



# City of Grand Island

Tuesday, February 28, 2006

Council Session

## Item G2

**#2006-42 - Approving Agreement with CH2M Hill for Consulting Engineering Services for Lift Station No. 19**

Staff Contact: Steven P. Riehle, Public Works Director

# Council Agenda Memo

**From:** Steven P. Riehle, Public Works Director

**Meeting:** February 28, 2006

**Subject:** Approving Agreement with CH2M Hill for Consulting Engineering Services for Lift Station No. 19

**Item #'s:** G-2

**Presenter(s):** Steven P. Riehle, Public Works Director

## Background

Lift Station 19 is located on Capital Avenue just west of Diers Avenue. The station was constructed in 1980. With the growth and development west of US HWY 281, the lift station is reaching capacity. Approximately 20 to 25 percent of the daily wastewater treatment plant flow comes through Lift Station 19.

Proposals were solicited for performing Consulting Engineering Services for Lift Station No. 19. One (1) proposal was received from CH2M Hill of Englewood, Colorado.

## Discussion

The agreement that was uploaded for the February 14, 2006 council meeting was only for Phase I (Design Services). This agreement includes both Phase I (Design Services) and Phase II (Services During Construction).

The construction costs for replacing lift station number 19 is estimated at \$2,873,000. The agreement for the design of Lift Station No. 19 was negotiated with billings to be at actual costs with a maximum dollar amount of \$376,018.

## Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve a resolution authorizing the mayor to execute the agreement.
2. Refer the issue to a Committee.
3. Postpone the issue to a future date.
4. Take no action on the issue.

## **Recommendation**

City Administration recommends that the Council approve the agreement for actual costs with a maximum amount of \$376,018.

## **Sample Motion**

Move to approve the agreement with CH2M Hill to perform Consulting Engineering services for Lift Station No. 19.

## STANDARD AGREEMENT FOR PROFESSIONAL SERVICES

This AGREEMENT is between CH2M HILL INC., ("ENGINEER"), and the City of Grand Island, ("OWNER") for a PROJECT generally described as:

Lift Station 19 Improvements-

Phase I - Replacement Lift Station 19 Design and Services During Bidding

Phase II - Replacement Lift Station 19 Services During Construction

### ARTICLE 1. SCOPE OF SERVICES

ENGINEER will perform the Scope of Services set forth in Attachment A.

### ARTICLE 2. COMPENSATION

OWNER will compensate ENGINEER as set forth in Attachment B. Work performed under this AGREEMENT may be performed using labor from affiliated companies of ENGINEER. Such labor will be billed to OWNER under the same billing terms applicable to ENGINEER's employees.

### ARTICLE 3. TERMS OF PAYMENT

OWNER will pay ENGINEER as follows:

#### 3.1 Invoices and Time of Payment

ENGINEER will issue monthly invoices pursuant to Attachment B. Invoices are due and payable within 30 days of receipt.

#### 3.2 Interest

3.2.1 OWNER will be charged interest at the rate of 1-1/2% per month, or that permitted by law if lesser, on all past-due amounts starting 30 days after receipt of invoice. Payments will first be credited to interest and then to principal.

3.2.2 In the event of a disputed billing, only the disputed portion will be withheld from payment, and OWNER shall pay the undisputed portion. OWNER will exercise reasonableness in disputing any bill or portion thereof. No interest will accrue on any disputed portion of the billing until mutually resolved.

3.2.3 If OWNER fails to make payment in full within 30 days of the date due for any undisputed billing, ENGINEER may, after giving 7 days' written notice to OWNER, suspend services under this AGREEMENT until paid in full, including interest. In the event of suspension of services, ENGINEER will have no liability to OWNER for delays or damages caused by OWNER because of such suspension.

### ARTICLE 4. OBLIGATIONS OF ENGINEER

#### 4.1 Standard of Care

The standard of care applicable to ENGINEER's Services will be the degree of skill and diligence normally employed by professional engineers or consultants performing the same or similar Services at the time said services are performed. ENGINEER will reperform any services not meeting this standard without additional compensation.

#### 4.2 Subsurface Investigations

In soils, foundation, groundwater, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total PROJECT cost and/or execution. These conditions and cost/execution effects are not the responsibility of ENGINEER.

#### 4.3 ENGINEER's Personnel at Construction Site

4.3.1 The presence or duties of ENGINEER's personnel at a construction site, whether as onsite representatives or otherwise, do not make ENGINEER or ENGINEER's personnel in any way responsible for those duties that belong to OWNER and/or the construction contractors or other entities, and do not relieve the construction contractors or any other entity of their obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction Contract Documents and any health or safety precautions required by such construction work.

4.3.2 ENGINEER and ENGINEER's personnel have no authority to exercise any control over any construction contractor or other entity or their employees in connection with their work or any health or safety precautions and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the construction contractor(s) or other entity or any other persons at the site except ENGINEER's own personnel.

4.3.3 The presence of ENGINEER's personnel at a construction site is for the purpose of providing to OWNER a greater degree of confidence that the completed construction work will conform generally to the construction documents and that the integrity of the design concept as reflected in the construction documents has been implemented and preserved by the construction contractor(s). ENGINEER neither guarantees the performance of the construction contractor(s) nor assumes responsibility for construction contractor's failure to perform work in accordance with the construction documents.

For this AGREEMENT only, construction sites include places of manufacture for materials incorporated into the construction work, and construction contractors

include manufacturers of materials incorporated into the construction work.

#### **4.4 Opinions of Cost, Financial Considerations, and Schedules**

In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the PROJECT, ENGINEER has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate PROJECT cost or schedule. Therefore, ENGINEER makes no warranty that OWNER's actual PROJECT costs, financial aspects, economic feasibility, or schedules will not vary from ENGINEER's opinions, analyses, projections, or estimates.

If OWNER wishes greater assurance as to any element of PROJECT cost, feasibility, or schedule, OWNER will employ an independent cost estimator, contractor, or other appropriate advisor.

#### **4.5 Construction Progress Payments**

Recommendations by ENGINEER to OWNER for periodic construction progress payments to the construction contractor(s) will be based on ENGINEER's knowledge, information, and belief from selective sampling that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by ENGINEER to ascertain that the construction contractor(s) have completed the work in exact accordance with the construction documents; that the final work will be acceptable in all respects; that ENGINEER has made an examination to ascertain how or for what purpose the construction contractor(s) have used the moneys paid; that title to any of the work, materials, or equipment has passed to OWNER free and clear of liens, claims, security interests, or encumbrances; or that there are not other matters at issue between OWNER and the construction contractors that affect the amount that should be paid.

#### **4.6 Record Drawings**

Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the PROJECT was finally constructed. ENGINEER is not responsible for any errors or omissions in the information from others that is incorporated into the record drawings.

#### **4.7 Access to ENGINEER's Accounting Records**

ENGINEER will maintain accounting records, in accordance with generally accepted accounting principles. These records will be available to OWNER during ENGINEER's normal business hours for a period of 1 year after ENGINEER's final invoice for examination to the extent required to verify the direct costs (excluding established or standard allowances and rates) incurred hereunder. OWNER may only audit accounting records applicable to a cost-reimbursable type compensation.

#### **4.8 ENGINEER's Insurance**

ENGINEER will maintain throughout this AGREEMENT the following insurance:

- (a) Work's compensation and employer's liability insurance as required by the state where the work is performed.
- (b) Comprehensive automobile and vehicle liability insurance covering claims for injuries to members of the public and/or damages to property of others arising from use of motor vehicles, including onsite and offsite operations, and owned, nonowned, or hired vehicles, with \$1,000,000 combined single limits.
- (c) Commercial general liability insurance covering claims for injuries to members of the public or damage to property of others arising out of any covered negligent act or omission of ENGINEER or of any of its employees, agents, or subcontractors, with \$1,000,000 per occurrence and in the aggregate.
- (d) Professional liability insurance of \$1,000,000 per occurrence and in the aggregate.
- (e) OWNER will be named as an additional insured with respect to ENGINEER's liabilities hereunder in insurance coverages identified in items (b) and (c) and ENGINEER waives subrogation against OWNER as to said policies.

### **ARTICLE 5. OBLIGATIONS OF OWNER**

#### **5.1 OWNER-Furnished Data**

OWNER will provide to ENGINEER all data in OWNER's possession relating to ENGINEER's services on the PROJECT. ENGINEER will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by OWNER.

#### **5.2 Access to Facilities and Property**

OWNER will make its facilities accessible to ENGINEER as required for ENGINEER's performance of its services and will provide labor and safety equipment as required by ENGINEER for such access. OWNER will perform, at no cost to ENGINEER, such tests of equipment, machinery, pipelines, and other components of OWNER's facilities as may be required in connection with ENGINEER's services.

#### **5.3 Advertisements, Permits, and Access**

Unless otherwise agreed to in the Scope of Services, OWNER will obtain, arrange, and pay for all advertisements for bids; permits and licenses required by local, state, or federal authorities; and land, easements, rights-of-way, and access necessary for ENGINEER's services or PROJECT construction.

#### **5.4 Timely Review**

OWNER will examine ENGINEER's studies, reports, sketches, drawings, specifications, proposals, and other documents; obtain advice of an attorney, insurance counselor, accountant, auditor, bond and financial advisors, and other consultants as OWNER deems appropriate; and render in writing decisions required by OWNER in a timely manner.

#### **5.5 Prompt Notice**

OWNER will give prompt written notice to ENGINEER whenever OWNER observes or becomes aware of any development that affects the scope or timing of

ENGINEER's Services, or of any defect in the work of ENGINEER or construction contractors.

#### 5.6 Asbestos or Hazardous Substances

5.6.1 If asbestos or hazardous substances in any form are encountered or suspected, ENGINEER will stop its own work in the affected portions of the PROJECT to permit testing and evaluation.

5.6.2 If asbestos is suspected, ENGINEER will, if requested, manage the asbestos remediation activities using a qualified subcontractor at an additional fee and contract terms to be negotiated.

5.6.3 If hazardous substances other than asbestos are suspected, ENGINEER will, if requested, conduct tests to determine the extent of the problem and will perform the necessary studies and recommend the necessary remedial measures at an additional fee and contract terms to be negotiated.

5.6.4 Client recognizes that CH2M HILL assumes no risk and/or liability for a waste or hazardous waste site originated by other than CH2M HILL.

#### 5.7 Contractor Indemnification and Claims

5.7.1 OWNER agrees to include in all construction contracts the provisions of Article 4.3, ENGINEER's Personnel at Construction Site, and provisions providing contractor indemnification of OWNER and ENGINEER for contractor's negligence.

5.7.2 OWNER shall require construction contractor(s) to name OWNER and ENGINEER as additional insureds on the contractor's general liability insurance policy.

5.7.3 OWNER agrees to include the following clause in all contracts with construction contractors, and equipment or materials suppliers:

"Contractors, subcontractors, and equipment and material suppliers on the PROJECT, or their sureties, shall maintain no direct action against ENGINEER, ENGINEER's officers, employees, affiliated corporations, and subcontractors for any claim arising out of, in connection with, or resulting from the engineering services performed. OWNER will be the only beneficiary of any undertaking by ENGINEER."

#### 5.8 OWNER's Insurance

5.8.1 OWNER will maintain property insurance on all pre-existing physical facilities associated in any way with the PROJECT.

5.8.2 OWNER will provide for a waiver of subrogation as to all OWNER-carried property damage insurance, during construction and thereafter, in favor of ENGINEER, ENGINEER's officers, employees, affiliates, and subcontractors.

#### 5.9 Litigation Assistance

The Scope of Services does not include costs of ENGINEER for required or requested assistance to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by OWNER. All such Services required or requested of ENGINEER by OWNER, except for suits or claims between the parties to this AGREEMENT, will be reimbursed as mutually agreed.

#### 5.10 Changes

OWNER may make or approve changes within the general Scope of Services in this AGREEMENT. If such

changes affect ENGINEER's cost of or time required for performance of the services, an equitable adjustment will be made through an amendment to this AGREEMENT.

### ARTICLE 6. GENERAL LEGAL PROVISIONS

#### 6.1 Authorization to Proceed

Execution of this AGREEMENT by OWNER will be authorization for ENGINEER to proceed with the work, unless otherwise provided for in this AGREEMENT.

#### 6.2 Reuse of PROJECT Documents

All reports, drawings, specifications, documents, and other deliverables of ENGINEER, whether in hard copy or in electronic form, are instruments of service for this PROJECT, whether the PROJECT is completed or not. OWNER agrees to indemnify ENGINEER and ENGINEER's officers, employees, subcontractors, and affiliated corporations from all claims, damages, losses, and costs, including, but not limited to, litigation expenses and attorney's fees arising out of or related to the unauthorized reuse, change or alteration of these PROJECT documents.

#### 6.3 Force Majeure

ENGINEER is not responsible for damages or delay in performance caused by acts of God, strikes, lockouts, accidents, or other events beyond the control of ENGINEER. In any such event, ENGINEER'S contract price and schedule shall be equitably adjusted.

#### 6.4 Limitation of Liability

6.4.1 To the maximum extent permitted by law, ENGINEER's liability for OWNER's damages will not, in the aggregate, exceed \$1,000,000.

6.4.2 This article takes precedence over any conflicting article of this AGREEMENT or any document incorporated into it or referenced by it.

6.4.3 This limitation of liability will apply whether ENGINEER's liability arises under breach of contract or warranty; tort; including negligence; strict liability; statutory liability; or any other cause of action, and shall include ENGINEER's officers, affiliated corporations, employees, and subcontractors.

#### 6.5 Termination

6.5.1 This AGREEMENT may be terminated for convenience on 30 days' written notice, or for cause if either party fails substantially to perform through no fault of the other and does not commence correction of such nonperformance within 5 days of written notice and diligently complete the correction thereafter.

6.5.2 On termination, ENGINEER will be paid for all authorized services performed up to the termination date plus termination expenses, such as, but not limited to, reassignment of personnel, subcontract termination costs, and related closeout costs.

#### 6.6 Suspension, Delay, or Interruption of Work

OWNER may suspend, delay, or interrupt the Services of ENGINEER for the convenience of OWNER. In such event, ENGINEER's contract price and schedule shall be equitably adjusted.

#### 6.7 No Third-Party Beneficiaries

This AGREEMENT gives no rights or benefits to anyone other than OWNER and ENGINEER and has no third-party beneficiaries.

Deleted: 5.8.3 OWNER will provide (or have the construction contractor(s) provide) a Builders Risk All Risk insurance policy for the full replacement value of all PROJECT work including the value of all onsite OWNER-furnished equipment and/or materials associated with ENGINEER's services. Such policy will include coverage for loss due to defects in materials and workmanship and errors in design, and will provide a waiver of subrogation as to ENGINEER and the construction contractor(s) (or OWNER), and their respective officers, employees, agents, affiliates, and subcontractors. OWNER will provide ENGINEER a copy of such policy.

**6.8 Indemnification**

6.8.1 ENGINEER agrees to indemnify OWNER for any claims, damages, losses, and costs, including, but not limited to, attorney's fees and litigation costs, arising out of claims by third parties for property damage or bodily injury, including death, to the proportionate extent caused by the negligence or willful misconduct of ENGINEER, ENGINEER's employees, affiliated corporations, and subcontractors in connection with the PROJECT.

6.8.2 OWNER agrees to indemnify ENGINEER from any claims, damages, losses, and costs, including, but not limited to, attorney's fees and litigation costs, arising out of claims by third parties for property damage or bodily injury, including death, to the proportionate extent caused by the negligence or willful misconduct of OWNER, or its employees or contractors in connection with the PROJECT.

**6.9 Assignment**

This is a bilateral personal Services AGREEMENT. Neither party shall have the power to or will assign any of the duties or rights or any claim arising out of or related to this AGREEMENT, whether arising in tort, contract or otherwise, without the written consent of the other party. Any unauthorized assignment is void and unenforceable. These conditions and the entire AGREEMENT are binding on the heirs, successors, and assigns of the parties hereto.

**6.10 Consequential Damages**

To the maximum extent permitted by law, ENGINEER and ENGINEER's affiliated corporations, officers, employees, and subcontractors shall not be liable for OWNER's special, indirect, or consequential damages, whether such damages arise out of breach of contract or warranty, tort including negligence, strict or statutory liability, or any other cause of action. In order to protect ENGINEER against indirect liability or third-party proceedings, OWNER will indemnify ENGINEER for any such damages.

**6.11 Waiver**

OWNER waives all claims against ENGINEER, including those for latent defects, that are not brought within 2 years of substantial completion of the facility designed or final payment to ENGINEER, whichever is earlier.

**6.12 Jurisdiction**

The substantive law of the state of the PROJECT site shall govern the validity of this AGREEMENT, its interpretation and performance, and any other claims related to it.

**6.13 Severability and Survival**

6.13.1 If any of the Provisions contained in this AGREEMENT are held for any reason to be invalid, illegal, or unenforceable, the enforceability of the remaining provisions shall not be impaired thereby.

6.13.2 Limitations of liability, indemnities, and other express representations shall survive termination of this AGREEMENT for any cause.

**6.14 Materials and Samples**

Any items, substances, materials, or samples removed from the PROJECT site for testing, analysis, or other evaluation will be returned to the PROJECT site within 60 days of PROJECT close-out unless agreed to otherwise. OWNER recognizes and agrees that ENGINEER ~~is acting as a bailee and at no time~~ assumes title to said items, substances, materials, or samples.

Deleted: , including use of alternative dispute resolution options.

**6.15 Engineer's Deliverables**

Engineer's deliverables, including record drawings, are limited to the sealed and signed hard copies. Computer-generated drawing files furnished by ENGINEER are for OWNER or others' convenience. Any conclusions or information derived or obtained from these files will be at user's sole risk.

**6.16 Dispute Resolution**

The parties will use their best efforts to resolve amicably any dispute.

**6.17 Ownership of Work Product and Inventions**

All of the work product of the ENGINEER in executing this PROJECT shall remain the property of ENGINEER. OWNER shall receive a perpetual, royalty-free, non-transferable, non-exclusive license to use the deliverables for the purpose for which they were intended. Any inventions, patents, copyrights, computer software, or other intellectual property developed during the course of, or as a result of, the PROJECT shall remain the property of the ENGINEER.

**ARTICLE 7. ATTACHMENTS, SCHEDULES, AND SIGNATURES**

This AGREEMENT, including its attachments and schedules, constitutes the entire AGREEMENT, supersedes all prior written or oral understandings, and may only be changed by a written amendment executed by both parties. The following attachments and schedules are hereby made a part of this AGREEMENT:

- Attachment A--Scope of Services
- Attachment B--Compensation

IN WITNESS WHEREOF, the parties execute below:

For OWNER, \_\_\_\_\_

dated this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

Signature \_\_\_\_\_

Signature \_\_\_\_\_

Name (printed) \_\_\_\_\_

Name (printed) \_\_\_\_\_

Title \_\_\_\_\_

Title \_\_\_\_\_

For ENGINEER, CH2M HILL INC.,

dated this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_



Signature \_\_\_\_\_

Name (printed)

Title

Signature \_\_\_\_\_

Name (printed)

Title

# Scope of Services – Lift Station 19 Improvements

Phase 1 - Replacement Lift Station 19 Design and Services During Bidding

Phase II - Replacement Lift Station 19 Services During Construction

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## General

CH2MHILL (ENGINEER) was selected by the CITY of Grand Island (CITY) to provide engineering design, services during construction, and startup services for Lift Station 19 and Forcemain Improvements. The scope of services presented herein describes services to be rendered by ENGINEER to the CITY for

*Phase I – Replacement Lift Station 19 Design and Services During Bidding  
and*

*Phase II – Replacement Lift Station 19 Services During Construction*

It is assumed that as-built drawings of existing facilities, aerial mapping, and wastewater flow records are available and will be provided by the CITY for use on this project.

## Project Information

**Project Title:** Lift Station 19 Improvements (PROJECT)

**Objective:** The CITY requires replacement of the existing Lift Station 19 (L.S. 19). This scope of work is to provide design services, services during construction, and startup services for Lift Station 19 improvements.

**Project Location:** The L.S. 19 site is near the intersection of Diers Avenue and Capital Avenue.

## Work Tasks

ENGINEER shall perform the following specific tasks and subtasks under this Scope of Work:

### Phase I – Design Services

**Objective:** Develop designs and prepare construction documents (drawings, special provisions, and supplemental technical specifications) for competitive bidding for the PROJECT.

**Overview:** To provide the CITY with appropriate opportunities to review and participate in the design process, this Phase I shall consist of the following tasks:

Task 1 - Design

- ◆ Predesign
- ◆ 30 Percent Design (Design Development)
- ◆ 90 Percent Design (Draft Contract Documents)
- ◆ 100 Percent Design (Final Contract Documents)

#### Task 2 – Bidding Services

#### Task 3 – Design Project Management

For lift station design, ENGINEER will prepare the design using 3-dimensional (3-D) computer-aided drafting CAD technology. This technology will be used to prepare traditional 2-dimensional (2-D) plan and section drawings as well as to provide 3-D perspective drawings in the construction documents. 3-D perspective drawings also will be used for workshop presentations to CITY staff.

#### *Task 1 – Design*

##### *Subtasks:*

##### 1. Predesign

- A. Kick-off Meeting - Conduct a kick-off meeting in Grand Island. Attendees will include the ENGINEER'S Project Manager, Design Manager, and Project Engineer. The purpose of this meeting is to establish a common understanding of PROJECT scope, goals, issues, concerns, design criteria, and schedule. ENGINEER shall plan and conduct this meeting. ENGINEER also shall prepare and distribute minutes of this meeting to all attendees.
- B. Field Survey – Conduct field surveys as necessary to supplement and verify existing available data and aerial mapping. Specifically, field surveys will obtain three dimensional coordinates of up to 10 existing manholes, including verification of pipe invert elevations within these manholes. Two PROJECT-specific control points will be established at the L.S. 19 site for future construction use. Based on information marked on the ground by the local utility locator services, field survey will include horizontal locations of existing underground utilities. Field surveys will be performed by Rockwell and Associates Engineering and Surveying.
- C. Geotechnical Investigations – Geotechnical investigations will be conducted by Mid States Engineering and Testing. One boring within the proposed “footprint” of the new L.S. 19 will be drilled up to 60 feet deep. This boring will identify groundwater elevations at the proposed lift station site and the soil strata will be logged. Appropriate soil samples will be collected and laboratory analyses will be performed to classify the soil strata and to determine engineering properties required for foundation design.
- D. Determine Future Wastewater Flows – In consultation with the Regional Planning Commission of Hall County, projected land use and development density will be reviewed. Estimated future average and peak wet sanitary sewer flows within the L.S. 19 service area will be calculated based on projected land use and development densities. Estimated future wastewater flows will be “ground truthed” against available historic wastewater generation factors as reported in the previous Sanitary

Sewer Comprehensive Plan and through review of wastewater treatment plant (WWTP) influent flow records.

E. Establish Design Criteria – Flexibility will be a key consideration in the design of the replacement L.S. 19 and forcemain. This includes consideration of future expansion requirements while providing a high level of service and operability in the near term. The ultimate number and capacity of lift station pumps will be based on the estimated wastewater flows through a 50-year planning horizon. To the extent practical, a phased approach for installation of required pumps and related equipment will be considered. A primary goal in pump selection is to minimize on/off cycles. Other key lift station design criteria that will be established in consultation with CITY staff include the following:

- Building Code Requirements
- Lightning protection
- Architectural criteria
- Heating, ventilation, and air conditioning (HVAC) for the electrical, supervisory control and data acquisition (SCADA), and motor control center (MCC) room as well as the pump room
- Interior and exterior lighting
- Crane system for equipment handling
- SCADA requirements
- Source of washdown and seal water
- Wet well access and inlet separation/shutoff requirements
- Wet well level and pump control requirements
- Wet well corrosion and odor control
- Overflow basin size, location, and access requirements
- Control valve and bypass requirement
- Landscaping
- Traffic access and patterns
- Driveway pavement
- Emergency power

Other criteria that will be established include traffic control requirements during construction and the sequence of transferring flows from the existing L.S. 19 system to the new L.S. 19 system.

A draft technical memorandum shall be prepared by ENGINEER and delivered to the CITY with recommended final design criteria, including recommended estimates of average and peak wet day flow rates. The draft technical memorandum also shall explain the basis and rationale for the recommendations, including input from CITY staff at the kickoff meeting.

After CITY review of the draft technical memorandum, CITY review comments will be provided to the ENGINEER. After receipt of CITY comments, ENGINEER shall plan and conduct a telephone conference with CITY staff to discuss and finalize the design criteria. Telephone conference attendees will include the ENGINEER'S Project Manager, Design Manager, and Project Engineer, plus any other appropriate

technical discipline leads on an as-needed basis. Final decisions shall be documented in a final technical memorandum by the ENGINEER and distributed to all conference attendees.

*Pre-design Deliverables:*

- Meeting Minutes of Kick-off Meeting distributed to all attendees via e-mail
- Two (2) copies each of the Draft and Final Geotechnical Report
- Five (5) copies each of the Draft and Final Design Criteria Technical Memoranda

2. 30 Percent Design (Design Development)

The primary purpose of the 30 percent design is to prepare plans in sufficient detail to determine required equipment, process flow diagrams, instrumentation and control (I&C) diagrams, general placement of structures, preliminary facility layouts, and other pertinent information. This design phase also shall include developing a preliminary list of special provisions and supplemental technical specifications that will be required for this PROJECT.

After CITY review of the 30 percent design, a workshop shall be planned and conducted by ENGINEER in Grand Island to discuss and resolve CITY review comments. Workshop attendees will include the ENGINEER'S Project Manager, Design Manager, and Project Engineer.

*30 Percent Design Deliverables:*

- Civil Design: Structure size, location, and orientation. Yard piping. Preliminary site plan and traffic access corridors. Draft proposed sequence of disconnecting influent and effluent piping from the existing L.S. 19 and activating the new L.S. 19.
- Architectural Design: General shape, elevations, and architectural features.
- Mechanical Design: Pump sizes, types, locations, and flow diagrams.
- I&C Design: Coordinated with flow control requirements. One-line control diagram.
- Electrical Design: Define load conditions and determine redundancy requirements. One-line electrical diagram.
- Conceptual 3-D perspectives of the lift station structure and equipment.
- Conceptual estimate of construction costs.
- Minutes of the comment review workshop shall be distributed to all workshop attendees via e-mail.

3. 90 Percent Design (Draft Contract Documents)

The 90 percent design drawings and specifications shall be essentially ready for bidding while providing the CITY with a final review prior to issuing bid documents. Simultaneously with submittal to the CITY, the ENGINEER shall submit copies of the 90 percent design documents to the Nebraska Department of Environmental Quality (NDEQ) for review and approval. This submittal will include a technical memorandum with a summary of design information and calculations.

During review of construction documents, ENGINEER shall respond to comments and questions generated by NDEQ. After CITY and NDEQ review of the 90 percent design, a workshop will be conducted in Grand Island to discuss and resolve review comments. The

workshop shall be planned and conducted by ENGINEER. Workshop attendees will include the ENGINEER'S Project Manager, Design Manager, and Project Engineer.

***90 Percent Design Deliverables:***

- Five (5) paper copies of the draft advertisement for bids, special provisions, supplemental technical specifications, and Bid Form.
- Five (5) paper copies of the final review set of construction drawings. (It is estimated that there will be approximately 30 sheets of drawings)
- Five (5) paper copies of the engineering analysis technical memorandum.
- One (1) paper copy of the draft estimate of construction costs.
- Minutes of the comment review workshop shall be distributed to all workshop attendees via e-mail.

**4. 100 Percent Design (Final Contract Documents)**

Final edits will be incorporated into the drawings and other contract documents based on CITY and NDEQ comments following the 90 percent design review workshop.

***100 Percent Design Deliverables***

- Thirty (30) paper copies of the 100 percent half-size construction drawings for bidding purposes only
- Four (4) paper copies of the 100 percent full-size construction drawings for bidding purposes only
- Six (6) CDs with all construction drawings in .pdf format for bidding purposes only and .pdf files of all other bidding and contract documents.
- Thirty (30) paper copies of the advertisement for bids, special provisions, supplemental technical specifications, and Bid Form
- One (1) CD with final drawings in AutoCAD 2005 format for CITY use
- One (1) paper copy of the Final Engineer's Opinion of Probable Cost

***Task 2 – Services During Bidding***

The CITY will issue and publish the advertisement for bids and will distribute bid documents to prospective bidders. ENGINEER shall provide the following support during the bidding process:

- Implement procedures for receiving and answering bidders' questions and requests for additional information. These procedures include maintaining a record of all bidders' questions and requests for information and responses thereto.
- Coordinate with the CITY to arrange and conduct one pre-bid conference. ENGINEER shall develop the agenda, conduct the conference, take minutes of the conference, and record all questions and requests for additional information. The ENGINEER'S Project Manager and Design Manager shall attend the pre-bid conference.
- As appropriate, responses to questions and requests for additional information will be issued in formal addenda. ENGINEER shall prepare addenda as necessary and

submit the addenda to the CITY for distribution to all planholders. Up to two addenda will be prepared by ENGINEER.

- Assist the CITY with evaluation of bids. After the bids are opened, CH2M HILL will review, tabulate, and evaluate all bids. A report of the bid review and evaluation will be prepared and submitted to the CITY. This report will include recommendations for award of a construction contract or other action as may be appropriate.

### *Task 3 – Design Project Management*

Project Management includes developing a general workplan that defines the ENGINEER'S design project delivery approach, staffing, subconsultants, responsibilities, quality assurance and quality control (QA/QC) procedures, and project deliverables during PROJECT implementation. ENGINEER shall advise the CITY of PROJECT progress, including preparation and submittal of monthly progress reports to the CITY and holding periodic meetings and consultations with the CITY. To ensure appropriate implementation of the QA/QC plan, all QA/QC activities are considered part of project management and shall be managed and controlled by the ENGINEER'S Project Manager.

## **Phase II – Services During Construction**

*Objective:* Provide engineering services during construction (SDC) and startup services to assist CITY during construction of the PROJECT. These services are intended to assist the CITY in administering the contract for construction, monitoring the performance of the construction contractor, verifying that the contractor's work is in substantial compliance with the contract documents, and responding to events that occur during construction. It is understood that the resident project representative (RPR) and daily inspection services are being provided by the CITY, as explained in the contract documents for the PROJECT. It is assumed that the construction duration for the PROJECT will be nine (9) months from date of construction notice to proceed to final completion.

*Overview:* To provide the CITY with appropriate support during construction, this Phase II shall consist of the following tasks:

### Task 1 – Services During Construction

- ◆ Preconstruction Conference
- ◆ Design Team Site Visits/Inspections
- ◆ Review Shop Drawings (includes shop drawings, product literature, samples, etc.)
- ◆ Review Alternates
- ◆ Safety
- ◆ Changes
- ◆ Requests for Information
- ◆ Startup
- ◆ Review Pay Requests

### Task 2 – Project Closeout

- ◆ Prepare Draft and Final Operation and Maintenance Manual
- ◆ Preparation of Record Drawings

### Task 3 – SDC Project Management

## Task 4 – Additional Services During Construction

### *Task 1 – Services During Construction (SDC)*

#### **Subtasks:**

1. Preconstruction Conference: ENGINEER shall coordinate and conduct one (1) pre-construction conference in Grand Island with the successful bidder, CITY staff, and other interested entities to review project communications, coordination, and other procedures, and to discuss the contractor's general work plans and requirements for the project. Attendance will be by the ENGINEER'S project manager and project engineer. ENGINEER shall take minutes or otherwise record the results of this conference and issue a record of the conference.
2. Design Team Site Visits/Inspections:
  - Periodic Site Visits/Inspections: Coordinate visits approximately every six weeks to the site by one ENGINEER design team member. Additionally, bi-weekly site visits will be conducted by one member of the ENGINEER'S local subconsultant, Miller & Associates. The purpose of these site visits is to review the progress and quality of the work and to determine if the work is proceeding in accordance with the intent of the contract documents. Visit timing may be adjusted to coincide with critical installations or specific issues. The design team member/subconsultant will observe the general quality of the work at the time of the visit and review any specific items of work that are brought to their attention by the contractor or the CITY.
  - Special Inspections: Assist the CITY with inspections at substantial and final completion, in accordance with the construction contract documents. ENGINEER shall assist in preparing punch lists of items requiring completion and correction, and will make recommendations to the CITY regarding the acceptance of the work based on the results of the final inspection. Two, single-day trips by up to two ENGINEER staff to Grand Island are assumed for this work.
3. Review Shop Drawings: ENGINEER shall review the contractor's proposed shop drawing and submittal schedules, which shall identify all shop drawings, samples, and submittals required by the contract for construction, along with the anticipated dates for submission. ENGINEER shall coordinate with the design team for review of contractor's shop drawings, samples, and other submittals. ENGINEER shall log and track all shop drawings, samples, and other submittals.

ENGINEER review of shop drawings, product literature, samples, and other submittals, such as the contractor's detailed progress schedule, will be for general conformance with the design concept and general compliance with requirements of the construction contract documents. Such review will not relieve the contractors from their responsibility for performance in accordance with the contract for construction, nor is such review a guarantee that the work covered by the shop drawings, product literature, samples, and other submittals is free of errors, inconsistencies, or omissions. ENGINEER review will be based on the requirements in the contract for construction and shall include a maximum of two submissions by the contractor for each shop drawing, product literature, sample, or other submittal. If additional reviews are required, ENGINEER shall be entitled to additional compensation.



Up to 90 original submittals and 30 re-submittals will be reviewed. This includes shop drawings, product literature, samples, schedules, O&M submittals. It is assumed that submittal reviews will require 2 hours of review time on average.

4. Review Alternates: Consider and make recommendations regarding the acceptability of alternate materials or equipment proposed by the contractor. Review the alternate proposals and coordinate recommendations with the CITY.
5. Safety: ENGINEER shall prepare a set of project instructions and field safety instructions to provide direction to ENGINEER staff and subconsultants to assist with project execution. The primary purpose of these instructions is for internal project management, but will be submitted to the CITY for review and input. ENGINEER shall manage the health, safety, and environmental activities of its staff and the staff of subconsultants to achieve compliance with applicable health and safety laws, regulations, and best management practices. ENGINEER shall notify affected personnel of site conditions that could pose danger to them when observed by the ENGINEER. ENGINEER is not responsible for health or safety precautions of construction workers, nor is ENGINEER responsible for the contractor's compliance with health and safety requirements in the construction contract documents, or with federal, state, and local occupational safety and health laws and regulations.
6. Changes:

Minor Variations in the Work: ENGINEER shall prepare and authorize Field Orders for minor variations in the work which do not involve an adjustment in the contract price or time for construction and are consistent with the intent of the contract documents.

CITY-Requested Change Orders: ENGINEER shall prepare Change Orders and assist the CITY with negotiations and issuance of changes to the contracts for construction. This may include design and engineering services to prepare drawings, specifications, and other information for changes. ENGINEER shall receive and review contractor's responses to requests for change and will obtain such further information as is necessary to evaluate the basis for the contractors' proposals. ENGINEER shall assist the CITY with negotiations of the proposal and, after approval by the CITY, prepare final change order documents for execution by the CITY and contractors.

Contractor-Requested Changes: ENGINEER shall review contractor-requested changes to the contract for construction. ENGINEER shall make recommendations to the CITY regarding acceptability of contractor requests and, after approval of the CITY, assist the CITY in negotiations for the requested change. After agreement and approval, ENGINEER shall prepare final change order documents for execution by the CITY and contractor. This may include design and engineering services to prepare drawings, specifications, and other information for changes.

Up to 2 change orders will be prepared. Each change order will take an average of 8 hours of project engineer time for review, negotiation, preparation, and coordination.

7. Requests for Information (RFI): ENGINEER shall review contractor's requests for information or clarification of the construction contract documents. ENGINEER shall coordinate such review with the design team and with the CITY as appropriate.

ENGINEER shall coordinate and issue responses to the requests and shall log and track RFIs submitted to the ENGINEER.

Up to 30 requests for interpretation/clarification will be reviewed and responses provided. It is assumed that an average of 1 hour of project engineer time will be required for each RFI.

8. Startup: Make one two-day visit to the site to assist in startup and initial operations to determine if the facility is operating properly and to familiarize CITY staff with the design intent of the PROJECT. This visit will be made by the ENGINEER'S project manager and lift station project engineer. Startup assistance also will include up to three weeks of on-site programming by one ENGINEER staff member for the SCADA system.
9. Review Pay Requests: ENGINEER shall provide recommendations to the CITY as to the acceptability of the contractor pay requests and will advise the CITY as to the status of the total amounts requested, paid, retained, and remaining to be paid under the terms of the construction contract documents. Recommendations by ENGINEER for payment will be based on ENGINEER'S knowledge and information from the CITY RPR regarding progress and acceptability of the Work. Such recommendations do not represent that sufficient field examinations have been made by ENGINEER to ascertain that the contractor has completed the work in exact accordance with the construction contract documents; that ENGINEER has made an examination to ascertain how or for what purpose the contractor has used the moneys paid; that title to any of the work, materials, or equipment has passed to the CITY free and clear of liens, claims, security interests, or encumbrances. Up to 9 monthly pay requests and one final pay request will be reviewed.

*Deliverables:*

- Four (4) full-size and twelve (12) half-size paper copies of the "Approved for Construction" drawings. Distribution of copies shall be as follows - two copies of the full-size drawings and four copies of the half-size drawings shall be for CITY use with the remaining two copies of the full-size drawings and eight copies of the half-size drawings being for use by the contractor.
- One (1) CD of the "Approved for Construction" drawings in .pdf format.
- Fourteen copies of other contract documents, including two copies of the construction contract with original signatures. Four copies, including one copy with original signatures, will be retained by the CITY. Ten copies, including one copy with original signatures, will be provided to the contractor.
- Project Instructions and Field Safety Instructions.
- Other deliverables shall include, as appropriate, minutes of meetings (including the preconstruction conference), approved shop drawings and other submittals, site visit reports, field orders, change orders, recommendations regarding alternates, responses to RFIs, and SCADA programming.
- Recommendations regarding contractor pay requests.

*Task 2 – Project Closeout*

1. Prepare Operation and Maintenance (O&M) Manual: ENGINEER shall organize appropriate contractor submittals and insert these submittals into an O&M manual.

2. Record Drawings: ENGINEER shall revise the original design drawings to reflect available record information provided by the contractor and CITY staff. One reproducible set of full-size mylar drawings and electronic files of all record drawings will be submitted to the CITY.

#### *Deliverables*

- Five (5) copies each of the draft and final O&M manual.
- One (1) mylar copy and one (1) CD with electronic files of all record drawings.

#### *Task 3 – Warranty Inspection Support*

Warranty inspection support includes preparing for and attending a one-day on-site inspection approximately 11 months after substantial completion of construction. The ENGINEER'S Project Manager and Project Engineer shall participate in the warranty inspection. ENGINEER shall document the activities and observations related to the warranty inspection in the form of a warranty inspection report to be provided to the CITY.

#### *Deliverables*

- Warranty Inspection Report

#### *Task 4 – SDC Project Management*

Project Management includes developing project instructions and field safety instructions that define the ENGINEER'S SDC project delivery approach, staffing, subconsultants, responsibilities, quality assurance and quality control (QA/QC) procedures, safety requirements, and project deliverables during PROJECT implementation. ENGINEER shall advise the CITY of ENGINEER'S activities during construction, including preparation and submittal of monthly progress reports to the CITY and holding periodic meetings and consultations with the CITY. To ensure appropriate implementation of the QA/QC plan, all QA/QC activities are considered part of project management and shall be managed and controlled by the ENGINEER'S project manager.

#### *Deliverables*

- Monthly progress reports

#### *Task 5 – Additional Services During Construction*

As-needed, upon written request from the CITY, ENGINEER shall perform the additional services listed below on a time and materials basis. Costs to perform these services are not included in the fee proposal.

- Claim Services: In the event that either the CITY or the contractor submits a claim, such claim shall be submitted to the ENGINEER. Following written authorization, ENGINEER will receive, log, and notify the other party about all letters and notices of claims or disputes between contractor and CITY pertaining to the acceptability of the work or the interpretation of the requirements of the contract for construction. ENGINEER will review all such letters and notices and will discuss them with all parties as necessary to understand each such claim or dispute. ENGINEER will advise the CITY

regarding the contractor's compliance with contract requirements for such claims and disputes. ENGINEER will assist the CITY in discussions with contractors to resolve claims and disputes. ENGINEER will issue decisions on claims and disputes in accordance with the contract for construction.

- Independent Testing, Inspection and Survey Services: The construction contract documents require contractors to employ independent firms for material testing, specialty inspection, survey, or other services related to verifying the quality and quantity of the contractors' work. ENGINEER will review the reports and other information prepared and provided by the independent testing firms. ENGINEER shall not be responsible for the timeliness, accuracy, or completeness of the work and reports of the independent testing, inspection, and survey firms.
- Subsurface and Physical Conditions: Whenever contractor notifies CITY of subsurface or physical conditions at the site for which the contracts for construction require notification, ENGINEER will advise the CITY and inspect the pertinent conditions at the site. ENGINEER will advise the CITY as to the appropriate action(s), and will assist the CITY in responding to the contractor. The effort may include engineering and technical services required to investigate the subsurface or physical conditions.
- Warranties, Guarantees, and Lien Releases: ENGINEER will coordinate with the contractors for submission of required warranties, guarantees, lien releases, and other similar documents as required by the contracts for construction. ENGINEER will advise the CITY as to the acceptability and compliance of these documents with the contracts for construction.
- Services related to development of the CITY project financing and/or budget
- Off-site specialty inspections and testing services
- Special inspections for compliance with building codes
- Services related to disputes over pre-qualification, bid protests, bid rejection, and re-bidding of the contracts for construction
- Services related to procurement or management of third party contractors
- Services necessary due to default of contractor(s)
- Services related to damages caused by fire, flood, earthquake, or other acts of God
- Services related to the CITY operation and use of the completed project other than as specifically provided in the above scope of work
- Services related to warranty claims and enforcement
- Preparation for and serving as a witness in connection with any public or private hearing or other forum related to the project
- Services supporting the CITY in public relations activities
- Development, coordination, or participation in partnering programs

- Value engineering or similar value analysis studies
- Services to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the CITY
- Performing periodic labor evaluations and processing prevailing wage documentation
- Other services requested by the CITY that are not specifically stated as included in the scope of services.

## Basis of Design Scope and Fee Development

The following key assumptions were made in the compilation of this scope of work and the estimated level of effort. These assumptions are in addition to the scope set forth in the foregoing scope of work.

1. The CITY will make its facilities accessible to ENGINEER as required for ENGINEER'S performance of services and will provide labor and safety equipment as required by ENGINEER for such access.
2. The SDC phase of the PROJECT will last 9 months from authorization to proceed and will be finished during calendar year 2007.
3. Any investigation and remediation of possible hazardous waste, asbestos, lead paint or other types of contamination will be conducted as a separate contract.
4. SDC for the PROJECT is based on the CITY executing a contract for construction with the CONTRACTOR that is consistent with ENGINEER'S agreement, and that provides the requisite authority for ENGINEER to fulfill its SDC responsibilities.
5. SDC are based on the schedule or duration of construction anticipated at the time these services are agreed. Deviations from the anticipated schedule or duration of the construction will materially affect the scope of these services and ENGINEER'S compensation for the work and may require adjustments.
6. ENGINEER will not be responsible for the means, methods techniques, sequences or procedures of the contractor, nor shall ENGINEER be responsible for the contractor's failure to perform in accordance with the contract documents.
7. Any labor and expenses required to address construction claims, unforeseen subsurface considerations or additional construction requested by the contractor or CITY would be additional costs. Any claims resolution or litigation assistance requested of ENGINEER will constitute additional services.

# Lift Station 19 Improvements

Phase 1 - Replacement Lift Station 19 Design and Services During Bidding

Phase II - Replacement Lift Station 19 Services During Construction

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## ARTICLE 2. COMPENSATION

Compensation by OWNER to ENGINEER will be as follows:

### A. MAXIMUM COST

The maximum cost for this PROJECT, as defined by services identified in ARTICLE 1, is three hundred and seventy-six thousand and eighteen dollars and zero cents, (\$376,018.00), which will be billed on a time and materials basis in accordance with Article 2.B below.

The estimated cost breakdown per subtask is shown in the attached Exhibit 1 to Attachment B. ENGINEER may alter the distribution of compensation between individual subtasks to be consistent with services actually rendered, but shall not exceed the maximum amount of \$376,018.00 unless approved in writing by the OWNER through a contract amendment to this agreement.

### B. ACTUAL COST

Actual cost for services enumerated in ARTICLE 1 will be computed by multiplying ENGINEER'S Salary Cost by a factor of 2.08, plus Direct Expenses, plus a service charge of 0 percent Direct Expenses and 0 percent of subcontracts and outside services, plus applicable sales, use, value added, business transfer, gross receipts, or other similar taxes.

### C. SALARY COST

Salary Cost is the amount of wages or salaries paid ENGINEER'S employees for work performed directly on the PROJECT plus a percentage applied to all such wages or salaries to cover all payroll-related taxes, payments, premiums, and benefits.

### D. DIRECT EXPENSES

Direct Expenses are those necessary costs and charges incurred for the PROJECT including, but not limited to: (1) the direct costs of transportation, meals and lodging, mail, special OWNER approved PROJECT specific insurance, letters of credit, bonds, and equipment and supplies; (2) ENGINEER'S current standard rate charges for direct use of ENGINEER'S vehicles, laboratory test and analysis, printing and reproduction services, and certain field equipment; and (3) ENGINEER'S standard project charges for computing systems, special health and safety requirements of Occupational Safety and Health Administration (OSHA), and telecommunications services.







RESOLUTION 2006-42

WHEREAS, the City of Grand Island invited proposals for Consulting Engineering Services for Lift Station No. 19 in accordance with a Request for Proposal on file with the Public Works Department; and

WHEREAS, one proposal was received, reviewed and evaluated in accordance with established criteria; and

WHEREAS, CH2M Hill of Englewood, Colorado, submitted a proposal in accordance with the terms of the request for proposals and all statutory requirements contained therein and the City Procurement Code, such proposal being for actual costs with a maximum dollar amount of \$376,018.00.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the proposal of CH2M Hill of Englewood, Colorado, for consulting engineering services for Lift Station No. 19 for actual costs with a maximum dollar amount of \$376,018.00 is hereby approved.

BE IT FURTHER RESOLVED, that the Mayor is hereby authorized and directed to execute an agreement for such services on behalf of the City of Grand Island.

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Adopted by the City Council of the City of Grand Island, Nebraska, February 28, 2006.

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Margaret Hornady  
City Council President / Interim Mayor

Attest:

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RaNae Edwards, City Clerk

Approved as to Form	☐ _____
February 23, 2006	☐ City Attorney