AMENDMENT NO. 1 TO AGREEMENT

Project:  Miscellaneous Improvements Projects, Project Number: 19–2540, CIP No. 51132

Background Data:  Effective Date of Agreement:  July 20, 2020
Owner:  City of Rapid City
Engineer:  HDR Engineering, Inc.

Nature of Amendment:  The City of Rapid City (City) had previously determined the need to procure professional engineering services for the design of various capital improvement projects at various locations throughout the City for the Water, Water Reclamation, and Solid Waste Divisions.

As the design progressed the City determined the need to have the Consultant complete additional tasks for the benefit of the project(s).  Refer to Amendment #1 – Exhibit A for a detailed explanation of the additional task components.

Current Contract Amount:  $568,429.00
Change Requested:  $76,829.00
New Contract Amount:  $645,258.00

Owner and Engineer hereby agree to modify the above referenced Agreement as set forth in this Amendment including Exhibits A and B.  All provisions of the Agreement not modified by this or previous Amendments remain in effect.  The overall project completion date will be June 25, 2021.  The effective date of this Amendment is:  September 7, 2020.

CITY OF RAPID CITY

By:  __________________________
     Mayor, Steve Allender

Date Signed:  ________________

ENGINEER:

By:  __________________________
     HDR Engineering, Inc., Jason Kjenstad

Date Signed:  ________________

ATTEST:

By:  __________________________
     Finance Officer, Pauline Sumption

Date Signed:  ________________

REVIEWED BY:

______________________________
Stacey Titus, Operations Project Manager

Page 1 of 1
AMENDMENT #1 - EXHIBIT A
SCOPE OF ENGINEERING PROFESSIONAL SERVICES FOR
MISCELLANEOUS IMPROVEMENTS PROJECTS
PROJECT NO. 19-2540 / CIP 51132

GENERAL

HDR was selected by the City of Rapid City to provide engineering services for the Miscellaneous Improvements Projects. The work consists of various capital improvement projects at the City’s Water, Water Reclamation, and Solid Waste Divisions. HDR is completing the work with FMG Engineering as a subconsultant.

SCOPE OF SERVICES

Additional engineering services to be provide are listed under each of the following project components.

Water Reclamation Division Projects:

WR-2, Digester Facility Gas Piping and Digester Boilers Replacement

- Task 2 – Final Design (Bid Package #3, Final Design, Modify Sub Tasks 2.1-2.9)
  - Prepare an equipment procurement bid package to allow the City to pre-purchase two new digester boilers. The Consultant shall prepare procurement documents for City advertisement and bid letting. Additional tasks include:
    - Coordination with City staff regarding equipment procurement general conditions. City standard front-end documents will be edited for equipment procurement in coordination with the City legal staff.
    - Coordination of procurement contract requirements with the installation contract requirements.
  - Prepare construction documents for a stand-alone digester boiler replacement project. One additional construction bid package will be prepared.
    - Provide additional effort to develop design drawings, specifications, and cost estimates.
    - Provide additional design review submittals and respond to City comments.
    - Provide a final, sealed, issued for bid procurement package for City advertising and bidding.
• Task 3 – Bidding Services (Boiler Procurement, Bidding Services, Add Tasks 3.1-3.6)
  - Provide bidding phase services for digester boiler pre-purchase (stand-alone bid). Bidding phase tasks include:
    - Submit information for City advertising authority
    - Submit final procurement documents for City production and distribution
    - Respond to bidder questions and issue clarifications
    - Issue addenda to bid documents
    - Review bid tab and provide award recommendation

  - Basis for amendment:
    - The original intent was to replace the digester boilers as part of bid package #3. However, since the project began the existing boiler condition has deteriorated. One boiler is inoperable, and the other's condition is near failure. The digestion process requires a heat source and the delivery time for a new boiler is four months after approval of equipment submittals. In order to potentially avoid or limit rental boiler costs, new boilers will be pre-purchased and installed by a stand-alone project. The existing boilers were determined to be inadequate to be replaced in kind. An evaluation of alternative manufacturers will be conducted.

WR-8, Main Entry Gate and Fence Realignment Project

• Task 2 – Final Design Services (Bid Package #2, Final Design, Add Sub Task 2.10)
  - Gather required petition signatures as necessary for a Pennington County right of way vacation request. (New Sub Task 2.10)

  - Basis for amendment:
    - Pennington County has jurisdiction over a section line located adjacent to the Water Reclamation Facility. Preferred site access improvements require vacation of a section of the right of way. A right of way vacation petition requires approximately 500 signatures, signature collection will be completed by the consultant. Signature collection was originally assumed to be completed by City staff but resulted in only half of the required signatures.
Water Division Projects:

W-2, North Rapid Reservoir Road and Drainage Repair Project

- Task 2 – Final Design Services (Bid Package #1, Final Design, Add Sub Tasks 2.11 and 2.12)
  - Lifecycle Cost Analysis and Feasibility Study (New Sub Task 2.11)
    - Perform a life cycle cost analysis of three surfacing options: gravel, asphalt, and concrete. Prepare preliminary designs for each surfacing option and develop associated life cycle costs.
    - Life cycle costs shall include initial capital costs and anticipated recurring maintenance costs for the three surfacing options. The City will select the preferred surfacing option based on life cycle costs.
    - Conduct a review meeting with City staff and incorporate preferred surfacing material into the final design plans and specifications.
    - Multiple surfacing materials were evaluated, in order for City staff to select the preferred option, a life cycle cost analysis was required.

  - Permanent Fencing and Gate Design (New Sub Task 2.12)
    - The existing site fence was intended to be removed and reset. However, during the design process it was determined the existing alignment was insufficient for parking and access. Additional design effort was required for access geometry revisions, grading analysis, and gate selection.

W-6, Robbinsdale Booster Station Electrical System Upgrades

- Task 1 – Preliminary Design (Bid Package #3, Preliminary Design, Modify Sub Task 1.4)
  - Prepare a background drawing by gathering field measurements and creating a CAD file for the facility. The task is limited to electrical and process items inside the existing facility and does not include a topographic survey of the site.

  - Basis for amendment:
    - As-Constructed drawings were believed to be available to use as background for the work. City staff was not able to obtain as-built drawings and therefore background drawing will need to be developed by the Consultant.
Solid Waste Division Projects:

SW-4, MRF Tip Floor Roof-Top Heat and Air Handling Unit Replacement

- Task 1 – Preliminary Design (Bid Package #3, Preliminary Design, Modify Sub Tasks 1.1, 1.3, 1.5, 1.7, & 1.10)
  - As part of the planned HVAC improvements, the Consultant will evaluate alternatives to the current layout of heating and air handling equipment within the Material Recovery Facility (MRF) building including:
    - Evaluate location of heating equipment. Evaluate unit heaters at worker stations as an alternative to the existing roof top air handler.
    - Evaluate dual source heating equipment to potentially utilize natural gas and biogas as a heat source. The evaluation is limited to identifying dual source heating equipment and excludes an evaluation of the existing biogas system or gas quality.
    - Develop recommendations for HVAC system improvements within the MRF. The current project will replace the failing roof top Air Handler-1 (AH1). Replacement of AH1 will be consistent with the recommendations for overall system improvements.
    - Prepare preliminary level cost estimates for the alternatives evaluated.
    - A special design submittal will be provided in the form of a technical memo summarizing evaluation results and recommended improvements with cost estimates.
    - One information gathering trip by a Senior Mechanical Engineer is included. Other meetings will be conducted virtually.
  - Basis for amendment:
    - As the project progressed, City staff recognized the need for an overall assessment of the facility’s heating and ventilation systems. An evaluation will provide recommended system improvements. Replacement of AH1 will be coordinated with other future anticipated improvements.

SW-6, Construct Concrete Pavement at Main Scale House and Remote Scale

- Task 2 – Final Design (Bid Package #1, Final Design, Add Sub Tasks 2.13-2.17)
  - Develop requirements for a contractor provided temporary scale house. The commercial scale will be temporarily utilized for daily operations due to impacts caused by construction at the main scale facility. A temporary scale house is required for a scale attendant and to house scale and payment processing equipment. New sub task 2.13 includes:
- Development of plan notes/specifications for a temporary, mobile style scale house
- Coordination of required temporary power and communication utilities
- Coordination with City Information Technology staff to integrate new or relocated equipment into existing City systems
- A temporary scale house was determined to be required by the City after the extents of pavement disruption were expanded. The main scale house functionality will be limited, the commercial scale will be utilized for all customers and a temporary scale house will provide a space for IT and scale equipment and for the scale attendant.
  o Evaluate traffic movements and alignments at the landfill main entrance and commercial scale. (New Sub Task 2.14)
    - Analysis shall be utilized to set curb lines and road widths to accommodate equipment delivery traffic movements.
    - Evaluate future roadway alignments and develop typical sections and lane configurations than can be utilized for future extension projects.
    - Evaluate and develop permanent signage and striping plan for landfill entrance and scale areas.
    - Pavement replacement was assumed to be in kind, evaluation of turning movements and revisions to roadway geometry and grading will be completed by the consultant.
  o Evaluate existing signage and prepare new permanent signage and roadway striping design. Evaluation of pedestrian crossings will be completed, and new crosswalks incorporated into design as necessary. No new signage or pavement markings were anticipated during project scoping, however preliminary design determined additional permanent traffic control was necessary. (New sub task 2.15)
  o Assist the City with development of a professional service agreement with the scale vendor (AWS) for hardware and software support required at the temporary scale house. (New Sub Task 2.16)
    - Coordination with the scale equipment vendor (AWS) to assist with procurement or relocation of scale and payment system hardware
  o A concurrent design project identified undersized stormwater piping segments in the project improvements area. Stormwater improvements, consisting of replacement of undersized segments, will be incorporated into the current project. (New Sub Task 2.17)
PROJECT SCHEDULE

The project schedule is revised as noted below. The City Project Manager and Consultant Project Manager, by mutual agreement, may adjust the dates as shown for the benefit of the project(s).

**Bid Package #1:**

Special Design Submittal:
- W-5 Geotechnical Recommendations February 2021
- SW-2 Tip Floor Pavement Options February 2021

Final Design Phase:
- Issued for Bid Submittal: December 30, 2020
- Bid Opening: January 26, 2021

**Bid Package #2:**

Special Design Submittals:
- WR-8 Entry Gate Fencing Memo September 2020

Preliminary Design Phase:
- Workshop Review (50%) February 2021

Final Design Phase:
- Final Design Submittal (100%) March 2021
- Issued for Bid Submittal April 2021
- Bid Opening: May 2021

*Dates may be revised as a result of the pending right of way vacation process.

**Bid Package #3:**

Special Design Submittals:
- WR-1 Digester Gas System Memo January 2020
- WR-3 Screen Bypass Memo January 2020
- SW-4 MRF Tip Floor HVAC Memo February 2021
- SW-10 Stormwater Quality Memo To be determined

Preliminary Design Phase:
- Preliminary Design Submittals March 2021

Final Design Phase:
- Final Design Submittal (100%) April 2021
- Issued for Bid Submittal May 2021
- Bid Opening: June 2021
**Boiler Pre-Purchase:**

<table>
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<tr>
<th>Event</th>
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<tr>
<td>Preliminary Specification Submittal</td>
<td>September 23, 2020</td>
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<tr>
<td>100% Review Submittal</td>
<td>October 9, 2020</td>
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<td>Issued for Bid Submittal</td>
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<td>Bid Opening</td>
<td>November 10, 2020</td>
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**Construction Package #4 (WR-2 Boiler Replacement):**

**Preliminary Design Phase:**
- Preliminary Design Submittals: January 2021

**Final Design Phase:**
- Final Design Submittal (100%): March 2021
- Issued for Bid Submittal: April 2021
- Bid Opening: May 2021
## Amendment #1 - Exhibit B

**City of Rapid City, Operations Miscellaneous Improvements Projects**

**Preliminary and Final Design Phase Engineering Services**

**HDR Engineering, Inc.**

December 17, 2020

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<tr>
<th>Labor</th>
<th>TOTAL HOURS</th>
<th>TOTAL LABOR ($)</th>
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<tr>
<td>Sub Consultant</td>
<td>EXPENSES</td>
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### Task 2: Final Design Services (Boiler Procurement and Install)

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<td>2.6 - Final Design Submittal</td>
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<td>2.7 - Attend Final Design Review Meeting with City Staff</td>
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<td>2.8 - Address Final Submittal City Staff Comments</td>
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<td>2.9 - Issued for Bid Submittal</td>
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**Total 2 Hours**: 105

### Task 3: Bid Services (Boiler Procurement Only)

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<td>3.2 - Final Procurement Documents for City Production and Advertising</td>
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<td>3.3 - Respond to Bid Questions/Issue Clarifications</td>
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<td>3.4 - Issue Addenda to Bid Documents (as needed)</td>
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<td>3.5 - Review Bid Tab and Provide Award Recommendation</td>
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<td>3.6 - Review Equipment Submittal</td>
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**Total 3 Hours**: 32

### Task 2: Final Design Services (Boiler Procurement Only)

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**Total 2 Task 2 & 3 Total Hours**: 137

**WR-2 Task 2 & 3 Total Fee**: $22,775

### Task 2: Final Design Services (North Rapid Reservoir and Drainage Repair Project)

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<td>2.11 - Lifecycle Cost Analysis and Feasibility Design</td>
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<td>2.12 - Permanent Fencing and Gate System Design</td>
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**Total Task 1 Hours**: 7

**W-2 Task 1 Total Fee**: $9,792

### Task 1: Preliminary Design Services (Robbinsdale Boxer Station Electrical System Upgrades)

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<td>1.4 - Site Surveys</td>
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**Total Task 1 Hours**: 22

**W-6 Task 1 Total Fee**: $2,990

### Task 1: Preliminary Design Services (MRF Tip Floor Roof Top Heat and Air Handling Unit Replacement)

<table>
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<th>Description</th>
<th>TOTAL HOURS</th>
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<tbody>
<tr>
<td>1.1 - Project Management &amp; Administration</td>
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<td>1.3 - Compile &amp; Review Background Information</td>
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<td>1.5 - Special Design Submittal</td>
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<td>1.7 - Opinions of Probable Construction Costs</td>
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<td>1.10 - Attend Submittal Review Meeting with City Staff</td>
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**Total Task 1 Hours**: 107

**SW-4 Task 1 Total Fee**: $18,900

### Task 2: Final Design Services (Concrete Pavement at Main Scale House and Remote Scale)

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<td>2.13 - Remote Scale Attendant Trailer Design and Specifications</td>
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<td>2.14 - Vehicle Flow Analysis and Typical Section Development</td>
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<td>2.15 - Permanent Signage and Striping Design</td>
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<td>2.16 - City Contract Assistance and Subcontractor Coordination</td>
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<td>2.17 - Additional Stormwater Piping Design</td>
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**Total Task 2 Hours**: 18

**SW-6 Task 2 Total Fee**: $17,842

### Summary

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**NOTE**: Costs have been assigned to tasks, the Consultant may reallocate costs amongst the various tasks, within and limited to the not to exceed fee amount listed on Exhibit B.