



City of Grand Island

Tuesday, January 8, 2019

Council Session

Item G-27

#2019-23 - Approving Amendment No. 3 with HDR Engineering, Inc. for Engineering Services Related to Cell 3 Liner Construction at the Grand Island Regional Landfill

Staff Contact: John Collins, P.E. - Public Works Director

Council Agenda Memo

From: Jeff Wattier, Solid Waste Superintendent

Meeting: January 8, 2019

Subject: Approving Amendment No. 3 with HDR Engineering, Inc. for Engineering Services Related to Cell 3 Liner Construction at the Grand Island Regional Landfill

Presenter(s): John Collins PE, Public Works Director

Background

The Grand Island Landfill Phase I development is comprised of four cells (Cells 1, 2, 3, and 4) of lateral expansion that are located within a 52 acre landfill footprint. Cell 1 was constructed in 1993 and Cell 2 was constructed in 1998. Landfilling will continue in Cells 1 and 2 until intermediate and final grades are achieved. Cell 3 will need to be constructed within the next year, and the project will be paid from our restricted fund account. Cell 4 will be constructed when filling in Cell 3 nears completion or as facility operations warrant.

On January 24, 2017, via Resolution No. 2017-12, City Council approved an agreement between the City and HDR Engineering, Inc. of Omaha, Nebraska for engineering services related to Cell 3 Liner Construction at the Grand Island Regional Landfill, in the amount of \$126,570.00.

On June 13, 2017, via Resolution No. 2017-168, City Council approved Amendment No. 1 to the original agreement to add the design and specifications for a new leachate control room, while removing the optional permit modification provided for in the original scope. Amendment No. 1 resulted in an agreement decrease of \$17,160.00, for a revised agreement amount of \$109,410.00.

On November 14, 2017, via Resolution No. 2017-325, City Council approved Amendment No. 2 to the original agreement to add construction phase services, which consisted of onsite observation and testing during the construction of Cell 3 Liner and Leachate System. Amendment No. 2 resulted in an agreement increase of \$230,500.00, for a revised agreement amount of \$339,910.00.

Discussion

Due to construction delays it is now requested to add additional construction observation services to the original agreement with HDR Engineering, Inc., in the amount of \$81,690.00, for a revised agreement total of \$421,600.00. Liquidated damages will be applied against the contractor for the completion delay, which will help offset the cost of this amendment.

Summary of Amendment No. 3-

Original Agreement =	\$126,570.00
Amendment No. 1 =	(\$17,160.00)
Amendment No. 2 =	\$230,500.00
<u>Add Construction Phase Services =</u>	<u>\$ 81,690.00</u>
Revised Agreement =	\$421,600.00

Alternatives

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

1. Move to approve
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 Amendment No. 3 to the agreement with HDR Engineering, Inc. of Omaha, Nebraska, for a revised agreement amount of \$421,600.00.

Sample Motion

Move to approve the resolution.

AMENDMENT NO. 3
Exhibit A
Scope of Services
Grand Island Regional Landfill
Cell 3 Liner Design & Construction Phase Services

Amendment No. 3 to Agreement, City Purchase Order #33617-00

This Amendment No. 3 includes service provided during construction period services that exceeded those included in the scope of work agreed to in Amendment No. 2. The services described in this Amendment have already been completed and represents the final work required to complete the Cell 3 Liner Design & Construction Phase Services project.

Task 5 – Basic Construction Phase Services

Objective:

The key objective is to document that the intent of the design and contract documents are realized with the desired quality and the agreed upon price for the Cell 3 liner and to obtain the quality assurance documentation necessary for the NDEQ to approve the construction.

HDR Activities:

During the construction phase of the project, HDR completed additional work beyond that included in Amendment No. 2 at the direction of the City, as described below:

- Due to the extended construction schedule, HDR facilitated additional progress meetings with City staff, the contractor, and subcontractors during the construction period. Similarly, additional communications occurred over the extended eight weeks of construction.
- HDR was responsible for construction contract administration and documentation, processing of change orders, review of request for substitutions or change proposals, review and maintenance of shop-drawings and review of Contractor-provided “as-recorded” drawings. The fee estimate for Amendment No. 2 assumed that the Contractor would incorporate HDR’s comments during a single review; however, Contractor-provided documents required multiple reviews by HDR due to technical specifications not being accurately reflected in shop-drawings and other “as-recorded” drawings. In total, there were 32 submittal reviews that were after the 2nd submission. Of these 32 shop-drawing submittals, 5 required four reviews, 2 required five reviews and another 2 required six reviews. Contractually, it is the responsibility for the Contractor to be responsible for these reviews. HDR also prepared, processed, and recommended payment requests and change orders. Due to the extended construction schedule, additional payment requests (including multiple reviews and calls with Contractor) and change orders were incurred over the additional eight weeks.
- HDR also provided interpretation and consulting on design modifications. The installation of the wrong transformer (due to the Contractor) resulted in a re-design of the electrical sheets which were issued on 5/17/2018. This process was encapsulated in an overall deduct from the Van Kirk contract of \$998.02 as outlined in CPR No. 3.
- HDR provided additional staff (i.e. Lori Calub) to participate in a site visit on August 2, 2018 with the Nebraska Department of Environmental Quality (NDEQ) and be available to answer questions. With HDR’s and Ms. Calub’s long-standing relationship with NDEQ, this interaction was beneficial

for the project and the eventual prompt review and approval of the CQA Report by NDEQ which allowed the City to start placing waste in Cell 3.

- Additional project management activities, such as resource coordination, quality assurance, and accounting, occurred throughout the additional eight weeks of construction.

Meetings:

Additional meetings beyond those specified in Amendment No. 2 and included in this Amendment No. 3 fee: one (1) additional progress meeting and one (1) construction site meeting with NDEQ.

Deliverables:

- Agenda and meeting notes of the additional progress meetings
- Copies of additional completed pay requests for processing by the City
- Copies of multiple reviews of shop drawings and contractor submittals

Key Understandings:

- The number of major meetings and quality control/quality assurance documentation and processing was based on an assumed construction duration of four months; however, the actual construction duration lasted six months.

Task 6 – Resident Construction Observation and Testing Services

Objective:

The key objective is to provide a competent and experienced full-time resident project representative to document that the intent of the design and contract documents for the lateral expansion are realized with the desired quality and the agreed upon price.

HDR Activities:

During the construction phase of the project, HDR completed additional work beyond that included in Amendment No. 2 at the direction of the City, as described below:

- HDR provided full-time construction observation person (resident project representative) during the liner construction period. These services were originally scheduled to occur for a duration of 20 weeks between March 15, 2018 and August 10, 2018. Due to changes in the duration of the construction schedule, HDR's resident project representative was onsite for an additional eight weeks. During this time, HDR's resident project representative completed the following activities:
 - Preparation of daily and weekly observation reports
 - Review of site conditions and document ongoing activities and corrective actions
 - Assist in issuing field orders and change proposal requests
 - Attend and participate in progress meetings
 - Observe site work and earthwork construction
 - Review stored materials for proper storage and payment
 - Coordinate with testing firm for QA testing
 - Verify material quantities associated with contractor's invoices
 - Maintain progressive punch list
 - Review and document schedule status
 - Review of surveys provided by Contractor

HDR's resident project representative also prepared written summaries of construction quality control and quality assurance documentation provided during the extended period of service.

- HDR subcontracted with Benesch to provide testing services and periodic construction observation. Benesch completed additional work that exceeded the scope of services to be performed and defined in Amendment No. 2, as described below:
 - The CQA testing of the recompacted clay liner (RCL) had 79 failed field tests out of a total of 584 tests for soil density and moisture (nuclear gauge testing). This required Benesch to return to the site for the retests after the Contractor had re-worked each area and re-compacted the soil. Contractually, it is the responsibility for the Contractor to be responsible for these retests.
 - The Contractor's placement of RCL in smaller areas and requesting field testing almost every day resulted in significant additional field person hours over budget. A portion of the trips and hours went to the retests as noted above.
 - Laboratory tests including: 8 sieve analysis (< 3000 gr.), 1 sieve analysis (> 3000 gr.), 1 additional plasticity index (Atterberg), 2 additional sand content (+#200), 4 additional flex-wall permeability tests, 8 additional soil moisture content determinations, and 2 less tube moisture/density tests.
 - Additional field and lab management activities and data compilation required by additional testing.

Meetings:

HDR's resident project representative attended additional onsite meetings during the additional eight weeks of construction and these are included in the estimate of his additional time onsite.

Deliverables:

- Over the additional eight weeks:
 - Daily field reports and documentation
 - Photographic documentation
- Coordination and maintenance of field test reports, including retests required on failed tests
- Coordination and maintenance of lab test reports

Key Understandings:

- The construction observation was based on an assumed construction duration of twenty weeks at 60 hours per week; however, the actual construction duration lasted six months.
- The field testing services provided by HDR's subcontractor Benesch was also based on an assumed construction duration of twenty weeks with a total of 200 field person hours, excluding the test pad construction.

Schedule

The services described above were completed during the construction phase of the project. HDR assumed that full-time observation would occur for 20 weeks; however, full-time observation was required from March 19, 2018 through September 26, 2018. Substantial completion for the Contractor was originally assumed to be August 10, 2018 with Final Completion by October 31, 2018. However, the project actually required almost eight additional weeks of liner construction, with substantial completion for the Contractor occurring September 25, 2018 (last day of contractual liquidated damages), with Final Completion occurring on November 8, 2018.

Compensation

The following table was developed to show the adjustment in fee as a result of the changes to the scope of services as described in this Amendment No. 3.

- The incurred fee for the additional services provided under Tasks 5 and 6 is Eighty-One Thousand Six Hundred Ninety dollars (\$81,690.00).

Upon execution of this Amendment, HDR will issue final invoices as defined in the Agreement between the City and HDR.

Original Contract Fee	\$126,570
Amended Contract Fee (Amendment No. 1)	\$109,410
Amended Contract Fee (Amendment No. 2)	\$339,910
Amendment No. 3:	
Task 5 – Basic Construction Phase Services	\$18,999
Task 6 – Resident Construction Observation and Testing Services	\$62,691
Amendment No. 3 Fee Adjustment	\$81,690
Amended Total Contract Fee	\$421,600

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the _____ day of _____ 2018.

CITY OF GRAND ISLAND, NE

"OWNER"

BY:

NAME:

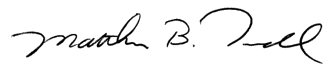
TITLE:

ADDRESS:

HDR ENGINEERING, INC.

"ENGINEER"

BY:



NAME:

Matthew B. Tondl

TITLE:

Senior Vice President

ADDRESS:

8404 Indian Hills Drive

Omaha, NE 68114

RESOLUTION 2019-23

WHEREAS, on January 24, 2017, via Resolution No. 2017-12, City Council approved an agreement between the City of Grand Island and HDR Engineering, Inc. of Omaha, Nebraska for engineering services related to Cell 3 Liner Construction at the Grand Island Regional Landfill, in the amount of \$126,570.00; and

WHEREAS, on June 13, 2017, via Resolution No. 2017-168, City Council approved Amendment No. 1 to the original agreement resulting in an agreement decrease of \$17,160.00, for a revised agreement amount of \$109,410.00; and

WHEREAS, on November 14, 2017, via Resolution No. 2017-325, City Council approved Amendment No. 2 in the amount of \$230,500.00, resulting in a revised agreement amount of \$339,910.00; and

WHEREAS, due to construction delays it is now necessary to add construction phase services, which will be offset by the liquidated damages applied against the contractor; and

WHEREAS, such modifications to the original agreement are detailed in Amendment No. 3 and result in an agreement increase of \$81,690.00, for a revised agreement amount of \$421,600.00.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that Amendment No. 3 to the Engineering Services Agreement between the City of Grand Island and HDR Engineering, Inc. of Omaha, Nebraska for engineering services related to Cell 3 Liner Construction at the Grand Island Regional Landfill, in the amount of \$81,690.00, is hereby approved for a revised agreement amount of \$421,600.00.

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

- - -

Adopted by the City Council of the City of Grand Island, Nebraska, January 8, 2019.

Roger G. Steele, Mayor

Attest:

RaNae Edwards, City Clerk

Approved as to Form	☐ _____
January 4, 2019	☐ City Attorney