



January 5, 2021

Mr. Mike Gitter, P.E., Interim General Manager
Racine Water and Wastewater Utilities
800 Center Street
Racine, WI 53403

Re: Sewer Relay Project – Racine Water and Wastewater Utilities

Dear Mike,

Strand Associates, Inc.® appreciates the opportunity to submit our proposal to the Racine Water and Wastewater Utilities (Utility) for the North Main Street Sewer Relay project.

Project Understanding and Approach

Based on the December 9, 2020 meeting with Amanda, Keith, and yourself, we understand that the sanitary sewer on North Main Street between William Street and Augusta Street has partially collapsed. Approximately 640 linear feet (LF) of sanitary sewer replacement is scheduled for 2021 construction ahead of the City of Racine's (City) Surface Transportation Program project. Tentatively, construction will begin after July 4, 2021. The project will impact approximately 24 laterals to 19 lots where sanitary services will require reconnection. Services that do not require reconnection will be abandoned. The 21-inch vitrified clay pipe sanitary sewer located in the center of the street will be replaced with 21-inch Polyvinyl Chloride (PVC) in the same location as the existing sanitary sewer. The Utility would like brick manholes or manholes in poor condition to be replaced. Based on the televising report, it appears that there is one brick manhole. The condition and type of manholes will be verified during the project survey. A bypass pumping plan will be developed and included in the bid documents.

We met with John Rooney with the City to discuss more project-specific questions, as encouraged by the Utility. As recommended by John, the contractor will be required to televise each sanitary lateral during construction and the Resident Project Representative (RPR) will determine if the lateral will need to be replaced to the right of way or reconnected at the main. The City typically requires slurry backfill but will allow an exemption if there was an RPR on site at all times during compaction and a geotechnical engineer provided compaction testing meeting the City's specifications. The City will require a trench patch for pavement restoration. John stated that the City will accept a temporary pavement structure less than the existing, if it is supported with a geotechnical engineer's recommendation. The current pavement structure, according to the drawings the City sent, is 6 inches of hot mix asphalt over 5.5 to 8 inches of rubblized concrete pavement over 4.75 to 8.25 inches of granular base course.

North Main Street sees an average daily traffic count of 10,200 vehicles per day (vpd). Given the depth and location of the sewer, it is anticipated that traffic will not be able to be maintained during construction. The City has approved the use of a traffic detour plan in order to route traffic around the project site. As part of the design, we will develop a traffic control plan to provide a detour route for North Main Street. Resident access will be maintained throughout the project. Residents will be notified of any disruptions during construction.

An Application for Street Opening will be completed and submitted to the City. In addition, a Permission to Close City of Racine Street application will be completed and submitted. The City indicated that the contractor will be responsible for paying for the street closure permit. We have included scope for the submittal of a Wisconsin Department of Natural Resources (WDNR) Sewer Extension permit; however, this will only be required if the pipe slope, size, or location changes. If the permit is not required, the effort will not be spent and, therefore, will not be invoiced to the Utility. A Water Resources Application for Project Permit is not anticipated because disturbance is less than 1 acre. The WDNR Surface Water Data Viewer indicates wetland indicator soils within the project; however, because the area is developed, we plan to obtain an e-mail from the WDNR to verify wetland exemption. If a sewer extension permit is required, we have already verified that there are no contaminated lands indicated on the WDNR Wisconsin Remediation and Redevelopment Database.

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During the meeting with the Utility, it was discussed that the specifications would use the Engineers Joint Contract Documents Committee C-Standard General Conditions of the construction contract, 2018 Edition and Supplemental Conditions provided by our firm. It is understood that the requirements of Racine's Ordinances Sec. 46-41 Racine Works Program will need to be incorporated into the construction contract. The front-end documents, detail drawings, and technical specifications will also be provided by our firm. It is understood that the City's Street Restoration Specifications will need to be incorporated in the technical specifications.

We anticipate a total of three virtual meetings during the duration of the project design. We plan to submit 60 and 90 percent documents to the Utility and City for their review. At these two submittals, we will prepare and submit a preliminary opinion of probable construction cost. After each entity has reviewed the documents, a meeting will be held to discuss review comments. At 90 percent, we will send drawings to public utilities located within the project limits to review for potential conflicts.

We have reached out to Professional Services, Inc. (PSI) to request a proposal for performing soil borings and providing a geotechnical report and recommendations. The soil borings will provide details on the existing pavement thickness, underlying soils, and groundwater conditions. We will communicate with the geotechnical firm to collect soil borings and review the geotechnical report when we receive it. After reviewing the geotechnical report, we will have a clearer picture on trench wall stability. Depending on the soil, there is a possibility that utilities within a certain distance from the trench may be uncovered. After reviewing the geotechnical report, we will discuss the options with the Utility.

In the meeting with the City, we learned that as part of the 2024 project, the City plans to implement sewer attenuation. John mentioned that the sewers surcharge in wet weather conditions. The City has attributed this to a lack of storage upstream of lift station No. 1. The City currently has a firm reviewing potential alternatives, including in line pipe storage, underground storage in the zoo (originally proposed under the tennis courts in Lakeview Park), or underground storage in the parking lots located on Wisconsin Street and Walton Avenue. The City plans to communicate with the selected firm to see if in-line pipe storage could be an option in this location if the work is already occurring. Keith had discussed installing a second pipe on top of the existing pipe for possible storage. We will continue communications with the City throughout the design process including providing construction schedule updates.

Our design fee has been developed based on the level of effort included in the project effort and cost table below.

Fee Proposal

Project Effort and Cost Table		
Task	Effort (Hours)	Cost
Data Collection		
Field survey of 720 LF on North Main Street between Augusta Street and William Street from back-of-sidewalk to back-of-sidewalk, including underground and aboveground utility locations and structure inventory.	27	\$3,200
Compile existing topographic, cadastral, and utility as-built information from City data files.	9	\$1,000
Review of Geotechnical Report.	6	\$1,000
Sewer Design		
Design of 670 LF of sewer main.	15	\$2,100
Prepare plan and profile.	27	\$3,300
Prepare bypass pumping plan.	18	\$2,500
Prepare appropriate construction details.	11	\$1,200
Drawings		
Prepare title sheet, general notes sheet, and alignment detail and control sheet.	10	\$1,100

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Project Effort and Cost Table		
Task	Effort	Cost
Prepare traffic detour plan.	13	\$1,900
Prepare erosion control plan.	3	\$400
Permitting		
City of Racine Street Opening Permit	5	\$600
City of Racine Street Closing Permit	5	\$600
WDNR Sewer Extension Permit (if required)	10	\$1,200
Specifications		
Provide technical specifications.	34	\$4,200
Prepare one set of bid documents using Engineers Joint Contract Documents Committee C-Standard General Conditions of the construction contract, 2018 Edition and Supplemental Conditions.	36	\$4,700
Bid Phase		
Submit bid documents to Utility for review and input. Incorporate review comments and submit two copies of bid documents to the Utility.	30	\$3,700
Submit advertisement to bid to Utility for publishing. Distribute bid documents electronically to prospective bidders.	7	\$800
Prepare addenda and answer questions during bidding.	15	\$1,800
Attend bid opening.	4	\$500
Tabulate and analyze bid results and assist Utility in the award of the construction contract. Prepare three sets of contract documents for signature.	13	\$1,900
Administration		
Provide project administration and management.	24	\$3,500
Attend up to two virtual meetings with the Utility (60 percent submittal meeting and 90 percent submittal meeting).	11	\$1,500
Communicate with subconsultant.	3	\$400
Communicate with Utility companies regarding potential utility conflicts	6	\$700
Prepare quantities and submit 60 percent and final construction cost estimates to the Utility.	16	\$2,100
Total	358	\$45,900

Subconsultant Costs

Costs for geotechnical services are provided below. PSI will be completing the geotechnical work. **The Utility will contract directly with PSI.**

Professional Services, Inc.	
Task	Cost
Complete three soil borings 670 LF on Main Street. Soil borings to 37, 28, and 25 feet below ground surface.	\$3,217.50*
Total:	\$3,217.50

*PSI does not anticipate traffic flaggers as cones and signs provided by PSI would be sufficient. If flagging is necessary, the cost would be \$2,000.

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Construction Services to be Agreed Upon Prior to Construction

- Construction Observation
- Construction Administration
- Construction Staking

Scope Items Not Included in Fee


The following items can be provided, if authorized by the Utility:

- Storm Sewer Design
- Water Main Design
- Sewer Capacity Analysis

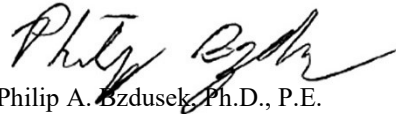
We look forward to continuing to work with and assist the Utility. If the Utility would like any more information regarding this proposal or would like to discuss any specific projects, please feel free to contact us.

Sincerely,

STRAND ASSOCIATES, INC.®



Emily A. Yoss, P.E.



Philip A. Bzdusek, Ph.D., P.E.

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