

ORDINANCE NO. 21-136

AN ORDINANCE AUTHORIZING AND DIRECTING THE CITY MANAGER TO ENTER INTO AN AGREEMENT FOR PROFESSIONAL DESIGN SERVICES WITH STANTEC CONSULTING SERVICES, INC. OF CLEVELAND, OHIO, FOR THE MILLS STREET HIGH RATE TREATMENT PROJECT; AND DECLARING THAT THIS ORDINANCE SHALL TAKE IMMEDIATE EFFECT IN ACCORDANCE WITH SECTION 14 OF THE CITY CHARTER.

WHEREAS, based on negotiations with the Ohio Environmental Protection Agency (EPA) from 2012-2015 regarding the City's General Plan Update, the City has an existing National Pollutant Discharge and Elimination System (NPDES) permit for the wastewater conveyance and treatment system that requires completing construction and operation of several projects such as the Grit Tank Expansion, East End Sewer Improvements, Pier Track Lift Station Improvements, and Farewell Lift Station Improvements; and

WHEREAS, all of these projects are designed to reduce overflows throughout the city's network as well as replace or upgrade aging infrastructure to reduce surface and basement flooding and the next project included in the original negotiations is a 16 million gallon per day (MGD) High Rate Treatment (HRT) Facility intended to reduce permitted combined sewer overflows (CSO) from the Mills Street bypass station prior to December 1, 2024; and

WHEREAS, Stantec Consulting Services, Inc. will be providing professional design services for the Mills Street High Rate Treatment Project which includes the first phase of preliminary engineering and limited detailed design and is more fully described in the Scope of Services, which is attached to this Ordinance and marked Exhibit "A" and specifically incorporated herein; and

WHEREAS, a Request for Qualifications (RFQ) was issued for the Mills Street High Rate Treatment Project in which four (4) submittals were received, evaluated and ranked by a selection committee and based upon the firm's expertise, professional knowledge and experience, it was determined Stantec Consulting Services, Inc. was the most qualified; and

WHEREAS, the total cost of the professional design services is \$410,800.00 and will initially be paid with Sewer Funds and the City will be applying for a low-interest or zero-interest loan from the Ohio Water Pollution Control Loan Fund (WPCLF) to finance the project and the City will receive partial reimbursement from Erie County pursuant to the Sewer Services Agreement; and

WHEREAS, this Ordinance should be passed as an emergency measure under suspension of the rules in accordance with Section 14 of the City Charter in order to immediately proceed with the services to ensure the construction is completed by the EPA-required deadline of December 2024; and

WHEREAS, in that it is deemed necessary in order to provide for the immediate preservation of the public peace, property, health, and safety of the City of Sandusky, Ohio, and its citizens, and to provide for the efficient daily operation of the Municipal Departments, including the Department of Public Works, of the City of Sandusky, Ohio, the City Commission of the City of Sandusky, Ohio finds that an emergency exists regarding the aforesaid, and that it is advisable that this **Ordinance** be declared an emergency measure which will take immediate effect in accordance

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with Section 14 of the City Charter upon its adoption; and NOW, THEREFORE,

BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF SANDUSKY, OHIO, THAT:

Section 1. The City Manager is authorized and directed to enter into an agreement with Stantec Consulting Services, Inc. of Cleveland, Ohio, for Professional Design Services for the Mills Street High Rate Treatment Project substantially in the same form as attached to this Ordinance, marked Exhibit "1", and specifically incorporated as if fully rewritten herein, together with any revisions or additions as are approved by the Law Director as not being substantially adverse to the City and consistent with carrying out the terms of this Ordinance, at an amount **not to exceed** Four Hundred Ten Thousand Eight Hundred and 00/100 Dollars (\$410,800.00).

Section 2. If any section, phrase, sentence, or portion of this Ordinance is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

Section 3. This City Commission finds and determines that all formal actions of this City Commission concerning and relating to the passage of this Ordinance were taken in an open meeting of this City Commission and that all deliberations of this City Commission and of any of its committees that resulted in those formal actions were in meetings open to the public in compliance with the law.

Section 4. That for the reasons set forth in the preamble hereto, this Ordinance is hereby declared to be an emergency measure which shall take immediate effect in accordance with Section 14 of the City Charter after its adoption and due authentication by the President and the Clerk of the City Commission of the City of Sandusky, Ohio.



RICHARD R. BRADY
PRESIDENT OF THE CITY COMMISSION



ATTEST:

KELLY L. KRESSER
INTERIM CLERK OF THE CITY COMMISSION

Passed: September 13, 2021

EXHIBIT A

SCOPE OF SERVICES FOR MILLS STREET 16 MGD HIGH RATE TREATMENT PRELIMINARY ENGINEERING DESIGN

Project Objectives

This project is intended to provide the engineering design services required to meet the City's existing permit requirement to complete construction of a 16 million gallon per day (MGD) High Rate Treatment (HRT) Facility for the Mills Street Combined Sewer Overflow (CSO). The Mills Street HRT is the final project in an initial series of projects in the City's General Plan Update (a.k.a. Long-Term Control Plan). The project will be separated into two phases: one for pre-design and the other for detailed design with bidding support. This scope of work includes the pre-design phase only and will primarily focus on process selection, alternative development and evaluation, and Preliminary Design Report (PDR) development.

In recent years, the City has completed additional flow monitoring and model calibration to better understand the existing conditions in the combined sewer system. The most recent model indicates the Mills Street CSO location has 22 activations totaling 118 million gallons in the typical year. The existing model will be used for quantification and layout of the proposed CSO diversion structure and validation of collection system flowrates and hydraulic grade lines (HGL).

The City has currently identified the parcel to the south of the WWTP as a potential location for the HRT facility. The proposed design solution, piping/connectivity constraints, depth to bedrock, etc. may factor into selection of the optimal location on this property. A primary objective of this project will be to minimize overall disturbance with reduced long-term use of the southern property and to maintain functionality of as many ballfields as feasible. The City also owns the property to the west of the WWTP that currently contains two larger ballfields. Alternatives will also include conceptual layouts for restoration of the property to the west of the WWTP. The CONSULTANT will be required to engage key stakeholders, including the recreation and planning departments, and possibly participate in public meetings to determine the most efficient and beneficial layout to consolidate the appropriate number of fields to the west of Harrison Street.

An overall review of the WWTP is also included within the scope of work to determine which processes such as screening, pumping, ultraviolet disinfection, etc. will require updates or modifications to support the HRT facility. The CONSULTANT will be responsible for coordination of site visits with other treatment facilities to evaluate various available technologies for each process that will be incorporated into the project. The selected technology will be required to treat up to 16-MGD and meet existing NPDES permit limits if blended with the plant effluent. If the HRT discharge is independent of the plant effluent, early coordination with Ohio EPA will be necessary to determine design criteria.

Project Schedule

The CONSULTANT will have approximately five months from Notice to Proceed (NTP) to submit the PDR and any supporting technical memoranda. Two additional months of detailed

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design budget have also been allocated to Specific Allowance No. 1 - Initiation of Detailed Design which must be authorized by the City prior to use. Following the submittal of the BODR and authorization from the City, the CONSULTANT will begin developing the detailed design/bidding services scope of work.

Project Management and Meetings

CONSULTANT shall utilize procedures related to cost estimating, scheduling, project documentation, risk management, QA/QC, and others as necessary to effectively manage budget, scope, and schedule for the project. In order to ensure that this project is successfully completed in a timely manner and to the satisfaction of the City, project management items include but are not limited to the following:

- Monthly Invoicing with project Progress Summary: The CONSULTANT will submit Progress Reports on a monthly basis in support of invoices. Progress Reports are to include a discussion of task progress through the period covered by the Progress Report, problems encountered, and solutions proposed and enacted, budget and schedule status, and status of deliverables.
- Project Meetings: The CONSULTANT's Project Manager and other team members shall meet, in person, with City personnel on a monthly basis to review the progress of this project, discuss technical solutions, address outstanding issues and potential problems. These meetings should include identification of work performed last period, work to be completed next period, critical action item status, and responsible parties to complete actions. Budget or schedule problems shall be identified and corrective actions noted. Key discussion topics should comprise a significant portion of the meetings. CONSULTANT shall provide the necessary graphics to facilitate discussions. This section of the scope of work also includes routine internal meetings to help advance the project.

It is also expected that the CONSULTANT and the City hold telephone discussions as frequently as needed. The CONSULTANT shall make personnel available for meetings with other agencies and utilities to answer questions pertaining to design elements of the project. The City and CONSULTANT will mutually agree upon who is responsible for taking the lead in organizing, planning, and conducting each meeting with other agencies and utilities.

TASK 1: PRE-DESIGN

Task 1A: Evaluation of Existing Information

The CONSULTANT shall evaluate and consider the following existing information related to the Scope of Services for the project.

- Past flow and rainfall monitoring data and/or reports
- Past CSO sampling data
- Past and current EPA documentation/correspondence

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- WWTP available record drawings
- Past geological/geotechnical data in and around the WWTP site.
- Collection system plan/profiles, detail drawings and condition assessment documentation
- Available GIS Datasets
- Available flow schematics, summary of flows, historic flow and wastewater characterization data.
- Updated version of the City's collection system baseline and consent decree hydraulic models.
- Other available information previously provided with the Request for Qualifications (RFQ)

Task 1A.1: *Surveying/Base Mapping*

CONSULTANT shall gather data necessary to properly map the existing contours and existing conditions of the site. Baseline survey information shall be tied to the state plane coordinate system, North American Datum 83 (NAD83), and North American Vertical Datum 88 (NAVD 88) datum shall be used for vertical datum with benchmark information provided by the City (if available) upon authorization of the project. Locate pertinent structures within the survey area. Structures to be surveyed shall include those that may be impacted by construction or be required for the project design. CONSULTANT shall survey to the extent described below:

- Locate critical elevations and establish a reference benchmark circuit for all construction.
- Baseline of Survey – Establish horizontal control points with permanent markers, including preparation of Baseline of Survey Control drawings.
- Bench Marks – Establish bench marks along the Baseline of Survey.
- Street Alignments – Establish the centerline of street and right-of-way lines; street centerline monuments shall be located and referenced.
- Collect topographic information at a sufficient density to generate 1-foot contours. CONSULTANT shall provide traverses that close to within 1:5000. CONSULTANT shall provide measurements and computations that are verifiable.
- Topographic Surveying and Base Mapping – Perform detailed topographic surveys and base mapping in AutoCAD Civil 3D; digital orthophotos shall also be included.
- Drainage – Storm and sanitary sewer manholes shall be opened where possible to obtain pipe invert elevations, sizes, and flow directions. CONSULTANT shall perform confined space entry in structures to obtain pipe or structure information not obtainable from the surface.
- Parcel Information/Property Surveys – Perform record research and procure information necessary to establish existing right-of-way, property, and existing easement lines.

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Perform surveys of property lines that are affected by proposed easements. Other parcels adjoining the project area shall be mapped from County records (tax maps, GIS mapping, etc.). Parcels shall be researched to provide owner, address, and parcel ID numbers.

- Utilities – CONSULTANT shall contact the Ohio Utilities Protection Service and other agencies for existing plans and field markings of subsurface utilities. Subsurface utilities shall be shown from an ASCE Quality Level C subsurface utility investigation. Under a Level C investigation, CONSULTANT shall survey the location of visible utility facilities (manholes, valves, etc.) and field markings provided by OUPS and/or others. The locations shall be correlated with existing plans provided by OUPS, City, and others. Known unresolved or missing utility information shall be summarized and provided on the survey or in a separate document. All utility contact information is to be maintained in a utility contact document that provides utility contact information, contact log, and status. Existing utility plans shall be scanned in a PDF file format and provided.
- Perform spot survey checks to verify the accuracy of the topographic mapping and upon request collect survey points to confirm water surface elevations at the WWTP for up to 20 locations. The City's surveyor will also be available to capture water surface and other structure elevations (i.e. overflow weirs, channel inverts, etc.) as needed for validation of record drawings of existing WWTP infrastructure

Task 1B: **Permits, Easements and Project Funding Support**

Task 1B.1: *List of Required Permits*

CONSULTANT will identify permits required by public and private entities, including, but not limited to, the City of Sandusky (street opening & hydrant permits for borings, maintenance of traffic plans, SWPPP), Army Corps of Engineers, Ohio EPA (Permit to Install, SWPPP, NOI, etc.), and prepare the necessary permit applications. Where necessary and with the approval of the City, the CONSULTANT shall contact the appropriate regulatory agency to seek clarification on the applicability of permit requirements. CONSULTANT will prepare documentation for the following permits on this project. Please note that the permit fees are not a part of this scope and it is understood the City will pay for these fees.

- Permit to Install: CONSULTANT will engage and meet with the Ohio EPA to discuss the project. CONSULTANT will provide and submit the required drawings and documents to obtain a sanitary Permit to Install (PTI) from the Ohio EPA. The PTI will be submitted upon addressing any comments at the 90% design stage. The Project Schedule will allow sufficient time for the Ohio EPA's review of the PTI application. The PTI application fee is estimated to be \$15,100. It is assumed that the PTI will be reviewed by the Ohio EPA Division of Financial and Environmental Assistance (DEFA), which administers the Water Pollution Control Loan Fund (WPCLF) program.
- Notice of Intent (NOI): An NOI and SWPPP will be prepared.

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CONSULTANT makes the following data collection and environmental survey assumptions:

- The proposed project is exempt from the State Environmental Policy Act (SEPA).
- No offsite wetland or stream mitigation is required.
- No Environmental Assessment, Environmental Impact Statement preparation services, or other National Environmental Policy Act (NEPA) documentation is required to be produced by the CONSULTANT. If this work is necessary, it will be performed by others.
- The City is responsible for all permitting fees. Permitting fees, approved by the City, and paid by the CONSULTANT, will be reimbursed through an allowance.

Should any of these assumptions prove false, CONSULTANT shall develop an approach to address these additional project needs and requirements under the project allowance.

Task 1C: **Hydraulic Analysis/Modeling**

Task 1C.1: *Collection System Model Review*

CONSULTANT shall perform a review of the City's XPSWMM collection system model representing the existing conditions as well as the post-Consent Decree improvement conditions. The review will be intended to identify hydraulic or hydrologic inaccuracies that would limit the model's ability to be used as a tool in developing basis of design flows related to this project as well as CSO activation frequency and volume. Model input parameters related to the sanitary sewer inflows from the County, bay level boundary conditions and antecedent moisture will be reviewed and evaluated with respect to the sensitivity of variations in the parameters on the HRT system performance. Model deficiencies or concerns will be documented along with recommended model updates. It is understood that the model is planned to be recalibrated in the future upon completion of the Mills HRT and other ongoing improvement projects. Flow monitoring and recalibration are not included in this scope of work.

Task 1C.2: *Modeling Support of Alternatives Development and Evaluation*

The model will be used to simulate hydraulic alternatives related to the diversion structure location and routing of flow to the HRT or existing plant influent pump station. Peak flows and volumes will be quantified for a range of rainfall events including the City's Typical Year or rainfall and up to two design storms as agreed upon with the City to evaluate level of service (I.e., pipe surcharge) resulting from different diversion structure alternatives.

An interim version of the model will be developed that represents the existing conditions plus the HRT diversion structure in order to quantify CSO frequency and volume that will result from completion of this project.

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The post-Consent Decree improvements version of the model will be updated to include the recommended diversion structure alternative in order to allow for quantification of the CSO activation frequency and volume that would result upon completion of the Phase 2 CSO control improvements currently called for in the City's NPDES permit. It is understood that Phase 2 projects are subject to change after the City performs flow monitoring and recalibration in the future.

Task 1C.3: *HRT/Plant Hydraulic Analysis*

CONSULTANT shall review and evaluate the HGL through the WWTP under the current 16 MGD HRT condition and then under a future 24 MGD scenario to assess potential impacts to the plant.

Task 1D: **Process Analysis and Supplementary Sampling**

The city will collect additional CSO samples to develop diurnal profiles for flow and load constituents over the course of a storm event. Samples will be tested for TP, TSS, CBOD, e-coli, pH, ammonia, and mercury. The CONSULTANT shall receive and analyze this data for the purpose of specifying the HRT facility process requirements.

During the diurnal sampling, the city shall collect additional samples for jar testing of potential coagulation chemicals and dosing rates. The CONSULTANT shall be on site for one full day to coordinate sampling and jar testing.

Costs for third party laboratory analysis are not included in this scope of work.

Task 1E: **Develop and Evaluate Feasible Alternatives**

Alternative development for this project is highly interdependent and will require a series of "component" or micro evaluations (i.e., CSO diversion/screening, HRT layout and siting, disinfection, park restoration, etc.). CONSULTANT shall develop "component" alternatives and evaluate each using a set of agreed upon criteria incorporating Pairwise Comparison methods or similar. The selected "components" will support development of two overall project alternatives. Those two alternatives will then be evaluated, and the selected option advanced for conceptual layout, Class IV cost estimating and BODR development. The findings of the evaluations will be presented at one of the regularly held progress meetings. An Alternative Evaluation Technical Memorandum (TM) will be developed and submitted to document the overall analysis and evaluation. The TM will then become an appendix to the BODR with a corresponding summary provided within the BODR.

Task 1E.1: *CSO Diversion and Screening Alternative Evaluation*

CONSULTANT shall evaluate two (2) alternatives for CSO diversion to the proposed HRT facility including a gravity diversion from the Putnam St. 84-in sewer to a dedicated screening facility and a gravity diversion from the Putnam St. 84-in sewer through the existing WWTP screening building and influent pump station. CSO diversion from the main

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Mills St. outfall conduit with conveyance via a dedication pump station has been removed from consideration.

Task 1E.2: *Disinfection Alternative Evaluation*

CONSULTANT shall evaluate three (3) alternatives for HRT disinfection. Initially UV, Sodium Hypochlorite with Sodium Bisulfate, and an alternate such as Peracetic Acid will be compared. A full evaluation will then be performed that includes an evaluation/expansion of the existing UV facility, compared to a standalone UV system at the HRT facility and will require a standby power evaluation. The focus of this evaluation will change if an alternate disinfection method is selected.

Task 1E.3: *Park and Recreation Alternative Evaluation*

CONSULTANT shall develop three (3) conceptual layouts for park development utilizing a combination of the City owned property to both the south and west of the WWTP. The layouts will take into consideration space required for construction staging of the HRT facility as well as other future infrastructure projects identified by the City. The layouts will be rendered with enhanced graphics suitable for public presentation and review. Content of the recreational concepts will include but is not limited to ballfields, relocated playground equipment and access to the existing bike path. CONSULTANT will be required to engage key stakeholders, including the recreation and planning departments, and possibly participate in public meetings to determine the most efficient and beneficial layout to consolidate the appropriate number of fields to the west of Harrison Street.

Task 1E.4: *HRT Technology Assessment*

CONSULTANT shall evaluate up to four (4) HRT technology alternatives. Preliminarily, these alternatives will be Ballasted Flocculation, Disc Filtration, Compressible Media Filtration and Advanced Primary Filtration. This evaluation may include coordination with HRT technology manufacturers and coordinating up to two (2) site visits to existing installations between the Vendor, Owner and Consultant. The selected technology will be required to treat up to 16-MGD and meet existing NPDES permit limits if blended with the plant effluent. If the HRT discharge is independent of the plant effluent, early coordination with Ohio EPA will be necessary to determine design criteria. HRT technology alternatives will be evaluated based on capital cost, lifecycle cost, site footprint, level of process treatment and flexibility to be used during dry weather flow. Comparisons between specific vendors of the selected HRT technology will be evaluated further in Task 1H.5.

Task 1E.5: *Overall HRT Alternative Evaluation*

CONSULTANT shall evaluate two (2) overall project alternatives that incorporate findings from each of the above “component” evaluations. Other considerations for this evaluation include results of the HRT process selection (influences HRT tankage footprint and siting), operational complexity, plant staff operational preferences, constructability, public impacts

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related to recreational land use, future infrastructure projects, and overall capital and life cycle costs.

Task 1F: **Engineer's Estimate of Probable Construction Cost and Constructability**

The PDR shall include a Class 4 estimate in accordance with the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice 18R-97 for the selected alternative. In addition, Class 5 cost estimates coupled with O&M and Life Cycle costs will be included for the various alternative evaluations conducted under Task 1E.

CONSULTANT will identify the appropriate construction method(s), for the project that will support a construction period of 18 to 24 months. The selected methods will consider the long-term effectiveness, operation and maintenance, and resiliency of each recommended improvement to meet the City's total project budget and schedule needs.

The CONSULTANT shall identify project related issues that could potentially cause schedule delay, such as: equipment with long lead times, lengthy construction requirements, construction methods, equipment installation coordination issues, plant/utility required outages, etc. This analysis will include reviews of the anticipated means and methods for construction, staging area and access requirements, risk mitigation measures, and approaches for construction of the project while keeping existing necessary infrastructure operating during construction. Findings from this analysis will be documented in the PDR.

Task 1G: **Preliminary Design Report (PDR)**

The CONSULTANT shall prepare a PDR for the project that concisely summarizes the activities and critical design decisions necessary to support advancement of the project into detailed design. The primary objective for the PDR is to ensure common understanding between the CONSULTANT and the City regarding the design parameters for the project.

Task 1H: **Coordination with Other Entities**

CONSULTANT is responsible for taking into consideration past, present and future work of other public and private entities potentially affecting the project and coordinating as necessary to complete the work.

The CONSULTANT shall provide support and tracking of coordination with other agencies and utilities. This subtask will provide assistance for early design coordination including, but not limited to, Ohio Environmental Protection Agency, local utilities, City of Sandusky Division of Recreation, and Erie County (upon request). The Consultant shall provide necessary graphics and figures to facilitate project coordination.

Once in detailed design, CONSULTANT's design will include utility relocations to accommodate for minor vertical or horizontal conflicts along the proposed alignments within City rights of way. In cases where the utility relocation must be designed by the utility owner, payment to the utility owner will be made through a Specific Allowance, and the relocation design will be incorporated into the plans as part of CONSULTANT's base scope.

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TASK 2: ADDITIONAL SERVICES (ALLOWANCES)

The City may require additional services from the CONSULTANT for items not specifically included in the aforementioned tasks. These services may consist of, but not be limited to, additional investigative and/or design services.

The funds associated with specific allowances may only be used following written authorization from the City. The following Additional Services may be authorized as part of this PROJECT:

Task 2A: Specific Allowance No. 1: Initiation of Detailed Design

This allowance is intended primarily to be used to compensate CONSULTANT for detailed design services for up to 45 days following submittal of the PDR. Following the submittal of the PDR and authorization from the City, the CONSULTANT shall begin developing the detailed design/bidding services scope of work.

EXHIBIT "A"