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Proposal for City of Manitowoc

Lawton Terrace Lift Station Replacement
with a New Gravity Sanitary Sewer

Submitted January 25, 2017





Stantec Consulting Services Inc.
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Phone: 262-241-4466

January 25, 2017

Mr. Greg Minikel, P.E.
Engineering Division Manager - City of Manitowoc
900 Quay St.
Manitowoc, WI 54220

RE: DESIGN PROPOSAL - LAWTON TERRACE LIFT STATION REPLACEMENT WITH GRAVITY SEWER

Dear Greg:

Stantec is enthusiastic to assist you in replacing the Lawton Terrace sanitary lift station with a new gravity sewer. There are numerous benefits to replacing an aging lift station with a gravity sewer. There are also challenges to the gravity sewer routing and construction.

The concept alignment developed in 2014 presents difficulties on several levels. Hydraulically, the 2014 alignment makes several hard turns, generating high head losses that may negatively impact performance and require more maintenance. Regarding constructability, the 2014 alignment runs very close alongside the existing interceptor, making construction within the existing easement implausible, and ultimately requiring additional easements. The proposed open cut construction would significantly damage the vegetation in the existing easement near Lawton Terrace, and greatly disrupt the new sewer corridor downstream. The horizontal directional drilling method considered in 2014 is not appropriate for gravity sewers with such a low slope.

Our approach involves considering a revised alignment, and an alternate construction methodology.

- Figure 1 shows a promising alignment we would like to consider, running the sewer around the condominiums rather than between them. Since easements will need to be purchased in any case, this alignment would seem to be more favorable from the homeowners' perspective.
- For tightly constrained areas and areas where we want to minimize disruption, we would consider an alternate installation method called Guided Boring (Pilot Tube Microtunneling). This trenchless method allows the level of installation accuracy required for low slope gravity sewers. It would allow the existing easement at Lawton Terrace to be used without destroying the existing arbor vitae trees along the north side. It could also be used if necessary to avoid wetland impacts.

These alternates will be evaluated efficiently, allowing the City to know early in the design process if the gravity sewer is the best value for the City. If it isn't, this project can be truncated after the preliminary engineering task, and the money spent to that point will have been invested wisely in making that long term decision.

We are happy to discuss any questions or comments you may have on this proposal. Feel free to call me at (262) 643-9025.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Richard J. Klein, P.E.
Senior Project Manager

PROJECT UNDERSTANDING

The City of Manitowoc is seeking consultant services to design a gravity sewer to replace the Lawton Terrace Lift Station.

The Lawton Terrace lift station is a small, below-ground sanitary pumping station that was constructed 55 years ago. Various equipment upgrades have been made over the years, but the lift station is nearing the end of its useful life. The station experiences operational and maintenance issues, especially during wet weather conditions, that place a burden on City staff time, funds and resources.

In 2014, Strand Associates prepared a report for the City that evaluated alternatives to replace the lift station. This report considered options to construct a gravity sanitary sewer that would eliminate the need for the lift station. The report also evaluated the replacement of the existing lift station with a new station. The report concluded that the gravity sewer would be less expensive than a new lift station, in terms of both construction cost and overall life-cycle cost.

The 2014 Strand Associates report recommended that the new gravity sewer be constructed from the existing Lawton Terrace lift station, through the Maritime Pointe subdivision, to a manhole upstream of the existing Maritime Drive lift station. This is a horizontal distance of approximately 1,300 feet, and a vertical drop of 10 feet. The report evaluated several different possible alignments for the new gravity sewer. The preferred alignment presents numerous challenges, which we will discuss in our Project Approach section.



Looking west on existing sewer easement, towards Lawton Terrace. Site constraints will make open-cut sewer installation challenging, even with additional easement acquisition.

PROJECT APPROACH

Based on our project understanding, Stantec has developed an approach to the project that we describe in this section. There are constraints and complicated elements of the project that require careful consideration for a successful outcome.

We concur with the previous findings that there are numerous benefits to replacing a lift station, with its operation and maintenance (O&M) burden and additional risks, with a gravity sewer. However, routing and constructing a gravity sewer at this project location involves challenges. The previous planning study recognized some of these challenges. We have identified additional challenges, based on our review of available information and recent project area changes that have occurred (such as the construction of a new building on Hawthorne Circle).

Challenges of the previously-recommended gravity sewer alignment include:

- The previously-recommended alignment cut across the corner of a fenced lot on Lawton Terrace. This would require additional easement acquisition, landscaping and fence removal and restoration. It would also result in disruption to the existing homeowner during construction.

- A new condominium building was constructed, just south of the proposed alignment, that was not built during the 2014 planning phase. Now construction between these two buildings, especially open-cut construction, will be very constrained. Easement acquisition may be a challenge.
- Crossing the relatively new concrete pavement of Hawthorne Court
- Tight fit for open-cut construction between two existing buildings on east side of Hawthorne Court. Again, easement acquisition may be a challenge.
- Construction in close proximity to existing interceptor sewer

One element of Stantec’s design approach is the evaluation of an additional alignment corridor. Stantec will evaluate possible sewer alignments in the new corridor shown in Figure 1. Highlights of this route include:

- From Lawton Terrace, construct new gravity sewer in existing alignment using trenchless technology
- Route north of existing stormwater detention basin
- Route east of all homes on Hawthorne Court, and east of existing interceptor sewer
- As previously proposed, connect to existing manhole upstream of Maritime Drive pumping station

While this route will still require easements to be obtained from the developer or condominium association for the Maritime Pointe subdivision, easement acquisition should be more feasible and straightforward if the route is not in front yards, driveways, or near buildings.

Our design approach will utilize **Stantec’s expertise in trenchless construction methods**. Given the access and property constraints associated with several parts of possible alignments, using trenchless construction may make the difference between a feasible and infeasible route. For example, the new sewer route just east of the existing Lawton Terrace lift station is very constrained by the width of the existing easement, the existing interceptor sewer, and mature trees and landscaping. One previously-recommended alternative involves obtaining an easement for part of the backyard to the south, and running the new sewer diagonally across this backyard. One stated reason for this alternative is to avoid disturbing the existing evergreen trees that serve as screening between the residential properties. However, this new route introduces additional complications. And based upon our field visit to this location, it is uncertain whether a new gravity sewer could be installed using open-cut excavation on this route without removing the existing evergreen trees, even with new easement acquisition.



Looking east, view of existing Lawton Terrace lift station and sanitary sewer easement.

Based on our statewide and national design expertise with sanitary sewers and other utilities, Stantec has experience with a wide range of possible trenchless construction methods. Therefore, we have the ability to compare the costs, benefits, design constraints and constructability factors of different trenchless methods. For example, traditional Horizontal Directional Drilling (HDD) can be difficult to properly construct low-slope sewers with. Usually, it is recommended that minimum design slopes of 1.5% to 2% be used when using HDD to install gravity sewers. This target slope may not be achievable on this project, given fixed upstream and downstream elevations.



Stantec will consider routing options in the vicinity of this existing detention basin, while prudently avoiding impacts to sanitary and stormwater infrastructure.

However, there are other methods of trenchless construction, such as guided boring (pilot tube microtunneling), that Stantec has experience with. Guided boring allows for much more precise control of horizontal and vertical alignment, compared to HDD, and allows for the practical construction of much lower sloped sewers. Stantec has local and national staff, including project manager Rich Klein, that are highly experienced in trenchless technology and will be used as resources to optimize the project design.

Another area of Stantec expertise is **environmental permitting and regulatory compliance**. Stantec has a large Wisconsin team of environmental scientists and managers that are experts in the evaluation and compliance with environmental requirements such as wetland, floodplain, shoreline and natural area regulations. Several of these staff, Brian Lennie and Jon Gumtow, are noted in the Design Team section of this proposal.

This is highly relevant to this project, given the proximity of the project area to wetlands, floodplain and river corridor areas. Our design approach is to recognize permitting and environmental requirements and constraints, but not to automatically eliminate certain sewer routes because of perceived permitting limitations. It appears the planning study may have ruled out or downgraded certain sewer routes because of the proximity of wetlands, floodplains and environmental corridors, and the possible permitting challenges associated with these areas. However, given the challenges and constraints associated with other routes, working in proximity to wetlands and floodplain should still be considered. Stantec staff are highly experienced in the Alternatives Analysis procedures for wetland impacts required by the Wisconsin DNR and Army Corps of Engineers. Our staff have been very successful in advocating for clients in the environmental permitting process, including work in and around wetlands and waterways where necessary.

Our design experience also is valuable in mitigating technical challenges of work in these areas, such as the impact of groundwater and soil conditions on sewer construction and operation. For example, we suggest that routing options in the vicinity of the existing stormwater detention basin still be considered, while prudently avoiding negative impacts to sanitary and stormwater infrastructure. It is possible that the new sanitary sewer, regardless of alignment, would be installed below the normal groundwater elevation, given its depth. Measures to protect against inflow/infiltration from groundwater would be included. Any additional stormwater contribution to inflow/infiltration because of proximity to the detention basin may be

insignificant compared to groundwater, and not a reason to rule out routing the new sewer in this area. Stantec has stormwater engineering expertise that we can use to evaluate impacts or accommodations for the detention basin.

Another important element of our approach is careful consideration of the tasks and results of the Preliminary Design Phase. As the City's Scope of Services requests, our work will be divided into Preliminary and Final Design phases. For this project, we envision that the Preliminary Design phase is much more important than a schedule formality or an intermediate checkpoint. With the serious challenges to constructing a sewer on the previously-studied alignments, our Preliminary Design phase will provide the City with an independent evaluation of the likely costs and critical path issues for the project to move forward.

At the end of the Preliminary Design phase, the **City will have a clearer picture of the costs and construction feasibility of the gravity sewer.** The City will also have a more complete view of the land/easement acquisition and regulatory permits that are likely to be required. **The City can then make an informed decision about committing to the final design and construction phase of the project.** Our proposal includes a detailed scope and cost to complete the final design for bidding, while giving the City flexibility to make an informed decision about further investment at the conclusion of Preliminary Design.

The above section highlighted important aspects of our project approach that we believe make Stantec uniquely qualified to successfully assist you with this important infrastructure project. A detailed description of our proposed Scope of Services is in Attachment A.

DESIGN TEAM

Stantec is an international engineering, architectural and environmental sciences consulting firm with over 22,000 employees working in more than 400 locations across six continents. Stantec has served local clients from Wisconsin offices for over 20 years, and combines extensive local involvement with national and international resources and expertise that can be drawn upon as needed. We assist clients in all phases of project life cycles, from initial project concept and planning through design, construction and commissioning.

For this project, we have assembled a design team with extensive experience in sanitary sewer design and other municipal infrastructure projects. Our team is described in the following section.

Rich Klein, P.E.

Rich Klein, P.E., will serve as Stantec's project manager. Rich has experience with a wide range of sanitary collection and conveyance projects of varying size and complexity, including projects with significant trenchless construction components. Rich is highly skilled at leading the interdisciplinary teams required to execute such projects. In addition to his experience with Wisconsin municipalities and sewer agencies, Rich played a key design role in large sewer projects (all of which included tunneling or microtunneling) in Cleveland, Indianapolis and Toronto.

Rich's relevant experience includes:

Northeast Side Relief Storm Sewer, Cudahy. Rich served as project manager and design team leader for preliminary and final design of 5,000 linear feet of new storm sewer required to

alleviate flooding in several residential neighborhoods. The sewers ranged in size from 12 inches up to 54 inches in diameter, and discharge directly to Lake Michigan.

Dugway West Interceptor Relief Sewer, Northeast Ohio Regional Sewer District, Cleveland, Ohio. Rich coordinated the development of the construction specification package, and conducted the hydraulic design and layout of seven large Combined Sewer Overflow (CSO) flow control diversion structures. The project involved approximately 8,000 linear feet of micro-tunneled sanitary interceptor sewer intended to alleviate CSO discharges into area waterways.

Sanitary Sewer Relay Analysis, Cudahy, Wisconsin. Rich analyzed alternative alignments for a 48-inch diameter sanitary sewer relay using MOUSE hydraulic modeling software. The assessment included construction sequencing considerations and cost estimates.

Southeast Collector Trunk Sanitary Sewer, Regional Municipality of York, Ontario. Rich served as design team coordinator for the final design of a 9-mile long 10-foot diameter sanitary sewer tunneled in soft ground and using precast segmental liners. Other project components included a baffle drop shaft, odor and corrosion control facilities, and structures for flow diversion, flow metering, access, and connection to the existing sanitary sewer system.

Rich is also currently serving as the lead design engineer for the Little Manitowoc River estuary restoration project. Stantec is leading the design of this river and wetland restoration project that is directly adjacent to the Lawton Terrace gravity sewer project area. Other Stantec staff are working with Rich on this project, including members of our proposed project team. Through the Little Manitowoc River project, we have gained valuable experience and knowledge of project area conditions including environmental constraints and regulatory permitting requirements.

Aaron Volkening, P.E.

Aaron Volkening will serve as assistant project manager. Aaron is a licensed professional engineer with over 18 years of experience in the planning, design and permitting of municipal infrastructure, including sewer systems. Aaron's representative professional experience includes:

Waukesha Interceptor Sewer Cost Comparison Analysis. Aaron served on the engineering team for this major sanitary sewer capital planning project for the City of Waukesha. Waukesha owns and operates 42 sanitary pump stations. In an effort to increase system reliability, remove potential bypass locations and reduce future operation and maintenance costs, Waukesha wished to consider the construction of two major new interceptor sewers. These two interceptor sewers, on the west and southeast sides of the city, have the potential to remove up to 15 sanitary pump stations. This study developed conceptual designs and preliminary cost estimates (both capital cost and life-cycle costs) for new interceptor alternatives, as well as continued upgrades and operation of the existing lift station / force main systems. The evaluation considered factors such as:

- Open cut vs. trenchless construction
- Easements and property acquisition
- Pavement age and condition along proposed construction routes
- Coordination with future road and utility projects
- Groundwater and subsurface soil conditions

Courtland Avenue Relief Storm Sewer, Wauwatosa

Aaron served as senior water resources engineer for a storm sewer design project to mitigate stormwater flooding in a topographic low area. Aaron's responsibilities included supervising hydrologic/hydraulic modeling using XPSWMM, sizing a relief storm sewer, and designing major upgrades of surface inlet capacity. Aaron assisted the design team in completing plans, specifications and permitting for the relief sewer (consisting of reaches of 42-inch and 54-inch pipe) in existing urban streets with extensive utility conflicts and other site constraints that were successfully accommodated.

City of Racine, Ohio Street Interceptor Sewer Design

Aaron was part of the project team that designed an overflow interceptor sewer for the Racine Wastewater Utility to provide wet weather relief. The design resulted in a 1.5 million dollar construction project which included over 2,000 feet of sanitary sewer from 18 inches to 54 inches in diameter, storm sewer and storm manhole relocation, and sanitary sewerage flow control structures.

Overall, Aaron has extensive experience in a wide range of infrastructure and utility planning, design and permitting projects.

Scott Henkel, RLS

Scott Henkel has 31 years of land surveying experience, including extensive experience in survey and base mapping for sanitary sewer projects. His experience includes Certified Survey Maps, ALTA surveys, Transportation Project Plats (TPPs), right of way and easement research and platting, utility acquisition platting, other property surveys, topographic surveying and construction staking.

Given the anticipated need to acquire temporary and permanent easements for the gravity sewer route, and the significant influence that right-of-way and easement considerations will have on the design, Scott will play a key role on the project team.

His selected relevant experience includes:

MMSD Underwood Creek Relief Sewer Acquisition Plat, Wauwatosa. Scott was responsible for the coordination, surveying, and mapping of permanent easements, temporary construction easements, and access rights acquisitions for this project. His work included a 7-parcel plat developed for the construction of a relief sanitary sewer for the Milwaukee Metropolitan Sewerage District (MMSD).

MMSD Canal Street Wet Weather Relief Sewer Acquisition Plate, Milwaukee. Scott was responsible for coordination, surveying and mapping related to a 31-parcel plat in conjunction with the construction of a relief sanitary sewer. Components included Fee Simple Acquisitions, Permanent Easements, Permanent Access Easements, Temporary Construction Easements, and Temporary Access Easements.

City of Racine, Ohio Street Interceptor Sewer

Scott was responsible for surveying and mapping for the design and construction of a relief interceptor sewer that also provided additional inline storage capacity.

Scott has completed numerous other surveying, mapping and easement / property acquisition projects for sanitary sewer projects for clients such as the Milwaukee Metropolitan Sewerage District (MMSD), City of Sheboygan, City of Racine, Village of Pleasant Prairie, and Village of Sturtevant.

Brian Lennie

Brian is a Senior Scientist for Stantec, with areas of expertise that include wetland delineations, waterway and natural resource inventories, erosion control plans, wetland mitigation, streambank stabilization, and wetland and waterway permitting.

He has over 23 years of experience. This experience allows him to navigate the complexities of the permitting process, understand the often-critical influence that permitting requirements have on project design and construction, and serve as an advocate for clients when coordinating with regulators.

Relevant project experience includes:

Richfield Way Reconstruction Project, Menomonee Falls. Brian completed wetland and waterway permitting for roadwork associated with street reconstruction and new street creation. A wetland impact alternatives analysis was completed for the Wisconsin DNR and the U.S. Army Corps of Engineers permit applications. Brian also completed erosion control plans and Wisconsin DNR Notice of Intent permitting for construction activities.

Mequon Towne Center Phase 2 Regulatory Permitting. Brian completed wetland permitting for this brownfield redevelopment project for wetland filling. Coordination between the client, project engineers, architect, the City, Army Corps of Engineers and Wisconsin DNR was integral to project success.

124th Street Reconstruction Permitting, City of Milwaukee and Village of Menomonee Falls. Brian completed wetland and waterway permitting for this road reconstruction project. Key project elements, including road resurfacing and drainage improvements, required Wisconsin DNR and U.S. Army Corps of Engineers permits. Brian's work also included detailed project coordination with the City of Milwaukee and the village of Menomonee Falls.

Overall, Brian has completed hundreds of wetland delineations throughout Wisconsin, and completed functional assessments on wetlands using the Wisconsin DNR rapid assessment methodology. He uses this information for environmental review and permitting, as well as natural resources management.

If necessitated by project conditions and the regulatory process, Brian can be assisted by **Jon Guntow**. Jon has already assisted the City of Manitowoc on numerous other projects. Jon manages natural resources staff for Stantec's Green Bay office. He is a state-licensed Soil Scientist and a certified Professional Wetland Scientist. Over the last 25 years, he has completed assessments and permitting on a wide variety of projects throughout Wisconsin and the Midwest. Jon is the project manager for Stantec's design of the Little Manitowoc River estuary restoration project, where he is working with Rich Klein, Adam Rock and other Stantec team members.

Adam Rock

Adam will assist the design team with drafting, CAD and plan development. He is a senior CAD technician who has been with Stantec since 1998. He provides design development, CAD drawing and plan set development for utility, roadway, water resources and site development projects.

Currently, Adam is serving as the lead design technician / CAD draftsman for the Little Manitowoc River estuary restoration plan, directly adjacent to the Lawton Terrace gravity sewer project area. Therefore, Adam already has familiarity with area base mapping and environmental conditions and constraints. This familiarity will enhance the efficiency of design development.

SCHEDULE

The City's requested schedule, listed in the RFP, indicates that final bid-ready plans and specifications shall be completed by December 31, 2017. This is based on the design project being awarded at the February or March City Council meeting, and the project kick-off meeting being held in March or April. Based upon these milestones and assumed start dates, we have prepared the following schedule. This schedule achieves the delivery of bid-ready plans and specifications by the end of 2017, assuming a notice to proceed of March 15th.

This schedule includes time cushions to allow for coordination with property owners, stakeholders and regulators. If the City determines that a more aggressive schedule is required to accelerate completion, we would be happy to discuss options for schedule modification to deliver the final design before the end of December.

Task / Milestone	Weeks after Notice To Proceed
Preliminary Design Phase	
Project kickoff meeting	1
Prepare preliminary plan and profile	2 -6
Evaluate and compare potential sewer alignments	2 -8
Recommend final alignment, meet with City staff	12
Final Design Phase	
Conduct field survey	13 - 15
Subsurface exploration	13 - 18
Evaluate need for wetland delineation, perform wetland delineation if necessary	13 - 18
Prepare and submit 60% plans	13 - 25
Submit sewer extension request to Bay Lake Regional Planning Commission	28
Submit sewer extension request to Wisconsin DNR	32
Meetings with property owners to negotiate easements	28 - 32
DNR / Army Corps of Engineers permitting	28 - 34
Prepare and submit 90% plans and draft specifications	28 - 38
Prepare final, bid-ready plans and specifications	39 - 41

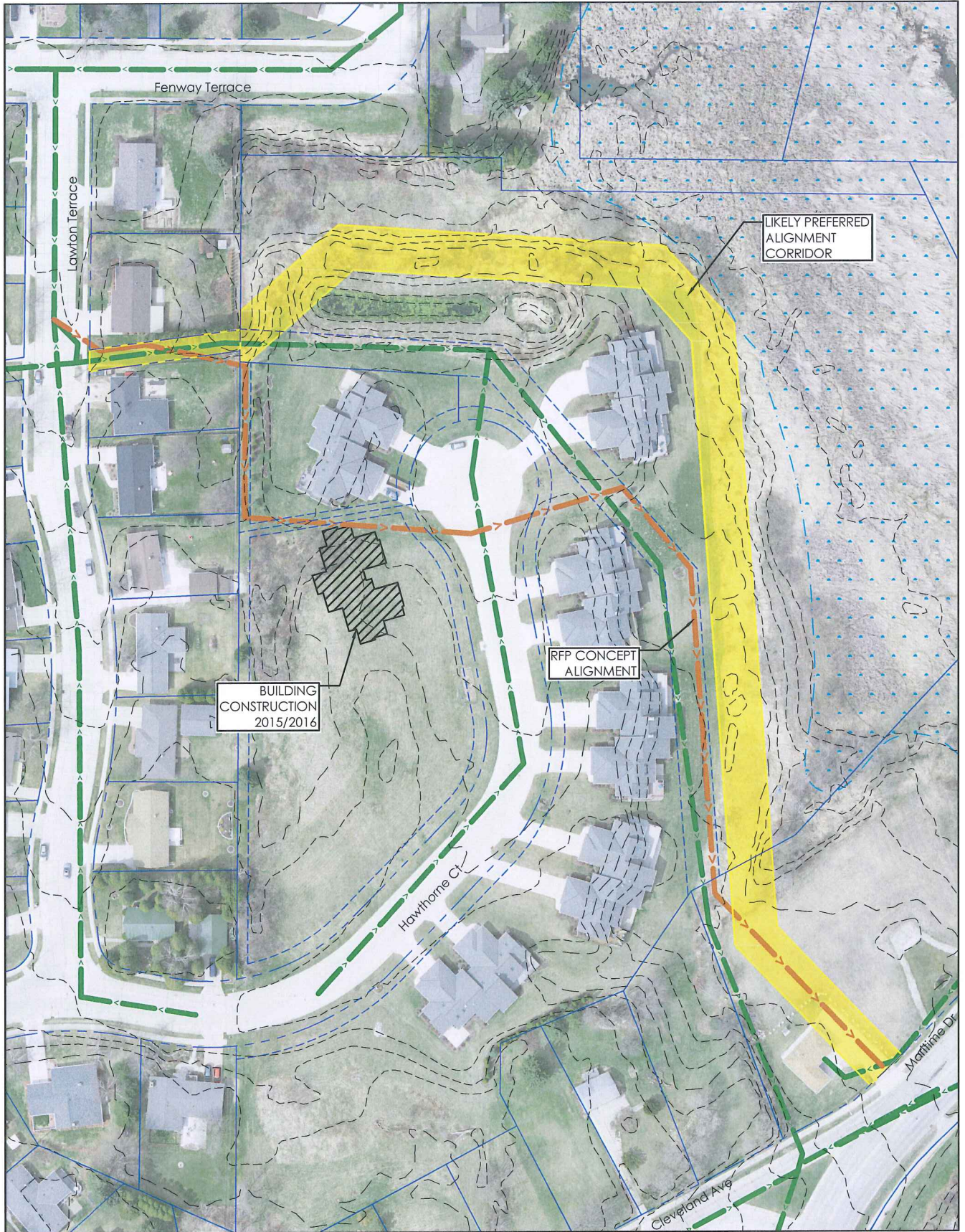
STANDARD FEES and FIXED FEE TOTAL COST

For our scope of services for this project, Stantec proposes the following fixed fee:

Work Phase	Fee
Preliminary Design	\$15,930
Final Design	\$24,050
Total	\$39,980

Per the RFP, we have also included the table below showing Stantec's standard hourly rates for 2017 Wisconsin infrastructure design.

Staff Category	Typical 2017 hourly rate
Project manager and assistant project manager	\$150 - \$180
Staff engineer / scientist	\$95 - \$135
Senior engineer / scientist	\$135 - \$180
Registered land surveyor	\$120 - \$130
CAD / GIS / engineering technician	\$95 - \$125
Administrative assistance	\$70 - \$90



Lawton Terrace Gravity Sewer
 City of Manitowoc
 Manitowoc, Wisconsin

- EXISTING EASEMENT
- - - RIGHT-OF-WAY
- PROPERTY LINE
- > EXISTING SANITARY SEWER



Figure 1

ATTACHMENT A: PROPOSED SCOPE OF SERVICES

Preliminary Design Phase

1. Attend project kickoff meeting with representatives of the City to review design objectives and scheduling for the project.
2. Review existing data, reports, mapping and plans. The following mapping data (where available) shall be provided by the City to Stantec, in digital (CAD or GIS) format.
 - a. Cadastral mapping (property lines, right of way, easements)
 - b. Utility mapping (sanitary sewer, storm sewer, water main)
 - c. Topography / contours
 - d. As-built plans, especially for sanitary sewers in project area and the existing Lawton Terrace lift station.
3. Prepare base map in CAD to be used in development and evaluation of possible alignments.
4. Prepare a preliminary plan and profile of one or more potential gravity sewer alignments, to be used by Stantec and City staff for initial evaluation of possible alignments.
5. Evaluate and compare possible gravity sewer alignments. Alternatives will be evaluated based on criteria such as:
 - a. Estimated construction costs
 - b. Easements / property acquisition requirements
 - c. Impacts to private and public property
 - d. Anticipated environmental impacts and permitting requirements
 - e. Utility and structure conflicts
 - f. Future access, operation and maintenance considerations
 - g. Other evaluation criteria agreed upon by City staff and Stantec
6. Preliminary sewer sizing and hydraulic analysis.
7. Evaluate applicability and estimated costs of trenchless construction methods.
8. Attend 2 meetings with City and property owners regarding proposed alignments (or alternative alignments) and other project considerations.
9. In collaboration with City staff, recommend final horizontal alignment and size of the proposed sanitary sewer.
10. Prepare a preliminary Opinion of Probable Construction Cost for the preferred alternative.
11. Meet with City staff to discuss evaluation of alternatives, and to review and obtain approval of design recommendations.

Final Design Phase

12. Conduct a field survey to obtain the information necessary to prepare construction drawings for approximately 1,300 feet of new gravity sanitary sewer.
Specifically, the survey scope will include:
 - a. Notify Diggers Hotline for utility marking.
 - b. Perform a topographic and utility survey along the selected alignment. For purposes of survey cost budgeting, Stantec assumes the route to be surveyed is generally comparable to the corridor shown in Figure 1, in terms of location and length. Stantec assumes that the survey control previously established for the Little Manitowoc River estuary restoration project will be utilized for this project.
 - c. Measure-downs at selected utility crossings of proposed new sewer / existing structures near proposed sewer alignment.
13. Develop recommendations for a subsurface exploration program, such as required number and location of soil borings. Assist the City in selecting a soil testing and/or geotechnical consultant to perform the subsurface evaluation.

Note: The subsurface field exploration, any requested lab testing, and geotechnical report will be contracted and paid for separately by the City and is not included in our budget.

14. Evaluate whether a wetland delineation is necessary to provide design and permitting information. If wetland delineation is necessary, assist the City in selected a certified wetland delineator to perform the fieldwork and prepare the necessary rreport. Any wetland delineation will be contracted and paid for separately by the City and is not included in our budget.
15. Refine horizontal alignment and vertical profile of selected route.
16. Finalize sewer sizing, including a hydraulic analysis to confirm design flows, and calculate design velocities and hydraulic grade line elevations.
17. Stantec will incorporate plans for the disconnection and abandonment of the existing Lawton Terrace lift station into the project documents.
18. Prepare 60% plans and an outline / Table of Contents of anticipated technical specifications. Submit to the City for review.
19. Review 60% plans with City, and incorporate review comments as appropriate.
20. Prepare an updated preliminary Opinion of Probable Construction Cost.

21. Assist the City to prepare and submit sewer extension request for the Bay Lake Regional Planning Commission.
22. Assist the City to prepare and submit sewer extension request to the Wisconsin DNR.
23. Assist the City by meeting with property owners to negotiate acquisition of permanent and temporary easements.
24. Prepare legal descriptions for use by the City in preparing easement documents. For purposes of budgeting, we assume that up to three easement legal descriptions will be prepared. The budget does not include the cost of title reports on parcels subject to said proposed easements.
25. Assist the City in obtaining necessary permits from Wisconsin DNR and U.S. Army Corps of Engineers.

We assume this work will consist of coordinating and conducting a site meeting with City staff to identify the WDNR/ACOE permitting requirements and timeline for permitting. The meeting will identify the permits necessary, application requirements, and timing for submittal and permit issuance. This task assumes the City will be preparing and submitting the permit application and materials after Stantec has confirmed the specific permit application.
26. Prepare 90% plans and draft specifications.
27. Make final plan revisions, based upon City review comments on 90% plans and specifications.
28. Prepare final, bid-ready plans and specifications. We assume the City will use QuestCDN for distribution of bid documents.
29. Update the Opinion of Probable Construction Cost.
30. In our budget for this Scope of Services, Stantec has allocated time for up to 4 meetings to review design process, design concerns (including permitting and easement acquisition), and coordination with utilities.
31. Our scope also includes project management tasks, such as financial oversight and tracking, record-keeping and miscellaneous communication, and project team coordination and oversight.