



# City of Grand Island

Tuesday, November 14, 2006

Council Session

## Item G6

**#2006-330 - Approving Agreement with CH2M Hill for  
Engineering Consulting Services for Composting System  
Improvements at the Waste Water Treatment Plant**

Staff Contact: Steven P. Riehle, Public Works Director

# Council Agenda Memo

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

**Meeting:** November 14, 2006

**Subject:** Approving Agreement with CH2M Hill for Engineering Consulting Services for Composting System Improvements; Waste Water Division

**Item #'s:** G-6

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

## Background

The Facility Plan Update was presented to the Grand Island City Council on August 29, 2006 by the engineering firm CH2M Hill of Englewood, Colorado. The City of Grand Island Administration was directed to proceed forward with proposals for engineering for a scaled composting facility.

The request for proposals was advertised in the Grand Island Independent on September 27, 2006 and sent to five (5) consulting engineering firms. One (1) proposal was received on October 12, 2006 from CH2M Hill of Englewood Colorado.

## Discussion

The proposal was reviewed by Public Works Staff. An agreement of understanding has been negotiated with CH2M Hill of Englewood, Colorado. The agreement with CH2M Hill shall be for final design services, bidding services, programming and services during construction. The work will be performed at actual costs with a maximum of \$399,200.

## 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 future date.

4. Take no action on the issue.

### **Recommendation**

City Administration recommends that the Council approve a Resolution allowing the Mayor to sign the agreement for actual costs with a maximum amount of \$399,200.

### **Sample Motion**

Motion to approve the agreement with CH2M Hill of Englewood, Colorado to perform consulting engineering services for composting system improvements.



Dale M. Shotkoski, Assistant City Attorney

*Working Together for a  
Better Tomorrow, Today*

**REQUEST FOR PROPOSAL  
FOR  
COMPOSTING SYSTEM IMPROVEMENTS**

**RFP DUE DATE:** October 12, 2006 at 4:00 p.m.

**DEPARTMENT:** Public Works

**PUBLICATION DATE:** September 27, 2006

**NO. POTENTIAL BIDDERS:** 5

**SUMMARY OF PROPOSALS RECEIVED**

**CH2M Hill**  
Englewood, CO

cc: Steve Riehle, Public Works Director  
Danelle Collins, Admin. Assist PW  
David Springer, Finance Director  
Sherry Peters, Legal Secretary

Bud Buettner, Assist. PW Director  
Gary Greer, City Administrator  
Dale Shotkoski, Purchasing Agent

**P1116**

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

Compost System Improvements

#### **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) Worker'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.

5.8.3 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.

## 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 intends to use documents for future projects, but 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.

#### **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.

#### **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, including use of alternative dispute resolution options.

#### **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 \_\_\_\_\_, 20\_\_\_\_

Signature \_\_\_\_\_

Signature \_\_\_\_\_

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

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

Title \_\_\_\_\_

Title \_\_\_\_\_

*JMS 11-3-06*

For ENGINEER, CH2M HILL INC.,

dated this 31<sup>ST</sup> day of OCTOBER, 2006

Signature *Lawrence J. Schimmeller*

Signature \_\_\_\_\_

Name (printed) LAWRENCE J. SCHIMMELLER

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

Title PROJECT DELIVERY LEADER

Title \_\_\_\_\_

# **Scope of Work – Composting System Improvements**

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Original Dated: October 30, 2006

## **General**

This scope of work describes the services to be rendered by CH2M HILL (the "ENGINEER") to the CITY of Grand Island (the "CITY") for the design and services during construction of an aerated static pile composting system at the Grand Island Wastewater Treatment Plant (WWTP).

## **Project Information**

**Project Title:** Composting System Improvements (the "PROJECT")

**Objective:** The CITY requires the modification of their existing composting system. Improvements include the construction of an aerated static pile composting system for a portion of the WWTP's sludge. This facility is to be sized from 25 percent to 50 percent of the current sludge production volume. This scope of work is intended to provide final design services, bidding services and services during construction for these improvements.

**Project Location:** The project site is the Grand Island WWTP in Grand Island, Nebraska.

## **Project Description**

The improvements included under this scope are as generally described below:

- Provide final design services to install an aerated static pile composting system for the City of Grand Island wastewater treatment plant.
- Assist the City in modifying their composting system permit.
- Provide bidding services for the design package.
- Provide services during construction to assist the City with change orders, payment applications, and submittals.
- Other items not specifically listed to provide a complete and workable composting system.

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## **Work Tasks**

ENGINEER shall perform the following specific tasks as part of this Scope of Work:

### **Task 1 – Preliminary Design Services**

**Objective:** Select the location, configuration and components of the design. Further advance the concept report in the actual selection of process type and location of equipment.

**Subtasks:**

- 1.1 Conduct a kick-off meeting with CITY staff in Grand Island. The meeting will include the ENGINEER's project manager, and the composting engineer. This meeting will be used to set the project's direction and obtain a basic understanding regarding the project needs and requirements.
- 1.2 ENGINEER will assist with the preparation of scope of work for the surveyor, if deemed necessary by CITY staff. It is understood that consultants under a separate contract with the CITY will perform a survey of the area.
- 1.3 Conduct a geotechnical investigation. Provide two borings within the footprint of the new facility. Identify groundwater levels and log soil strata. Appropriate soil samples will be collected and laboratory analyses will be performed to classify soils and determine engineering properties for the foundation design.

**Deliverables:** Meeting summary from the kickoff workshop, geotechnical report.

### **Task 2 – Final Design Phase**

**Objective:** Prepare contract documents for the construction of the improvements identified herein.

**Subtasks:**

- 2.1 Schematic Design. Prepare drawings and other supporting information as necessary in sufficient detail to define the equipment sizing and facilities configuration, including preliminary facility layouts, and process and instrumentation diagrams (P&IDs). Provide a preliminary opinion of cost for the facilities. The project manager and project engineer will conduct a one-day workshop in Grand Island to review the schematic design work products with CITY staff.
- 2.2 60 % (Design Development) Review. The ENGINEER will provide drawings and certain technical specifications at approximately the 60 percent complete stage for review by the CITY and the ENGINEER. This information will further define the facilities and will provide the CITY an opportunity to comment on the direction of the design prior to the detailed preparation of contract documents. The project manager and project engineer will conduct a one-day workshop in Grand Island to review the work products with CITY staff.
- 2.3 95 % (Contract Document Preparation) Review. Prepare plans and specifications for final review prior to finalizing the contract documents for bidding. This submittal will include all drawings and specifications to be included in the bidding documents. An updated opinion of cost will be provided at this time also. The project manager and project engineer will conduct a one-day workshop in Grand Island to review the work

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products with CITY staff. See the attached preliminary list of drawings to be included as contract drawings.

- 2.4 **Contract Documents Submittal.** Prepare and deliver final contract documents to the CITY. Provide electronic copies of the drawings and specifications on a CD-ROM. Provide ENGINEER's final opinion of construction cost. This cost opinion will be the cost opinion submitted with the 95 percent review documents, modified as necessary to reflect any changes to the project following final review. Contract Documents shall consist of drawings and specifications that set forth the requirements for construction of improvements and shall include proposal forms, notice to bidders, bid forms, bond forms, as needed by the CITY to competitively bid the work. Specifications, including proposal forms, notice to bidders, bid forms, bond forms and technical specifications will be prepared using ENGINEER's standard forms.

**Deliverables:** Schematic Design package, 60% review package, 95% review package, workshop minutes, 100% contract documents, and meeting summaries following workshops. A total of 5 half sized bond copies of each will be provided.

### ***Task 3 – Bidding Services***

**Objective:** Provide assistance to CITY staff during the bidding phase of the PROJECT.

#### ***Subtasks:***

- 3.1 Review and evaluate technical questions from prospective bidders during the bidding process, and prepare addenda, as necessary, to interpret, clarify, or expand the Contract Documents prior to opening of bids. Questions will be answered directly by the ENGINEER.
- 3.2 It is understood that the CITY will have responsibility for distributing copies of the contract documents and addenda to prospective bidders, and for making copies of the contract documents beyond the original sets provided by the ENGINEER.
- 3.3 Assist the CITY at one pre-bid conference and site visit during a one-day visit to Grand Island. The project manager will attend this conference.
- 3.4 Evaluate the technical aspects of the bids, subcontractors and suppliers, as appropriate, make a recommendation regarding award, and assist the CITY in the award of the contract. A memo of recommendation will be prepared if required. ENGINEER will not attend the bid opening.

**Deliverables:** Memo of recommendation, responses to contractor technical questions, addenda if necessary.

### ***Task 4 – Services During Construction***

**Objective:** Provide engineering services during construction (SDC) to assist CITY during the construction phase 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

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understood that the resident project representative (RPR) and daily inspection services are being provided by the CITY.

**Subtasks:**

- 4.1 Conduct a pre-construction conference with CITY staff, the successful bidder, and other appropriate representatives to establish a program of construction activities. Attendance will be by the ENGINEER's project manager.
- 4.2 Design Team Site Visits. Coordinate visits approximately every six weeks to the site by a single design team member 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 coordinate with critical installations or specific issues. The design team member 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 the attention of the design team member by the contractor or the CITY.
- 4.3 Shop Drawings. Review the contractor's shop drawings, samples and other submittals, and maintain a log to track them. Review shall be for general conformance with the design concept and general compliance with the requirements of the contract documents for construction. Such review shall not relieve the contractor from his responsibility for performance in accordance with the contract documents for construction, nor is such review a guarantee that the work covered by the shop drawings, samples and submittals is free of errors, inconsistencies or omissions.
- 4.4 Alternates. Consider and make recommendations regarding the acceptability of alternate materials or equipment proposed by the Contractor. Review the alternate proposals with the CITY.
- 4.5 Safety. ENGINEER will manage the health, safety and environmental activities of its staff and the staff of its subcontractors to achieve compliance with applicable health and safety laws and regulations. ENGINEER will notify affected personnel of site conditions posing an imminent 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 the health and safety requirements in the contract for construction, or with federal, state, and local occupational safety and health laws and regulations.
- 4.6 Schedule. Review the accuracy and appropriateness of contractor's construction schedule and monitor actual versus scheduled progress.
- 4.7 Changes. Jointly with the CITY, prepare, negotiate, and submit contract change orders necessary to achieve the intent of the contract documents for construction.
- 4.8 Requests for Information: Respond to technical questions and requests for information from the contractor to clarify design as needed to implement construction.
- 4.9 Final Review. Assist the CITY with inspections at substantial and final completion, in accordance with the contract documents for construction. ENGINEER will assist in preparing punch lists of items requiring completion or correction, and will make recommendations to the CITY regarding the acceptance of the work based on the

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results of the final inspection. Two, single-day trips to Grand Island made by one person are assumed for this work.

- 4.10 Initial Operation. Make up to two one-day visits to the site to assist in startup and initial operation to determine if the facility is operating properly and to familiarize the CITY staff with the design intent of the project. Visits will be by the project manager.
- 4.11 Record Drawings. Prepare and submit to the CITY, upon completion of the work, one electronic file and four half size hard copies of record drawings of the work as generally constructed, using information supplied by the contractor and onsite inspection personnel.
- 4.12 Field Safety Instructions. Prepare a set of project instructions and field safety instructions providing directions for the services to be provided for ENGINEER's staff assigned to assist with project execution. These instructions are primarily required for the internal management of the project but will be submitted to the CITY for review and input.

**Deliverables:** Record drawings, Meeting minutes, Preconstruction meeting minutes, and shop drawing approvals.

#### **Task 5 – Process Computer Control System Programming and Integration**

**Objective:** Provide Process Computer Programming tasks of the existing TI PLC and FactoryLink HMI application programs. Programming tasks shall include logic and graphical interface screens for monitoring and control of the composting system process designed under this project.

#### **Subtasks:**

- 5.1 Gather all data pertinent to the upgrade of the existing application programs and the composting system, including existing programs and information regarding additions, modifications or deletions to the originally installed process computer system.
- 5.2 Develop and provide for CITY staff review, Process Control Narratives based on the design documents and intended operation of the composting system processes.
- 5.3 Conduct a workshop with CITY staff and ENGINEER's programming staff to review and update the Process Control Narratives providing a document that establishes the requirements for the programming tasks.
- 5.4 Based on the contract documents for construction and approved Process Control Narratives, develop TI PLC application program modifications to the existing application programs to include the processes for the PROJECT and interface with the FactoryLink HMI application program.
- 5.5 Based on the contract documents for construction and approved Process Control Narratives, develop FactoryLink HMI application program modifications to the existing application programs including:
- 5.6 Install and connect communication components in the Main Control Room of the WWTP.

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- 5.7 Interface with the CONTRACTOR to establish the required communications network modifications per the contract documents for construction. Interface with CITY staff and provide guidance in the purchase requirements of required Owner-furnished hardware.
  - 5.8 Assist the CONTRACTOR in the startup of the composting system with regard to the application programs functionality as defined in the contract documents for construction and the Process Control Narratives.
  - 5.9 This task will be completed by DH Automation a subcontractor to the Engineer.

**Deliverables:** Applications programs for the completed TI PLC and FactoryLink HMI modified software.

### **Task 6 – Project Management**

**Objective:** Keep the CITY informed on the progress of the PROJECT. Provide project management and administrative activities to support the technical work performed.

#### **Subtasks:**

- 6.1 Project Instructions. Prepare a set of project instructions providing directions for the services to be provided for all principal personnel and staff assigned to assist with project execution. A general description of the work, the anticipated schedule, the ENGINEER's opinion of construction cost, communication between the CITY and ENGINEER, and other background data and project execution procedures will be discussed. These instructions will be submitted for informational purposes to the CITY. Project instructions will be prepared at both the start of design and the start of construction.
- 6.2 Provide project set-up, invoice preparation, ongoing project cost control, staff support and coordination services.
- 6.3 Coordination of project activities. ENGINEER will be responsible for coordinating project activities with the CITY, other consultants, and the various agencies.

**Deliverables:** Project instructions and invoices.

### **Basis of Design Scope and Fee Development**

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

1. Fee development was based on the assumptions in this scope of work and on a potential drawing list. This list of drawings is included with this scope of work as Attachment A1.
2. 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 needed by ENGINEER for such access.

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3. As-built drawings, aerial mapping, previous annual reports and plant monitoring data are available and will be provided by the CITY.
  4. The design phase work on this project will last approximately 6 months from authorization to proceed and will be finished during calendar year 2007. The bidding phase work on this project will last a total of 6 weeks and will be completed in calendar year 2007.
  5. The design approach will be based on interactive workshops and informal deliverables, (sketches, a few drawings, catalogue cuts, workshop meeting minutes) as opposed to formal, comprehensive documentation such as technical memoranda, extensive drawings, or a formal report. A maximum of four workshops are anticipated, including the project kickoff, and at the conclusion of schematic design, 60 percent design development and 95 percent contract document preparation.
  6. With the exception of the final review, the project team will not stop work during formal review of submittals.
  7. The design will be based on the federal, state, and local codes and standards in effect at the start of the project. Changes in these codes may necessitate a change in scope.
  8. The design documents will be prepared for a single construction contract with a fixed price.
  9. ENGINEER's master specifications will be used as the basis for all specifications, including ENGINEER's Division 0 and Division 1 documents. The drawings will follow ENGINEER's CAD standards. Microstation™ will be used to develop the drawings. The drawings will be converted to AutoCAD™ and delivered in electronic form to the CITY at the end of the bid process.
  10. Any investigation and remediation of possible hazardous waste, asbestos, lead paint or other types of contamination will be conducted as a separate contract.
  11. Site drawings will only be prepared for those sectors in the plant where new facilities are to be constructed. The only roadway work required is in the immediate area of the new facilities.
  12. Design concerning "plant-wide" utility systems such as basin drainage, water, and in-plant waste collection/disposal will be limited to extensions and/or changes in existing piping.
  13. A total of two (2) additional site visits by the project manager or project engineer have been included for support, coordination and project management purposes during the design phase.
  14. Charges collected from potential bidders requesting contract documents will be the property of the CITY and will not be payable to ENGINEER.
  15. The SDC phase of the sludge PROJECT will last 7 months from authorization to proceed and will be finished during calendar year 2007.



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16. Any investigation and remediation of possible hazardous waste, asbestos, lead paint or other types of contamination will be conducted as a separate contract.
  17. SDC for the composting system PROJECT is based upon 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.
  18. SDC are based upon 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 will require adjustments.
  19. 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.
  20. The construction documents will require the construction contractors to employ independent firms for material testing, specialty inspection, surveys, or other services related to verifying the quality and quantity of the contractor's 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.
  21. 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.
  22. Itemized items (for composting system PROJECT):
    - Up to 60 original submittals and 30 re-submittals will be reviewed. This includes shop drawings, O&M submittals and samples. Submittal reviews will require 4.7 hours of review time on average. This will consist of 3.8 hours of project engineer time and 0.9 hours of administrative time for documentation, management and handling.
    - Up to 8 construction schedules and updates will be reviewed. This will consist of 3 hours of engineer time for review of each schedule.
    - Up to 35 requests for interpretation/clarification will be reviewed and responses provided. An average of 2 hours of project engineer time will be required for each.
    - Up to 4 change orders will be prepared. It is assumed that change orders will amount to a value no more than 3 percent of the original bid amount.
    - Up to 8 monthly pay requests and one final pay request will be reviewed. This will consist of 3 hours of project engineer's time for review.

## **Scope of Work – Sheet Count**

<b>No.</b>	<b>Sheet Type</b>	<b>Sheet Description</b>
1	G	Title, drawing index and location plan
2	G	Abbreviations, notes and legends
3	G	Structural and Mechanical Legend & Notes
4	G	Electrical Legend & Notes
5	G	I&C legend and Notes
6	C	Civil Site Plan (overall)
7	C	Civil Site Grading
8	C	Civil Site Utilities
9	C	Civil Plan and Profile
10	E	Electrical Site Plan
11	S	Overall Structural Plan
12	S	Compost Sections and Details
13	S	Biofilter Sections and Details
14	S	Foundation Plan of Electrical Building
15	S	Electrical Building plan and sections
16	S	Electrical Building wall sections
17	S	Structural Details
18	S	Structural Details
19	M	Blower Piping Plan (overall)
20	M	Blower Piping Sections
21	M	Blower Piping (3-D)
22	M	Blower Piping Details
23	I	Compost and Biofilter P&ID
24	E	Electrical Process Plan
25	E	Electrical One-Line Diagram
26	E	Electrical Equipment Control Schematics
27	SD	Standard Details
28	SD	Standard Details
29	SD	Standard Details
30	SD	Standard Details

## ATTACHMENT B - COMPENSATION

### ARTICLE 2. COMPENSATION

Compensation by OWNER to ENGINEER will be as follows:

#### A. COST REIMBURSABLE-MULTIPLIER (TIME AND EXPENSE)

For services enumerated in ARTICLE 1, ENGINEER's actual cost will be computed by multiplying Direct Salaries by Salary Costs and by a factor of 2.0667, and adding Direct Expenses, and adding a service charge of zero percent for Direct Expenses and zero percent of subcontracts and outside services, plus applicable sales, use, value added, business transfer, gross receipts, or other similar taxes.

#### B. MAXIMUM BUDGET

A budgetary maximum amount of three hundred ninety nine thousand, two hundred Dollars (\$ 399,200.00 USD), excluding taxes, is hereby established for services in ARTICLE 1. ENGINEER will make reasonable efforts to complete the work within the budget and will keep OWNER informed of progress toward that end so that the budget or work effort can be adjusted if found necessary.

ENGINEER is not obligated to incur costs beyond the indicated budgets, as may be adjusted, nor is OWNER obligated to pay ENGINEER beyond these limits.

When any budget has been increased, ENGINEER's excess costs expended prior to such increase will be allowable to the same extent as if such costs had been incurred after the approved increase.

This maximum budget can only be exceeded if approved by the OWNER in writing.

#### C. DIRECT SALARIES

Direct Salaries are the amount of wages or salaries paid ENGINEER's employees for work directly performed on the PROJECT, exclusive of all payroll-related taxes, payments, premiums, and benefits.

#### D. SALARY COSTS

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

#### E. 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, 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, and certain field equipment; and (3) ENGINEER's standard project charges for computing systems (\$1.85 per hour for all personnel), and special health and safety requirements of OSHA (\$1.75 per hour, if an employee is trained in health and safety).

R E S O L U T I O N 2006-330

WHEREAS, on August 29, 2006, the Waste Water Treatment Plant (WWTP) Facility Plan Update presentation was conducted to Council; and

WHEREAS, on August 29, 2006, the City of Grand Island Administration directed to proceed with proposals for consulting engineering services for a scaled composting facility at the WWTP; and

WHEREAS, on September 27, 2006, an invitation for request for proposals was advertised in the Grand Island Independent as on file with the Public Works Department; and

WHEREAS, on October 12, 2006, proposals were received and one engineering firm, CH2M Hill of Englewood, Colorado, responded to the request for proposals; and

WHEREAS, a maximum cost and an agreement of understanding has been negotiated with CH2M Hill of Englewood, Colorado for final design services, bidding services, programming and services during construction; and

WHEREAS, work will be performed at actual costs with a maximum budgetary amount for all services of \$399,200.00; and

WHEREAS, such contract is reasonable and acceptable.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the Mayor be, and hereby is, authorized and directed to sign the agreement for final design services, bidding services, programming and services during construction for Composting System Improvements with the engineering firm of CH2M Hill of Englewood, Colorado at the Grand Island Waste Water Treatment Plant of Grand Island, Nebraska.

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Adopted by the City Council of the City of Grand Island, Nebraska, November 14, 2006.

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Jay Vavricek, Mayor

Attest:

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RaNae Edwards, City Clerk