



City of North Port

PURCHASING

Office: 941.429.7170

Fax: 941.429.7173

Email: purchasing@northportfl.gov



WORK ASSIGNMENT
CDM Smith, Inc.

CONSULTANT

CONTINUING CONTRACT NO. & TITLE

Continuing Contract 2020-58-05 - Continuing Services for Professional Engineering Services

THIS WORK ASSIGNMENT

WORK ASSIGNMENT #

2024-02

AGENDA ITEM 24-0277

2/27/24 COM MTG

SHORT TITLE

North Port Wastewater Master Plan

DATE SUBMITTED

1/23/24

AMOUNT (LUMP SUM)

\$499,850.00

SCHEDULED COMPLETION

TBD - See attached scope of services

CONTRACT AND BUDGET OVERVIEW FOR FISCAL YEAR 2024

DEPARTMENT

TOTAL OF PREVIOUS ASSIGNMENTS	<u>\$0.00</u>
THIS WORK ASSIGNMENT	<u>\$499,850.00</u>
TOTAL WORK ASSIGNMENTS	<u>\$499,850.00</u>
ACCOUNT NO/PROJECT NO	<u>420-6062-535.31-05</u>

All work assignments require City Manager approval. In presenting this work assignment, it is understood that:

1. All associated supporting documentation and justification for this work assignment is attached hereto.
2. Unless specified herein, work does not involve watercraft, boat piers and/or other activities requiring additional workers compensation endorsements.
3. Contact or involvement with hazardous materials is not anticipated, should hazardous materials be encountered, the City shall be informed.
4. THIS WORK ASSIGNMENT SHALL NOT EXCEED \$500,000 & ANY RESULTING CONSTRUCTION SHALL NOT EXCEED \$4,000,000 PER FLORIDA STATUTE 287.055 AS AMENDED.

SUBMITTED BY:

CONSULTANT

2 February 2024

DATE

APPROVED BY:

DEPARTMENT DIRECTOR

Ginny Duyn

Digitally signed by Ginny Duyn
Date: 2024.02.05 12:13:50 -05'00'

DATE

2-2-24

Lisa Herrmann

Digitally signed by Lisa Herrmann
Date: 2024.02.05 12:58:10 -05'00'

BUDGET ADMINISTRATOR

Kimberly Williams

Digitally signed by Kimberly Williams
Date: 2024.02.06 11:06:38 -05'00'

DATE

PURCHASING

Juliana B. Bellia

Digitally signed by Juliana B. Bellia
Date: 2024.02.09 12:17:29 -05'00'

DATE

FINANCE DIRECTOR

CITY MANAGER

DATE

DATE

EXHIBIT A

WORK ASSIGNMENT NO. 2024-02

CITY OF NORTH PORT WASTEWATER MASTER PLAN

This Work Assignment, when executed, shall be incorporated in and become part of the Agreement for Professional Services between the City of North Port, Florida (CITY), and CDM Smith Inc. (CONSULTANT), dated October 13, 2020, hereafter referred to as the Agreement.

PROJECT BACKGROUND

The CITY owns and operates the Pan American and the Southwest Water Reclamation Facilities, the PAWRF and SWWRF, respectively. The PAWRF has a permitted capacity of 7.0 million gallon per day (MGD) based on a three-month average daily flow (TMADF). The SWWRF has a permitted capacity of 2.0 MGD TMADF. The SWWRF is planned to be expanded by the developer of Wellen Park to 4.0 MGD TMADF. The collection system consists of approximately 185 miles of gravity collection system, 93 miles of force main, 20 miles of reclaimed water main, and 125 lift stations.

The last wastewater master plan update was completed in 2015 by Wade Trim. In 2019, Giffels-Webster Engineers finalized a plan to provide water and wastewater service to the platted lot areas of the CITY that are currently unserved. This plan, known as the Neighborhood Expansion program, is a long-term CITY project has been initiated with the initial phase of the first sewershed nearing design completion. The CITY has completed recent upgrades in 2022 and 2023 to the wastewater system hydraulic model (lift stations that manifold directly into the force main system that discharge into the two (2) existing WRFs) using Innovyze InfoWater software. The CITY is also nearing completion of water and force main extensions along Sumter and Toledo Blade Boulevards. These extensions are expected to increase development in these corridors. The growth associated with these areas, Wellen Park, the Neighborhood Expansion program and other areas of the CITY will be addressed in this Wastewater Master Plan (Project). Additionally, evaluation will be performed for a new WRF in the NE and a 'parallel' force main along the US 41 corridor from roughly the Hillsborough/Cranberry area to the PAWRF.

SCOPE OF SERVICES

The following is a description of the services to be provided under this Work Assignment.

TASK 1: PROJECT MANAGEMENT AND COORDINATION

1.1 Project and Quality Management

Activities performed under this task consist of those general functions required to maintain the Project on schedule, within budget, and that the quality of the work products defined within this Work Assignment is consistent with CONSULTANT's standards and CITY's requirements.

CONSULTANT will maintain a Quality Management System (QMS) on all projects. CONSULTANT will perform a technical specialist review of the deliverables, in accordance with QMS, prior to transmitting it to CITY. Technical Review comments will be addressed prior to moving forward with finalizing deliverables for the CITY's review. CONSULTANT will maintain and submit to the CITY, comment tracking

log on technical memorandums and meeting summaries which include CONSULTANT's responses and intended actions.

The CONSULTANT'S project manager will prepare and submit monthly status reports in the format requested by the CITY'S project manager.

1.2 Kickoff Meeting

CONSULTANT will schedule, plan, and participate in a Project Kickoff Meeting with the CITY's staff. CONSULTANT will prepare the meeting presentation to focus on the project scope (meetings and deliverables), schedule, communications, and data request. The Project Kickoff Meeting will include the CONSULTANT's project manager, project technical lead, and key members of the project engineering team. The anticipated format for this meeting is in-person.

1.3 Data Collection and Review

CONSULTANT will review existing sources of data from past work with the CITY and identify additional data to be requested. CONSULTANT will submit a Data Request to the CITY prior to the Project Kickoff Meeting. CONSULTANT will manage a data log documenting data request and received dates, status of request, and type and quality of information provided.

1.3.1 Regulation and Policy Review

CONSULTANT will review pertinent policies and regulations to identify how existing and future regulations may impact wastewater system policy and operations. A list of regulations to be considered as part of this review include the following:

- Section 1424 – Safe Drinking Water Act – Sole Source Aquifer Protection Program (G1)
- 40 CFR Part 503 Biosolids
- National Pollutant Discharge Elimination System
- CMOM Requirements (40CFR 122.41(E))
- Chapter 62-610 Florida Administrative Code (F.A.C.) – Water Reuse
- Chapter 62-528 F.A.C. – Underground Injection Control
- Chapter 62-640 F.A.C. – Biosolids
- Statewide Stormwater Rule
- Chapter 62-600 F.A.C. – Collection System
- Proposed state regulations including Senate Bill 1058 and Clean Waterways Act (Senate Bill 712)

CONSULTANT will review CITY policies applicable to the wastewater system and identify where improvements can be made for the following:

- Connection and enforcement
- Private laterals
- Industrial Pretreatment
- Privately owned sewer systems

1.3.2 Data Collection and Regulation and Policy Review Meeting

CONSULTANT will discuss the findings of the data review and present findings of the regulatory and policy review to solicit feedback from the CITY. CONSULTANT will incorporate the CITY's feedback on the regulatory and policy review into the Draft Wastewater Master Plan.

TASK 1 Meetings:

- Kickoff Meeting
- Data Collection and Regulation and Policy Review Meeting

TASK 1 Deliverables:

- Monthly Status Reports
- Project Baseline Schedule
- Deliverable Comment Response Logs
- Kickoff Meeting Summary
- Data Collection and Review Meeting Summary
- Data Collection and Regulation and Policy Review Meeting Summary

TASK 2: CONDITION ASSESSMENT

The purpose of this task is to assess the condition of the PAWRF, SWWRF, and 31 of the CITY's 125 lift stations (approximately 25%). This assessment does not include the piping condition of the collection system.

2.1 Setup Scoring Rubric and Mobile Application

CONSULTANT will use proprietary software to collect condition information. CONSULTANT will configure a custom mobile application for our use to assess the PAWRF and SWWRF and 31 of the 125 lift stations asset types identified in the criticality analysis.

CONSULTANT will then develop a condition assessment rubric that details condition criteria and scoring parameters for each asset type using standard pre-loaded criteria and scoring libraries in the tool. These will then be presented to CITY staff for review and subsequent comment via remote teleconference. Upon comments received from the CITY, CONSULTANT will make the appropriate adjustments and proceed with configuring the tool in the mobile environment.

2.2 Perform Condition Assessment

Three CONSULTANT staff members will perform the assessment at the PAWRF and SWWRF over three (3) calendar weeks. A subject matter expert (SME) will accompany field staff the first day at each facility or group of pump stations. CITY to provide one (1) resource to accompany our staff to provide access to and locate the equipment, sharing institutional knowledge of how the asset has performed. CONSULTANT will prioritize field efforts by CITY institutional knowledge of the highest critical assets.

For each week onsite, CONSULTANT will provide a brief plan detailing the locations we intend to visit, proposed activities onsite, the days and times onsite, and safety protocols for CITY review. The plan will be submitted for City review 5 business days prior to arriving onsite.

2.3 SOP and Support

CONSULTANT will develop a standard operating procedure (SOP) detailing the assumptions made and how the CITY can use the tool to perform ongoing condition monitoring if they decide to continue with the assessment. Up to 2 hours of training for CITY staff on setup and use of the tool will also be provided.

TASK 2 Meetings

- Condition assessment field investigations
- SOP training

TASK 2 Deliverables

- Assessed condition for CITY 's assets at the PAWRF and SWWRF plants and 31 lift stations in exportable XLS format.
- Weekly field activity plan for CITY 's review 5 business days prior to that week's field activity.

TASK 3: CUSTOMER AND USAGE PROJECTIONS

CONSULTANT will review and summarize the population and wastewater flow data provided by the CITY and other appropriate sources (CITY Planning Department, University of Florida's Bureau of Economic and Business Research (BEBR) data, and Southwest Florida Water Management District (SWFWMD), customer water usage, and WRF Discharge Monitoring Reports (DMR)) to summarize historic populations, wastewater flows and patterns to develop future wastewater flows for the service area. This data and analysis will be incorporated into a spreadsheet, Wastewater Projection Tool, that can be utilized and updated by the CITY following completion of this Project.

3.1 Historic Population Estimates

CONSULTANT will review data from CITY's planning documents and population estimates from BEBR and SWFWMD for the service area from 2003 -2023 (current).

3.2 Historic Wastewater Flow and Patterns

CONSULTANT will review DMR and WRF operating data to determine historical average day flow (ADF), maximum month flow (MMF), maximum day flow (MDF), and peak hour flow (PHF) ratios for the two WRFs. Daily data will be reviewed for the last 5 years depending on the availability of data and 2-3 years of hourly.

CONSULTANT will review 10 years of metered water sales records, as available, to determine historic wastewater generation rates per capita.

CONSULTANT will calculate the following wastewater flow peaking factor ratios for the last three (3) years of record (2021-2023):

- Maximum Monthly Flow to Average Daily Flow (MMF:ADF)
- Maximum Daily Flow to Maximum Monthly Flow (MDF:MMF)
- Maximum Daily Flow to Average Daily Flow (MDF:ADF)
- Peak Hourly Flow to Maximum Daily Flow (PHF:MDF)
- Peak Hourly Flow to Average Daily Flow (PHF:ADF)

These peaking factors will be used to convert flows from ADF to the desired flow condition.

CONSULTANT will use 2023 5-minute archived SCADA data for WRF influent flow from SCADA and/or other system operational records collected by CITY to calculate diurnal flow patterns for the system under MDF and ADF system flow conditions to be used in the hydraulic model (Task 4.3) and WRF capacity gap assessment through 2045 (Task 3.5).

3.3 Population and Wastewater Flow Projections

The wastewater flow increase within the CITY service area is based on population growth and new development in the Wellen Park area, system expansion via the Neighborhood Expansion Program, planned new development, and expansion of the system to interstate interchanges. CONSULTANT will use information available from CITY's Planning Department, SWFWMD, and BEBR to estimate the wastewater projections from the service area for the following planning years: Existing (2023), 2025, 2030 and 2045. CONSULTANT will work with CITY to compare any differences between the sources of data and the recently completed Water Master Plan to determine population estimates to be used for the wastewater flow projections, this includes separating the growth rates in the various types of growth within the CITY. CONSULTANT will then apply the per capita wastewater flows to calculate the projected wastewater flows for the same planning years.

The historical and projected wastewater flows projections and data utilized to develop the wastewater flow projections will be incorporated into the Wastewater Projection Tool which will be provided to the CITY upon completion of the Wastewater Master Plan.

3.4 Spatial Distribution of System Flows

CONSULTANT will use the flow projections developed in Task 3.3, customer billing records and the population/parcel shapefiles created by SWFWMD to create figures illustrating the spatial allocation of the future flows to existing lift stations or nodes for future development. CONSULTANT will prepare and submit to CITY a system map for the base year of 2023 and each planning year (2025, 2030, and 2045) summarizing the spatial distribution of projected wastewater flow. These figures, once approved by the CITY, will be the basis for allocating projected future wastewater flow to the hydraulic model. The spatial distribution of wastewater flows will be incorporated into the Wastewater Projection Tool.

3.5 WRF Treatment and Disposal Capacity Gap Assessment

A spreadsheet capacity gap assessment of the treatment of the two facilities and reclaimed water storage capacity and disposal as a whole for each planning year (2023, 2025, 2030, and 2045) to evaluate the adequacy of existing facilities and to identify deficiencies in capacity based on capacity needs for treatment and disposal due increases in wastewater flow will be completed. The data and gap assessment will be included in the Wastewater Projection Tool spreadsheet.

3.6 Wastewater Flow Projection Workshop

CONSULTANT will conduct a workshop with the CITY to review the wastewater flow projections and spatial allocation of wastewater flows. The CONSULTANT will also review facility and distribution system performance goals and confirm the split of wastewater flows from Wellen Park and other future growth/developments between CITY's existing, planned, and future WRF (as required).

TASK 3 Meetings:

- Population Projection Estimate Meeting
- Wastewater Flow Projection Workshop

TASK 3 Deliverables:

- Population Projection Estimate Meeting Summary
- Wastewater Flow Projection Workshop Summary

TASK 4: RENEWAL, REPLACEMENT AND CAPITAL IMPROVEMENT PROJECTS

4.1 Renewal and Replacement Planning

CONSULTANT will utilize the condition assessment results to develop a renewal and replacement plan for the WRFs and 31 lift stations assessed. The renewal and replacement plan will be based on condition scores developed in Task 2. The condition scores will be used to develop and prioritize projects.

4.2 Capacity Planning (Hydraulic Modeling)

The current hydraulic model in Innowyze InfoWater is developed to evaluate the CITY'S lift stations that connect directly into the manifolded force main transmission system that discharge into the two existing WRFs. The majority of the hydraulic model has been maintained over the past two years with the exception of the lift stations west of the Myakka River on US 41 that discharge to the existing SWWRF. Most of the model updates are anticipated to be in this general service area.

4.2.1 Existing Conditions Hydraulic Model Update and Calibration

CONSULTANT will collect pump performance curves, wet well dimensions, and level control setpoints for all lift stations with those records available. These records will be incorporated as an appendix to the overall Master Plan Report. The force mains will be reviewed based on record drawings that are available and the City's up-to-date GIS data. Influent flows and diurnal patterns for each lift station in the hydraulic model will be updated based on analysis performed under Task 2 of this scope.

Hydraulic model validation will be performed with assistance from the CITY based upon historical data. CONSULTANT will run up to three model validation scenarios. The scenarios will be developed based upon historical data of the three highest influent flows at the WWTPs over the past three years. The assistance from the CITY will include collecting data from the City's SCADA system data and other available data from instruments installed in the system (i.e. temporary pressure recorders).

The CONSULTANT will develop a drawdown testing plan for the CITY to conduct up to 10 drawdown tests at the CITY's larger lift stations. These tests will be used to evaluate the model performance of the larger lift stations versus real life performance. CONSULTANT will review drawdown plan in a virtual meeting with the CITY.

Model results versus the field data will be presented graphically in a workshop with the CITY for both the validation and drawdown testing activities. Both the CITY and CONSULTANT shall agree on a reasonable level of model accuracy prior to the commencement of the hydraulic capacity analyses. The workshop exhibits and meeting summary will be included as an appendix to the Hydraulic Model and Capacity Gap Assessment Technical Memorandum.

4.2.2 Existing Conditions Hydraulic Capacity Gap Assessment

A hydraulic capacity gap assessment of the existing conditions will be performed to develop recommended capital improvements to address immediate (2025) needs. The recommended improvements will be based on agreed upon level of service standards that will be used as hydraulic model evaluation criteria. The level of service standards will be established and agreed upon between the CITY and CONSULTANT prior to commencement of the hydraulic capacity analyses. The existing conditions hydraulic capacity analysis will consist of four scenarios including:

1. Current maximum day flow extended period simulation with existing infrastructure.
2. Current annual average daily flow extended period simulation with existing infrastructure.
3. Current maximum day flow extended period simulation with existing infrastructure and recommended capital improvements.
4. Current annual average daily flow extended period simulation with existing infrastructure and recommended capital improvements.

The recommended capital improvements identified to address immediate needs will be evaluated further in the future conditions' hydraulic capacity analyses. The final recommended improvements will consider condition of the existing asset, timing of the improvement, and need for additional improvements in the future.

4.2.3 Future Conditions Hydraulic Capacity Gap Assessment

CONSULTANT will perform hydraulic capacity assessments for the planning years (2025, 2030, and 2045) sequentially using the flow projections established in Task 3. Maximum daily flow and annual average daily flow extended period simulations will be performed for each planning year. Scenario iterations will be developed to evaluate alternatives to identify the practical and appropriate recommended improvements that consider availability of treatment capacity, estimated cost of the improvements, and future planning horizons. The scenario iterations will include improvements identified for the SWWRF, a new WRF in the NE corridor in lieu of the improvements identified for the SWWRF, and 'parallel' force main along the US 41 corridor from roughly the Hillsborough/Cranberry area to the PAWRF

The 2025 planning year hydraulic capacity analysis will include the recommended improvements identified for immediate needs as the baseline. The 2030 planning year hydraulic capacity analysis will include the recommended identified for 2025 as its baseline. Similarly, 2045 planning year will use 2030 recommended improvements as its baseline.

4.2.4 Hydraulic Model Update and Capacity Gap Assessment Technical Memorandum and Workshop

CONSULTANT will develop a Draft Hydraulic Model and Capacity Gap Assessment Technical Memorandum summarizing the hydraulic model update, validation, and capacity assessments performed under Sub-Task 3.3. A draft technical memorandum workshop will be conducted with the CITY to review the overall hydraulic evaluation. The CITY to provide comments based on review of the technical memorandum and discussions held in the workshop. A meeting summary will be produced, and CITY comments will be incorporated into a final Hydraulic Model and Capacity Assessment Technical Memorandum signed and sealed by a Florida Licensed Professional Engineer.

4.3 Renewal, Replacement, and Capital Improvement Technical Memorandums

4.3.1 Renewal and Replacement Planning Technical Memorandum

CONSULTANT will prepare and submit a Draft Renewal and Replacement Planning Technical Memorandum to CITY for review and comment. The Renewal and Replacement Planning Technical Memorandum will summarize the Renewal and Replacement planning efforts from Task 4. CONSULTANT will address CITY comments and submit a final Renewal and Replacement Planning Technical Memorandum signed and sealed by a Florida Licensed Professional Engineer.

4.3.2 Capacity Improvement Planning Technical Memorandum

CONSULTANT will prepare and submit a Draft Capital Improvement Planning Technical Memorandum to the CITY for review and comment. The Capital Improvement Planning Technical Memorandum will summarize the wastewater flow projection efforts from Task 3 and the capacity planning efforts from Task 3. CONSULTANT will address CITY comments and submit a final Capital Improvement Planning Technical Memorandum signed and sealed by a Florida Licensed Professional Engineer.

4.4 Capital Improvement Planning

Capital Improvement Planning: Capital improvement planning will consist of all of the improvements identified in Tasks 3 and 4.

4.4.1 Pipe Unit Cost Estimation

CONSULTANT will prepare unit cost (in 2024 dollars) information and assumptions for the variety of types of improvements identified. This unit cost information will be used to develop planning-level opinions of probable project costs for force main and gravity main. The unit cost information will be added to the CIP Spreadsheet Tool to support the calculation and organization of CIP project costs.

4.4.2 Facilities Rehabilitation Cost Estimation

CONSULTANT will use relevant cost data obtained from CITY along with typical industry costs to estimate replacement costs for the assets. This unit cost information will be used to develop planning-level opinions of probable project costs for lift stations and WRF components.

4.4.3 Capital Prioritization and Scheduling

The CONSULTANT will develop a Capital Improvement Plan (CIP) Spreadsheet Tool to help prioritize and manage CITY's Wastewater Master Plan CIP. The tool will include project ID, location, description, project costs, size of proposed infrastructure, criticality, and schedules. Project opinions of probable cost will utilize Class 5 from the AACE International Recommended Practice No. 18R-97 (Cost Estimate Classification System). The CIP Spreadsheet Tool will be used during the CIP Validation and Prioritization Workshop to refine the scheduling of projects with each planning year (2025, 2030 and 2045). The CIP Spreadsheet Tool with the final CIP recommendations will be delivered to CITY at the end of the project for their use in updating and managing the wastewater system CIP following completion of this Wastewater Master Plan.

4.4.4 CIP Validation and Prioritization Workshop

A workshop will be conducted with CITY's staff to review the CIP projects list, opinions of probable costs, and schedule. The justification for each project will be reviewed and discussed, as well as the priority ranking for each project.

TASK 4 Meetings:

- Lift Station Drawdown Plan Review
- Perform Lift Station Drawdowns
- Hydraulic Model Existing Conditions Workshop
- Draft Hydraulic Model Update and Capacity Gap Assessment Technical Memorandum Review
- Draft Renewal and Replacement Planning Technical Memorandum Review
- Draft Capacity Improvement Planning Technical Memorandum Review

TASK 4 Deliverables:

- Lift Station Drawdown Plan
- Hydraulic Model Existing Conditions Workshop Summary
- Draft Hydraulic Model Update and Capacity Gap Assessment Technical Memorandum Review Meeting Summary
- Draft Renewal and Replacement Planning Technical Memorandum Review Meeting Summary
- Draft Capacity Improvement Planning Technical Memorandum Review Meeting Summary
- Draft and Final Hydraulic Model Update and Capacity Gap Assessment Technical Memorandum
- Draft and Final Renewal and Replacement Planning Technical Memorandum
- Draft and Final Capacity Improvement Planning Technical Memorandum

TASK 5: SECURITY

5.1 Physical Security

CONSULTANT will evaluate the existing physical security of CITY's critical wastewater assets, which are the PAWRF, SWWRF, and 125 lift stations. The analysis will include site visits to physically inspect the facilities. The site visits will include up to 1 day for visiting the plants and up to 1 day visiting representative lift stations. An additional visit will occur at night to inspect CCTV operation (if applicable) and lighting levels. This effort will also include interviews with staff and local/regional law enforcement to review response plans, procedures, personnel behavior, etc. The CONSULTANT will make physical security recommendations for improvements in the Subtask 4.3 Security Technical Memorandum.

5.2 Cybersecurity

CONSULTANT will conduct interviews with CITY Wastewater staff and CITY Information Technology staff to assess CITY's Information Technology (IT) vulnerability and Operation Technology (OT) vulnerability. The assessment will utilize the AWWA Cybersecurity Risk Management Tool which provides guidance based on NIST standards. Both the IT and OT assessments will be a desktop assessment only conducted remotely (e.g., Microsoft Teams), no penetration tests of either the IT or OT systems is included in this task. CONSULTANT will make security recommendations for improvements in the Subtask 4.3 Security Technical Memorandum.

- Information Technology (IT) - Financial Systems, Security Cameras
- Operation Technology (OT) – SCADA system and Data Historian, physical and cyber security controls and infrastructure

5.3 Security Technical Memorandum

CONSULTANT will prepare and submit a Draft Security Analysis Technical Memorandum to CITY for review and comment. CONSULTANT will address CITY comments and submit a final Security Analysis Technical Memorandum.

The Security section of the Wastewater Master Plan shall be treated as sensitive information/data and shall not be transmitted via email with any final report items on this portion separated from the final report.

TASK 5 Meetings:

- Security Kickoff Meeting (virtual)
- Onsite Visits (total of 3 days, 2 day and 1 evening)
- Cybersecurity Coordination Meeting (virtual)
- Personnel and Local Law Enforcement Interviews (virtual)

TASK 5 Deliverables:

- Draft and Final Wastewater System Security Technical Memorandum

TASK 6: DRAFT AND FINAL REPORT

6.1 Draft Master Plan Report

CONSULTANT will document the Wastewater Master Plan in a draft report. The report will incorporate the final versions of the following technical memoranda prepared in Tasks 3 and 4.

The report will describe the evaluations performed and the resulting recommendations. The report will provide recommendations for system and facility improvements for 2025 and 2030; and also define longer term improvements recommended through 2045. System maps and figures to support the recommendations and summarize the proposed improvements will be provided. One electronic copy of the draft Wastewater Master Plan Report will be provided. The updated hydraulic model and CIP planning tools (CIP Spreadsheet Tool, Wastewater Projection Tool, Hydraulic Model) will also be provided with the draft report.

6.2 Draft Master Plan Report Review Workshop

CONSULTANT will facilitate a workshop and PowerPoint presentation with CITY staff to present the draft report and receive comments.

6.3 Final Master Plan Report

CONSULTANT will incorporate comments from the Draft Master Plan Report Review Workshop and update the Wastewater Master Plan Report to address these comments. Two (2) hard copies, signed and sealed by a Florida Licensed Professional Engineer, and one electronic copy with electronic seal and signature of the final report and CIP planning tools.

6.4 Wastewater Master Plan Interactive Platform

CONSULTANT will develop an interactive digital platform that uses a GIS-based digital twin of the wastewater system assets. The digital twin will show the assets' locations and attributes, such as dimension, risk, and replacement cost. The purpose of the platform is to enable the CITY to examine the system and associated asset management analytics. CONSULTANT will create this platform in collaboration with the CITY'S existing online GIS.

6.5 City Commission Master Plan Report Presentation

CONSULTANT will develop a Draft Wastewater Master Plan PowerPoint presentation and review with CITY staff. The CITY's comments will be incorporated, and a Final Wastewater Master Plan PowerPoint will be submitted. CONSULTANT will present the final PowerPoint with CITY staff and request approval from City Council.

TASK 6 Meetings:

- Draft and Final Wastewater Master Plan Report Review Workshop
- Draft Wastewater Master Plan PowerPoint Presentation Review Meeting
- Wastewater Master Plan PowerPoint Presentation to City Council

TASK 6 Deliverables:

- Draft and Final Wastewater Master Plan Report
- CIP Spreadsheet Tool
- Wastewater Projection Tool
- Hydraulic Model
- Draft Wastewater Master Plan Report Review Workshop Summary
- Wastewater Master Plan Interactive Platform
- Draft and Final Wastewater Master Plan PowerPoint Presentation

ASSUMPTIONS

- The CITY will provide CDM Smith with an export of assets from its existing CMMS / EAMS.
- The CITY will ensure CDM Smith has access to the agreed upon areas prior to the assessment commencing.
- The CITY will provide at least one maintenance or operations resource to accompany CDM Smith staff member for at least at the beginning and the end of the day.
- Condition assessment assumes visual assessment only. Level of effort and equipment needed for equipment to perform electrical inspections can be negotiated on a time and materials basis.
- During any field work including lift station drawdowns and field investigations the CONSULTANT will not enter confined spaces, climb ladders or open any electrical panels. Also, this does not include destructive or otherwise invasive testing.
- Customer water billing records are geocoded to actual location of meter and are in a shapefile or geodatabase.
- Cybersecurity documentation exists, has been updated within the last calendar year, and can be provided to CONSULTANT for review.
- AWWA Cybersecurity Risk Management Tool utilized to determine NIST recommendations.

- All interviews, workshops, review meetings, etc. to be conducted remotely.
- CITY maintenance, operations, and engineering staff will avail themselves to participate in all required workshops.
- Access to SCADA screenshots and/or Process and Instrumentation diagrams to facilitate the development of a functional hierarchy.

TIME OF COMPLETION/SCHEDULE

The Project will be enrolled by the CONSULTANT within 2 weeks of the receipt of authorization/ notice-to-proceed (NTP) from the CITY. The Project will be performed within 9 months of receiving all data requested from the CITY.

COMPENSATION AND PAYMENT

CONSULTANT's compensation for engineering services described herein will be in accordance with the Agreement and in accordance with **Exhibit A – CONSULTANT'S FEE ESTIMATE** of this proposed scope of services.

Each invoice will be accompanied by a project status update for the CITY project manager. The total compensation for this scope of work, Tasks 1 through 6, are to be performed on a fixed price basis with a fee of \$499,850.00

Both the CITY and the CONSULTANT recognize that the services described above represent an estimated level of effort at this time. Back up for our fee estimate is provided in Exhibit A – CONSULTANT'S FEE ESTIMATE. The CONSULTANT shall not be obligated to incur costs, and the CITY is not obligated to pay fees in excess of the fee set established in the scope of work, without written authorization signed by both the CITY and the CONSULTANT. The CONSULTANT will submit monthly invoices for work performed during the project with a project status report. The CONSULTANT reserves the right to utilize hours and staff between tasks and labor classifications as required to complete the overall project as long as the total value is not exceeded without prior authorization from the CITY.

ATTACHMENT B – FEE SCHEDULE

HOURLY BILLING RATE SCHEDULE FOR CDM SMITH AND SUBCONSULTANTS

CDM SMITH	
Labor Category	Hourly Rate
Officer/Associate	\$285.00
Principal/Sr. Specialist	\$255.00
Sr. Project Manager/ Sr. Engineer	\$235.00
Specialist	\$215.00
Sr. Professional/In-House Consultant	\$190.00
Professional	\$160.00
Sr. Field Services /Jr. Professional	\$145.00
Project Controls /Contract Administrator	\$135.00
Field Services/Staff Support/ Engineering Intern	\$115.00
Administrative Support	\$95.00
YPC CONSULTING GROUP, P.L.	
Labor Category	Hourly Rate
Sr. Geotechnical Engineer	\$125.00
Project Geotechnical Engineer	\$100.00
CADD	\$50.00
Clerical	\$50.00
AIM Engineering & Surveying, Inc.	
Labor Category	Hourly Rate
Surveyor/Mapper	\$140.00
CADD Technician	\$86.00
Survey Crew - 2 man	\$140.00
Survey Crew - 3 man	\$161.00
Survey Crew - 4 man	\$189.00

2024-02 RLI Evaluation Form

Project:	Wastewater Master Plan
RLI No.:	2024-02
Date of Ranking:	10/30/2023

Kimley Horn

<i>Evaluation Criteria</i>	Value	MA	JF	SB	Score
Understanding of Project/Deliverables	0-8	6	6	7	19
Expertise/Qualifications of Personnel	0-8	7	7	8	22
Availability of Personnel/Timeline	0-5	5	5	3	13
Evaluations/Experience on NPU projects	0-5	5	5	4	14
Proposed Cost Saving Measures	0-3	3	3	2	8
References/Required Forms	0-1	1	1	1	3
Total		27	27	25	79

CHA Consulting

<i>Evaluation Criteria</i>	Value	MA	JF	SB	Score
Understanding of Project/Deliverables	0-8	8	6	5	19
Expertise/Qualifications of Personnel	0-8	7	8	6	21
Availability of Personnel/Timeline	0-5	5	4	3	12
Evaluations/Experience on NPU projects	0-5	5	4	3	12
Proposed Cost Saving Measures	0-3	2	3	1	6
References/Required Forms	0-1	1	1	1	3
Total		28	26	19	73

CDM Smith

<i>Evaluation Criteria</i>	Value	MA	JF	SB	Score
Understanding of Project/Deliverables	0-8	8	8	8	24
Expertise/Qualifications of Personnel	0-8	8	8	8	24
Availability of Personnel/Timeline	0-5	5	5	5	15
Evaluations/Experience on NPU projects	0-5	5	5	5	15
Proposed Cost Saving Measures	0-3	3	3	3	9
References/Required Forms	0-1	1	1	1	3
Total		30	30	30	90

Black and Veatch

<i>Evaluation Criteria</i>	Value	MA	JF	SB	Score
Understanding of Project/Deliverables	0-8	8	8	8	24
Expertise/Qualifications of Personnel	0-8	8	8	8	24
Availability of Personnel/Timeline	0-5	5	4	4	13
Evaluations/Experience on NPU projects	0-5	5	3	4	12
Proposed Cost Saving Measures	0-3	2	3	2	7
References/Required Forms	0-1	1	1	1	3
Total		29	27	27	83

Non-submittal: Ardurra Group, Inc.

CITY OF NORTH PORT WASTEWATER MASTER PLAN

City of North Port Utilities Department
6644 West Price Boulevard, North Port, FL 34291

RE: Request for Letters of Interest No. 2024-02 City of North Port Wastewater Master Plan

The City of North Port Utilities Department’s (City) mission is to provide their customers quality water and sewer services in a safe, healthy, and cost-effective manner, and to accommodate the continuing growth of the community through the planned orderly expansion of their utility systems. In support of this mission, the City is seeking a consultant partner to update the current wastewater master plan.

CDM Smith Inc. (CDM Smith) offers the City a team with deep familiarity of your wastewater system and highly qualified specialists that will deliver local, personally responsive service to meet your goals. For this project to be successful, we understand the selected team must work closely with the City to complete project assignments. We offer the following:

Local-project leadership team. Most of our key staff are local including key leadership staff—**Justin Saarinen, Sam Nehme, Marc Stonehouse, Isaac Holowell,** and **David MacNevin.** This will make a difference in our attention to detail and responsiveness throughout the project.

Hydraulic modeling experience. We developed the City’s wastewater hydraulic model in 2018 and provided model updates in 2022 and 2023, including future flow analysis. The City has trusted CDM Smith to continually update the model to support infrastructure decision making.

Innovative approach to asset management. We have decades of experience developing asset management strategies for similar communities/utilities. We believe we are peerless when it comes to integrating maintenance and reliability best practices into the strategic elements of asset management. Our team of ISO-55000 certificate holders and Certified Maintenance and Reliability Professionals will work with you to build on your current program’s progress.

CDM Smith has developed a team specifically to meet the request of the City with services detailed in the RLI. We look forward to the opportunity to serve the City in a collaborative manner and stand committed to providing you with the competent professional services upon which our solid reputation is built.

Sincerely,



Justin Saarinen, GISP | Client Service Leader | CDM Smith Inc.

1. Project Understanding and Project Plan

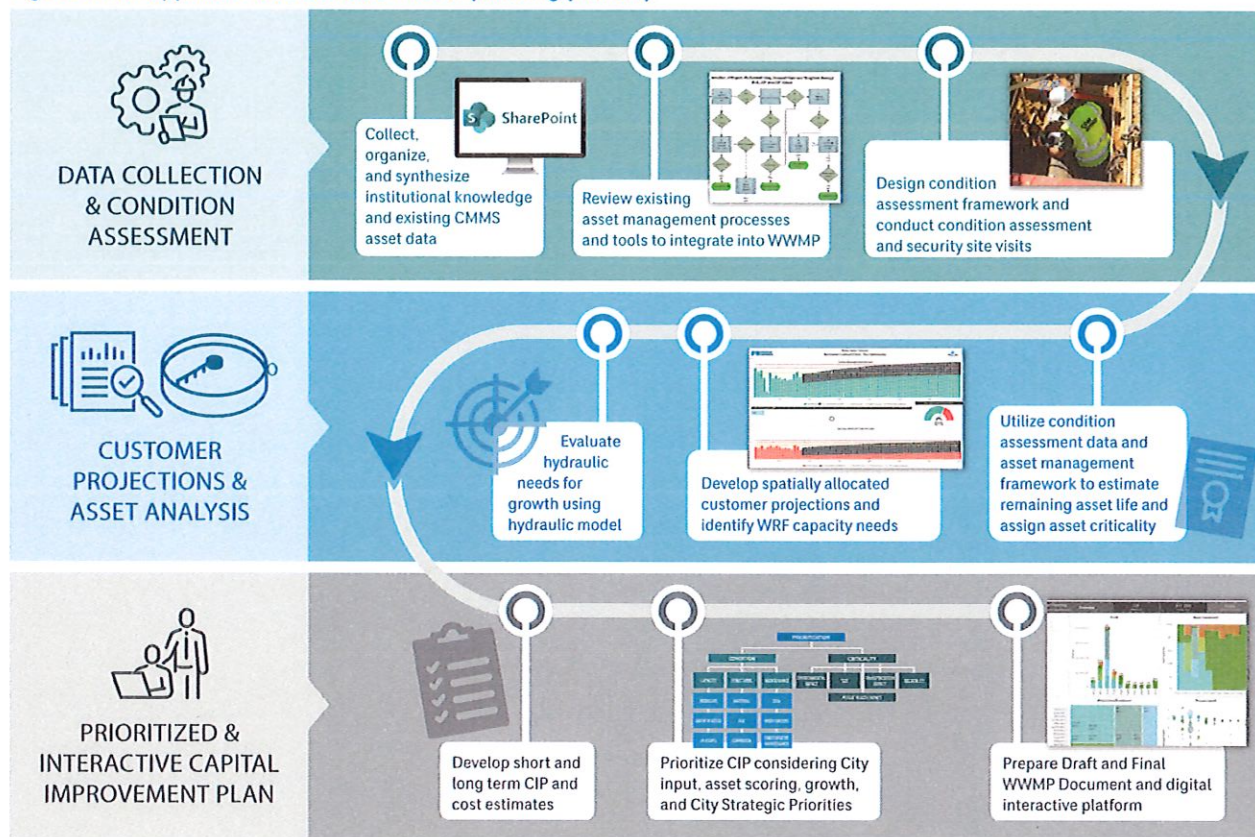
Project Understanding

North Port is one of the fastest growing cities in the country. This is attributed to the large master planned community of Wellen Park, affordable housing within the city relative to surrounding areas, and a desirable quality of life for citizens. To stay ahead of this growth and to maintain an aging wastewater system, the City must maintain a robust wastewater master plan that guides the next 10 years by providing a capital improvement plan (CIP) to grow and maintain the City’s wastewater infrastructure. In addition to addressing growth and infrastructure maintenance, the City has initiated the Neighborhood Expansion Program which brings sewer service to platted areas of the City currently on septic tanks. This Program aligns with the City’s Strategic Plan, which includes priorities for an expanded affordable and efficient wastewater system and environmental resiliency in its facilities’ design and operation. We understand the critical role of the wastewater master plan to align the utility department with the City’s Strategic Plan. This is especially important for utilizing a transparent data-driven process to prioritize improvements to the City’s facilities and invest in infrastructure to minimize lifecycle costs and maximize service delivery. Our project plan presents how our team will develop an interactive data-driven wastewater master plan to meet the City’s priorities for long-term sustainable growth of the City and its wastewater infrastructure.

Contents

Project Understanding and Approach	1
Relevant Expertise/Qualifications of Personnel ..	4
Availability of Staff and Ability to Meet Project Schedule ..	4
Cost Saving Measures	5
Schedule	5
References	5
Required Forms	

Figure 1. Our approach to wastewater master planning (WWMP).



Project Plan

Task 1- Project Management and Coordination

Sam Nehme, as your project manager will develop a Project Management Plan (PMP) which includes communication protocols. Our project management approach is centered on three core principles:

- **Conduct open and thorough communications** at all levels with the City including the detailed Project Execution Plan (PxP), project status reports, project status meetings, and day-to-day communications between technical staff
- **Develop detailed scopes of work** (with the City), including approaches, deliverables, and assumptions so everyone knows what is expected and when. This eliminates gaps in performing activities and meeting objectives. Monitoring these items throughout the project controls cost and optimizes the schedule
- **Perform all quality control activities**—this is a shared commitment; everyone on the CDM Smith team will actively participate in these activities on each task and deliverable

These core principles will be carried out by Sam Nehme through the procedures we use to promote good communication, control cost, optimize schedule, and provide quality deliverables. The PxP, coupled with monthly project status reports and bi-weekly project status meetings, keep the City up-to-date on all activities, deliverables, upcoming events, and any issues of concern.

Our project management approach is aligned closely with Project Management Institute (PMI) standards. Our team understands that the key to delivering a successful project is exceptional project management, and part of that is a detailed and well-planned PxP that accounts for key project milestones, while being easy to maintain and update.

As Principal, Justin Saarinen provides the City with our corporate assurance that services under this contract will be a key priority for our firm until all work is successfully completed. He will conduct detailed audits periodically to confirm that work is on schedule and that the budget is on track.

Task 2 – Condition Assessment

We will develop building blocks for an effective condition assessment program for the Pan American Water Resource Facility (PAWRF), Southwest Water Reclamation Facility (SWWRF), and the City’s 125 lift stations. Our philosophy is that condition assessment must draw on the principles of Reliability-Centered-Maintenance (RCM) if it is to provide meaningful value. We will develop assessment criteria informed by equipment failure modes and a scoring rubric curated by asset type. In alignment with the City’s Priorities of preventative and proactive maintenance, we also believe that following our baseline assessment

efforts, assessment should be incorporated into day-to-day maintenance management. We will provide the City with a Standard Operating Procedure (SOP), including assessment frequencies for configuration into your CMMS— whether it is Lucidity or Lumin. We will adopt a non-invasive approach for mechanical equipment and provide advanced assessment such as vibration analysis if needed. Our electrical engineers can employ thermography, amp probes, and multi-point temperature recorders for electrical equipment.

We have full access to mobile condition assessment tools, including ArcGIS Field Maps, and advanced tools that feature pre-loaded standard condition criteria and equipment failure mode libraries for all vertical wastewater asset types. We can assist you in exporting the results for upload into your CMMS. Additional deliverables we can provide the City include:

- Condition assessment criteria and rubric for plant and pump station mechanical, electrical, and building system assets
- Condition assessment in Excel format
- SOP to guide future condition assessments

Task 3 – Customer and Usage Projections

We understand the City is experiencing growth citywide and our team is uniquely qualified to develop customer and usage projections for the wastewater system. We will utilize existing trusted datasets, such as BEBR, SWFWMD, and the City’s land-use and existing customer usage data to develop a customized projection tool that the City can continue to use and refine beyond the completion of this project. The tool will customize these datasets to establish residential and commercial usage and projections. It is user friendly with instructions and explanations so that the City can update it each year to see how projections are tracking.

The projection tool will spatially allocate projected wastewater flows and will consider Wellen Park, the Neighborhood Expansion Program, planned new development, and future development. The projections will be on a parcel, pump station service area, and water reclamation facility basis to aid in loading the hydraulic model at lift stations and identifying potential WRF capacity expansions. We know through our work on the wastewater hydraulic model that the future development in the northeast portion of the City may require the construction of a new WRF. Through our work on the hydraulic modeling of the Price Boulevard force main, we understand the potential system impacts of development in the northeast portion of the City. We will utilize our projection tool along with hydraulic modeling to identify when and at what capacity a new WRF is needed and the hydraulic improvements in the collection system.

Task 4 – Renewal, Replacement, and Capital Improvement Projects

Identifying an asset’s remaining useful life and risk of failure is a vital step to directing maintenance and capital renewal and replacement activities. To accomplish this, we will perform a criticality analysis using condition assessment efforts to target assets that are truly vital to the City’s business objectives and most in need of renewal or replacement.

We will use a scoring methodology that will classify the criticality of each asset. For each of the assets identified in the criticality analysis, we can develop capital interventions based on risk results (e.g. capital redesign or replacement vs. rehabilitation) and maintenance interventions (e.g. calendar inspections, condition monitoring, run-to-fail) based on criticality results. We then adjust the results of the criticality analysis by appropriate mitigations, which can be used to calculate a risk reduction to cost score, thereby normalizing cost invested to risk reduced (see **Figure 2**).

Our team will develop projects to address the City’s renewal, replacement, and capital planning needs for the next 10 years by combining the results of the criticality analysis and the customer projection and hydraulic analysis. We will then prioritize the projects based on criticality, current treatment capability, timing of growth, and City input and strategic priorities. The projects will include a description, engineers’ opinion of probable cost, and planning period.

Task 5 – Security

Cybersecurity affects all markets and facilities. Your assets need protection from cyber threats such as computer viruses and data breaches, and each market has different requirements to achieve a cybersecure system or facility. Our team can conduct cybersecurity and network performance testing on mission-critical Industrial Control System (ICS) networks in a production environment supported by proven techniques and software tools to mitigate the potential of network failure. These assessments identify exposures within the existing system’s physical and logical configuration and locate potential disruptions that may be introduced through new technology implementations. Our experts will assist the City with the development of cybersecurity policies and plans required to conform with the latest cybersecurity best practices. This ranges from a simple security policy to detailed contingency, disaster recovery, and incident response plans. Our policies and procedures will give clear direction to employees, staff, and others who use the utility network and support a security program that focuses on optimizing confidentiality, integrity, and availability. Policies ensure employees and contractors are required to complete security training upon hire or before working on the utility network, and procedures are put in place for reoccurring security training on an annual basis covering the security requirements that are reflected in established policies.

Figure 2. We will use a scoring methodology that will classify the criticality of each asset. For each of the assets identified in the criticality analysis, we can develop capital interventions based on risk results.

System Name	Scenario Risk	Scenario Criticality	System Asset Driving Results	Asset Issue	Capital Approach	Ops Inspection/Monitoring Strategy
Pump Station A	4.01	2.69	RTU	RTU Loss	Cap REPL/RED ES.	Calendar Insp
Pump Station B	3.90	2.34	Seal, Failed	Seal Fail	Cap REFURB	RTF/at will

Task 6 – Draft and Final Report

We will develop a draft and final WWMP document with an accompanying digital platform that is interactive and updateable (see Figure 3). CDM Smith designs client GIS databases so that they tightly integrate with key business systems, such as asset management, maintenance management, finance, SCADA, modeling and planning systems. Through this integration, the City will be able to view trends (e.g. infrastructure failing in key locations), complete analysis (determine where and how capital improvement dollars should be spent), and more effectively manage projects and make decisions.



Figure 3. We will provide an interactive digital platform.

The interactive digital platform that will accompany the master plan document will be formed around a GIS-based digital twin of all the known assets modeled in the wastewater system, including their locations and attributes such as dimension, condition, and improvement cost. The City will be able to explore the system and identify areas at scale for essential analytics such as R&R status, capital improvement costs, and phased completion.

CDM Smith will develop this digital platform as an extension of the City’s existing online GIS or as a Trinnex waterCAST application that is subscription based.

2. Relevant Expertise and Qualifications of Personnel

CDM Smith has the depth, experience, and local knowledge to efficiently and effectively provide the services specified in the RLI. The organizational chart on the right summarizes our proposed team for this project.

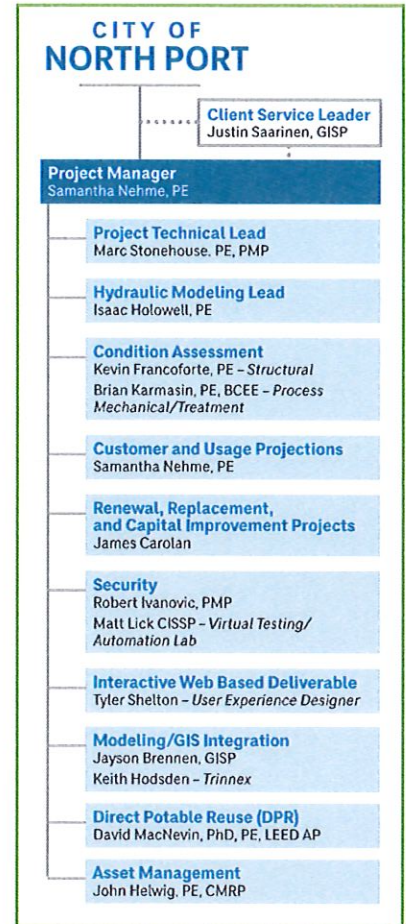
Experienced Delivery Team

Day-to-day project management will be led by **Project Manager, Sam Nehme, PE**. Sam has 12 years of experience in utility planning in Southwest Florida with the focus of her career being in Sarasota County. She has worked on wastewater master plans and effluent management plans for Sarasota County Public Utilities and the City of Venice Utilities, as well as master planned wastewater infrastructure for Lakewood Ranch in Manatee County, Waterside in Sarasota County, and Wellen Park in the City of North Port. This experience makes her uniquely qualified to deliver an exceptional Wastewater Master Plan for the City.

Project Technical Lead, Marc Stonehouse, PE, PMP, is experienced in planning, analysis, hydraulic modeling, design and construction services for water, wastewater, stormwater, and reclaimed water utilities. His extensive local experience spanning over a decade and focused on all aspects of water and water resources engineering will directly benefit the City.

Hydraulic Modeling Lead, Isaac Holowell, PE, is well known to the City through his work on the existing hydraulic model. He has 10 years of experience specializing in hydraulic modeling for both pumping systems and plant hydraulics. Isaac also has experience in utilities master planning, pump station design, sanitary sewer design, pressure pipe design, and construction management.

Direct Potable Reuse (DPR) Lead, David MacNevin, PhD, PE, LEED AP, is well known to the City through his work on the Direct Potable Reuse Feasibility Study. He is a nationally recognized expert in advanced water treatment, potable reuse, and distribution system water quality. He has 17 years of experience in the testing, design, and implementation of drinking water and advanced water reuse treatment systems.



3. Availability of Staff and Ability to Meet Project Schedule

We considered current and future workloads when selecting our team. The staff identified were selected specifically for their relevant experience, availability, and ability to meet project schedule. As the project manager, one of Sam Nehme’s primary responsibilities will be to efficiently leverage staff and maintain adherence to schedule requirements. She will monitor project status on a weekly basis, proactively identifying variances to schedule to facilitate early initiation of corrective action measures.

Team Member	Availability
Samantha Nehme	50%
Justin Saarinen	50%
Marc Stonehouse	50%
Isaac Holowell	50%
Carl Frizzell	40%
Kevin Francoforte	30%
Brian Karmasin	30%
James Carolan	40%

Team Member	Availability
Rob Ivanovic	30%
Matt Lick	50%
Tyler Shelton	60%
Jayson Brennen	50%
Keith Hodsden	50%
John Helwig	30%
David MacNevin	30%

4. Cost Saving Measures

CDM Smith will create cost savings for the City on this project as follows:

- We built the existing wastewater hydraulic model and will make a seamless transition from our current modeling efforts to the wastewater master plan hydraulic modeling. We have no learning curve on updating the hydraulic model and obtaining results because we are already well acquainted with the model scenarios and settings.
- Perform condition assessment and security assessment site visits in tandem to be efficient with the City's staff time. Our team will use tools such as Survey123 to enter field data reducing the amount of time transcribing field notes and data.
- Provide agendas before meetings with detailed time allotment so that meetings are efficient and productive. Our team will be clear on the objective of each meeting so the City can identify which staff are needed.
- In-house disciplines across major disciplines with Florida specific experience. Key management staff are located in Sarasota and Lee County, and the majority of our technical leads are within 100 miles of the City, saving unnecessary travel costs.

5. Schedule

The CDM Smith team will deliver the wastewater master plan within nine months. Prior to kickoff, we will provide a data request list to start fast and to have an informed discussion during the kickoff meeting. We also understand the City's budgeting process and will develop a draft capital improvement plan for the first five-year planning period in late spring to help the City confirm capital costs prior to the budgeting approval process. A preliminary schedule is provided below.

Task/Deliverable	2023				2024				
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Kickoff and Progress Meetings	★	★	★	★	★				
Data Collection									
Condition Assessment									
Customer and Usage Projections									
Hydraulic Modeling									
R&R and CIP									
Security									
Capital Improvement Plan									
Draft and Final Report									

★ Kickoff Meeting
 ★ Meeting
 ▲ Draft Deliverable

6. References

At CDM Smith, we believe there is no better measure of project performance than our client's perspectives. We encourage the City to learn more about our team and our numerous wastewater master planning projects throughout Florida. Below are three contact references. **Each project was successfully completed on budget and ahead of schedule.**

Cape Coral Wastewater Master Plan

Cape Coral, FL

Duration: 2014-2016; 2020-Ongoing

Relevance:

- Wastewater Master Plans
- Hydraulic modeling
- Condition Assessment
- Cost-effective transmission system
- Value engineering review
- Conceptual layout for new force mains and pump stations
- Conceptual level opinion of probable construction costs
- Capital Improvement Plan (CIP)
- Developed a 10-year business plan
- SRF funding

Key Staff: Isaac Holowell, Marc Stonehouse, James Carolan

Contact

William H. (Bill) Sperry, PE
 Engineer; City of Cape Coral, FL
 Phone: (239) 574-0729
 E-mail: wsperry@capecoral.net

Wastewater Hydraulic Model, Model Update, and Future Flow Analysis

North Port, FL

Duration: Nov 2018–Jun 2018; Sept 2022–Feb 2023; March 2023–Ongoing

Relevance:

- Developed extended period simulation wastewater hydraulic model
- Verified the model to existing conditions using SCADA and field data
- Updated model demands and diurnal pattern for existing conditions
- Develop customer usage projections
- Update hydraulic model for future wastewater flow scenarios
- Develop and run multiple hydraulic model scenarios to analyze infrastructure improvement options
- Size collection system infrastructure

Key Staff: Sam Nehme, Isaac Holowell

Contact

Michael Acosta, PE; Utilities Engineering Manager; City of North Port, FL
 Phone: (941) 240-8013
 E-mail: macosta@northportfl.gov

CSA 8 Integrated Utilities Master Plan

Palm Beach County, FL

Duration: 2021-2022

Relevance:

- Integrated Utilities Master Plan
- Wastewater treatment
- Condition Assessment
- Reclaimed water
- Collection and distribution system
- Data collection and review
- Capital Improvement Plan (CIP)

Key Staff: Marc Stonehouse, Isaac Holowell, James Carolan

Contact:

Krystin Berntsen, PE, PMP
 Deputy Director; Palm Beach County Water Utilities Department
 Phone: (561) 493-6027
 E-mail: kberntsen@pbcwater.com

CONFLICT OF INTEREST FORM

F.S. §112.313 places limitations on public officers (including advisory board members) and employees' ability to contract with the City either directly or indirectly. Therefore, please indicate if the following applies:

PART I.

- I am an employee, public officer or advisory board member of the City
_____ (List Position or Board)
- I am the spouse or child of an employee, public officer or advisory board member of the City
Name: _____
- An employee, public officer or advisory board member of the City, or their spouse or child, is an officer, partner, director, or proprietor of Respondent or has a material interest in Respondent. "Material interest" means direct or indirect ownership of more than 5 percent of the total assets or capital stock of any business entity. For the purposes of [§112.313], indirect ownership does not include ownership by a spouse or minor child.
Name: _____
- Respondent employs or contracts with an employee, public officer or advisory board member of the City
Name: _____
- None of The Above

PART II:

Are you going to request an advisory board member waiver?

- I will request an advisory board member waiver under §112.313(12)
- I will NOT request an advisory board member waiver under §112.313(12)
- N/A

The City shall review any relationships which may be prohibited under the Florida Ethics Code and will disqualify any vendors whose conflicts are not waived or exempt.

BUSINESS NAME: CDM Smith Inc.

NAME(PERSON AUTHORIZED TO BIND COMPANY): Justin Saarinen, GISP

SIGNATURE:  _____

THIS PAGE MUST BE SUBMITTED WITH LETTER OF INTEREST

DISCLOSURE FORM FOR CONSULTANT/ENGINEER/ARCHITECT

Please select only one of the following three options:

Print Form

Clear All Fields

Our firm has no actual, potential, or reasonably perceived, **financial*** or **other interest**** in the outcome of the project.

Our firm has a potential or reasonably perceived **financial*** or **other interest**** in the outcome of the project as described here:

Our firm proposes to mitigate the potential or perceived conflict according to the following plan:

Our firm has an actual **financial*** or **other interest**** in the outcome of the project as described here:

***What does "financial interest" mean?**

If your firm, or employee(s) of your firm working on the project (or a member of the employee's household), will/may be perceived to receive or lose private income depending on the government business choices based on your firm's findings and recommendations, this must be listed as a financial interest. An example would be ownership in physical assets affected by the government business choices related to this project. The possibility of contracting for further consulting services is not included in this definition and is not prohibited.

****What does "other interest" mean?**

If your firm, or employee(s) of your firm working on the project (or a member of the employee's household), will/may be perceived to have political, legal or any other interests that will affect what goes into your firm's findings and recommendations, or will be/may be perceived to be affected by the government business choices related to this project, this must be listed as other interest.

BUSINESS NAME: CDM Smith Inc.

NAME (PERSON AUTHORIZED TO BIND THE COMPANY): Justin Saarinen, GISP

SIGNATURE:



DATE: September 26, 2023

Scrutinized Company Certification Form

Company Name: <u>CDM Smith Inc.</u>			
Authorized Representative Name and Title: <u>Justin Saarinen, GISP Client Service Leader</u>			
Address: <u>5965 Cattlemen Lane</u>	City: <u>Sarasota</u>	State: <u>FL</u>	ZIP: <u>34232</u>
Phone Number: <u>(239) 938-9600</u>	Email Address: <u>saarinenja@cdmsmith.com</u>		

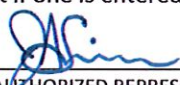
A company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with the City of North Port for goods or services of any amount if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Florida Statutes, section 215.4725, or is engaged in a boycott of Israel.

A company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with the City of North Port for goods or services of \$1 million or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Florida Statutes, section 215.473, or with companies engaged in business operations in Cuba or Syria.

CHOOSE ONE OF THE FOLLOWING

- This bid, proposal, contract or contract renewal is for goods or services of less than \$1 million. As the person authorized to sign on behalf of the above-named company, and as required by Florida Statutes, section 287.135(5), I hereby certify that the above-named company is not participating in a boycott of Israel.

- This bid, proposal, contract or contract renewal is for goods or services of \$1 million or more. As the person authorized to sign on behalf of the above-named company, and as required by Florida Statutes, section 287.135(5), I hereby certify that the above-named company is not participating in a boycott of Israel, is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and it does not have business operations in Cuba or Syria.

I understand that pursuant to Florida Statutes, section 287.135, the submission of a false certification may result in the termination of the contract if one is entered into, and may subject the above-named company to civil penalties, attorney's fees and costs.	
Certified By: 	_____
AUTHORIZED REPRESENTATIVE SIGNATURE	
Print Name and Title: <u>Justin Saarinen, GISP Client Service Leader</u>	
Date Certified: <u>September 26, 2023</u>	

Solicitation/Contract/PO Number (Completed by Purchasing): _____

VENDOR'S CERTIFICATION FOR E-VERIFY SYSTEM

The undersigned Vendor/Consultant/Contractor (Vendor), certifies the following:

1. Vendor is a person or entity that has entered into or is attempting to enter into a contract with the City of North Port (City) to provide labor, supplies, or services to the City in exchange for salary, wages or other remuneration.
2. Vendor has registered with and will use the E-Verify System of the United States Department of Homeland Security to verify the employment eligibility of:
 - a. All persons newly hired by the Vendor to perform employment duties within Florida during the term of the contract; and
 - b. All persons, including subcontractors or subconsultants, assigned by the Vendor to perform work pursuant to the contract with the City.
3. If the Vendor becomes the successful Contractor who enters into a contract with the City, then the Vendor will comply with the requirements of Section 448.095, Fla. Stat. "Employment Eligibility", as amended from time to time.
4. Vendor will obtain an affidavit from all subcontractors attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien as defined in 8 United States Code, Section 1324A(H)(3).
5. Vendor will maintain the original affidavit of all subcontractors for the duration of the contract.
6. Vendor affirms that failure to comply with the state law requirements can result in the City's termination of the contract and other penalties as provided by law.
7. Vendor understands that pursuant to Florida Statutes, section 448.095, the submission of a false certification may result in the termination of the contract if one is entered into, and may subject the Vendor named in this certification to civil penalties, attorney's fees and costs.

VENDOR: CDM Smith Inc. (Vendor's Company Name)

Certified By:  _____
AUTHORIZED REPRESENTATIVE SIGNATURE

Print Name and Title: Justin Saarinen, GISP | Client Service Leader

Date Certified: September 26, 2023



CITY OF NORTH PORT

PROFESSIONAL ENGINEERING SERVICES FOR NPU
NO. 2020-58
THIS IS NOT AN ORDER

Date: 9/7/2023

Page: 1 of 3

CITY OF NORTH PORT
Utilities Department
6644 W. Price Blvd.
North Port, Florida 34291

Contact Person: Michael Acosta, P.E., Engineering Mgr.
Contact Phone: 941-240-8013
Contact Fax: 941-240-8022
Contact Email: macosta@northportfl.gov
Reply No Later Than: October 18, 2023 @ 2:00 p.m. (EST)

REQUEST FOR LETTERS OF INTEREST NO. 2024-02

CITY OF NORTH PORT WASTEWATER MASTER PLAN

The City of North Port Utilities Department (NPU) is currently accepting letters of interest from firms within Contract No. 2020-58, Category 1 for Professional Engineering Services for NPU. The Wastewater Master Plan is budgeted for fiscal year 2024.

INTENT: It is the intention of NPU to secure professional engineering services to update the Wastewater Master Plan NPU. The development of an interactive master plan in lieu of a document that sits on the shelf is anticipated.

BACKGROUND/SCOPE OF SERVICES:

BACKGROUND

NPU owns and operates the Pan American and the Southwest Water Reclamation Facilities, the PAWRF and SWWRF, respectively. The PAWRF has a capacity of 7.00 million gallon per day (MGD) based on a three-month average daily flow (TMADF). The SWWRF has a capacity of 2.0 MGD TMADF. Both facilities employ the Modified Ludzack-Ettinger treatment process. The SWWRF is planned to be expanded by the developer of Wellen Park to 4.0 MGD TMADF. The last master plan update was completed in 2015 by Wade Trim. NPU is currently updating the hydraulic model for part of the collection system using Innovyze InfoWater software. The collection system consists of 185 miles of gravity collection system, 93 miles of force main, 20 miles of reclaimed water main, and 125 lift stations. The City has applied for a renewal of the PAWRF operating permit and expects that permit to be issued anytime. NPU anticipates applying for a renewal of the SWWRF operating permit in the first quarter of 2024.

In 2019 Giffels-Webster Engineers finalized a plan to provide water and wastewater service to the platted lot areas of the City that are currently unserved. This plan, known as the Neighborhood Expansion program, has been initiated with the first phase of the first sewershed nearing design completion. This is a long-term project for the NPU. In addition to the Neighborhood Expansion program, NPU is nearing completion of water and force main extensions along Sumter and Toledo Blade Boulevards. These extensions are expected to spark development in these corridors with significant interest already expressed in the Toledo Blade Blvd./Interstate 75 area and Sarasota Memorial Hospital announcing that a new hospital will be constructed on Sumter Blvd. near I-75. The growth associated with these areas, Wellen Park, the Neighborhood Expansion program and other areas of the City will all needed to be addressed in this Master Plan.

SCOPE OF SERVICES

TASK 1- PROJECT MANAGEMENT AND COORDINATION

This task will include overall project management by the consultant and coordination with NPU, attendance at project meetings, assistance with any permitting coordination as needed. This task will include a project kickoff meeting with NPU staff to review the project, regulatory concerns, and any items pertinent to the progress of the project.

Additional data may be requested as needed. The firm will work with NPU staff to acquire the information. This may include phone calls, meetings, site visits and email communications with staff.

TASK 2 – CONDITION ASSESSMENT

Conduct condition assessment of wastewater system components such as treatment processes and lift stations. It is anticipated that 25 percent of the largest lift stations will be assessed. This assessment does not include the piping condition of the collection system.

TASK 3 – CUSTOMER AND USAGE PROJECTIONS

Projections shall be the basis for evaluating future wastewater system needs. Projections of the total number of customers and associated usage shall be developed for the wastewater system consistent with historical trends in the system. The projections will be split include the growth at Wellen Park to be met by the SWWRF located there and the balance of the growth by the PAWRF, and perhaps a future plant. Customer and usage projections shall also take into account planned wastewater system expansion including the Neighborhood Expansion program. The forecasted usage shall provide the guidance for scheduling necessary capital improvements.

TASK 4 – RENEWAL, REPLACEMENT AND CAPITAL IMPROVEMENT PROJECTS

Based on the condition assessment and customer usage projections, develop renewal and replacement and capital improvement projects to maintain current treatment capability and ensure that the demands of the system are met over the 10-year planning horizon.

TASK 5 – SECURITY

Evaluate overall facility and operational aspects of physical and cybersecurity of the wastewater reclamation facilities and the collection system in accordance with the latest available requirements from the Department of Environmental Protection, the Department of Homeland Security, the Water Environment Federation (WEF) and the National Institute of Standards and Technology (NIST) Framework for Improving Critical Infrastructure Cybersecurity including storm surge (disaster plan) and resiliency. Security portions of the master plan shall be treated as sensitive information/data and shall not be transmitted via e-mail with any final report items on this portion separated from the final report.

TASK 6 – DRAFT AND FINAL REPORT

The format of the draft and final reports will be developed by the firm and approved by NPU in advance of the draft report being issued. The Wastewater Master Plan and all other written material will be provided electronically in Microsoft Word format for review, final reports will be signed and sealed and provided in portable document format. Upon contract completion, all documents and reports will become property of NPU and the City of North Port.

DELIVERABLES

The deliverables to be provided for this project include the following:

- Kickoff meeting agenda and meeting notes
- Data request list
- Monthly status reports
- Draft report, including an interactive portion
- Final report, including interactive portion, incorporating any comments from NPU
- Two (2) sets of any Final Reports and data files

PROPOSAL REQUIREMENTS

Proposals shall include a project plan which specifies the firm's understanding of project and required deliverables; ability and relevant expertise/qualifications of the firm's personnel to be used in performing the service; availability of staff and ability to meet project schedule; the firm's proposed cost saving measures for the project, if any; and provide a schedule that will meet the timeline requirements of this project.

Firms are to provide references for at least three (3) similar projects within the last five (5) years. Name, title, email and phone numbers are required for appropriate contact for each reference.

Proposals are to include the names of all subconsultants/subcontractors to be used on this project.

ATTACHMENTS

1. Conflict of Interest Form
2. Disclosure for Consultant, Engineer, Architect
3. Statement of Non-Submittal
4. City of North Port Utilities Master Plan, September 2015, Wade Trim
5. City of North Port, 2004 Utility Master Plan, January 2005, Black and Veatch
6. Pan American Water Reclamation Facility Operating Permit
7. Southwest Water Reclamation Facility Operating Permit

Please Note: The Conflict of Interest Form and Disclosure for Consultant, Engineer, Architect **must be submitted** with proposals for consideration.

Any questions concerning this project must be submitted via email to both Michael Acosta and Brittany Kammerer at macosta@northportfl.gov and bkammerer@northportfl.gov, respectively no later than **October 11, 2023**.

All firms within Contract No. 2020-58, Category 1 are encouraged to submit a letter (not to exceed five single-sided pages) that provides the above information and adequately expresses why it would be in the City's best interest to select the submitting firm(s).

**LETTERS OF INTEREST ARE TO BE DELIVERED TO THE UTILITIES DEPARTMENT
ON OR BEFORE OCTOBER 18, 2023 AT 2:00 P.M. (EST) VIA EMAIL TO:**

MICHAEL ACOSTA: MACOSTA@NORTHPORTFL.GOV

AND

BRITTANY KAMMERER: BKAMMERER@NORTHPORTFL.GOV

STATEMENT OF NON-SUBMITTAL

If you **do not** intend to submit a bid on this service, please return this form (see information below) immediately.

We, the undersigned, have declined to submit a Letter of Interest for **RLI No. 2024-02 – CITY OF NORTH PORT WATER MASTER PLAN.**

- Insufficient time to respond to the Request for Bid.
- We do not offer this product/service.
- Unable to meet bond/insurance requirements.
- Specifications are unclear (explain below).
- OTHER (please specify below).

REMARKS: _____

COMPANY NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____

TELEPHONE: _____ FAX: _____

E-MAIL ADDRESS: _____

SIGNATURE: _____ DATE: _____

PRINT NAME: _____

Note: Please email "Statement of Non-Submittal" to:

MICHAEL ACOSTA: MACOSTA@NorthPortFL.gov
AND
Brittany Kammerer: BKammerer@NorthPortFL.gov

CONFLICT OF INTEREST FORM

F.S. §112.313 places limitations on public officers (including advisory board members) and employees' ability to contract with the City either directly or indirectly. Therefore, please indicate if the following applies:

PART I.

- I am an employee, public officer or advisory board member of the City
_____ (List Position or Board)
- I am the spouse or child of an employee, public officer or advisory board member of the City
Name: _____
- An employee, public officer or advisory board member of the City, or their spouse or child, is an officer, partner, director, or proprietor of Respondent or has a material interest in Respondent. "Material interest" means direct or indirect ownership of more than 5 percent of the total assets or capital stock of any business entity. For the purposes of [§112.313], indirect ownership does not include ownership by a spouse or minor child.
Name: _____
- Respondent employs or contracts with an employee, public officer or advisory board member of the City
Name: _____
- None of The Above

PART II:

Are you going to request an advisory board member waiver?

- I will request an advisory board member waiver under §112.313(12)
- I will NOT request an advisory board member waiver under §112.313(12)
- N/A

The City shall review any relationships which may be prohibited under the Florida Ethics Code and will disqualify any vendors whose conflicts are not waived or exempt.

BUSINESS NAME: CDM Smith, Inc.

NAME(PERSON AUTHORIZED TO BIND COMPANY): Continuing Contract 2020-58-05 - Cont

SIGNATURE: _____

THIS PAGE MUST BE SUBMITTED WITH LETTER OF INTEREST

DISCLOSURE FORM FOR CONSULTANT/ENGINEER/ARCHITECT

Please select only one of the following three options:

Print Form

Clear All Fields



Our firm has no actual, potential, or reasonably perceived, **financial*** or **other interest**** in the outcome of the project.



Our firm has a potential or reasonably perceived **financial*** or **other interest**** in the outcome of the project as described here:

_____.

Our firm proposes to mitigate the potential or perceived conflict according to the following plan:

Our firm has an actual **financial*** or **other interest**** in the outcome of the project as described here:

_____.

*What does "financial interest" mean?

If your firm, or employee(s) of your firm working on the project (or a member of the employee's household), will/may be perceived to receive or lose private income depending on the government business choices based on your firm's findings and recommendations, this must be listed as a financial interest. An example would be ownership in physical assets affected by the government business choices related to this project. The possibility of contracting for further consulting services is not included in this definition and is not prohibited.

**What does "other interest" mean?

If your firm, or employee(s) of your firm working on the project (or a member of the employee's household), will/may be perceived to have political, legal or any other interests that will affect what goes into your firm's findings and recommendations, or will be/may be perceived to be affected by the government business choices related to this project, this must be listed as other interest.

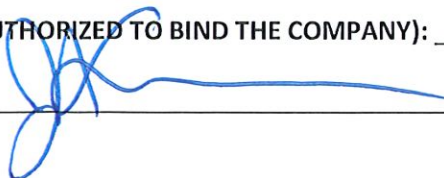
BUSINESS NAME:

CDM Smith, Inc

NAME (PERSON AUTHORIZED TO BIND THE COMPANY):

Justin A. Saarinen

SIGNATURE:



DATE:

February 2, 2024

Scrutinized Company Certification Form

Company Name: CDM Smith, Inc
Authorized Representative Name and Title: Justin A. Saarinen, Client Service Leader
Address: 5915 Cahoon Rd City: Scranton State: FL ZIP: 34231
Phone Number: 941-780-7028 Email Address: Saarinen.ja@cdmsmith.com

A company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with the City of North Port for goods or services of any amount if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Florida Statutes, section 215.4725, or is engaged in a boycott of Israel.

A company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with the City of North Port for goods or services of \$1 million or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to Florida Statutes, section 215.473, or with companies engaged in business operations in Cuba or Syria.

CHOOSE ONE OF THE FOLLOWING

This bid, proposal, contract or contract renewal is for goods or services of less than \$1 million. As the person authorized to sign on behalf of the above-named company, and as required by Florida Statutes, section 287.135(5), I hereby certify that the above-named company is not participating in a boycott of Israel.

This bid, proposal, contract or contract renewal is for goods or services of \$1 million or more. As the person authorized to sign on behalf of the above-named company, and as required by Florida Statutes, section 287.135(5), I hereby certify that the above-named company is not participating in a boycott of Israel, is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and it does not have business operations in Cuba or Syria.

I understand that pursuant to Florida Statutes, section 287.135, the submission of a false certification may result in the termination of the contract if one is entered into, and may subject the above-named company to civil penalties, attorney's fees and costs.

Certified By: [Signature]
AUTHORIZED REPRESENTATIVE SIGNATURE

Print Name and Title: Justin A. Saarinen, Client Service Leader

Date Certified: February 2, 2024

Solicitation/Contract/PO Number (Completed by Purchasing): _____

VENDOR'S CERTIFICATION FOR E-VERIFY SYSTEM

The undersigned Vendor/Consultant/Contractor (Vendor), certifies the following:

1. Vendor is a person or entity that has entered into or is attempting to enter into a contract with the City of North Port (City) to provide labor, supplies, or services to the City in exchange for salary, wages or other remuneration.
2. Vendor has registered with and will use the E-Verify System of the United States Department of Homeland Security to verify the employment eligibility of:
 - a. All persons newly hired by the Vendor to perform employment duties within Florida during the term of the contract; and
 - b. All persons, including subcontractors or subconsultants, assigned by the Vendor to perform work pursuant to the contract with the City.
3. If the Vendor becomes the successful Contractor who enters into a contract with the City, then the Vendor will comply with the requirements of Section 448.095, Fla. Stat. "Employment Eligibility", as amended from time to time.
4. Vendor will obtain an affidavit from all subcontractors attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien as defined in 8 United States Code, Section 1324A(H)(3).
5. Vendor will maintain the original affidavit of all subcontractors for the duration of the contract.
6. Vendor affirms that failure to comply with the state law requirements can result in the City's termination of the contract and other penalties as provided by law.
7. Vendor understands that pursuant to Florida Statutes, section 448.095, the submission of a false certification may result in the termination of the contract if one is entered into, and may subject the Vendor named in this certification to civil penalties, attorney's fees and costs.

VENDOR: CDM Smith, Inc (Vendor's Company Name)

Certified By: [Signature]
AUTHORIZED REPRESENTATIVE SIGNATURE

Print Name and Title: Justin A. Saarinen, Client Service Leader

Date Certified: Feb 2, 2024