

**Public Works Committee Meeting
Tuesday, April 21, 2020 4:30 PM
Crete Library/Community Center
1515 Forest Ave.
Crete, NE 68333**

1. Open Meeting

- In accordance with Nebraska law, a copy of the Open Meetings Act can be found in the back of the Council Chambers.
- Items listed on the agenda may be considered in any order.
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2. Roll Call

- Attendance of members will be recorded to determine the presence of a quorum for official actions.
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3. Items of Business

- The Committee may discuss or limit discussion on, hear testimony in favor of or in opposition to, or take action to provide a recommendation to the City Council on any matter presented under this title.
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- A. Discuss and provide a recommendation to the City Council regarding the Opinion of Probable Cost for the mill and overlay project for 12th Street and Linden Avenue and the associated engineering contract with JEO Consulting.
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- B. Discuss and provide a recommendation to the City Council on reconstructing the sidewalk and stairs in front of City Hall.
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- C. Discuss and provide a recommendation to the City Council regarding Ordinance 2103: An ordinance vacating the property adjacent to Lot 2 of Wanek's Subdivision.
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- D. Discuss and provide a recommendation to the City Council on entering into a contract with JEO Consulting for the construction of a new well and well house near Highway 103.
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- E. Discuss and provide a recommendation to the City Council regarding an updated water main plan.
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F. Discuss and provide a recommendation to the City Council on approving the preliminary cost estimate for water and sewer service to the Dana Point Subdivision.

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4. Officers' Reports

- Reports may be given by the Mayor, Officers, Departments, or Councilmembers concerning the current operations of the City.
- No action can be taken on matters presented under this title except to answer any questions or to refer the matter for further action.

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5. Adjournment

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ENGINEER'S CONCEPTUAL OPINION OF PROBABLE COST

2020 Street Improvements

Crete, NE

JEO Project No. 200351.00

Date Prepared:

April 17, 2020

**ESTIMATE OF QUANTITIES**

Item #	Description	Unit	Quantity	Unit Price	Total	
BASE BID - LINDEN AVENUE & 12TH STREET - ASPHALT MILL AND OVERLAY						
1.	Mobilization	LS	1	\$10,000.00	\$10,000	
2.	Bonding and Insurance	LS	1	\$2,500.00	\$2,500	
3.	Temporary Traffic Control Measures	LS	1	\$2,500.00	\$2,500	
4.	Cold Milling	SY	2,500	\$3.00	\$7,500	
5.	Asphalt Concrete	TONS	280	\$120.00	\$33,600	
6.	Tack Coat	GAL	375	\$1.60	\$600	
7.	Full-Depth Patching	SY	125	\$50.00	\$6,250	
8.	Adjust Valve Box to Grade	EA	3	\$500.00	\$1,500	
9.	Adjust Manhole to Grade	EA	3	\$750.00	\$2,250	
10.	4" Yellow Permanent Pavement Marking Paint	LF	851	\$3.00	\$2,553	
				Construction Subtotal	Base Bid	\$69,260
				Contingency	10%	\$6,930
				Total Opinion of Construction Cost		\$76,190



**AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR
PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of _____ (“Effective Date”) between City of Crete (“Owner”) and JEO Consulting Group, Inc. (“Engineer”).

Owner’s project, of which Engineer’s services under this Agreement are a part, is generally identified as follows:

2020 Street Improvements (“Project”).

JEO Project Number: 200351.00

Owner and Engineer further agree as follows:

ARTICLE 1 - SERVICES OF ENGINEER

1.01 Scope

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

ARTICLE 2 - OWNER’S RESPONSIBILITIES

2.01 Owner Responsibilities

- A. Owner responsibilities are outlined in Section 3 of Exhibit B.

ARTICLE 3 - COMPENSATION

3.01 Compensation

- A. Owner shall pay Engineer as set forth in Exhibit A and per the terms in Exhibit B.
- B. The lump sum fee for the Project is: \$9,990.00
- C. The Standard Hourly Rates Schedule shall be adjusted annually (as of approximately January 1st) to reflect equitable changes in the compensation payable to Engineer. The current hourly rate schedule can be provided upon request.

ARTICLE 4 - EXHIBITS AND SPECIAL PROVISIONS

4.01 Exhibits

Exhibit A – Scope of Services
Exhibit B – General Conditions

4.02 Total Agreement

- A. This Agreement (consisting of pages 1 to 2 inclusive, together with the Exhibits identified as included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

Owner:

By: _____

Title: _____

Date Signed: _____

Address for giving notices:

Engineer: JEO Consulting Group, Inc.



By: Nathan Boone

Title: Project Manager

Date Signed: 4/21/2020

Address for giving notices:

JEO Consulting Group, Inc.

2700 Fletcher Ave

Lincoln, NE 68504

This is **Attachment 1 to Exhibit A**, consisting of 3 pages,
Referred to in part of the **Agreement between OWNER and
ENGINEER for Professional Services**.

Project Description:

The City of Crete is looking to improve Linden Avenue and 12th Street with a mill and overlay. The mill and overlay project will include a 2" mill and overlay of the asphalt surface width of 30' from the existing curb and gutter.

Linden Avenue – 13th Street to 12th Street, inclusive of 12th Street intersection (1 block)
12th Street – Linden Avenue to Main Avenue, (1 block)

For this project, JEO Consulting Group, Inc. (JEO) will proceed with creating construction documents for the improvements and supporting the City through bidding and negotiation and construction phase services. Topographic survey will not be conducted for the project. The project will instead be designed with a site visit and using readily available existing aerial imagery.

Scope of Services:

Phase 1: Final Design

Task 1.1: Design

Objective: Project documents for the one (1) block of Linden Avenue, 13th Street to 12th Street, inclusive of the 12th Street intersection, and one (1) block of 12th Street, Linden Avenue to Main Avenue, for bidding and construction purposes.

Deliverable: Final plans, specifications, and an opinion of probable cost.

- 1.1.1 Using one (1) site visit and readily available existing aerial, design the two (2) blocks of asphalt mill and overlay to produce final plans and specifications for bidding and constructed purposes. An opinion of probable cost will also be developed for this.

Phase 2: Bidding and Negotiation

Task 2.1: Bidding and Negotiation

Objective: Solicit bidders and assist in obtaining construction bids according to state statutes.

Deliverable: Bid tabulations and a written recommendation of award.

- 2.1.1 Furnish copies of plans, specifications, and contract documents of the project to prospective bidders, material suppliers, and other interested parties upon their request and payment of the purchase cost established for the documents.
- 2.1.2 Respond to inquiries from prospective bidders and prepare any addenda required.
- 2.1.3 Assist the City in securing construction bids for the project.
- 2.1.4 Assist the City at the bid opening. (1 meeting)

- 2.1.5 Tabulate and analyze construction bids and report on them to the City, together with advice and assistance to the City in award of construction contract.
- 2.1.6 Prepare and submit a Letter of Recommendation to the City for project award approval.
- 2.1.7 Prepare Contract Documents for execution by Contractor and the City, and approval by City and City's legal and insurance counsel.

Phase 3: Construction Administration

Task 3.1: Construction Administration and Observation

Objective: Assist the City during the construction of the improvements. The scope of services is based on an estimate of 2 weeks of construction management and observation services.

Deliverables: None

- 3.1.1 Coordinate and attend one (1) Pre-construction Conference, on site, prior to construction beginning.
- 3.1.2 Provide interpretation of the plans and specifications when necessary.
- 3.1.3 Review Contractor's monthly pay applications and provide to the City for review and approval. The scope of services is based on one (1) pay applications for the project: one at the completion of all construction activities that will close out the project.
- 3.1.4 Consult with and advise the City during construction.
- 3.1.5 Asphalt material testing to be contracted by and paid for by JEO. The Engineer to coordinate when testing is required.
- 3.1.6 Furnish a part-time Resident Project Representative (RPR) to observe the construction progress and quality of work, estimated at 16 hours. Key inspections to include:
 - a. Marking of milling operation limits with paint.
 - b. Asphalt overlay operations.
 - c. Manhole adjustments
- 3.1.7 Conduct one (1) final inspection of the project with the Contractor and Owner at the project substantial completion.
- 3.1.8 Recommend to the City the acceptance of the project and complete the necessary certificates. These recommendations will be based on the Engineer's observation of construction utilizing professional judgement and accepted tests to determine that the Contractor has completed their contracts in substantial compliance with the plans, specifications, and contract documents.

Phase 4: Materials Testing

Objective: Material testing services will be conducted by Terracon as a subconsultant to JEO and coordinated through JEO.

Deliverables: Material test results.

- 4.1.1 This includes one (1) site visit to measure temperature and density and obtain field samples. The sample will be testing in the laboratory to determine maximum theoretical specific gravity and extraction/gradation of the asphalt.

Items not included with this scope that can be provided as Additional Services:

1. Any services or meetings not specifically mentioned above.
2. Topographic survey.
3. ADA sidewalk or sidewalk ramp design.
4. 11-month warranty review.

The City shall provide:

1. Existing water, sanitary sewer, and storm sewer information, if requested.
2. Notify property owners when construction is going to happen.
3. Schedule and attend meetings.
4. Setup funding of project with Fiscal Agent.
5. Publications.
6. Permit fees, if needed.
7. Any known drainage issues.
8. Representation at design site visit and the final inspection construction walk-through.

Project Fee Summary

Owner: City of Crete, Nebraska
Engineer: JEO Consulting Group Inc.
Project: 2020 Street Improvements
Crete, Nebraska - 2020

JEO Project No.: 200351.00

Lump Sum Project Phases:

Phase 1 Final Design	\$2,995.00
Phase 2 Bidding and Negotiation.....	\$2,460.00
Phase 3 Construction Administration	\$3,205.00
<u>Phase 4 Materials Testing.....</u>	<u>\$1,330.00</u>
TOTAL	\$9,990.00

Project Schedule

Owner: City of Crete, Nebraska
Engineer: JEO Consulting Group Inc.
Project: 2020 Street Improvements
Crete, Nebraska - 2020

JEO Project No.: 200351.00

Approximate Time Frame:

Notice to Proceed	April 21, 2020
On Site Meeting	May 1, 2020
Design Complete	May 1, 2020
Project Advertisement.....	May - June 2020
Bid Opening	May 28, 2020
Project Award.....	June 2, 2020
Construction.....	Summer/Fall 2020



 Project Area

JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

1. SCOPE OF SERVICES: JEO Consulting Group, Inc. (JEO) shall perform the services described in Exhibit A. JEO shall invoice the owner for these services at the fee stated in Exhibit A.

2. ADDITIONAL SERVICES: JEO can perform work beyond the scope of services, as additional services, for a negotiated fee or at fee schedule rates.

3. OWNER RESPONSIBILITIES: The owner shall provide all criteria and full information as to the owner's requirements for the project; designate and identify in writing a person to act with authority on the owner's behalf in respect to all aspects of the project; examine and respond promptly to JEO's submissions; and give prompt written notice to JEO whenever the owner observes or otherwise becomes aware of any defect in work.

Unless otherwise agreed, the owner shall furnish JEO with right-of-access to the site in order to conduct the scope of services. Unless otherwise agreed, the owner shall also secure all necessary permits, approvals, licenses, consents, and property descriptions necessary to the performance of the services hereunder. While JEO shall take reasonable precautions to minimize damage to the property, it is understood by the owner that in the normal course of work some damage may occur, the restoration of which is not a part of this agreement.

4. TIMES FOR RENDERING SERVICES: JEO's services and compensation under this agreement have been agreed to in anticipation of the orderly and continuous progress of the project through completion. Unless specific periods of time or specific dates for providing services are specified in the scope of services, JEO's obligation to render services hereunder shall be for a period which may reasonably be required for the completion of said services.

If specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such periods of time or date are changed through no fault of JEO, the rates and amounts of compensation provided for herein shall be subject to equitable adjustment. If the owner has requested changes in the scope, extent, or character of the project, the time of performance of JEO's services shall be adjusted equitably.

5. INVOICES: JEO shall submit invoices to the owner monthly for services provided to date and a final bill upon completion of services. Invoices are due and payable within 30 days of receipt. Invoices are considered past due after 30 days. Owner agrees to pay a finance charge on past due invoices at the rate of 1.0% per month, or the maximum rate of interest permitted by law.

If the owner fails to make any payment due to JEO for services and expenses within 30 days after receipt of JEO's statement, JEO may, after giving 7 days' written notice to the owner, suspend services to the owner under this agreement until JEO has been paid in full all amounts due for services, expenses, and charges.

6. STANDARD OF CARE: The standard of care for all services performed or furnished by JEO under the agreement shall be the care and skill ordinarily used by members of JEO's profession practicing under similar circumstances at the same time and in the

same locality. JEO makes no warranties, express or implied, under this agreement or otherwise, in connection with JEO's services.

JEO shall be responsible for the technical accuracy of its services and documents resulting therefrom, and the owner shall not be responsible for discovering deficiencies therein. JEO shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in owner furnished information.

7. REUSE OF DOCUMENTS: Reuse of any materials (including in part plans, specifications, drawings, reports, designs, computations, computer programs, data, estimates, surveys, other work items, etc.) by the owner on a future extension of this project, or any other project without JEO's written authorization shall be at the owner's risk and the owner agrees to indemnify and hold harmless JEO from all claims, damages, and expenses including attorney's fees arising out of such unauthorized use.

8. ELECTRONIC FILES: Copies of Documents that may be relied upon by the owner are limited to the printed copies (also known as hard copies) that are signed or sealed by JEO. Files in electronic media format of text, data, graphics, or of other types that are furnished by JEO to the owner are only for convenience of the owner. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk.

a. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it shall perform acceptance tests or procedures within 30 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 30 day acceptance period shall be corrected by the party delivering the electronic files. JEO shall not be responsible to maintain documents stored in electronic media format after acceptance by the owner.

b. When transferring documents in electronic media format, JEO makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by JEO at the beginning of the project.

c. The owner may make and retain copies of documents for information and reference in connection with use on the project by the owner.

d. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

e. Any verification or adaptation of the documents by JEO for extensions of the project or for any other project shall entitle JEO to further compensation at rates to be agreed upon by the owner and JEO.

9. SUBCONSULTANTS: JEO may employ consultants as JEO deems necessary to assist in the performance of the services. JEO shall not be required to employ any consultant unacceptable to JEO.

10. INDEMNIFICATION: To the fullest extent permitted by law, JEO and the owner shall indemnify and hold each other harmless and their respective officers, directors, partners, employees, and consultants from and against any and all claims, losses, damages, and expenses (including but not limited to all fees and charges of

JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) to the extent such claims, losses, damages, or expenses are caused by the indemnifying parties' negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of JEO and the owner, they shall be borne by each party in proportion to its negligence.

11. INSURANCE: JEO shall procure and maintain the following insurance during the performance of services under this agreement:

- a. Workers' Compensation: Statutory
- b. Employer's Liability
 - i. Each Accident: \$500,000
 - ii. Disease, Policy Limit: \$500,000
 - iii. Disease, Each Employee: \$500,000
- c. General Liability
 - i. Each Occurrence (Bodily Injury and Property Damage): \$1,000,000
 - ii. General Aggregate: \$2,000,000
- d. Auto Liability
 - i. Combined Single: \$1,000,000
- e. Excess or Umbrella Liability
 - i. Each Occurrence: \$1,000,000
 - ii. General Aggregate: \$1,000,000
- f. Professional Liability:
 - i. Each Occurrence: \$1,000,000
 - ii. General Aggregate: \$2,000,000
- g. All policies of property insurance shall contain provisions to the effect that JEO and JEO's consultants' interests are covered and that in the event of payment of any loss or damage the insurers shall have no rights of recovery against any of the insureds or additional insureds thereunder.
- h. The owner shall require the contractor to purchase and maintain general liability and other insurance as specified in the Contract Documents and to cause JEO and JEO's consultants to be listed as additional insured with respect to such liability and other insurance purchased and maintained by the contractor for the project.
- i. The owner shall reimburse JEO for any additional limits or coverages that the owner requires for the project.

12. TERMINATION: This agreement may be terminated by either party upon 7 days prior written notice. In the event of termination, JEO shall be compensated by owner for all services performed up to and including the termination date. The effective date of termination may be set up to thirty (30) days later than otherwise provided to allow JEO to demobilize personnel and equipment from the site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble project materials in orderly files.

13. GOVERNING LAW: This agreement is to be governed by the law of the state in which the project is located.

14. SUCCESSORS, ASSIGNS, AND BENEFICIARIES: The owner and JEO each is hereby bound and the partners, successors, executors, administrators and legal representatives of the owner and JEO are hereby bound to the other party to this agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, with respect to all covenants, agreements and obligations of this agreement.

a. Neither the owner nor JEO may assign, sublet, or transfer any rights under or interest (including, but without limitation, monies that are due or may become due) in this agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or discharge the assignor from any duty or responsibility under this agreement.

b. Unless expressly provided otherwise in this agreement: Nothing in this agreement shall be construed to create, impose, or give rise to any duty owed by the owner or JEO to any contractor, contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

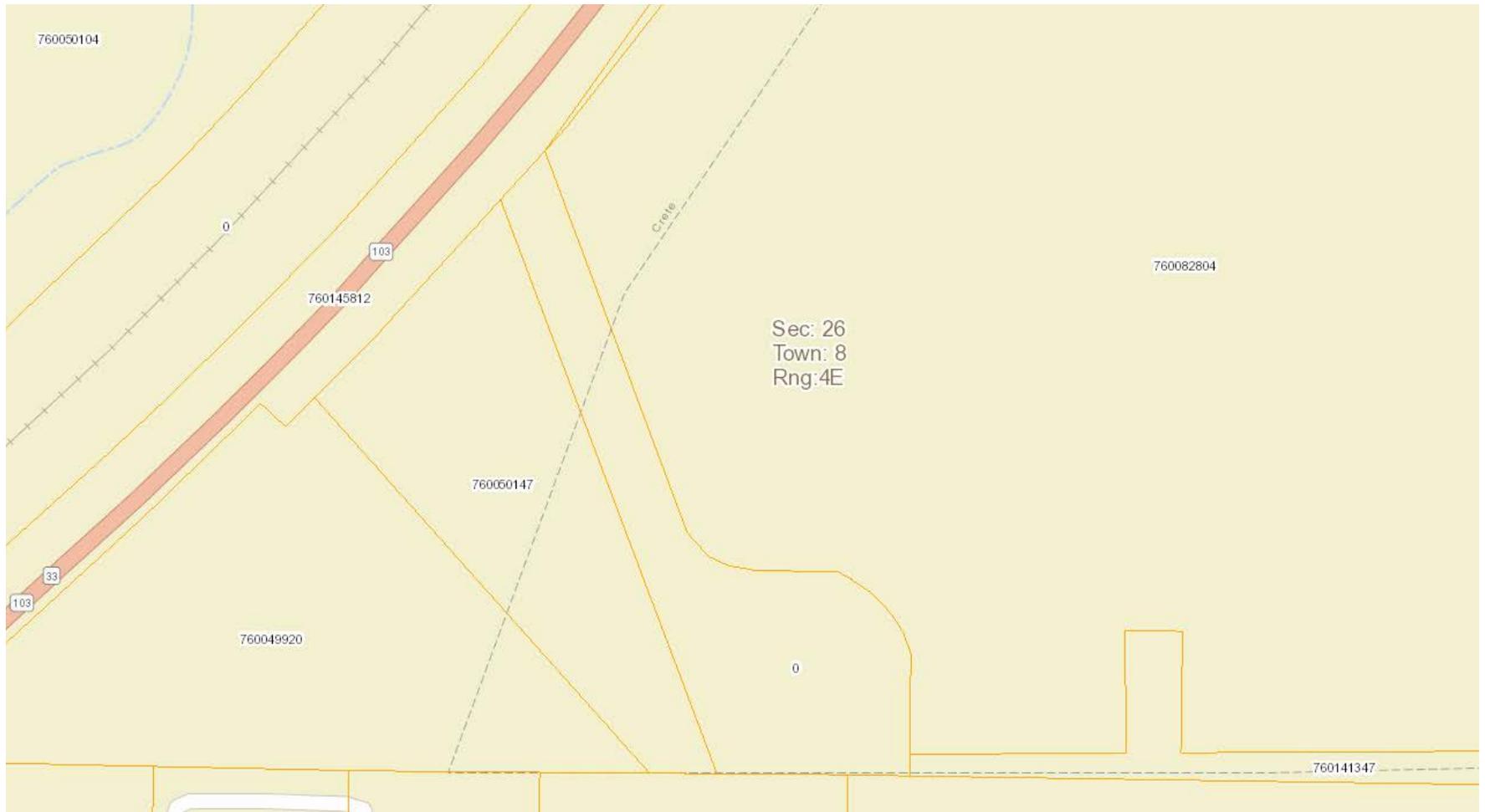
c. All duties and responsibilities undertaken pursuant to this agreement shall be for the sole and exclusive benefit of the owner and JEO and not for the benefit of any other party.

15. PRECEDENCE: These standards, terms, and conditions shall take precedence over any inconsistent or contradictory language contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding JEO's services.

16. SEVERABILITY: Any provision or part of the agreement held to be void or unenforceable shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the owner and JEO, who agree that the agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

17. NON-DISCRIMINATION CLAUSE: Pursuant to Neb. Rev. Stat. § 73-102, the parties declare, promise, and warrant that they have and will continue to comply fully with Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C.A § 1985, et seq.) and the Nebraska Fair Employment Practice Act, Neb. Rev. Stat. § 48-1101, et seq., in that there shall be no discrimination against any employee who is employed in the performance of this agreement, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

18. E-VERIFY: JEO shall register with and use the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee pursuant to the Immigration Reform and Control Act of 1986, to determine the work eligibility status of new employees physically performing services within the state where the work shall be performed. Engineer shall require the same of each consultant.



ORDINANCE NO. 2103

AN ORDINANCE OF THE CITY OF CRETE, NEBRASKA RELATING TO THE VACATION OF CERTAIN PROPERTY DEDICATED TO PUBLIC USE; TO VACATE PROPERTY ADJACENT TO LOT 2 OF WANEK'S SUBDIVISION; AND TO RESERVE TITLE TO THE VACATED PROPERTY.

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRETE, NEBRASKA:

Section 1. That the following described street, alley, or right-of-way that was previously dedicated to the public shall be and is hereby vacated:

The approximately 2.65 acre parcel located primarily in the SW 1/4 of the NW 1/4 of Section 26, Township 8, Range 4E of the 6th P.M. that is bordered by Nebraska Highway 33 to the northwest, the county industrial tract currently owned by Nestle Food Company to the northeast and east, the southern line of the NW 1/4 of Section 26 to the south, and Lot 2 of Wanek's Subdivision, City of Crete, Saline County, Nebraska to the west.

(See Attachment A)

Section 2. That the City of Crete shall reserve title to the entire vacated property and may sell, convey, exchange, or lease the property upon such terms and conditions as shall be deemed in the best interests of the City.

Section 3. That all ordinances and parts of ordinances in conflict herewith are hereby repealed.

Section 4. That this ordinance shall be published in a newspaper of general circulation or in pamphlet or book form and shall take effect and be in full force and effect from and after its passage, approval, and publication, as provided by law.

PASSED AND ENACTED this 21st day of April 2020.

Mayor

ATTEST:

City Clerk

ORDINANCE NO. 2103
Attachment A





**AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR
PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of date signed by the owner ("Effective Date") between City of Crete, Nebraska ("Owner") and JEO Consulting Group, Inc. ("Engineer").

Owner's project, of which Engineer's services under this Agreement are a part, is generally identified as follows: Crete Water System Improvements ("Project").

JEO Project Number: 160333.00

Owner and Engineer further agree as follows:

ARTICLE 1 - SERVICES OF ENGINEER

1.01 Scope

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

ARTICLE 2 - OWNER'S RESPONSIBILITIES

2.01 Owner Responsibilities

- A. Owner responsibilities are outlined in Section 3 of Exhibit B.

ARTICLE 3 - COMPENSATION

3.01 Compensation

- A. Owner shall pay Engineer as set forth in Exhibit A and per the terms in Exhibit B.
- B. The fee for the Project is: As stated in Exhibit 'A'.
- C. The Standard Hourly Rates Schedule shall be adjusted annually (as of approximately January 1st) to reflect equitable changes in the compensation payable to Engineer. The current hourly rate schedule can be provided upon request.

ARTICLE 4 - EXHIBITS AND SPECIAL PROVISIONS

4.01 Exhibits

Exhibit A – Scope of Services
Exhibit B – General Conditions

4.02 Total Agreement

- A. This Agreement (consisting of pages 1 to 2 inclusive, together with the Exhibits identified as included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

Owner:

By: _____

Title: _____

Date Signed: _____

Address for giving notices:

Engineer: JEO Consulting Group, Inc.

By: Dane Simonsen

Title: Sr. Project Manager

Date Signed: 03/31/2020

Address for giving notices:

JEO Consulting Group, Inc.

2700 Fletcher Ave.

Lincoln, Ne 68047

Wahoo, NE 68066

Project Description:

Construct the following water supply improvements:

1. Construction of one new well, a single well house, and associated connective piping approximately 3/4 mile south of the intersection of HWY 33 and HWY103. The proposed wells will draw water from a specific formation and depth based on test well results. The proposed well is intended to supplement the City's existing water sources and will pump directly into the distribution system. Proposed wells are anticipated to be 160 feet deep, utilize 16" casings, utilize variable frequency drives, and supply approx. 500 gpm.
2. Construction of approximately 5,000' of 12" and 900' of 6" water main to connect the existing well and create a system loop in the existing distribution system. Currently, there are two distribution mains, 12" and 8", that cross that cross the Big Blue River to serve the western portion of Crete's services area. The proposed water mains will connect these two existing dead-end mains to create a system loop.
3. Construct one (1) well building. The building will include a process room to house the vertical turbine well, process piping, and electrical panels and a chemical room to house the liquid chlorine and injection equipment. The Building is intended to be located at the well site.
4. Construct backup electrical power generation to support the new well.
5. Modify the existing control system to control and/or monitor the proposed well.

Scope of Services:

Preliminary Design Phase:

1. Project Initiation/Kick-off Meeting – Meet with the Owner to review project requirements, collect existing information, review of available data pertaining to the existing water system; this may include water main information (location, size, type), water service information (location, size, type), sanitary sewer main locations, storm drainage locations, known other buried utilities owned by the City, contact information for other utilities within the community, etc..
2. Coordinate a geotechnical investigation including borings at the building sites and along the transmission main route to obtain recommendations on bearing capacity of soil, expected compaction ratios, depth of groundwater, and conditions for directional boring.
3. Determine necessary improvements to provide 3 phase power to the proposed well site.
4. Obtain site approval from Nebraska Health and Human Services for the well site location.
5. Perform a wetland delineation and prepare a wetland delineation report.
6. Complete preliminary field surveys:
 - a. Establish vertical and horizontal control on the State Plane coordinate system near the project area(s).
 - b. Conduct a topographic survey of the well site and the location of the proposed transmission main.
 - c. Survey the locations of all physical features within the proposed site locations (concrete, asphalt, gravel, rock, driveways, sidewalks, trees, utility poles, utility

- locates, valves, manholes, signs, drainage structures, curb stops, water meter pits, terrain profiles, etc.).
- d. Conduct a boundary survey and title and deed research of property to be obtained either through easement or purchase.
 - e. Schedule utility location information and incorporate on preliminary plans (gas, telephone, electric, water, sanitary sewer, communications, etc.).
 - f. Create an electronic drawing illustrating elevations, site features, property boundaries, and existing utilities resulting from the surveys performed.
7. 50% Design Phase:
- a. Prepare preliminary plan and profile for proposed transmission main utilizing the preliminary survey.
 - b. Determine location of air releases based of anticipated water main profile and topography.
 - c. Prepare preliminary well details for the well including site location, well building layout, piping and fitting layout, expected formations, casing size, pump capacity, and site and access layout.
 - d. Prepare preliminary chemical injection feed system details including building layout, piping and fitting layout, chemical storage and pumping layout, chemical injection locations, and site and access layout.
 - e. Prepare a 50% plan set to include a title sheet, location map, civil plan sheets, and appropriate plan and profile and details sheets to illustrate water system improvements.
 - f. Compile a list of easements to be obtained and permits to be obtained.
 - g. Prepare a 50% preliminary opinion of cost for the water system improvements.
 - h. Conduct an internal QA/QC review of the 50% plan set.
 - i. Attend one (1) meeting with the Owner to review the preliminary 50% plan set as a plan-in-hand for input and concurrence.
 - i. Review 50% preliminary opinion of cost.
 - ii. Review material selections for transmission main.
 - iii. Review building materials for well building.
 - iv. Review routing of transmission main and necessary easements and construction easements to be purchased and permits to be obtained.
 - v. Review locations of valves, air releases, and hydrants along water main route.
 - vi. Compare installing VFD at proposed east well vs installing in well building at the proposed west well.
 - vii. Review alternatives for backup electrical power generation.
 - viii. Review control alternatives for the water control system.

Final Design Phase:

1. 70% Design Phase:
 - a. Revise 50% plan set as necessary following input from Owner and internal QA/QC.
 - b. Prepare architectural details including building elevations and miscellaneous details for the well building.
 - c. Prepare plumbing and HVAC design for the well building.
 - d. Coordinate with Railroad and the Nebraska Department of Roads on applicable requirements for the construction of the transmission main adjacent their right-of-way.

- e. Prepare boring details for the boring of the transmission main and appropriate casing pipe for Railroad other necessary crossings.
 - f. Prepare stream crossing details for the water main.
 - g. Prepare direction boring and alignment plans to mitigate environmentally sensitive areas.
 - h. Prepare details for air release locations, valve locations, hydrant locations, and service locations along the transmission main route to facilitate operations and flushing and disinfection during construction.
 - i. Prepare electrical service and distribution details for the proposed well location. Electrical details to include electrical service details from power utility, location of transformers, "one-line" diagram, panel details, lighting details, receptacle details, heating and ventilation details, motor control diagrams, chemical feed control details, and backup generation details and connectivity.
 - j. Prepare a preliminary plan for the water control system including type, location of PLC's, communication type, and level control.
 - k. Prepare a 70% plan set to include the revised sheets from the 50% plan set as well as architectural details for the building, electrical service and distribution details, water control system details, and limits of construction.
 - l. Prepare a 70% preliminary opinion of cost for the water system improvements.
 - m. Conduct an internal QA/QC review of the 70% plan set.
 - n. Attend one (1) meeting with the Owner to review the preliminary 70% plan set for input and concurrence.
 - i. Review recommended chemical feed dosages.
 - ii. Review architectural details for the buildings.
 - iii. Review electrical service and distribution details.
 - iv. Review water control system details.
2. 90% Design Process:
- a. Revise 70% plan set as necessary following input from Owner and internal QA/QC.
 - b. Prepare final Specifications, including technical specifications related to the materials and installation for the water system improvements, electrical service and distribution, well construction, water control system, and building materials.
 - c. Prepare forms for Contract Documents including the Invitation to Bid used for the advertisement, Notice of Public Hearing, Bid Form, construction contracts between Owner and Contractor(s), and necessary payment and performance bonds and insurance requirements.
 - d. Prepare easement plats and/or property plats for the attainment of easements, construction easements, and property to be purchased for the transmission main and building.
 - e. Prepare a 90% plan and specification set to include revisions from 70% review and final specifications.
 - f. Prepare a 90% engineer's opinion of probable cost.
 - g. Conduct an internal QA/QC of the 90% plan and specification set.
 - h. Conduct a 90% review with the Owner of the plans, opinion of probable cost, technical specifications, bidding documents, and contract documents.
 - i. Review technical specifications for well construction, electrical service and distribution, and water control system.
 - ii. Review bidding and contract documents.
 - iii. Review final easement and/or property plats.

- iv. Coordinate Owner's attorney for the preparation of title and deeds for the easements and/or property to be obtained.
 - v. Coordinate Owner's attorney for the review of the bidding and contract documents.
3. Design Finalization Process:
- a. Revised 90% plan and specification set as necessary following input from Owner, Owner's attorney, and internal QA/QC.
 - b. Create final plan and specification set and sign and seal by an engineer registered in the State of Nebraska.
 - c. Coordinate the Owner's signature and submit a Notice of Intent (NOI) to the Nebraska Department of Environmental Quality to obtain an NPDES Stormwater permit.
 - d. Prepare a SWPPP book complying with State regulations.
 - e. Prepare Right-of-Way permits for NDOT and permit to undercross the Railroad as necessary for the construction of the transmission main.
 - f. Finalize the wetland delineation report and Corp 404 permit.
 - g. Complete floodplain development permit
 - h. Assist the Owner with the submittal of permits. Owner shall be responsible for all applicable review and permitting fees.
 - i. Prepare a final engineer's opinion of probable cost.
 - j. Submit final plans and specifications to DHHS for review and approval. Owner to pay all review and permit fees.

Bidding and Negotiation Phase:

- 1. Obtain approval of plans and specifications and authorization to advertise for bids from Owner and assist Owner with the development of an Invitation to Bid to be placed into publication.
- 2. Furnish copies of plans, specifications, and contract documents of the project to prospective bidders, material suppliers, and other interested parties upon their request upon receipt of a non-refundable fee to be determined by Engineer.
- 3. Respond to inquiries from prospective bidders and prepare and issue any addenda required.
- 4. Assist the Owner at the bid opening consisting of one (1) meeting to ensure proper rules are followed and adhered to during the process to ensure all requirements of State and Federal law are fulfilled.
- 5. Tabulate and analyze construction bids and report on them to the Owner at one (1) meeting. A written recommendation will be provided by the Engineer, along with any supporting documentation to advise and assist the Owner in award of a construction contract.
- 6. Prepare Contract Documents (Notice of Award, Construction Contract, Notice to Proceed) for execution by Contractor and the Owner; provide cursory reviews of all insurance and bonds submittals and present to the Owner's legal and insurance counsel for approval; then advise the Owner to proceed with execution of all documents.
- 7. Provide copies of all executed Contract Documents to the Owner and Contractor(s).

Construction Phase:

- 1. Schedule and conduct a Pre-construction Conference, on site, consisting of one (1) meeting prior to construction beginning. This conference (Pre-Con) will review the required timelines set forth in the specifications, lines of communication, key contacts of those involved, review

- any conflicts with utilities or schedules, review the schedule proposed by the Contractor, review any requirements of the Contractor for locates and staking needs, etc.
2. Review shop drawings (submittals) and related data supplied by the Contractor. This will provide the Engineer and Owner the opportunity to review the materials and equipment that will be supplied for the improvements prior to the Contractor securing and obtaining them; which allows the Engineer to compare the selected materials and equipment with the specifications to ensure compliance.
 3. Provide construction staking of the proposed improvements; including location of the proposed water distribution mains, control points, building corners, easement limits, and other miscellaneous items.
 4. Provide interpretation of the plans and specifications, when necessary.
 5. Review and process Contractor's monthly payment applications and change orders (if necessary) and provide to Owner for review and approval.
 6. Schedule and conduct progress meetings on a monthly basis with Owner and Contractor onsite.
 7. Consult with and advise Owner during construction in regards to all aspects of the project.
 8. Conduct a final inspection of the project with the Contractor and Owner to ensure all components of the project have been completed and are acceptable to all parties prior to final payment. A list of items (Punch List) will be produced for the Contractor to complete prior to the entire final payment being released.
 9. Recommend to the Owner the acceptance of the project and complete the necessary certificate. This recommendation will be based on the Engineer's observation of construction utilizing professional judgment and accepted tests to determine that the Contractor has completed their contracts in substantial compliance with the plans, specifications and contract documents.
 10. Prepare Record Drawings to illustrate the final location of the water distribution mains, should there be any modifications.
 11. Prepare a report of total project costs, as necessary.
 12. Conduct Davis-Bacon reviews for compliance.

Resident Project Representation:

1. The Resident Project Representation (RPR) will be provided part-time during the entire construction phase.
2. The RPR will assist the Engineer with the following tasks:
 - a. Review the progress schedules and schedule of values.
 - b. Communicate with the Engineer in regards to suggestions and recommendations made by the Contractor.
 - c. Conduct on-site observations of the Contractor's work and report their progress to the Engineer.
 - d. Consult with the Engineer in regards to scheduling inspections, tests, and system start-ups, and accompany visiting inspectors and technicians during said events.
 - e. Maintain reports of inspections, progress and other pertinent construction data and questions during the construction phase.
 - f. Review payment applications from the Contractor for compliance with the established procedures.
 - g. Participate in final inspection; prepare final list of items to be completed or deficient.

Post Construction Phase:

1. Provide record drawings to illustrate final location and installation of water system improvements.
2. Prepare a report of final total project costs.
3. Submit final documentation to Department of Health and Human services included bacteria test results, record drawings, and report of final total project costs to close out construction permit.
4. Complete O&M manual per SRF requirements.
5. 11 month on site review with Owner and contractor.

Storm Water Pollution Prevention Plan (SWPPP) Administration and Monitoring:

1. Conduct regular reviews of the SWPPP to ensure inspections by the contractor are occurring every 14 days or within 24 hours of a 0.5" rainfall event beginning after initial breaking ground and continuing until final stabilization of site.
2. Review the maintenance of the SWPPP logs, inspection results, and maintenance records within the SWPPP book to comply with State regulations.
3. Direct Contractor to maintain best management practices (BMP's) as designed and update the SWPPP if necessary due to site conditions.

Project Management (All Phases):

1. Provide project management oversight over all facets and phases of the project. Project management shall include the following services:
 - a. Coordination of design disciplines including facilitating communication and transfer of documents between disciplines to minimize errors in the plans and specifications as well as ensure a timely project design.
 - b. Provide timely and coordinated communication to and from the Owner for requests for information, providing progress updates, scheduling meetings, and receiving and providing feedback.
 - c. Provide oversight to ensure scope of services and schedule is met.
 - d. Work with disciplines to identify potential risks and how to mitigate those risks.
 - e. Review billed hours by design team and prepare invoice statements for Owner.
 - f. Provide timely and coordinated communication to and from the Contractor for requests for information and to receive and provide feedback.

Meetings included with this scope:

1. Preliminary Design:
 - a. Attendance at design kick-off meeting.
 - b. Attendance at 50% review meeting with City staff.
 - c. Attendance at City Council meeting to provide update on design process.
2. Final Design:
 - a. Attendance at 70% review meeting with City staff.
 - b. Attendance at City Council meeting to provide update on design process.
 - c. Attendance at 90% review meeting with City staff.
3. Bidding and Negotiation:
 - a. Attendance at City Council meeting to approve plans and specifications and receive authorization to advertise.

- b. Attendance at Bid Opening.
- c. Attendance at City Council meeting to award bid.
- 4. Construction Phase:
 - a. Attendance at Pre-Construction Conference.
 - b. Attendance at construction progress meetings on a monthly basis with Owner and Contractor.

Items not included with this scope of services:

- 1. Materials testing services including concrete and soil testing.
- 2. Obtaining any environmental regulatory permits beyond the approval of DHHS for a construction permit, NDEQ for a Stormwater Discharge Permit, County for Right-of-Way permitting, RR crossing permit, Corp 404, Floodplain Development Permit, and the Nebraska Department of Transportation for a Permit to Occupy.
- 3. Installation or maintenance of best management practices (BMP's) corresponding to the implementation of the SWPPP.
- 4. Creation of a comprehensive distribution system WaterCAD model.
- 5. Payment of review and permitting fees.
- 6. Conducting test pumping, water quality sampling, or water quality testing of the existing test wells.
- 7. Other environmental permitting including floodplain mitigation, not outlined in the scope of services.
- 8. DNR, LBBNRD, or other transfer permit applications.
- 9. Cultural investigation and survey

Project Fee:

1. Preliminary Design Phase (Lump Sum)	\$50,000
2. Final Design Phase (Lump Sum)	\$52,700
3. Bidding and Negotiation Phase (Lump Sum)	\$3,000
4. Construction Phase (Lump Sum)	\$41,000
5. Resident Project Representative (Hourly to max)	\$40,000
6. <u>Post Construction Phase (Lump Sum)</u>	<u>\$6,500</u>
7. Total	\$193,200

Project Time Frame:

- 1. Preliminary Design Phase – 90 calendar days from authorization to proceed
- 2. Final Design Phase – 60 calendar days from previous phase completion
- 3. Bidding and Negotiation Phase – 60 calendar days from previous phase completion
- 4. Construction Phase – estimate 210 calendar days (7 months) from Award
- 5. Post Construction Phase – end of Contractors correction period

JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

1. SCOPE OF SERVICES: JEO Consulting Group, Inc. (JEO) shall perform the services described in Exhibit A. JEO shall invoice the owner for these services at the fee stated in Exhibit A.

2. ADDITIONAL SERVICES: JEO can perform work beyond the scope of services, as additional services, for a negotiated fee or at fee schedule rates.

3. OWNER RESPONSIBILITIES: The owner shall provide all criteria and full information as to the owner's requirements for the project; designate and identify in writing a person to act with authority on the owner's behalf in respect to all aspects of the project; examine and respond promptly to JEO's submissions; and give prompt written notice to JEO whenever the owner observes or otherwise becomes aware of any defect in work.

Unless otherwise agreed, the owner shall furnish JEO with right-of-access to the site in order to conduct the scope of services. Unless otherwise agreed, the owner shall also secure all necessary permits, approvals, licenses, consents, and property descriptions necessary to the performance of the services hereunder. While JEO shall take reasonable precautions to minimize damage to the property, it is understood by the owner that in the normal course of work some damage may occur, the restoration of which is not a part of this agreement.

4. TIMES FOR RENDERING SERVICES: JEO's services and compensation under this agreement have been agreed to in anticipation of the orderly and continuous progress of the project through completion. Unless specific periods of time or specific dates for providing services are specified in the scope of services, JEO's obligation to render services hereunder shall be for a period which may reasonably be required for the completion of said services.

If specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such periods of time or date are changed through no fault of JEO, the rates and amounts of compensation provided for herein shall be subject to equitable adjustment. If the owner has requested changes in the scope, extent, or character of the project, the time of performance of JEO's services shall be adjusted equitably.

5. INVOICES: JEO shall submit invoices to the owner monthly for services provided to date and a final bill upon completion of services. Invoices are due and payable within 30 days of receipt. Invoices are considered past due after 30 days. Owner agrees to pay a finance charge on past due invoices at the rate of 1.0% per month, or the maximum rate of interest permitted by law.

If the owner fails to make any payment due to JEO for services and expenses within 30 days after receipt of JEO's statement, JEO may, after giving 7 days' written notice to the owner, suspend services to the owner under this agreement until JEO has been paid in full all amounts due for services, expenses, and charges.

6. STANDARD OF CARE: The standard of care for all services performed or furnished by JEO under the agreement shall be the care and skill ordinarily used by members of JEO's profession practicing under similar circumstances at the same time and in the

same locality. JEO makes no warranties, express or implied, under this agreement or otherwise, in connection with JEO's services.

JEO shall be responsible for the technical accuracy of its services and documents resulting therefrom, and the owner shall not be responsible for discovering deficiencies therein. JEO shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in owner furnished information.

7. REUSE OF DOCUMENTS: Reuse of any materials (including in part plans, specifications, drawings, reports, designs, computations, computer programs, data, estimates, surveys, other work items, etc.) by the owner on a future extension of this project, or any other project without JEO's written authorization shall be at the owner's risk and the owner agrees to indemnify and hold harmless JEO from all claims, damages, and expenses including attorney's fees arising out of such unauthorized use.

8. ELECTRONIC FILES: Copies of Documents that may be relied upon by the owner are limited to the printed copies (also known as hard copies) that are signed or sealed by JEO. Files in electronic media format of text, data, graphics, or of other types that are furnished by JEO to the owner are only for convenience of the owner. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk.

a. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it shall perform acceptance tests or procedures within 30 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 30 day acceptance period shall be corrected by the party delivering the electronic files. JEO shall not be responsible to maintain documents stored in electronic media format after acceptance by the owner.

b. When transferring documents in electronic media format, JEO makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by JEO at the beginning of the project.

c. The owner may make and retain copies of documents for information and reference in connection with use on the project by the owner.

d. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

e. Any verification or adaptation of the documents by JEO for extensions of the project or for any other project shall entitle JEO to further compensation at rates to be agreed upon by the owner and JEO.

9. SUBCONSULTANTS: JEO may employ consultants as JEO deems necessary to assist in the performance of the services. JEO shall not be required to employ any consultant unacceptable to JEO.

10. INDEMNIFICATION: To the fullest extent permitted by law, JEO and the owner shall indemnify and hold each other harmless and their respective officers, directors, partners, employees, and consultants from and against any and all claims, losses, damages, and expenses (including but not limited to all fees and charges of

JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) to the extent such claims, losses, damages, or expenses are caused by the indemnifying parties' negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of JEO and the owner, they shall be borne by each party in proportion to its negligence.

11. INSURANCE: JEO shall procure and maintain the following insurance during the performance of services under this agreement:

- a. Workers' Compensation: Statutory
- b. Employer's Liability
 - i. Each Accident: \$500,000
 - ii. Disease, Policy Limit: \$500,000
 - iii. Disease, Each Employee: \$500,000
- c. General Liability
 - i. Each Occurrence (Bodily Injury and Property Damage): \$1,000,000
 - ii. General Aggregate: \$2,000,000
- d. Auto Liability
 - i. Combined Single: \$1,000,000
- e. Excess or Umbrella Liability
 - i. Each Occurrence: \$1,000,000
 - ii. General Aggregate: \$1,000,000
- f. Professional Liability:
 - i. Each Occurrence: \$1,000,000
 - ii. General Aggregate: \$2,000,000
- g. All policies of property insurance shall contain provisions to the effect that JEO and JEO's consultants' interests are covered and that in the event of payment of any loss or damage the insurers shall have no rights of recovery against any of the insureds or additional insureds thereunder.
- h. The owner shall require the contractor to purchase and maintain general liability and other insurance as specified in the Contract Documents and to cause JEO and JEO's consultants to be listed as additional insured with respect to such liability and other insurance purchased and maintained by the contractor for the project.
- i. The owner shall reimburse JEO for any additional limits or coverages that the owner requires for the project.

12. TERMINATION: This agreement may be terminated by either party upon 7 days prior written notice. In the event of termination, JEO shall be compensated by owner for all services performed up to and including the termination date. The effective date of termination may be set up to thirty (30) days later than otherwise provided to allow JEO to demobilize personnel and equipment from the site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble project materials in orderly files.

13. GOVERNING LAW: This agreement is to be governed by the law of the state in which the project is located.

14. SUCCESSORS, ASSIGNS, AND BENEFICIARIES: The owner and JEO each is hereby bound and the partners, successors, executors, administrators and legal representatives of the owner and JEO are hereby bound to the other party to this agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, with respect to all covenants, agreements and obligations of this agreement.

a. Neither the owner nor JEO may assign, sublet, or transfer any rights under or interest (including, but without limitation, monies that are due or may become due) in this agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or discharge the assignor from any duty or responsibility under this agreement.

b. Unless expressly provided otherwise in this agreement: Nothing in this agreement shall be construed to create, impose, or give rise to any duty owed by the owner or JEO to any contractor, contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

c. All duties and responsibilities undertaken pursuant to this agreement shall be for the sole and exclusive benefit of the owner and JEO and not for the benefit of any other party.

15. PRECEDENCE: These standards, terms, and conditions shall take precedence over any inconsistent or contradictory language contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding JEO's services.

16. SEVERABILITY: Any provision or part of the agreement held to be void or unenforceable shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the owner and JEO, who agree that the agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

17. NON-DISCRIMINATION CLAUSE: Pursuant to Neb. Rev. Stat. § 73-102, the parties declare, promise, and warrant that they have and will continue to comply fully with Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C.A § 1985, et seq.) and the Nebraska Fair Employment Practice Act, Neb. Rev. Stat. § 48-1101, et seq., in that there shall be no discrimination against any employee who is employed in the performance of this agreement, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

18. E-VERIFY: JEO shall register with and use the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee pursuant to the Immigration Reform and Control Act of 1986, to determine the work eligibility status of new employees physically performing services within the state where the work shall be performed. Engineer shall require the same of each consultant.



State Highway 33

Future 12" Water Main

Proposed 6" Water Main

CITY OF CRETE

Length of Pipe in Easement: 3,700'
Width of Permanent Easement: 20'
Area of Permanent Easement: 1.7 Acres
(does not include development area and existing ROW)

Water Main Alignment Subject to Development Design

CITY WATER MAP
CRETE, NEBRASKA

Width of Temporary Easement: 50'
Area of Temporary Easement: 4.2 Acres
(does not include development area and existing ROW)

County Road 2100

County Road 2225

LEGEND

16"	Red
14"	Yellow
12"	Orange
10"	Light Blue
8"	Dark Blue
6"	Purple
4"	Cyan
3"	Green
2"	Yellow-Green
1"	Red

Proposed Well

Proposed 12" Water Main

PRELIMINARY COST ESTIMATE

Revised 4/15/2020

SEWER SERVICER FOR LOT 1, BELOHLAVY INDUSTRIAL TRACT
(Does not include electrical service or standby generator for lift station)

1. Pumping Station, Pumps, and Controls, Valve and Ventilation Manholes, Interior Piping, Fittings, and Valves, Piping and Fittings Between Structures, Electrical Work, Dewatering, and Related Work	\$250,000
3. Construct Manholes, 30 V.F.	10,500
4. 6" PVC Force Main, 1,990 L.F.	49,800
5. 8" PVC, SDR 26 Sanitary Sewer Main, 780 L.F.	23,400
6. Cased Highway Boring of Highway 103, 120 L.F.	60,000
7. Miscellaneous Construction, Testing, SWPPP, etc.	<u>8,000</u>
Total Estimated Construction Cost	\$401,700
Contingencies (10%)	40,200
Engineering Design (Basic Services)	44,200
Geotechnical Engineering	3,000
Construction Phase Engineering, Legal and Administrative, O&M Manual, Interest During Construction, etc.	<u>11,400</u>
TOTAL ESTIMATED PROJECT COST	<u><u>\$500,500</u></u>

PRELIMINARY COST ESTIMATE

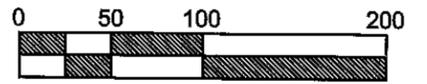
**Additional Cost To Extend Sewer Service West Across the Highway
To the SE. Corner of an Approximately 10 Acre Tract**

1. 8" PVC, SDR 26 Sanitary Sewer Main, 335 L.F.	10,720
2. Cased Highway Boring of Highway 103, 120 L.F.	72,000
3. Construct Manholes, 11 V.F.	3,850
4. Miscellaneous Construction, Testing, etc.	<u>4,000</u>
Total Estimated Construction Cost	\$90,570
Contingencies (10%)	9,030
Engineering Design (Basic Services)	12,000
Construction Phase Engineering, Legal and Administrative, O&M Manual, Interest During Construction, etc.	<u>3,000</u>
TOTAL ESTIMATED PROJECT COST	<u><u>\$114,600</u></u>

BELOHLAVY ESTATES SANITARY SEWER & FORCE MAIN CRETE, NE



226.334



SCALE IN FEET

