



Date: March 29, 2023

Client: Mr. Lornie Stadler, Public Works Director
Mr. Kevin Kuchenbecker, HP/PZ Director
City of Deadwood
108 Sherman Street
Deadwood, SD 57732

Engineer: Mr. Michael Towey, PE
Towey Design Group, Inc.
475 Villa Drive, Suite #3
Box Elder, SD 57719

RE: City of Deadwood – Water Demands Modeling and Planning Project
Task 3 – Water Facility Plan

Dear Lornie & Kevin,

Thank you for the opportunity to provide our proposal to you for the third task of this project. The initial project (approved by City Commission on 09.05.2022) was to develop a functional water model ("existing conditions") of the Deadwood Water Network. The model was then used to generally evaluate the reliability the current system with the proposed new developments within Deadwood. The resulting efforts identified the Denver Avenue booster pump station and the Roosevelt Reservoir as limiting factors in the system.

The second task of this project (approved by City Commission on 02.06.2023) used the existing conditions water model to evaluate numerous scenarios and evaluate multiple potential solutions for the needs established in Task 1. With Task 2 completed several alternatives have been developed, reviewed by staff, and recommendations for moving forward have been developed.

Task 3 will be for the development of a SDDANR Water Facility Plan. The plan will be used as part of the funding application process to seek funds through the State of South Dakota, DANR's State Water Plan for grants and revolving loans. The Water Facility Plan is a document required by DANR which details existing City conditions and facilities and lays out a plan for the City of Deadwood moving forward to address anticipated growth needs.

The following narrative presents our proposal to further expand our Task 3 services for the preparation of an updated Water Facility Plan for the City of Deadwood.

PROJECT UNDERSTANDING

Our understanding of the project is as follows.

- Several existing subdivisions, outside of city limits, have also expressed interest in connecting to city water network. Regionalization of water systems is a major priority to state governing bodies.

Towey Design Group, Inc.
475 Villa Drive, Suite #3 | Box Elder, SD 57719
605.600.3758 | mtowey@toweydesigngroup.com



- The City of Deadwood is in the early stages of seeing some major growth within the city. Several new subdivisions have been proposed to city staff. City staff has concerns that they may not have enough water capacity with the future increased demands.
- The existing water system is sized appropriately for the existing conditions. At full buildout, based only on full development of the 3 proposed subdivisions, the city's water system becomes inadequate for the potential additional demands.
- In Task 1, TDG recommended that the allowable number of new additional single family dwelling equivalent units should be limited to 100 based on peak day flows and pumping rates. Additional recommendations are made in Task 2 that allow the city to make improvements as needed over time to keep up with the proposed growth.
- Information gathered in Task 1 and Task 2 has been reviewed by City Staff and recommendations have been made to address future growth needs.
- The Facility Plan is a description of the system (existing and proposed), an analysis of the system (existing and proposed), and the recommendations of the proposed developmental improvement needs based on estimated demands on the system.
- Supporting documentation includes physical characteristics of the area, socio-economic concerns and environmental and cultural resources of the area.

TDG has prepared this final design services proposal in conjunction with the project documents. Our scope of work and breakdown of fees is summarized as follows.

Task 1 – Final Modeling Task:

This task addresses efforts to prepare the Water Facility Plan.

- TDG will research historical data, existing City records, coordinate with Black Hills Council of Local Governments and use data and recommendations generated from Task 1 and Task 2 to prepare a Water Facility Plan for the City of Deadwood.
- The Water Facility Plan will address existing facilities and current operating conditions.
- The Water Facility Plan will review existing City conditions such as historic and anticipated growth, climate, cultural, environmental, existing and forecast service area and socio-economic conditions of Deadwood.
- The Water Facility Plan will look at existing and forecasted water demands taking into consideration demands average and peak demands and fire flow conditions.
- The Water Facility Plan will look at the entire system, distribution, storage and mechanical facilities, booster stations, pressure reducing stations, altitude valves, etc.
- The Water Facility Plan will also identify deficiencies within the system and provide recommendations as generated from project memorandums during Tasks 1 and 2.
- And finally, the Water Facility Plan will detail the proposed plans and recommendations, as determined in Tasks 1 and 2, for addressing the City of Deadwood's future needs along with the justifications for the recommendations.

SCHEDULE

TDG is prepared to start this project as soon as possible. Assuming an NTP by April 11th, 2023, we have prepared the following theoretical schedule:



- NTP – 04.11.23
- Research of existing conditions – week of 04.17.23
- Plan preparation thru – 06.02.23
- Initial Draft Report submission to City – week of 06.05.23
- Review comments incorporation into Plan – week of 06.12.23
- Final Plan submission – week of 06.19.23

DATA PROVIDED BY CITY STAFF

The following is a partial list of items to be requested by TDG staff in order to complete this task.

- The Facility Plan is a description of the system (existing and proposed), an analysis of the system (existing and proposed), and the recommendations of the proposed developmental improvement needs based on estimated demands on the system.
- Supporting documentation includes physical characteristics of the area, socio-economic concerns and environmental and cultural resources of the area.
- Integrated planning documentation for proposed subdivisions (or best available information)
- Any additional information determined during study as available.

PROGRESS PAYMENTS

Monthly progress payments shall be processed by City upon receipt of the claim as computed by the TDG based on work completed during the month per the hourly rates and allowable reimbursables as established in this proposal and approved by City. TDG traditionally invoices our clients on the last Saturday of each month.

DESIGN FEES

TDG proposes to complete this project on an hourly not-to-exceed basis. We have estimated our total fee for this project to be Twenty-Four Thousand Two Hundred Eighty Dollars and no cents (\$24,280.00). Insurance and W-9 documents can be provided as requested. Exhibit A and B from our initial proposal apply as related to this project.

FEE BREAKOUT

The following table identifies our fee breakout for each task.

Task	Design	REIM / Mile	Sales Tax	Subtotal
Design Services	\$23,524.00	\$756.00	\$0.00	\$24,280.00
Totals	\$23,524.00	\$756.00	\$0.00	\$24,280.00

ACCEPTANCE OF THIS PROPOSAL

TDG requests written acceptance of this proposal as listed in the Design Fees section, but the following actions shall constitute your acceptance of this proposal together with the Terms and Conditions and



Amendments: 1) issuing an NTP or sub-consultant contract for any of the Services described above, or 2) written or electronic notification for TDG to proceed with any of the Services described in this proposal.

If these arrangements are acceptable, please sign below and return one copy to me, electronically. We are enthused about this project and look forward to working with you and your team members to effectively meet the needs of your development.

Sincerely,

Michael Towey, PE
Towey Design Group, Inc.

ACCEPTED BY:

Signature

Name

Title

Date

Exhibit A – TDG Standard Terms & Conditions
Exhibit B – TDG Hourly Rates