



Public Works Service Operations

DATE: April 23, 2024

FROM: Steven Salwei, Director Public Works Services

ITEM: New Scale House - Conceptual Design Scope and Fee

REQUEST:

Approve contract with HDR Engineering for the new Scale House Conceptual Design Scope and Fees.

BACKGROUND INFORMATION:

On February 13, 2024, the City Commission approved the extension of the Master Short Form Agreement to February 16, 2026, with HDR Engineering, Inc. for Solid Waste Collections and Landfill Operations.

Public Works Service Operations has requested HDR Engineering to assist in the identification, evaluation and eventual development of a new scale house and scales at the entrance of the existing landfill. The Scope of Services has been established by the Task Series, as follows:

- Task 100 – Project Kickoff and Programming Workshop
- Task 200 – Data Gathering and Information Review
- Task 300 – Conceptual Design and Site Layout

The goal and objectives established for the scale house will include ancillary features such as scales, access roads, and incorporation with existing site operations. The estimated fee for tasks 100, 200, and 300 is \$47,570.

RECOMMENDED CITY COMMISSION ACTION:

Approve the contract for the new Scale House Conceptual Design Scope and Fees with HDR Engineering.

STAFF CONTACT INFORMATION:

Steven Salwei, Director Public Works Services, 701-355-1705, ssalwei@bismarcknd.gov

ATTACHMENTS:

1. Scale House Scope Fee - HDR Transmittal
2. Scale House and Scales - Conceptual Design
3. 2024 HDR Engineering Rate Sheet
4. Scale House and Scales - Fee Development Conceptual Design

Transmittal

Date: Tuesday, February 13, 2024

Project: City of Bismarck Solid Waste

To: Steve Salwei, PW Director of Service Operations, City of Bismarck

From: Dennis Reep, HDR Engineering
Karli Frohling, HDR Engineering

Subject: Scale House Design and Construction Administration – Scope and Fee Estimate

We are sending you:

<input checked="" type="checkbox"/> Attached	<input type="checkbox"/> Under separate cover via the following items:	
<input type="checkbox"/> Shop drawings	<input type="checkbox"/> Prints	<input type="checkbox"/> Plans
<input type="checkbox"/> Samples	<input type="checkbox"/> Specifications	<input type="checkbox"/> Copy of letter
<input type="checkbox"/> Change Order	<input type="checkbox"/> Other: Enter Other Item	

Copies	Date	No.	Description
1	2/13/2024	1	Scope Document
1	2/13/2024	2	Fee Document
1	2/13/2024	3	Rate Sheet

These are transmitted as checked below:

<input type="checkbox"/> For your approval	<input type="checkbox"/> Approved as submitted	<input type="checkbox"/> Resubmit
<input type="checkbox"/> For your use	<input type="checkbox"/> Approved as noted	<input type="checkbox"/> Submit
<input checked="" type="checkbox"/> As requested	<input type="checkbox"/> Returned for corrections	<input type="checkbox"/> Return
<input checked="" type="checkbox"/> For review/comment	<input type="checkbox"/> Other: Enter Other Item	
<input type="checkbox"/> For bids due		<input type="checkbox"/> Prints returned after loan to us

Remarks: As discussed on Feb 2, 2024

Copy to:

Signed: 
Dennis Reep

Engineering Scope of Services for the City of Bismarck, North Dakota Solid Waste Scale House and Scales

February 13, 2024

Project Description

The purpose of this scope is to describe the objectives, activities, deliverables, key assumptions, and approach that the ENGINEER will utilize in carrying out the services requested by the OWNER for the identification, evaluation and eventual development of a new scale house and scales at the entrance of the existing landfill.

The OWNER has requested assistance in the development of a new scale house, scales, and access roads for traffic routing and queuing at the existing landfill to replace the existing scale house. The new scale house and scales will be located on the west side of the existing landfill and within a few hundred feet of the existing scale house. The Scope of Services has been established by Task Series, which are as follows:

Task 100 – Project Kickoff and Programming Workshop

Task 200 – Data Gathering and Information Review

Task 300 – Conceptual Design and Site Layout

TASK 100 – PROJECT KICKOFF AND PROGRAMMING WORKSHOP

OBJECTIVE

The objective of this task is to establish project communication protocols, discuss project goals, schedules, project constraints, and other key discussion points. The workshop will focus on confirming the programming requirements and OWNER needs for the proposed scale house to provide the team with an understanding of the drivers, issues, space needs, and goals to be considered. The existing design of a scale house (designed for Larimer County, Colorado) shared by ENGINEER during scoping meeting will serve as the basis of the programming.

ENGINEER ACTIVITIES

- ENGINEER will participate in a kickoff meeting at the OWNER's office, or virtually as appropriate to discuss project logistics and initial project data with OWNER staff. The kickoff meeting will be held within three (3) weeks of receiving notice to proceed. The meeting will cover technical and administrative project issues with key team members. The project kickoff portion of the meeting will include:
 - Goal and objective establishment for the scale house including ancillary features such as scales, access roads, and incorporation with existing site operations.
 - Identification of existing permits and data relevant to the project area.
 - Additional discussion elements will include review of:

- Customer traffic and vehicle types
 - Operational and spatial needs
 - Regulatory requirements
 - Sustainability goals
 - OWNER standards
 - Communications and security needs
 - Signage
 - Utilities
- Prior to the meeting, ENGINEER will submit an agenda for review and comment.
 - ENGINEER will prepare meeting notes summarizing the meeting discussion and basis of design elements. ENGINEER will submit draft meeting notes to the OWNER for review and comment prior to finalization.

MEETINGS

- One (1) kickoff meeting at the OWNER's office and/or virtual as appropriate and site visit with up to three (3) ENGINEER project team members.
- One (1) virtual review meeting to discuss draft meeting notes with up to three (3) ENGINEER project team members.

DELIVERABLES

- Draft and final meeting agenda.
- Draft and final electronic versions of meeting notes.

CLARIFICATIONS

- The OWNER will provide recent operational information requested.
- The OWNER to provide the meeting location.
- The kickoff meeting will consist of one (1) half-day at the OWNER's offices followed by a site visit to confirm certain discussion points.
- It is intended to duplicate prior design from example shared by ENGINEER during scoping meeting and confirm the components of that design during programming.

TASK 200 – DATA GATHERING AND INFORMATION REVIEW

OBJECTIVE

The objective of this task is to obtain, gather, and review readily available existing data and information pertaining to utilities, as-builts, site modifications, topographic survey, and geotechnical information for the use in further developing concepts as noted in Task 300.

ENGINEER ACTIVITIES

- ENGINEER will contract with a geotechnical engineering firm to perform geotechnical investigation in the project area. The following geotechnical engineering services are anticipated:
 - Perform site field investigation;
 - Perform the necessary soil borings for new building construction and miscellaneous sitework;
 - Perform laboratory soils testing and analysis; and
 - Determine the characteristics of the subsurface materials.
- The geotechnical engineering firm will prepare a geotechnical report sealed by a registered Professional Engineer containing recommendations of pavement design, foundation design, and related construction recommendations.
- ENGINEER will contract with North Dakota registered land surveyor to conduct a field survey of the project site. The field survey work will consist of approximately two (2) acres to include topographical survey and utility location survey of above ground and below ground utilities within the project site.
- ENGINEER will evaluate and identify available utility services and capacity at the site, including electrical power, water, sewer, telecommunications, and storm water.
- ENGINEER will review data and information collected and identify potential data gaps.

MEETINGS

- No meetings are anticipated for this task.

DELIVERABLES

- Draft and final geotechnical report (electronic, PDF).
- Draft and final survey (electronic, PDF).

CLARIFICATIONS

- Geotechnical exploration will include two to three borings with each being advanced with a truck mounted drill rig using hollow-stem augers and will extend 15 feet deep. Borings will be backfilled with drilling spoils.
- Borings will be logged in general accordance with the Unified Soil Classification System and ASTM D2488 by observing cuttings and split-spoon samples.

- Soil samples will be tested to evaluate the on-site soil's index, strength and chemical characteristics.
- Basis of horizontal control shall be based on North Dakota State Plane Coordinate System South as established by GPS methods. Vertical control shall be based on NAVD88 datum benchmarks in and/or adjacent to project area.
- Survey will not include landscape inventory indicating size and type of vegetation and coordination for any blue staking marking services.
- Geotechnical subcontractor will contact North Dakota One Call (811) to evaluate utility locations prior to performing exploratory borings.
- OWNER to assist in summarizing site modifications not previously documented.
- OWNER to provide record drawings of existing facilities in PDF and/or CAD format at project kickoff.
- A budget of \$10,000 (\$5,000 each) has been allocated for survey and geotechnical investigation. These services will be billed at cost.

TASK 300 – CONCEPTUAL DESIGN AND SITE LAYOUT

OBJECTIVE

The objective of this task is to confirm the scope elements for the proposed scale house and scales. The result would be a conceptual site plan that documents the key criteria that will guide the detailed design of the project and provide the OWNER with an opinion of probable cost for planning and budgeting purposes.

ENGINEER ACTIVITIES

- ENGINEER will determine structural, electrical, water/sewer plumbing, mechanical system, storm water, and physical requirements.
- ENGINEER will develop preliminary building elevations and sections.
- ENGINEER will review regulations and provide a discussion of permitting requirements associated with facility implementation such site plan approval and building codes.
- ENGINEER will prepare a conceptual site plan identifying scale house location, preliminary grading, access roads, inbound and outbound scales, and anticipated utilities locations and tie-ins.
- ENGINEER will prepare an opinion of probable construction cost based on the level of detail of the engineering and design to be completed at this time, a contingency of 25% will be included in the opinions of cost. The cost estimate will be prepared in accordance with American Association of Cost Engineering (AACE) standards.
- ENGINEER will facilitate a virtual conceptual site plan and building elevations review meeting with OWNER staff to discuss the components of the plan and building.
- ENGINEER will address OWNER comments on the conceptual site plan and building elevations and prepare a final conceptual site plan and building elevations.

- ENGINEER will develop up to 3 conceptual level alignments/alternatives for approach roadway to new scale house parallel to N 52nd Street.

MEETINGS

- One (1) virtual review meeting to discuss the draft conceptual site plan with up to three (3) ENGINEER project team members.

DELIVERABLES

- Draft and Final Conceptual Site Plan and Building Elevations.

CLARIFICATIONS

- Unless otherwise noted, all project deliverables will be issued electronically, for both draft and final conceptual site plan and building elevations, in PDF formats.
- Conceptual site plan and building elevations will be utilized to refine design elements and fee estimate including permitting and construction services to be provided as an additional scope and fee.



Cost Estimate

ENGINEER will furnish labor, equipment, and materials as outlined in this proposal to assist the OWNER in accomplishing the scope of work described herein on a time and material basis for an estimated fee of \$47,570. A breakdown of costs is given below:

Cost Summaries	
Tasks	Cost
Task Series 100 - Planning Initiation & Workshop	\$ 4,135
Task Series 200 - Data Gathering & Information Review	\$ 15,310
Task Series 300 - Conceptual Design and Site Layout	\$ 28,125
Task Series 400 - Regulatory Approvals/Permitting	\$ -
Task Series 500 - Design Development	\$ -
Task Series 600 - Construction Administration	\$ -
Task Series 700 - Project Management	\$ -
Total	\$ 47,570

ASSUMPTIONS

- This proposal includes assumptions HDR has made in the preparation of our bid. If our assumptions are not correct, it could result in an adjustment to our proposed fee. In the event we are made aware of a change in scope or if one of our assumptions is not correct, we will engage OWNER to discuss appropriate schedule and/or compensation reimbursement (if appropriate).
- HDR assumes that budgets can be re-allocated between individual tasks as needed depending upon actual incurred cost for each task.
- Design is anticipated to occur in 2024 and construction in 2025.
- HDR will invoice according to our 2024 Rate Sheet.



HDR Engineering 2024 Hourly Billing Rates

Enclosed are the 2024 Hourly Billing Rates for HDR Engineering. These rates shall be adjusted annually.

Description	Billing Rate/Hour
Managing Principal	235
Senior Project Manager	225
Project Manager III	205
Project Manager II	190
Project Manager I	170
Engineer VI	205
Engineer V	190
Engineer IV	170
Engineer III	145
Engineer II	130
Engineer I	120
Senior ASME Engineer	195
ASME Engineer	180
System Integrator Engineer IV	195
System Integrator Engineer III	175
System Integrator Engineer II	155
System Integrator Engineer I	115
Engineering/Field Services Technician V	180
Engineering/Field Services Technician IV	160
Engineering/Field Services Technician III	135
Engineering/Field Services Technician II	115
Engineering/Field Services Technician I	105
Cadd/GIS Technician V	160
Cadd/GIS Technician IV	140
Cadd/GIS Technician III	120
Cadd/GIS Technician II	110
Cadd/GIS Technician I	100
Right of Way IV	190
Right of Way III	175
Right of Way II	155
Right of Way I	120
Right of Way Coordinator	95
Environmental/Hydrologist/Geologist VI	200
Environmental/Hydrologist/Geologist V	180
Environmental/Hydrologist/Geologist IV	160
Environmental/Hydrologist/Geologist III	140
Environmental/Hydrologist/Geologist II	125
Environmental/Hydrologist/Geologist I	110
Senior Land Surveyor	155
Land Surveyor	135
Survey Technician III	125
Survey Technician II	110
Survey Technician I	95



Senior Construction Manager	205
Construction Manager	195
Construction Engineer III	180
Construction Engineer II	160
Construction Engineer I	135
Construction Inspector	105
Strategic Communications/Graphic Designer IV	165
Strategic Communications/Graphic Designer III	145
Strategic Communications/Graphic Designer II	130
Strategic Communications/Graphic Designer I	100
Project Controller	95
Project Assistant	95
Admin Assistant	70

HDR has technical experts in various geographic locations that may be utilized based on specific project need. This specialized expertise will be billed at the below rates.

Description	Billing Rate/Hour
Technical Expert VI	315
Technical Expert V	305
Technical Expert IV	285
Technical Expert III	265
Technical Expert II	245
Technical Expert I	225

REIMBURSABLE EXPENSES

Reimbursable Expense shall mean actual expenses incurred for travel, meals, subconsultants, shipping, and other incurred expense. If negotiated with Owner in the contract, HDR will add an agreed to percentage mark-up to subconsultant invoices to cover administrative expenses and vicarious liability. Specialty equipment charges apply to specific equipment used on the project.

<u>Direct Expenses</u>	
Drone	\$275.00 per day
Traffic Counting Equipment	\$120.00 per hour
Survey/GPS Equipment	\$50.00 per hour
Robotic Total Station	\$50.00 per hour
Side-by-Side Utility Vehicle	\$25.00 per hour
Handheld GPS	\$20.00 per hour
HDR Vehicle Mileage	\$0.75 per mile
Personal Vehicle Mileage	IRS rate per mile
<u>Printing (in-house)</u>	
B&W 8.5x11	\$0.0857 each
Color 8.5x11	\$0.1801 each
B&W 11x17	\$0.1228 each
Color 11x17	\$0.2397 each
Plots Bond	\$0.55 per sq. ft.

