



Public Works Utility Operations Department

DATE: August 16, 2022

FROM: Michelle Klose, Public Works Utility Water Director

ITEM: Approval of Task Order #5 – Hay Creek Lift Station and Forcemain

REQUEST:

Request for approval to accept Task Order #5 to the agreement with Apex Engineering Group for the preliminary and final designs of the new Hay Creek Lift Station and Forcemain.

Please place this item on the August 23, 2022, City Commission meeting agenda.

BACKGROUND INFORMATION:

On March 27, 2018, the City Commission approved a contract to Apex Engineering for professional engineering services for the Hay Creek Sanitary Sewer Project.

Task Order #5 is for engineering services related to the new Hay Creek Lift Station, forcemain and associated gravity sewer extension. The total estimated fee for Task Order #5 is not to exceed \$1,450,100.

RECOMMENDED CITY COMMISSION ACTION:

Approve Task Order 5 to the agreement with Apex Engineering in the amount not to exceed \$1,450,100 for engineering services related to the new Hay Creek Lift Station, forcemain and associated gravity sewer extension.

STAFF CONTACT INFORMATION:

Michelle Klose, PE | Utility Operations Director | 355-1700 | mklose@bismarcknd.gov

**SUGGESTED FORM OF
TASK ORDER**

This is Task Order No. 5,
consisting of 7 pages.

Task Order

In accordance with Paragraph 1.01 of the Agreement Between Owner and Engineer for Professional Services – Task Order Edition, dated March 27th, 2018 ("Agreement"), Owner and Engineer agree as follows:

1. Background Data

- a. Effective Date of Task Order: August 23rd, 2022
- b. Owner: City of Bismarck
- c. Engineer: Apex Engineering Group, Inc.
- d. Specific Project (title): Hay Creek Lift Station and Forcemain
- e. Specific Project (description): Engineering services related to the new Hay Creek Lift Station, forcemain, and associated gravity sewer extension.

2. Services of Engineer

- A. The specific services to be provided or furnished by Engineer under this Task Order are:

Described in Attachment 1 to Task Order 5
- B. All of the services included above comprise Basic Services for purposes of Engineer's compensation under this Task Order.

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 of the Agreement and in Exhibit B, subject to the following: **None**

4. Task Order Schedule

In addition to any schedule provisions provided in Exhibit A or elsewhere, the parties shall meet the following schedule: *As described in Attachment 1 to Task Order 5.*

5. Payments to Engineer

- A. Owner shall pay Engineer for services rendered under this Task Order as follows:
 - a. An amount equal to the cumulative hours charged to the Project by each class of Engineer's personnel times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Equipment Rentals, Reimbursable Expenses and Engineer's Consultants' charges, if any.

- b. The Engineer's Reimbursable Expenses Schedule and Standard Hourly Rates are incorporated into Exhibit C.

Hay Creek Lift Station Improvements	Amount	Basis of Compensation
1. Basic Services (Part 1 of Exhibit A)		
Phase 1, Preliminary Design (30%)	\$590,800	HNTE
Phase 2, Final Design	\$859,300	HNTE
TOTAL COMPENSATION	\$1,450,100	Hourly Not To Exceed (HNTE)

- B. Compensation items and totals based in whole or in part on Hourly Rates or Direct Labor are estimates only. Lump sum amounts and estimated totals included in the breakdown by phases incorporate Engineer's labor, overhead, profit, reimbursable expenses (if any), and Consultants' charges, if any. Engineer may alter the distribution of compensation between individual phases (line items) to be consistent with services actually rendered, but shall not exceed the total compensation amount unless approved in writing by the Owner.
- C. The terms of payment are set forth in Article 4 of the Agreement and in the applicable governing provisions of Exhibit C.

6. Attachments: Attachment 1 to Task Order 5

7. Other Documents Incorporated by Reference: None

8. Terms and Conditions

Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is [August 23rd, 2022].

OWNER:

By: City of Bismarck

Signature: _____

Print Name: Mike T. Schmitz

Title: President of Board of City Commissioners Date

Signed: _____

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

Name: Michelle Klose

Title: Director of Public Works - Utilities

Address: PO Box 5503, Bismarck, ND 58506-5503

E-Mail Address: mklose@bismarcknd.gov

Phone: 701-355-1700

ENGINEER:

By: Apex Engineering Group, Inc.

Signature: *Mike Berg*

Print Name: Mike Berg

Title: Principal

Date Signed: 8/2/22

Engineer License or Firm's Certificate No. (if required): COCP #975
State of: North Dakota

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

Name: Mike Berg, PE

Title: Project Manager

Address: 600 S. 2nd St., Bismarck, ND 58504

E-Mail Address: Mike.Berg@ApexEngGroup.com
Address: _____

Phone: 701-323-3952



Attachment 1 to Task Order 5

Hay Creek Lift Station and Forcemain

City of Bismarck, North Dakota
August 2, 2022

Phase	Description
1	Preliminary Design (30%)
2	Final Design

Project Background

The Hay Creek Lift Station was constructed and placed into service in 1975. Approximately 26% of the total flow of wastewater from the City of Bismarck passes through this station. The primary service area of the Hay Creek Lift Station is the east, northeast, and far north areas of the City of Bismarck. This service area is expected to receive the majority of City development over the next 20 years.

In 2020 the City completed a study of the Hay Creek Lift Station and Interceptor. This study identified the existing condition, capacity and remaining useful life of the existing lift station and force main. This study also forecasted future flows and evaluated alternatives to meet future demands. This study determined that the most cost-effective alternative to serve development in the Hay Creek and Apple Creek sewersheds is to construct a single lift station that can serve both areas. It also recommended pumping around the South 26th St. Lift Station to eliminate the need for future expansions at that facility and to reduce overall pumping costs.

Phase 1 of the Hay Creek Lift Station and Forcemain project will develop 30% plans for the new lift station and approximately 4.7 miles of forcemain and gravity sewer piping. It will also include a preliminary engineering report (PER) that addresses the major design issues and decisions along with updated cost estimates. Phase 2 will develop final plans and specifications and updated cost estimates.

Phase 1 – Preliminary Design (30%)

Objective:

The objective of the preliminary design phase is to identify the basis of design and to resolve all major design decisions.

Activities:

Project Management

Project Management will be ongoing throughout the project. Progress meetings, progress reporting, management of engineers, technicians and subconsultants through all phases of the project, including contract administration and coordination of quality assurance and quality control.

- 1.1 Project Administration
- 1.2 Quality Assurance / Quality Control
- 1.3 Progress Meetings

Preliminary Design (30%)

A Preliminary Engineering Report (PER) will be developed to establish the design concepts and standards. The purpose of the PER is to build consensus regarding the design concepts. The subtasks for this section include the following:

- 2.1 Field Survey
- 2.2 Preliminary Design (30%)
 - Development of the hydraulic design conditions and the pump basis of design
 - Development of floor plans and piping plans
 - Development of odor control options
 - Architectural, mechanical, and electrical basis of design
 - Preliminary site design
 - Preliminary forcemain and gravity sewer design
- 2.3 Permitting and regulatory approvals
- 2.4 Cost Estimates
- 2.5 Preliminary Engineering Report (PER)
- 2.6 Review Meeting and Incorporation of City Comments

Phase 2 – Final Design

Objective:

The objective of the final design phase is to produce final plans and specifications and updated cost estimates for the new lift station, gravity sewer extension, and forcemain.

Activities:

Final Design

This task includes the development of the detailed design of Civil, Architectural, Structural, Mechanical, and Electrical improvements. This task includes the preparation of bidding documents, including plans and specifications. Subtasks for this section include the following:

- 3.1 60% Design
- 3.2 Review Meetings and Incorporate City Comments
- 3.3 Preliminary Opinion of Probable Construction Costs
- 3.4 90% Design
- 3.5 Review Meetings and Incorporate City Comments
- 3.6 Final Opinion of Probable Construction Costs
- 3.7 Specifications
- 3.8 Final Plans

City of Bismarck Responsibilities

- Execute the Apex contract amendment
- Attend Review Meetings
- Review and Comment on Draft Reports and Plans

Apex Responsibilities and Deliverables:

- Communicate with Bismarck on updates, schedule, and assumptions
- Deliver a Preliminary Engineering Report (PER)
- Deliver 60%, 90%, and Final Plans and Specifications
- Conduct review meetings with City staff

Future Tasks

Anticipated additional Hay Creek Lift Station and Forcemain tasks not authorized under this amendment:

- Phase 3, Bidding Services
- Phase 4, Construction Services

Anticipated Project Schedule:

Task/Schedule

- Contract Amendment Approval
- Draft Preliminary Engineering Report
- Final Preliminary Engineering Report
- 60% Plans and Specifications
- 90% Plans and Specifications
- Final Plans and Specifications

Date / Schedule

- August 23rd, 2022
- December 7th, 2022
- December 21st, 2022
- March 15th, 2023
- May 17th, 2023
- June 1st, 2023