8	\$ 40.40	\$ 323.20
PE	54	\$ 38.94	\$ 1,994.76
TECH	58	\$ 24.81	\$ 1,438.98
	120		\$ 0.00
Total Direct Labor			\$ 3,756.94
Overhead 182.11%			\$ 6,892.38
			\$ 9,847.32
Fixed Fee	12.30%		\$ 1,211.22
Total Fee			\$ 11,068.54

Project Name: South 56th Street, Shadow Pines Drive to Old Cheney Road  
 Project No.: LCLC-824(15)  
 Control Number: 13141

PRELIM/FUNC ROADWAY DESIGN (No Traffic Count Field Work)

Estimate by: Mark Luehmann Date: 8-Nov-11  
 Type of Work: Urban R./mi. Rural R./mi.  
 Total: Station: Sta.

Task	Task Description	PR	PM	SRPE	PE	EJ	CAD Tech	Drafter	Blotter	Blotter	C	RLS	Survey Chief	Survey Crew	Total
1	POSICE Preliminary Functional Design														0
2	Construction Channel Plans (2P)														0
3	Pulverized Ash Concrete Cross-sections														0
4	Rise Collector and Retain														0
5	Drainage Plans														0
6	Drainage Plan Sheets														0
7	Hydrology Data Sheets														0
8	General Information Sheets (2N)														0
9	Geometric Sheets (2L)														0
10	Geotechnical Evaluation														0
11	Data Research			8	2										5
12	Design Recommendations			9	4	20									32
13	Site/Topographic Report			10	4						3				16
14	General Design and Other Special Plans (specify special plans needed for the project)	2													0
15	Horizontal Alignment and Control Points (2H)														0
16	Hydrobiological/Hydraulic Analysis for Culverts and Storm Sewers														0
17	Hydrobiological/Hydraulic Analysis for Road Erosion														0
18	Plans and Grades Sheets (2L)														0
19	Meetings (Monthly, weekly, other)		17	19			4				4				44
20	Note revisions, preliminary plotting														0
21	Pavement Design (concrete computations)				0										0
22	Pavement Markings and Signage Plans														0
23	Permitted Applications/Agreements (04 normal, Road Plan, Railroad, etc.)														0
24	Plan & Profile Plans (Limits of Construction, Horizontal and Vertical Alignment)														0
25	Plan Conversion to NDQR Standards														0
26	Practitioner Title Sheet														0
27	Project Management	8	10												16
28	Public Information Meeting			3	7		4				2				18
29	Public Involvement														0
30	Quality Assurance/Quality Control														0
31	Retaining Wall and/or Special Design														0
32	Revisions														0
33	Roadway Survey														0
34	Roadway Cross-Sections														0
35	Roadway Stationing (plans and computations)														0
36	Retention/Erosion Control Plans (SWPPP)														0
37	Sidewalk Design (ADA Compliant)														0
38	Storm Sewer Design (Plan and Cross Section Sheets)														0
39	Structural/Retain Plan Sheets														0
40	Summary of Quantities/Estimate (Estimate No. 30 Pre-PM and 40 Functional)		2	12			24								30
41	Summary of Soils and Materials Information (2K)														0
42	Topographic Survey														0
43	Traffic Study/Signal Design (plans, computations and special provisions)														0
44	Traffic Data Collection				8		14	2							22
45	Traffic Analysis	2	5				15								22
46	Traffic Signal's Design and Plan Sheets	2	2	15			12				0				39
47	Traffic Control Plans														0
48	Typical Sections (2J)														0
49	Utilities Coordination/Verification														0
50	Verify Right-of-Way is free of encroachments														0
51	Waste Water Design (plan and profile)														0
52	Water Line Design, Non-Participating (plan and profile)														0
53	Welland 2M Sheets														0
	Welland Avoid. Anal., Impact, Mitigation Dgn.														0
															325
															325

DIRECT LABOR COST SUMMARY

Category	Rate	Hours	Amount
PR - Principal	\$ 81.03	12	\$ 972.36
PM - Project Manager	\$ 47.05	42	\$ 1,982.10
SRPE - Senior Project Engineer	\$ 46.09	156	\$ 7,190.04
PE - Project Engineer	\$ 38.99	10	\$ 389.90
EJ - Engineer Intern	\$ 23.88	34	\$ 812.11
CAD Tech	\$ 20.63	82	\$ 1,712.73
C - Director	\$ 21.63	9	\$ 194.67
<b>TOTAL DIRECT LABOR</b>		<b>325</b>	<b>\$ 12,668.26</b>

OVERHEAD

TOTAL LABOR AND OVERHEAD			\$ 23,781.77
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DIRECT NON LABOR PROJECT EXPENSES

Item	Quantity	Unit	Rate	Amount
Mileage	3487.00	mi.	\$0.55	\$1917.85
Mileage: Survey Vehicle		mi.	\$0.55	\$0.00
Soil borings / Drilling		lb		\$2,000.00
Drilling equipment fees		lb		\$438.00
Equipment Rental		days	\$50.00	\$0.00
Logging & assays		days	\$116.00	\$0.00
Printing: 24 x 36 Sheets (Reproducible Paper)		copies	\$3.00	\$0.00
<b>TOTAL DIRECT PROJECT EXPENSES</b>				<b>\$2,623.50</b>

SUBCONSULTANTS

Specialty Subcontractor			\$0.00
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TOTAL LABOR AND OVERHEAD

FIXED FEE	Fixed Fee for Profit		\$89,980.06
DIRECT PROJECT EXPENSES	Range 10% - 15%		\$2,623.50
<b>SUBCONSULTANTS</b>			<b>\$0.00</b>
<b>TOTAL FEE</b>			<b>\$92,603.56</b>



Project Name: South 56th Street, Shadow Pines Drive to Old Cheney Road  
 Project No.: LCLC-5241(S)  
 Control Number: 13141  
 City of Lincoln #701923

FINAL ROADWAY DESIGN

Estimate by: E&A Consulting Date: 11/8/2011  
 Type of Work: Urban arterial design  
 Urban: R/mi Rural: R/mi  
 Total: R/mi Stations: Sta.

Task	Task Description	PR	PM	PE	EI	CAD Tech	Drafter	Clerk	RLS	Survey Chief	Survey Crew	Total
1	BONAFCE Final Design											
2	Construction and Removal Sheets (21)			18		10						28
3	Construction Phasing Plans (2P)			14		10						24
4	Construction/Operational Cross-sections			5								5
5	Data Collection and Review			1		2						3
6	Detail Plan			1		10						11
7	Drainage Plan Sheets			1		3						4
8	Earthwork Data Sheets			2		4						6
9	General Information Sheets (2H)			3		8						11
10	Geometric Sheets (2L)			2		4						6
11	Guardrail Design and Other Special Plans (specify special plans needed for the project)			3		8						11
12	Horizontal Alignment and Control Points (2H)			1		3						4
13	Joints and Closures Sheets (2L)			4		3						7
14	Metabolic (Monthly, weekly, other)			27		46						73
15	Permitting Marking and Signage Plans			1		3						4
16	Permitting Applications/Agreements (204 permit, flood plain, Railroad, Utility, etc.)			0		18						18
17	Plan & Profile Plans (Utility, of Construction, horizontal and Vertical Alignment)			3		4						7
18	Preliminary Title Sheet			0		2						2
19	Project Management	6	61	46		0						113
20	PS&E Submittal			4		64						68
21	Public Information Meeting (Pre-Construction mtg.)			16		24						40
22	Public Involvement			66		72						138
23	Quality Assurance/Quality Control			32		9						41
24	Retaining Wall and/or Slope Design			9		8						17
25	Revisions			24		10						34
26	Roadway Cross-Sections			18		8						26
27	Roadway, Utility (noise and consultative)			12		0						12
28	Sediment/Erosion Control Plans (SWPPP)			10		6						16
29	Shoulder Provisions (Noise Only)			8		0						8
30	Storm Sewer Design Cross Section Sheets			18		16						34
31	Structural/Bidder Plan Sheets			0		0						0
32	Summary of Quantities/Estimates (Estimate No. 45, Post LCC Plans)			24		8						32
33	Summary of Soils and Materials Information (2K)			0		0						0
34	Traffic Signal/TIS Design and Plan Sheets			8		10						18
35	Traffic Control Plans			4		4						8
36	Typical Stockings (27)			12		2						14
37	Utilities Coordination/Verification			0		0						0
38	Waste Water Design (plan and profile)			3		3						6
39	Water Line Design Participating (plan and profile)			21		12						33
40	Water Line Design, Non-Participating (plan and profile)			5		32						37
41	Wetland 2W Sheets			2		2						4
42	Wetlands (Avoid, Anal, Impacts, Mitigation Dgn.)			6		0						6
Totals: 6 207 494 0 294 0 0 0 0 0 0 0 1001												

DIRECT LABOR COST SUMMARY

Category	Rate	Hours	Rate	Amount
PR - Principal	\$ 55.87	6	\$ 335.22	\$ 335.22
PM - Project Manager	\$ 40.40	207	\$ 8,322.80	\$ 8,322.80
PE - Professional Engineer	\$ 36.94	494	\$ 18,249.36	\$ 18,249.36
EI - Engineer Intern		0	\$ 0.00	\$ 0.00
CAD Tech	\$ 24.81	294	\$ 7,294.14	\$ 7,294.14
Drafter		0	\$ 0.00	\$ 0.00
ENV - Environmental Scientist		0	\$ 0.00	\$ 0.00
SENV - Senior Environmental Scientist		0	\$ 0.00	\$ 0.00
C - Clerical		0	\$ 0.00	\$ 0.00
RLS - Registered Land Surveyor	\$ 33.00	0	\$ 0.00	\$ 0.00
Survey Crew Chief	\$ 23.72	0	\$ 0.00	\$ 0.00
Survey Crew	\$ 20.19	0	\$ 0.00	\$ 0.00
TOTAL DIRECT LABOR				1001 \$ 34,241.12

OVERHEAD

OVERHEAD	102.11%	Overhead Rate	\$ 55,608.28
TOTAL LABOR AND OVERHEAD			\$ 89,749.40

DIRECT NON LABOR PROJECT EXPENSES

Category	Amount	Cost
Tollage	\$3.50/mi	\$3.50
Mileage Survey Vehicle	\$0.83/mi	\$0.00
Staking Materials	\$0.10/each	\$0.00
Photocopiers	\$0.10/copy	\$0.00
Equipment Rental	\$50.00/day	\$0.00
Lodging & Meals	\$116.00/day	\$0.00
Printing 24 x 36 Sheets (Reproducible Paper)	\$3.00/copy	\$0.00
TOTAL DIRECT PROJECT EXPENSES		\$0.00

SUBCONSULTANTS

Schmitt	\$48,377.17
Metzler-Wagner	\$14,442.25
TOTAL LABOR AND OVERHEAD	\$ 89,749.40

FIXED FEE

FIXED FEE	Range 10% - 15%	\$ 11,058.18
DIRECT PROJECT EXPENSES		\$ 0.00
SUBCONSULTANTS		\$ 72,723.42
TOTAL FEE		\$ 173,511.99

Distance traveled to site, miles  
 Travel time to site in hours (44.3 mph)

PR Trips	0
PM Trips	0
PE Trips	0
EI Trips	0
RLS	0
Survey Crew Chief Trips	0
Survey Crew Member 1 Trips	0
RC Trips	0
PR Time Hours	0
PM Time Hours	0
PE Time Hours	0
EI Time Hours	0
RLS Hours	0
Survey Crew Chief Time Hours	0
Survey Crew Member 1 Time Hours	0
RC Time Hours	0

Non-Participating Costs	HOURS	RATE	AMOUNT
PM	5	\$ 40.40	\$ 202.00
PE	32	\$ 36.94	\$ 1,182.08
TECH	28	\$ 24.81	\$ 694.08
Total Direct Labor			\$ 2,078.16
Overhead 102.11%			\$ 2,123.44
			\$ 5,319.58
Fixed Fee 12.30%			\$ 654.10
Total Fee			\$ 5,972.76

Non-Participating Fee \$ 5,972.76  
 TOTAL PARTICIPATING FEE \$ 167,539.23

Project Name: South 58th Street, Shawcoy Pines Drive to Ole Cheney Road  
 Project No.: 14-LP-034 (B)  
 County Number: 13541

FINAL ROADWAY DESIGN

Estimate by: Mark Luthgens Date: 8-Nov-11  
 Type of Work: Urban: R./M.L. Rural: R./M.L. Station: N./M.L. Sta.  
 Total: R./M.L. Station: N./M.L. Sta.

Task	Task Description	PR	PM	SrPE	PE	BI	CAD Tech	Drafter	Blank	Blank	C	PLS	Survey	Survey	Total
													Chief	Grow	
1	SOS/PE Preliminary/Functional Design														0
2	Construction and Removal Sheets (2L)														0
3	Construction Planning Plans (2P)														0
4	Construction Cross-sections														0
5	Data Collection and Review														0
6	Detail Plan														0
7	Detail Plan Sheets														0
8	Detail Plan Sheets														0
9	General Information Sheets (2H)														0
10	Geometric Sheets (2I)														0
11	Geotechnical Evaluation:														0
12	Data Research														0
13	Design Recommendations														0
14	Geotechnical Report														0
15	Guardrail Design and Other Special Plans (specify special cases needed for the project)														0
16	Horizontal Alignment and Vertical Curves														0
17	Hydrological/Hydraulic Analysis for Culverts and Storm Sewers														0
18	Hydrological/Hydraulic Analysis for Base Slough														0
19	Limits and Grades Sheets (2J)														0
20	Methods (Motorway, water, other)														0
21	Noise reduction preliminary plotting		10	4			2				2				18
22	Pavement Design (Empirical computations)														0
23	Pavement Marking and Storage Plans				15										15
24	Pavement Applications/Assessments (404 permit, flood plain, Railroad, Utility, etc.)		4	24			20								48
25	Plan & Profile Plans (Limits of Construction, Horizontal and Vertical Alignment)														0
26	Plan Convention to NCDOT Standards														0
27	Preliminary Title Sheet			10			40								50
28	Project Management														0
29	Public Information Meeting		12	28								2			42
30	Public Involvement		3	7			4								14
31	Quality Assurance/Quality Control														0
32	Reconcile View and/or Special Design														0
33	Revisions														0
34	Right-of-Way Survey														0
35	Roadway Cross-Sections														0
36	Roadway Lighting (plans and computations)		4	5	88						6				103
37	Sediment/Erosion Control Plans (SWPPP)														0
38	Sewer Design (2K Consents)														0
39	Storm Sewer Design (Plan and Cross Section Sheets)				14										14
40	Structural/Bridge Design Sheets														0
41	Summary of Quantities/Estimates (Estimate No. 30 Pre-Plan and 40 Functional)		2	12			24								38
42	Topographic Survey						2								2
43	Traffic Study/Signal Design (plans, computations and special provisions):														0
44	Traffic Data Collection														0
45	Traffic Analysis														0
46	Traffic Control Plans		2	2	24		16								52
47	Traffic Signals/ITS Design and Plan Sheets														0
48	Utility Coordination/Verification														0
49	Verify Right-of-Way & Easement Encroachments														0
50	Water Meter Design (plan and profile)														0
51	Water Line Design (Plan and Profile)														0
52	Wetland 2W Sheets														0
53	Wetlands (Avoid, Anal., Impacts, Mitigation Plan)														0
															405
															405

DIRECT LABOR COST SUMMARY

Category	Rate	Hours	Rate	Amount
PM - Principal	\$ 87.53	14	\$ 87.53	\$ 1,225.42
PM - Project Manager	\$ 47.05	53	\$ 47.05	\$ 2,493.65
Sr PE - Senior Project Engineer	\$ 46.09	82	\$ 46.09	\$ 3,781.38
PE - Project Engineer	\$ 38.99	120	\$ 38.99	\$ 4,678.76
EI - Engineer Intern	\$ 23.59	0	\$ 23.59	\$ 0.00
CAD Tech	\$ 20.83	108	\$ 20.83	\$ 2,249.64
C - Clerical	\$ 21.82	18	\$ 21.82	\$ 392.76
<b>TOTAL DIRECT LABOR</b>		<b>405</b>		<b>\$ 14,873.87</b>
<b>OVERHEAD</b>			Overhead Rate (19%)	\$ 2,825.66
<b>TOTAL LABOR AND OVERHEAD</b>				<b>\$ 17,699.53</b>
<b>DIRECT NON-LABOR PROJECT EXPENSES</b>				
Mileage Survey Vehicle	\$ 0.55/mi	14	\$ 0.55/mi	\$ 7.70
Mileage Survey Vehicle	\$ 0.55/mi	53	\$ 0.55/mi	\$ 29.15
Soil borings / Drilling	\$ 1.00/ft	10	\$ 1.00/ft	\$ 10.00
Drilling equipment fees	\$ 8.00/ft	10	\$ 8.00/ft	\$ 80.00
Equipment Rental	\$ 5.00/day	2	\$ 5.00/day	\$ 10.00
Lodging & Meals	\$ 15.00/day	2	\$ 15.00/day	\$ 30.00
Printing: 24 x 36 Sheets (Reproducible Paper)	\$ 3.50/copy	10	\$ 3.50/copy	\$ 35.00
<b>TOTAL DIRECT PROJECT EXPENSES</b>				<b>\$ 207.85</b>
<b>SUBCONSULTANTS</b>				
<b>TOTAL LABOR AND OVERHEAD</b>	Fixed Fee for Profit			\$ 17,907.38
<b>FIXED FEE</b>	Range 10% - 15%			\$ 2,825.66
<b>DIRECT PROJECT EXPENSES</b>				\$ 207.85
<b>SUBCONSULTANTS</b>				\$ 0.00
			<b>TOTAL FEE</b>	<b>\$ 20,940.89</b>



Project Name: South 56th Street, Shadow Pines Drive to Old Cheney Road  
 Project No.: LCLC-5241(5)  
 Control Number: 13141  
 City of Lincoln #701923

RIGHT-OF-WAY DESIGN

Estimate by: EAA Consulting Date: 11/8/2011  
 Type of Work: Urban arterial design  
 Urban: f./mi. Rural: f./mi.  
 Total: f./mi. Stations: Sta.

Task	Task Description	PR	PM	PE	EI	CAD Tech	Drafter	Checker	RLS	Survey Chief	Survey Crew	Total
<b>SOS-GE Right-of-Way</b>												
<b>ROW PLANS - Prelim/Functional Design</b>												
1	Add and notes to plan sheets			4		10						14
2	Adjust ROW design after review meeting			16		14						30
3	Check and plot previous ROW			40		24						64
4	Compute ROW areas			2		6						8
5	Create sheet on plan sheet			1		3						4
6	Create summary of areas sheet (R-2 sheet)											0
7	Design access control (if needed)											0
8	Design new ROW for review meeting			12		48						60
9	Early acquisition appraisal plans (if needed)											0
10	Early acquisition computations (if needed)											0
11	Early acquisition legal descriptions (if needed)											0
12	Label encroachments on plans			3		4						7
13	Label station & offsets on plans			4		2						6
14	List of Existing Access Control Breaks (if needed)											0
15	Meeting (if needed, weekly, other)		12	16		4						32
16	Plan revisions associated with negotiations			12		16						28
17	Plot and submit final right of way plans (appraisal/negotiations) and legal descriptions			2		2						4
20	Prepare construction plans/descriptions			6		12						18
21	Prepare legal descriptions			18		46						64
22	Project Management			34								34
23	Quality Control			18								18
24	Review & attach ROW Survey			12		6						18
25	ROW Cost Estimate			4		2						6
26	Update sheets with cost #'s					1						1
<b>PS&amp;E PLANS</b>												
1	Submit PS&E plans w/staking listing			8		2						10
2	Submit CADD and electronic files on CD					1						1
3	Quality Control			6		4						10
4	Verify Right of Way is free of encroachments											0
<b>FINAL PLANS</b>												
1	Prepare Final plans			16		32						48
2	Plot and submit Final plans, Submit CADD and electronic files on CD			2		2						4
3	Quality Control			6		4						10
<b>Totals</b>		0	98	263	0	247	0	0	0	0	0	698

DIRECT LABOR COST SUMMARY

Category	Rate	Hours	Rate	Amount
PR - Principals		0	\$0.00	\$ -
PM - Project Manager	\$40.40	96	\$40.40	\$ 3,959.20
PE - Professional Engineer	\$36.94	263	\$36.94	\$ 9,715.22
EI - Engineer Intern		0	\$0.00	\$ -
CAD Tech	\$24.81	247	\$24.81	\$ 6,128.07
Drafter		0	\$0.00	\$ -
Blank		0	\$0.00	\$ -
Blank		0	\$0.00	\$ -
C - Clerical		0	\$0.00	\$ -
RLS - Registered Land Surveyor		0	\$0.00	\$ -
Survey Crew Chief		0	\$0.00	\$ -
Survey Crew		0	\$0.00	\$ -
<b>TOTAL DIRECT LABOR</b>		<b>698</b>		<b>\$ 19,802.49</b>
<b>OVERHEAD</b>			<b>Overhead Rate</b>	<b>\$ 32,101.82</b>
			<b>162.11%</b>	
<b>TOTAL LABOR AND OVERHEAD</b>				<b>\$ 51,904.31</b>

DIRECT PROJECT EXPENSES

Category	Rate	Quantity	Rate	Amount
Mileage	\$0.55/mi.		\$0.55/mi.	\$0.00
Mileage Survey Vehicle	\$0.53/mi.		\$0.53/mi.	\$0.00
Staking Materials	\$0.10/each		\$0.10/each	\$0.00
Photocopies	\$0.00/copy		\$0.00/copy	\$0.00
Equipment Rental	\$20.00/day		\$20.00/day	\$0.00
Lodging & Meals	\$116.00/day		\$116.00/day	\$0.00
Printing: 24 x 38 Sheets (Reproducible Paper)	\$3.00/copy		\$3.00/copy	\$0.00
<b>TOTAL DIRECT PROJECT EXPENSES</b>				<b>\$0.00</b>

SUBCONSULTANTS

Category	Rate	Amount
Manager Review of Plans, Staking, etc.		\$2,982.46
<b>TOTAL LABOR AND OVERHEAD</b>		\$51,904.31
<b>FIXED FEE</b>	Fixed Fee for Profit	\$6,384.23
<b>DIRECT PROJECT EXPENSES</b>	Range 10% - 15%	\$0.00
<b>SUBCONSULTANTS</b>		\$2,982.46
<b>TOTAL FEE</b>		\$61,290.98

- Distance traveled to site, miles
- Travel time to site in hours ( \_\_ mph)
- PR Trips
- PM Trips
- PE Trips
- EI Trips
- RLS
- Survey Crew Chief Trips
- Survey Crew Member 1 Trips
- RC Trips
- PR Trips
- PM Trips
- PE Trips
- EI Trips
- RLS Trips
- Survey Crew Chief Trips
- Survey Crew Member 1 Trips
- RC Trips
- PR Time Hours
- PM Time Hours
- PE Time Hours
- EI Time Hours
- RLS Hours
- Survey Crew Chief Time Hours
- Survey Crew Member 1 Time Hours
- RC Time Hours

Project Name: South 55th Street, Snagow Pines Drive to Ole Chaney Road  
 Project No.: LCLC-6241(5)  
 Control Number: 13141  
 City of Lincoln #791923

RIGHT-OF-WAY DESIGN

Estimate by: Midwest ROW Date: 11/8/2011  
 Type of Work: Urban arterial design  
 Urban: ft./mi. Rural: ft./mi.  
 Total: ft./mi. Stations: Sta.

Task	Task Description	PR	PM	PE	EI	CAD Tech	Drafter	Clerk	RLS	Survey Chief	Survey Crew	Total
SOS&E Right-of-Way												
<b>ROW PLANS - Prelim/Functional Design</b>												
1	Add buy notes to plan sheets											0
2	Adopt ROW design after review meeting											0
3	Check and plot previous ROW											0
4	Compute ROW areas											0
5	Orient situation plan sheet											0
6	Create summary of areas sheet (R-2 sheet)											0
7	Design access control (if needed)											0
8	Design new ROW for review meeting											0
9	Early acquisition appraisal plans (if needed)											0
10	Early acquisition computations (if needed)											0
11	Early acquisition legal descriptions (if needed)											0
12	Label ownership on plans											0
13	Label station & offsets on plans											0
14	List of Existing Access Control Breaks (if needed)											0
15	Messaging (Monthly, weekly, other)											0
16	Plan revisions associated with negotiations											0
17	Plot and submit final (and) of way plans (appraisals/negotiation plans) and legal descriptions											0
20	Prepare condemnation plans/descriptions											0
21	Prepare legal descriptions											0
22	Project Management											0
23	Quality Control											0
24	Review & plot ROW Survey											0
25	ROW Cost Estimate		34									34
26	Update sheets w/traff #s											0
<b>PS&amp;E PLANS</b>												
1	Submit PS&E plans w/staking listing											0
2	Submit CADD and electronic files on CD											0
3	Quality Control											0
4	Verify Right of Way is free of encroachments											0
<b>FINAL PLANS</b>												
1	Prepare Final plans											0
2	Plot and submit Final plans, Submit CADD and electronic files on CD											0
3	Quality Control											0
Totals												34

DIRECT LABOR COST SUMMARY

Category	Rate	Hours	Rate	Amount
PR - Principal	\$31.73	34	\$31.73	\$ 1,078.82
PM - Project Manager		0	\$0.00	\$ -
PE - Professional Engineer		0	\$0.00	\$ -
EI - Engineer Intern		0	\$0.00	\$ -
CAD Tech		0	\$0.00	\$ -
Drafter		0	\$0.00	\$ -
Blank		0	\$0.00	\$ -
C - Clerical		0	\$0.00	\$ -
RLS - Registered Land Surveyor		0	\$0.00	\$ -
Survey Crew Chief		0	\$0.00	\$ -
Survey Crew		0	\$0.00	\$ -
<b>TOTAL DIRECT LABOR</b>		34		\$ 1,078.82
<b>OVERHEAD</b>			Overhead Rate 162.00%	\$ 1,585.87
<b>TOTAL LABOR AND OVERHEAD</b>				\$ 2,664.69

DIRECT PROJECT EXPENSES

Item	Unit	Rate	Amount
Mileage	mi.	\$0.55/mi.	\$0.00
Mileage Survey Vehicle	mi.	\$0.55/mi.	\$0.00
Staking Materials	each	\$0.10/each	\$0.00
Photocopies	copies	\$0.10/copy	\$0.00
Equipment Rental	days	\$50.00/day	\$0.00
Lodging & Meals	days	\$116.00/day	\$0.00
Printing: 24 x 36 Sheets (Reproducible Paper)	copies	\$3.00/copy	\$0.00
<b>TOTAL DIRECT PROJECT EXPENSES</b>			\$0.00

SUBCONSULTANTS

Category	Rate	Hours	Rate	Amount
<b>TOTAL LABOR AND OVERHEAD</b>				\$2,664.69
<b>FIXED FEE</b>				\$327.75
<b>DIRECT PROJECT EXPENSES</b>				\$0.00
<b>SUBCONSULTANTS</b>				\$0.00
<b>TOTAL FEE</b>				\$2,992.44

Distance traveled to site, miles

Travel time to site, n hours (\_\_\_\_ mph)

- PR Trips
- PM Trips
- PE Trips
- EI Trips
- RLS
- Survey Crew Chief Trips
- Survey Crew Member 1 Trips
- RC Trips

- PR Trips
- PM Trips
- PE Trips
- EI Trips
- RLS Trips
- Survey Crew Chief Trips
- Survey Crew Member 1 Trips
- RC Trips

- PR Time Hours
- PM Time Hours
- PE Time Hours
- EI Time Hours
- RLS Hours
- Survey Crew Chief Time Hours
- Survey Crew Member 1 Time Hours
- RC Time Hours



## FEES AND PAYMENTS

### EXHIBIT "E"

- A. For performance of the services as described in this agreement, the Consultant will be paid a fixed-fee-for-profit of \$66,074.76, as defined in paragraph E of this section, and up to a maximum amount of \$546,717.26 for actual costs as defined in paragraph F of this section. The total agreement amount is \$612,792.02. Progress and final payments will be based on receipted invoices or certified billings and compensation will be in accordance with all requirements and limitations of the federal cost principles contained in the Federal Acquisition Regulation (48 CFR 31).
- B. The Consultant shall require the subconsultants (if applicable) to notify them if at any time they determine that their costs will exceed their estimated actual costs. The Consultant shall not allow the subconsultants to exceed their estimated actual costs without prior written approval of the LPA. The Consultant is cautioned that cost under-runs associated with any subconsultant's contract are not available for use by the Consultant unless the LPA and FHWA (when applicable) have given prior written approval.
- C. The LPA is not responsible for costs incurred prior to the Notice-to-Proceed date or after the completion deadline date stated in the NOTICE TO PROCEED AND COMPLETION section of this agreement or as provided in a written time extension notification.
- D. Final payment will be based on an audit to be performed by the State at the conclusion of the work.
- E. Fee for profit is computed upon the direct labor costs and overhead costs. The Fee for Profit is not allowable upon direct non-labor costs. The Fee for profit is calculated by multiplying the sum of the direct labor and overhead costs billed by the negotiated Fee for Profit rate of "12.30%".
- F. Actual costs include direct labor costs, direct non-labor costs, and overhead costs.
- (1) Direct Labor Costs are the earnings that individuals receive for the time they are working directly on the project.
- (a) Hourly Rates: For hourly employees, the hourly earnings rate shall be the employee's straight time hourly rate for the pay period in which the work was performed. For salaried employees, the hourly earnings rate shall be their normal hourly rate as established by the company's compensation plan, except for those pay periods where the employee works more hours

than normally expected. In those pay periods, the hourly rate for project billing purposes shall be the actual rate determined by dividing the actual compensation for that pay period by the actual hours reported, including paid absences, for that pay period. Hours worked includes paid absences, such as: holiday, vacation, sick leave, administrative leave, etc.

(b) Time records: The hours charged to the project must be supported by adequate time distribution records. The records must clearly indicate the distribution of hours to all activities on a daily basis for the entire pay period, and there must be a system in place to ensure that time charged to each activity is accurate.

(2) Direct Non-Labor Costs charges in this category include actual allowable expenses for personnel away from their base of permanent assignment, communication costs, reproduction and printing costs, special equipment and materials required for the project, special insurance premiums if required solely for this agreement, and such other similar items.

A non-labor cost cannot be charged as a direct cost and also be included in the Consultant's overhead rate. If for reasons of practicality, the consultant is treating a direct non-labor cost category, in its entirety, as an overhead cost, then costs from that category are not eligible to be billed to this project as a direct expense.

Payment for eligible direct non-salary costs must be made on receipted invoices whenever possible, or on certified billings of the Consultant. For purposes of standardization on this agreement, the following expenses will be reimbursed at actual costs, not to exceed the rates as shown below.

(a) The reimbursement for vehicle mileage associated with the use of company owned vehicles shall be the prevailing standard rate as established by the Internal Revenue Service (IRS) through its Revenue Procedures. For vehicle mileage associated with the use of a privately owned vehicle (POV), reimbursement is limited to the lesser of:

- 1) The mileage rate which the consultant reimbursed to the person who submitted the claim for POV use, or
- 2) The prevailing standard rate as established by the IRS.

- (b) Automobile Rentals and Air Fare will be actual reasonable cost giving the State all discounts.
- (c) The reimbursement for meal and lodging rates shall be the prevailing standard rate as indicated in the current website address for U.S. General Services Administration's (GSA) rates which is indicated below:

<http://www.gsa.gov/portal/category/100120>

- (1) For the Consultant and its employees to be eligible for the meal allowance, the following criteria must be met.

Breakfast:

- (a) Employee is required to depart at or before 6:30 a.m., or
- (b) Employee is on overnight travel.

Lunch:

- (a) Employee must be on overnight travel. No reimbursement for same day travel.
- (b) Employee is required to leave for overnight travel at or before 11:00 a.m., or
- (c) Employee returns from overnight travel at or after 2:00 p.m.

Dinner:

- (a) Employee returns from overnight travel or work location at or after 7:00 p.m., or
- (b) Employee is on overnight travel.

Meals are not eligible for reimbursement if the employee eats within 20 miles of the headquarters town of the employee.

The Consultant shall note the actual lodging and meal costs in a daily diary, expense report, or on the individual's time report along with the time of departure to the project and time of return to the headquarters town. The total daily meal costs must not exceed the rate indicated in (c) above. When requested by LPA or State, the Consultant will provide a copy of the meal receipts.

- (3) Overhead Costs include indirect labor costs, indirect non-labor costs, and direct labor additives that are allowable in accordance with 48 CFR 31. Overhead costs are to be allocated to the project as a percentage of direct labor costs. The

Consultant will be allowed to charge the project using its actual allowable overhead rate. Overhead rate increases which occur during the project period will not be cause for an increase in the maximum amount established in paragraph A of this section. When an audit is performed by the State at the completion of the work, the actual allowable overhead rate for the year the project labor was incurred will be applied to the direct labor costs for that year. If a particular year's actual overhead has not yet been computed or approved by the State, the most recent year's accepted rate will be applied. The audit may result in additional funds due the Consultant or a cost due from the Consultant to the State.

- G. The Consultant shall submit invoices to the LPA at a minimum of monthly intervals. The invoices must present actual direct labor, actual overhead, actual direct non-labor costs, as well as the fee for profit based upon the actual direct labor and overhead costs billed for that period. The invoices must identify each employee by name and classification, the hours worked, and each individual's actual labor cost. Direct non-labor expenses must be itemized and provide a complete description of each item billed.

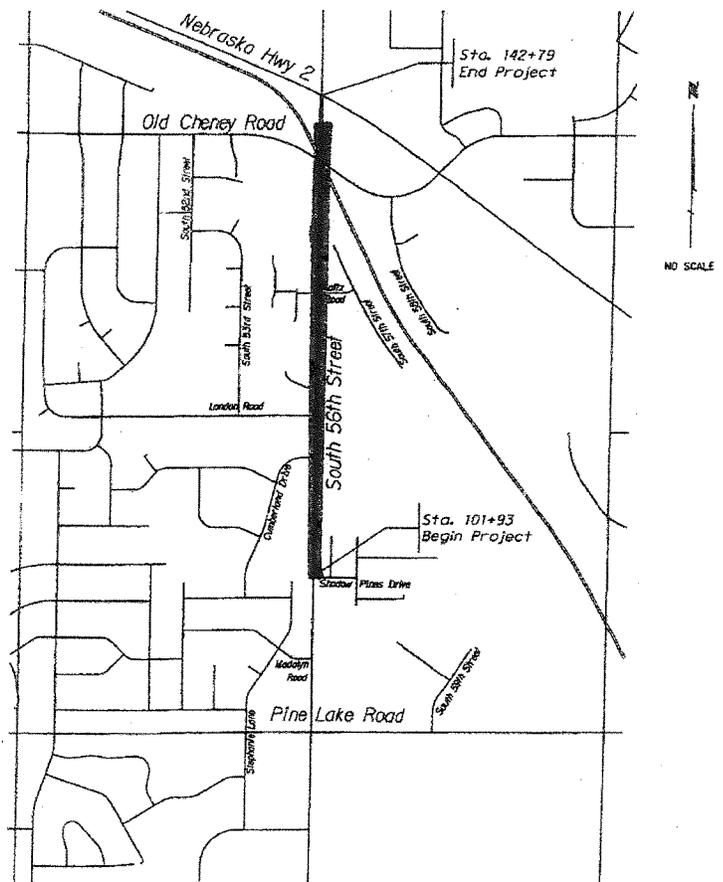
Each monthly invoice must be substantiated by a progress report which is to include/address, as a minimum:

1. A description of the work completed for that period
2. A description of the work anticipated for the next pay period
3. Information needed from LPA
4. Percent of work completed to date
5. A completed "Cost Breakdown Form" which is located on the State's webpage at [www.transportation.nebraska.gov/rfp](http://www.transportation.nebraska.gov/rfp).

If the Consultant does not submit a monthly invoice, it shall submit its progress report monthly. The State, on behalf of LPA, will make every effort to pay the Consultant within 30 days of receipt of the Consultant's invoices. Payments are dependent upon whether the monthly progress reports provide adequate substantiation for the work and whether the LPA determines that the work submitted is satisfactory.

- H. Upon completion of the work under this agreement, the Consultant shall submit their final invoice with a letter identifying it as the final invoice. The letter shall also include the following information/statements:

CITY OF LINCOLN, NE  
SOUTH 56TH STREET PAVING  
SHADOW PINES DRIVE TO  
NEBRASKA HIGHWAY 2  
PROJECT #701763



Project No. LCLC-5241(5)  
Control No. 13141  
S 56th St, Shadow Pines Dr - Old Cheney Rd

Exhibit "F"