RESOLUTION DIRECTING WORK TO ENTECH ENGINEERING FOR THE ADAMS STREET WWTP PRIMARY CLARIFIER REHAB DISIGN PROJECT

MOTIONED BY: Friedrich
SECONDED BY: Gardiner

WHEREAS, the North Hudson Sewerage Authority (hereinafter "Authority") is a public body, duly formed under the Sewerage Authorities law, constituting Chapter 138 of the Laws of New Jersey of 1946, as amended (Chapter 14A of Title 40 of the New Jersey Statutes Annotated) and possesses the powers set forth therein; and

WHEREAS, Entech Engineering has been selected under resolution 22-127 to provide engineering services for various capital projects required throughout its service area that must be performed in order to maximize the performance of its waste water treatment facility, the capacity of its combined sewer system and/or to comply with its New Jersey Pollution Discharge Elimination System (NJPDES) permit; and

WHEREAS, Entech Engineering has submitted a proposal (Exhibit "A") to provide Engineering Services During Construction for the Adams Street WWTP Primary Clarifier Rehab Design Project; and

WHEREAS, the Facilities Review Board has considered this request and proposal and recommends the approval of the full Board.

NOW THEREFORE, BE IT RESOLVED that the Authority, as recommended by the Facilities Review Board, directs Entech Engineering to provide professional engineering services during construction for the Adams Street WWTP Primary Clarifier Rehab Design Project not to exceed $131,397.48.

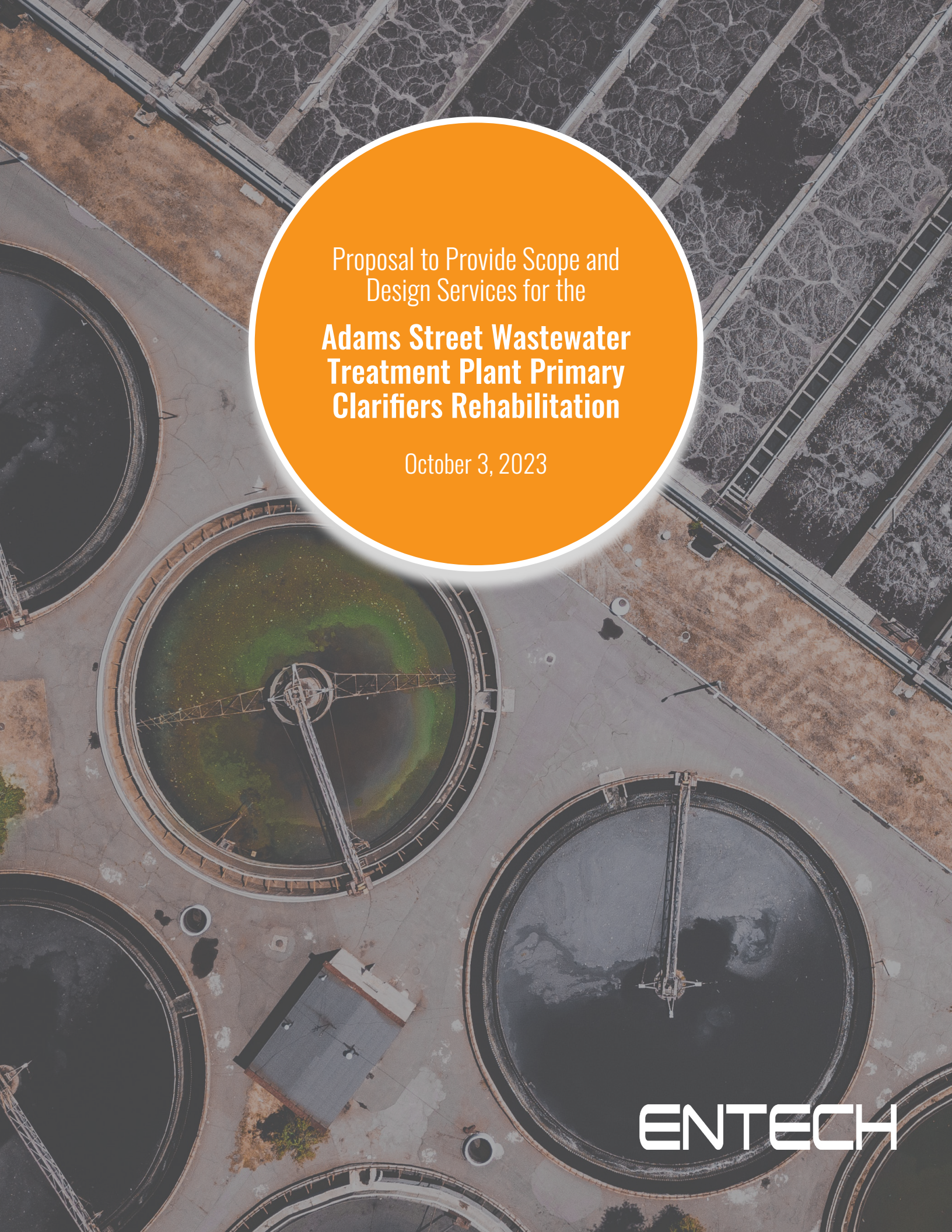
DATED: OCTOBER 19, 2023

RECORD OF COMMISSIONERS' VOTE

	YES	NO	ABSENT
Commissioner Kappock			x
Commissioner Marotta	x		
Commissioner Gardiner	x		
Commissioner Friedrich	x		
Commissioner Guzman	x		
Commissioner Velazquez	x		
Commissioner Barrera	x		
Commissioner Zucconi	x		
Commissioner Assadourian	x		

THIS IS TO CERTIFY THAT THIS RESOLUTION WAS DULY ADOPTED BY THE NORTH HUDSON BOARD OF COMMISSIONERS ON SEPTEMBER 21, 2023.

SECRETARY



Proposal to Provide Scope and Design Services for the

Adams Street Wastewater Treatment Plant Primary Clarifiers Rehabilitation

October 3, 2023

ENTECH

ENTECH

October 3, 2023

Don Conger
Authority Engineer
North Hudson Sewerage Authority
1600 Adams Street
Hoboken, NJ 07030

Via email to: Don Conger, dconger@nhudsonsa.com
Cc: Fredric Pocci, fpocci@nhudsonsa.com and Belissa Vega, bvega@nhudsonsa.com

RE: Adams Street Wastewater Treatment Plant Primary Clarifiers Rehabilitation

Dear Mr. Conger:

EnTech Engineering of New Jersey, PA (EnTech) is excited to submit our proposal to provide professional engineering services for the Adams Street Wastewater Treatment Plant (WWTP) Primary Clarifiers Repair Project. EnTech has thoroughly reviewed the RFP and understands the goals and objectives necessary for completion. The specific details of our understanding and approach are described in the Project Understanding and Technical Approach sections of our proposal. The EnTech team is committed to delivering exceptional engineering solutions and has a proven track record of successfully addressing complex wastewater infrastructure challenges.

About the EnTech Team

EnTech is proud to be recognized as an ENR "Top Design Firm," holding the esteemed rank of #67 on ENR's 2021 National Top CM/PM for Fee Firms List. As a certified WBE and SBE firm, EnTech offers a proven team of local engineering and consulting specialists, with a professional staff of more than 250 engineers, construction managers, inspectors, and modelers. To expertly tackle potential project challenges, we have strategically partnered with Ramboll for their deep history of structural experience. Our team members have extensive experience in conducting structural inspections, designing repair solutions, and overseeing construction projects that demand precision and expertise. We will bring this wealth of knowledge to ensure the success of the Adams Street WWTP Primary Clarifiers Repair Project. HydroTech will be available to provide support services which may include drafting support and bidding support services.

Project Understanding

We have carefully reviewed the project details and are fully aware of the critical nature of this project. The structural deterioration and settling issues in the existing clarifiers pose significant operational and environmental concerns. We are dedicated to working closely with the North Hudson Sewerage Authority to inspect the clarifiers, recommend effective concrete repair methods, and provide comprehensive design documents to restore them to full working order.

Proven Project Management

Under the guidance of our experienced Project Manager, George Sholy, BSCET, BSBM, who has a demonstrated history of successfully managing similar projects, we are confident in our ability to meet and exceed your expectations. George brings over 30 years of expertise in infrastructure projects and a commitment to delivering efficient, safe, and reliable solutions.

Project Understanding

The Adams Street WWTP Primary Clarifiers have shown signs of structural deterioration, such as concrete disintegration and settling in Primary Clarifier 3, leading to sludge accumulation. A Jacobs report underscores the urgency of addressing these issues to maintain operational integrity.

This project aims to inspect, propose, and design necessary repairs, including concrete repair recommendations and bid-ready design documents, ensuring the WWTP's continued functionality for all primary clarifiers.

Our review of the available documents and similar experience at other regionally applicable WWTPs suggest the majority of the identified deficiencies have been caused by chemical reactions from compounds present in the wastewater, from chloride corrosion of the embedded steel, and frequent freeze-thaw events present in the prevalent winter climate of the area. However, these assertions would need to be confirmed during the field investigation. The Scope of Work includes reviewing existing documents, structural inspections, repair recommendations, bid-ready designs, and bidding services.

Knowledge of the Authority and their System

The North Hudson Sewerage Authority (NHSA) is committed to a singular mission: safeguarding local waterways while efficiently operating a regional wastewater treatment system for its customers. This dedication extends to maintaining the highest standards of performance and fostering a private-sector culture that values creativity and productivity within the organization. NHSA recognizes its ratepayers as stakeholders and strives for excellence, managing its business cost-effectively with honesty and integrity. The Authority's primary responsibility is to protect the vital Hudson River.

NHSA is responsible for wastewater treatment and management in northern New Jersey, serving the communities of Hoboken, Union City, Weehawken, and West New York. They operate wastewater treatment facilities, removing pollutants to ensure treated water's safe release into the environment. The collection and transportation of wastewater from residential, commercial, and industrial sources involve an extensive network of sewer lines and pumping stations.

Wastewater treatment and management are essential for environmental protection and public health. NHSA plays a crucial role in ensuring compliance with environmental standards before discharging wastewater. They adhere to various federal, state, and local regulations and engage in community outreach and education to promote responsible wastewater management among residents and businesses.

Our team understands NHSA's mission and their long-term control plans and progress, as well as the City of Hoboken's vision for community-centric resilience and sustainability. Our project design incorporates community feedback while meeting permit requirements. We also prioritize resiliency and sustainability to enhance the project's longevity and quick recovery after natural weather events.

Technical Approach

Project Management

EnTech has designated George Sholy as the Project Manager for this project, leveraging his extensive 30+ years of experience in managing large-scale capital projects and programs spanning water resources and other public infrastructure. His role will be crucial in ensuring that the project adheres to the schedule and budget. One of George's core responsibilities will be identifying project risks, aligning with EnTech's project management methodology that emphasizes a rigorous approach to risk management. Initial challenges and project risks have already been identified, and comprehensive measures will be taken to minimize and mitigate these risks.

Task 1: Kick-off Meeting

Upon receipt of the notice to proceed, we will initiate an initial project kick-off meeting to evaluate project objectives, assess potential risks, define the project schedule, and outline the technical approach necessary to achieve these goals. This meeting will also address safety considerations, establish communication protocols, and define site access procedures.

Task 2: Field Review

In order to complete the reviews, the clarifiers must be taken offline. The process to remove a clarifier from the system includes draining and cleaning to allow the inspection staff to safely enter and could take up to one week to complete. It is expected that it will take up to 2 weeks to complete the inspection process per tank.

Material Sampling

NHSA has indicated that there is no expectation of contaminated material based on recent updated to the primary clarifiers. However, it is recommended to complete a Limited Hazardous Materials Investigation. The sampling of materials will be based on document review of record drawings a site visit by EnTech's certified inspectors. Sampling from electrical equipment and wiring will only be conducted if the equipment is properly shut down and locked out and tagged out by the NHSA. Sampling will be limited to three Primary Clarifiers at the Adams Street WWTP.

Collected samples will be sent to a testing laboratory certified by the National Environmental Laboratory Accreditation Program (NELAP), the American Industrial Hygiene Association (AIHA), and/or the National Voluntary Laboratory Accreditation Program (NVLAP) for analysis. As per NJDEP, asbestos bulk samples collected in the state of New Jersey are to be analyzed in accordance with N.J.A.C. 8:60 and 12:120 via EPA Method 600/R-93/116. The sample is examined first with a stereomicroscope, followed by examination with Polarized Light Microscopy (PLM). If asbestos is not detected or detected at trace levels by PLM, gravimetric method is an additional analysis that can be conducted. Gravimetric method involves the removal of interference by using appropriate solvents or ashing and analyzing the residue by PLM or Transmission Electron Microscopy (TEM).

Assumptions:

- The hazardous materials investigation will be conducted by one (1) inspector on three separate days during normal daytime business hours (7am to 5pm).
- NHSA will provide documentation (as-builts, work-orders, etc) that document the materials used in construction (including Safety Data Sheets).
- We will work with NHSA to reach any materials that are not safely accessible for sampling.
- It is assumed that the following amount of samples will be collected:
  - » 27 asbestos samples, representing 9 materials, will be collected [3 materials per clarifier]
  - » 3 lead samples [1 material per clarifier]
  - » 3 PCB samples [1 material per clarifier]
- One (1) email summarizing the lab results will be submitted along with a digital copy of the results from the lab.

An allowance of $1,965 for material testing will be established and only charged if testing of suspect materials occurs.

Review of Designs and Field Inspections

Our team will conduct a comprehensive review of the project facility's as-built drawings to establish a foundational understanding of the structural design before conducting on-site visits. We will perform a condition assessment of each basin, using the Jacobs' report as a reference point. The review will include the grating for the clarifiers and the hand rail. The hand rail will be evaluated for condition and possible code required improvements. Any additional areas of concern will be brought to the owner's attention for guidance on their inclusion in the project.

During our field assessment, we will gather both qualitative and quantitative data, aiming to ascertain the extent of degradation, assess the condition of corroded steel components, and determine if further assessments such as concrete coring, petrographic examinations, non-destructive testing, etc., are necessary. Please note that we have not included a firm fixed price for testing, as the level of testing required is unknown. Our pricing includes an allowance, which can be utilized for testing if recommended by our team and approved by the Authority.

To gain a comprehensive understanding of hydraulic considerations related to sludge deposition, a potential site for microbial corrosion, our team will observe the basins both before and after sludge removal. Additionally, we may need to give special attention to the section of the floor in Primary Clarifier 3, which has settled. This setting has resulted in sludge build in the area of the tank and is expected the primary concern. If further evaluation is required to determine the root cause of the settling, the testing allowance would cover the associated costs.

Failure Mode Determination and Design

After the field inspections, our team will identify the likely failure modes for each of the identified deficiencies. We will group similar failure modes together since mitigation measures should be of a similar nature. Collaboratively with the Authority, we will determine the most suitable mitigation method, taking into account the age and overall condition of the structure, its remaining useful life, and the required level of resiliency.

Standard repair details, along with any project-specific requirements, will be integrated into a draft bid package. This package will include all necessary specifications and will undergo a review by the Authority. We will address any comments or feedback from the Authority and prepare a final bid-ready set for the tendering process.

Task 3: Inspection Report

Information from the field review will be compiled into an Inspection report by a licensed engineer. The inspection report will include information from the structural reviews. The report will include pictures of the defects and will show the location on record drawings. The recommended repair types will be included for each clarifier.

A draft report will be prepared for review by the NHSA. The report will be updated based on comments from the Authority and a final sealed document will be provided. This document will be the basis for the development of the structural repair plans and identification of any environmental remediation.

Environmental Review

The project is a replacement, rehabilitation or reconstruction of a structure or facility, in kind, on the same site. EnTech will assist NHSA in preparing and finalizing the Finding of No Significant Impact Determination letter. No further environmental review will be required.

Task 4: Design/Repair Plans

Repair plans will be developed identifying locations in need of structural repair. Details for the repairs will be developed with consideration for the type of required repairs. We expect that repairs will address concrete spalls and deteriorated rebars. The repair plans will consider ensuring that proper concrete coverage and proper development length exists for repaired rebars. All the repairs such as spalled concrete, cracks and floor slab of the clarifiers are expected to utilize rapid setting waterproof concrete. Any new reinforcement shall be either galvanized or epoxy coated. Updates to railing may be limited to painting and removal of surface rust.

Repairs to the tank will also consider add a waterproofing product such as Xypex concentrate to protect and prolong the life of the concrete and associated repairs. Detailed procedures for structural repairs will be developed for inclusion in the project specifications.

Repairs for the floor of Primary Clarifier #3 are expected to be limited to addressing the build up of sludge. Potential repairs may include fixes such as flowable concrete. Replacement of sections of the floor or improvement to the subgrade are expected to be outside the scope of this project.

Task 5: Bidding Services

Upon receiving approval to proceed with the project, our engineering team will collaborate with the client to facilitate the selection of a contractor for project execution. This process will involve planning and attending a pre-bid meeting, including a review of the general scope of work and highlighting critical information from project specifications. The goal is to ensure that potential bidders are well-informed about essential aspects, such as shutdown requirements, construction timelines (working days or calendar days), and permit restrictions.

Our engineering team will address all Requests for Information (RFI) related to the project design received during the bidding phase. We anticipate that up to two (2) addenda may be necessary to adequately respond to all RFIs. Furthermore, we will participate in the bid opening and compile a bid tabulation sheet in Excel to confirm the bid opening results.

Subsequently, following a comprehensive review of all bids, we will provide a recommendation to award the contract to the successful bidder in accordance with the contract requirements.

PROJECT TEAM

The Right Team to Get the Job Done

To respond to the specific needs of the Adams Street Wastewater Treatment Plant Primary Clarifiers Rehabilitationproject, EnTech has carefully selected a team from our pool of resources, based on their technical expertise, relevant knowledge, and exceptional performance on past similar projects. The EnTech team is structured to leverage our collective wisdom and lessons learned from past similar assignments so that we can effectively manage any challenges we might encounter and deliver within schedule and budget, no mater what the circumstances.

EnTech

Founded in 2000, EnTech is one of the largest WBE firms in the region with over 250 professionals in proximity to the project site. As a top ENR Design Firm, we have completed over 150 water/wastewater infrastructure projects throughout New Jersey and New York.

Ramboll

Ramboll's experience on pump station and wastewater infrastructure projects gained national recognition for unique and complex projects such as DC Water's Main Pumping Station with a capacity of 480 MGD. Founded in 1945, Ramboll comprises of 16,500 experts, helping drive sustainable impact.

KEY PERSONNEL

To successfully meet potential project challenges, we have assembled a team of professionals with records of success on projects with similar facets and similar challenges. Our team will quickly respond to NHSA's needs and ensure all issues are addressed expeditiously, no matter how tight the timeline.

George Sholy
Project Manager
George, a veteran project leader with 30+ years of experience, excels in overseeing water infrastructure projects in New York and New Jersey. He heads EnTech's NJ office, expertly managing multidisciplinary teams, budgets, and schedules for successful project delivery.

Senior QA/QC - Structural Design
Leonard W. Woods, PE, SECB
Leonard is an experienced Structural Engineer with 38 years in structural design, rehabilitation, and renovation. He specializes in forensic engineering and construction management. Notable projects include East Side Water Supply and Shoremont Water Treatment.

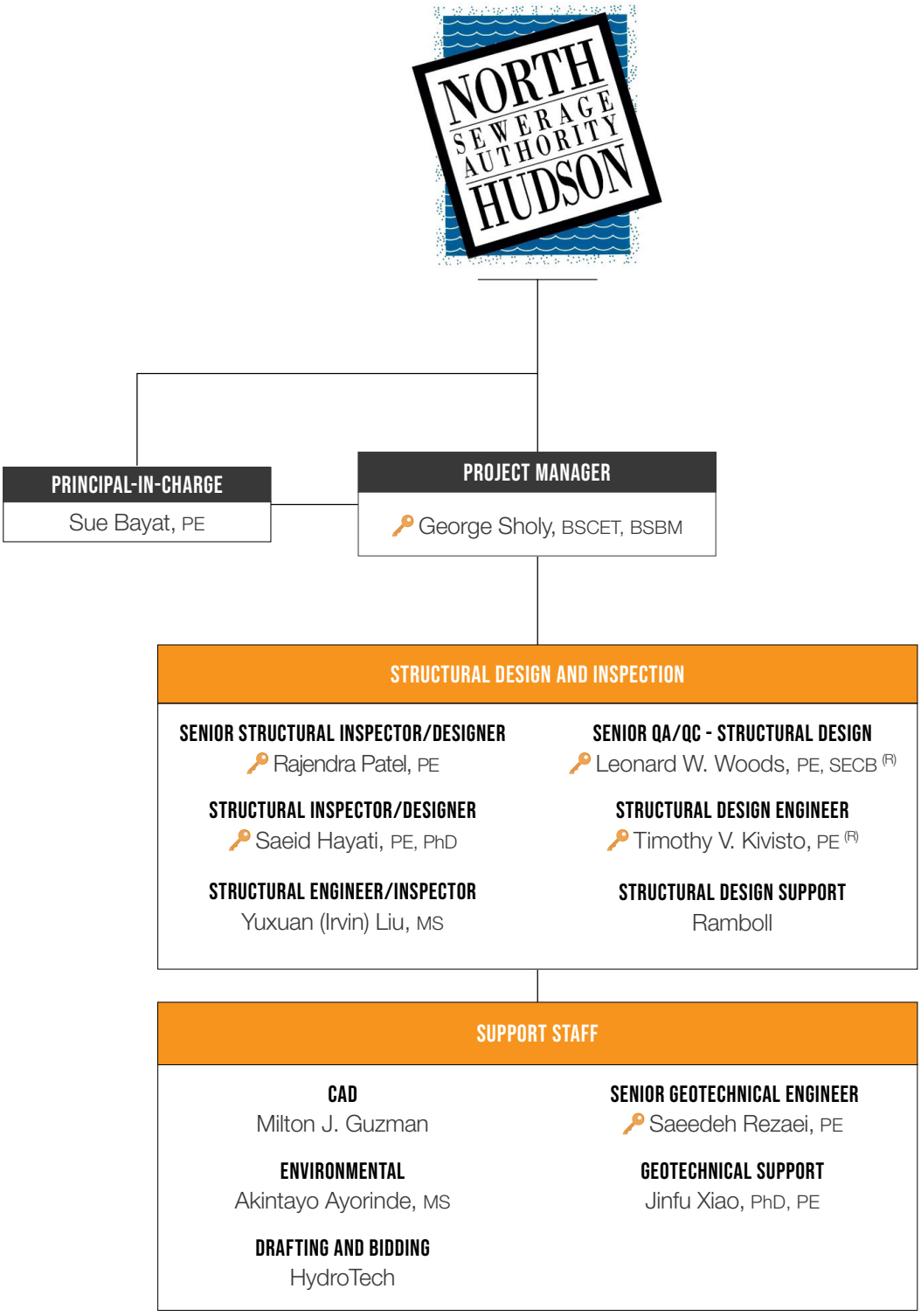
Senior Structural Inspector
Rajendra Patel, PE
Rajendra is a Professional Engineer with 40+ years' expertise in structural design for water infrastructure, tunnels, bridges, roads, and transit projects. He specializes in QA/QC reviews and flood resilience enhancements for NYCDEP facilities.

Timothy V. Kivisto, PE
Structural Design Engineer
Tim is a structural Engineer with 20 years of experience in analysis, design, and investigations. Specialized in finite element modeling and BIM. Notable projects include East Side Water Supply, Toby Road Water Storage Tanks, and Comprehensive Water Supply Project in NY.

Structural Inspector/Designer
Saeid Hayati, PE, PhD
Saeid is a Professional Engineer with 11 years of expertise in structural design, planning, and inspection for various infrastructure projects. He holds a PhD in structural engineering, excels in team collaboration, and research-driven success.

Saeedeh Rezaei, PE
Senior Geotechnical Engineer
Saeedeh serves as EnTech's Geotechnical Director. With 10+ years of experience, her expertise includes geotechnical investigations, seismic studies, foundation design, QA/QC, team management, client coordination, and green infrastructure support, with a strong focus on resiliency design standards.

ORGANIZATION CHART



LEGEND
Ramboll **(R)**
All other names associated with **EnTech Engineering of New Jersey, PA (WBE**)

RELEVANT EXPERIENCE

North River WRRF Reconstruction Site Assessment

New York, NY

The North River Wastewater Resource and Recovery Facility (WRRF) is a unique structure built in the 1980s. It's a 28-acre facility over the Hudson River in Upper Manhattan, supported by caissons in bedrock. Riverbank State Park, atop it, offers recreational facilities. North River serves western Manhattan, with a capacity of 170 MGD dry weather flow and 340 MGD wet weather flow.

EnTech provided laser scanning, BIM, environmental screening, and structural inspection services. The VDC team conducted laser scanning and developed 3D BIM models of the facility's existing conditions using LiDAR technology, creating georeferenced point clouds. EnTech developed a BIM at the 300 LOD covering structural, architectural, mechanical, and drainage systems with five separate models for efficiency. For laser scanning operations, they planned and prepared for work in confined spaces, including job hazard analyses, confined space safety plans, rescue plans, and respiratory protection plans.

The environmental team assessed hazardous materials, notably asbestos, through an on-site preliminary hazards inventory and hazmat survey, including the roof deck drainage system investigation, which involved challenging field sampling. EnTech evaluated structural components and electrical systems through visual inspections and documented conditions using PlanGrid.

Firm
EnTech

Client
New York City Department of Environmental Protection

Completion
9/2019 – 12/2021

Wards Island WRRF Settling System Rehabilitation

New York, NY

This project improved the settling system at Wards Island Wastewater Resource Recovery Facility (WRRF), a 275 MGD East River facility serving parts of Manhattan and the Bronx. It involved critical repairs to 10 final settling tanks and clarifiers, along with equipment upgrades such as collectors, influent and effluent channels, walkways, and water connections.

EnTech provided civil engineering services during construction, including QA/QC, permit management, and closeout services. The team reviewed the construction contractor's civil shop drawings and submittals for compliance, handled civil RFIs, and prepared necessary civil design-related documents for change orders. EnTech offered risk management, IT support, hydraulic modeling, sustainability review, public involvement support, CAD/BIM support, and Environmental, Health, and Safety (EHS) support. They documented energy control procedures (ECPs) for safe equipment de-energization, studied existing drawings for accuracy, and created ECPs. EnTech supported permitting throughout planning and construction. They determined permit requirements, managed applications with the NYC Department of Buildings (NYCDOB), and expedited permits for an interim effluent service water pumping station. They also facilitated permits for the primary settling tanks' reconstruction, including NYCDOB, FDNY, and SBS permits, coordinating with the client and design consultant.

Firm
EnTech

Client
New York City Department of Environmental Protection

Completion
08/2018 – Present

RELEVANT EXPERIENCE

Sludge Dock Improvements at Port Richmond WRRF

Staten Island, NY

The Port Richmond Wastewater Resource Recovery Facility (WRRF), the primary wastewater treatment facility for northern Staten Island, includes a sludge dock within the Kill Van Kull strait, directly north of the plant. The sludge dock consists of three main parts: a causeway, used to travel from shore to the dock; the 200 foot-long concrete dock; and the walkways extending from both sides of the dock. The sludge dock suffers from deficiencies that include damaged supporting piles, a deteriorated timber fender system, and marine fouling, and the New York City Department of Environmental Protection is undertaking a project to repair and reconstruct it.

EnTech is providing civil, environmental, geotechnical, and BIM services for the assessment, repair, and reconstruction of the sludge dock and sludge tank. The team prepared the health and safety plan for the project, supervised design staff during surveying and other on-site activities, and monitored general site safety. EnTech's design team performed laser scanning of the dock and causeway and developed a BIM model of the dock and the facility's sludge tank, working from point-cloud data. The work focused on BIM representation of MEP systems on the dock and causeway and their support systems. While preparing the BIM model, the team faced challenges coordinating laser scanning activities with tides, requiring low tide scanning with a long-range scanner for accurate support capture.

Firm
EnTech

Client
New York City Department of Environmental Protection

Completion
5/2021 – Present

Jerome Park Reservoir Rehabilitation

Bronx, NY

This project entails the structural rehabilitation of the Jerome Park Reservoir, a part of New York City's Croton Water Supply System, which supplies approximately 10% of New York City's water. The 94-acre, 773 million-gallon reservoir was constructed in 1905 and requires various structural upgrades to extend its life. The rehabilitation project forms part of a broader plan to repair and upgrade the infrastructure of the Croton system.

EnTech is providing construction phase structural and civil design support for the project, which involves stabilizing and repairing the eastern wall of the reservoir, upgrading interior fences, installing vehicular guardrails, and installing new asphalt roadways around the reservoir's perimeter. The project will also fill portions of the Old Croton Aqueduct with flowable concrete, where it runs alongside the reservoir.

EnTech's design team is responding to RFIs and reviewing shop drawings and submittals for structural and civil work. The team has developed quantity and cost estimates for change orders relating to concrete demolition and replacement; and prepared design modifications involving the relocation of sewer manholes. The firm's engineers have performed in-person structural inspections as needed to determine existing conditions of structural elements.

Firm
EnTech

Client
New York City Department of Environmental Protection

Completion
6/2021 – Present

RELEVANT EXPERIENCE

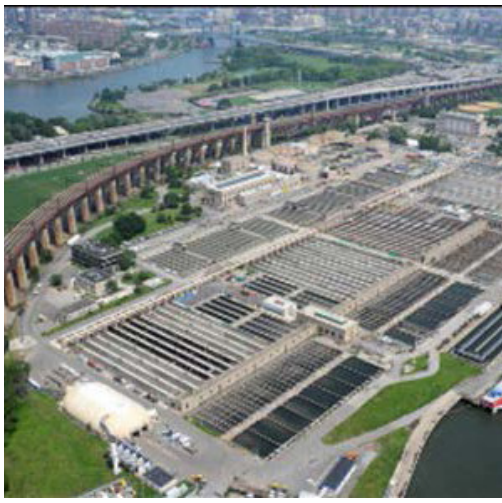
Tallman Island Wastewater Treatment Plant

Bronx, NY

This Design Phase Task Order was part of RLCY-DES-B, a term agreement that called for various engineering and investigation services at NYCDEP facilities in order to maximize their effective lifespan and improve their resilience to harsh weather conditions. These facilities included wastewater pumping stations and wastewater treatment plants such as the Tallman Island WWTP located in Queens.

Geotechnical investigations were required to perform structural upgrades to the Tallman Island WWTP's Grit building, mixed flow pumping station, storage building,North and South sludge thickeners, and the dewatering and sludge storage buildings. EnTech provided the geotechnical investigatory services necessary to define the underground conditions necessary to advance the engineering design of the facilities. This included soil classification and foundation recommendations for the structural modifications to achieve dry flood proofing, soil vertical and lateral sub-grade moduli variations with depth, allowable soil bearing capacity for saturated and unsaturated soils, and underground infrastructure waterproofing recommendations.

EnTech's geotechnical engineers delivered technical reports, including investigation and interpretive reports with recommendations for the structural design engineer during design and construction.



Firm
EnTech

Client
New York City Department of Environmental Protection

Completion
02/2019 – 12/2019

Engineering & DSDC for the Queens-Brooklyn Tunnel

Queens/Brooklyn, NY

This NYCDEP project involved the construction of a crucial segment of City Tunnel No. 3 Stage 2, connecting Queens and Brooklyn. City Water Tunnel No. 3, initially built in 1970, plays an essential role in New York City's water supply system, and this project served to establish a third connection to the upstate water supply, bolstering the city's water infrastructure. The extensive scope of work encompassed several vital components, including the construction of Shafts 17B-1 and 18B-1, the meticulous cleaning and inspection of approximately 10.5 miles of tunnel, the integration of the Richmond Tunnel, intricate mechanical and electrical installations, and the potential replacement of previously installed equipment at existing shafts. Additionally, the project involved the activation of various components, ultimately bringing City Tunnel No. 3, Stage 2, Queens-Brooklyn portion, into full operational service.

EnTech played a pivotal role in this project, providing a range of services; including, BIM laser scanning, design, and structural services. EnTech was responsible for developing and maintaining the Building Information Model (BIM) involving the generation and management of digital representations of physical and functional characteristics of the proposed facilities throughout the project life and assisting with In-House Design.

Firm
EnTech

Client
New York City Department of Environmental Protection

Completion
2017 – 2029

RELEVANT EXPERIENCE

Special Inspection for Massaponax WWTP Bioreactor Repairs

Spotsylvania County, VA

Ramboll has served Spotsylvania County under Basic Ordering Agreements (BOAs) for over 20 years, during which time the Firm has provided planning through construction services for nearly every aspect of their water and wastewater utility needs. In 2016, Ramboll completed a wastewater-specific master plan that considered both City of Fredericksburg conveyance and treatment needs and County wastewater management options for the Hazel Run sewershed, FMC service area and treatment facility, and impacts on the previously-completed Massaponax optimization and expansion studies. In 2018, Ramboll developed the County's comprehensive Water and Wastewater Master Plan, which establishes the needs, recommended projects, budgets and timing for capital projects over the next ten years. City-County consolidation plans have been developed and recently updated.

Ramboll assisted the County with testing, special inspections and required reporting related to existing bioreactors at the Massaponax WWTP. Ramboll provided special inspection staff and assisted the County with reporting completion of the special inspection program to the Building Code Official. Inspections assessed concrete reinforcement placement, stainless steel bracket fabrication installation, installation of post-installed reinforcement and post-installed anchors including hole cleaning and other preparation, concrete formwork. and shoring.

Firm
Ramboll

Client
Spotyslvania County

Completion
2020 – 2021

Concrete Tank Rehabilitation – Aquia and Little Falls Run WWTF

Stafford County, VA

Ramboll has served Stafford County continuously since 1984, providing a full range of water and wastewater engineering services. Many of these tasks have been performed under renewable open end agreements.

Ramboll developed a comprehensive water and sewer system master plan (2018) to assist Stafford County with its planning for improvements and upgrades that are required to meet its near-term and buildout needs and to develop a Capital Improvement Program (CIP). This project included developing complete geographic information system (GIS)-based hydraulic models for the water system and for the sewer system, developing capital programs in five-year increments, aligning CIP cash flow with revenues, addressing changes in the development envelop, and modifying the water system pressure zones to address demographics and the new Lake Mooney water supply.

Completed inspection, final design, bid and construction phase services for repairs to cast-in-place concrete walls and elevated slabs at the Aquia and Little Falls River (LFR) Wastewater Treatment Facilities (WWTF). Services included inspection, final design, bid and construction phase services.

Firm
Ramboll

Client
Stafford County

Completion
2020 – 2022

RELEVANT EXPERIENCE

Frank E. VanLare WWTF Primary Clarifier Improvements

Rochester, NY

The Frank E. Van Lare Secondary Treatment Upgrades project improves secondary system treatment performance by implementing improvements to facilitate the Rapid Response Plan, the aeration system, and the secondary clarifiers. The project improves water quality, complies with permit requirements, improves the reliability of equipment, and meets the current and future needs of the community.

Ramboll provided design, bid and construction phase services for modernization of 1970s era chain and flight and circular primary clarifiers with a total capacity of 135 MGD. Improvements included concrete repairs, mechanical and electrical equipment replacement, instrumentation, and hydraulic improvements.

Due to substantial settling of one 140-ft diameter circular clarifier, Ramboll was tasked with developing hydraulic improvements and repairs to the existing mechanism to accommodate existing conditions.

Firm
Ramboll

Client
Monroe County Department of Environmental Services

Completion
2010 – 2016

Feura Bush Sedimentation Basin Rehabilitation

Albany, NY

One of the central components of this project involves the replacement of the existing concrete roof deck with a brand-new roof deck structure. This upgrade not only ensures the structural integrity of the basin but also contributes to its longevity and resilience. The project also encompasses masonry wall repairs; which are imperative to maintain the basin's structural soundness and aesthetics. The approach taken by Ramboll's experts in masonry restoration guarantees that the basin retains its visual appeal while meeting stringent safety standards.

Ramboll is also providing design, field investigation, and construction administration services for the concrete basin repairs, removal of asbestos and installation of fall protection measures within the building. Services included design, field investigation, and construction administration services.

Firm
Ramboll

Client
City of Albany, NY

Completion
2016 – Ongoing

SCHEDULE

Tasks	2023			2024					
	O	N	D	J	F	M	A	M	J
Notice to Proceed		◆ 11/1/2023							
Task 1 - Information Collection/Site Visit									
Task 2 - Inspection Report									
Task 3 - Design/Repair Plans									
Task 4 - Bidding Services									

COST

Summary

Phase	Task Description	Proposed Cost
Task 1	Kick-off Meeting	$2,106.24
Task 2	Task 2 – Field Review/Investigation	$39,959.48
Task 3	Task 3 – Inspection Report	$14,518.88
Task 4	Task 4 – Design/Repair Plans	$39,917.62
Task 5	Task 5 – Bidding Services	$7,930.26
	Other Direct Costs	$26,965.00
TOTAL PROPOSED COST		**$131,397.48**

HOUR AND FEE ESTIMATE

Project: **Adams Street Wastewater Treatment Plant Primary Clarifiers**

	Labor Hour Estimate											
Position	Project Manager	Environmental Lead	Senior Structural Engineer	Structural Engineer	Junior Structural Engineer	Geotechnical Lead	Senior Geotechnical Engineer	Senior CAD Technician	Enviromental Engineer III	Environmental Inspector		
Hourly Rate	$ 290.82	$ 196.50	$ 202.40	$ 170.30	$ 123.14	$ 235.80	$ 183.40	$ 110.04	$ 117.90	$ 117.90		
Task 1 Kick Off Meeting												
1.1 Kickoff Meeting	2	2	0	0	0	2	0	0	0	0	6	1,446.24
												-
Task Totals	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1446.24**
Task 2 – Field Review/Investigation												
2.1 Environmental Assesment	0	1	0	0	0	0	0	0	7	0	8	1,021.80
2.2 Document Review	0	1	2	4	4	0	0	0	4	8	23	3,189.85
2.3 Material Sampling	0	1.5	0	0	0	0	0	0	2	24	27.5	3,360.15
2.4 Strucutral Assesment	0	0	48	0	48	0	0	0	0	0	96	15,625.68
Task Total	**0**	**3.5**	**50**	**4**	**52**				**13**	**32**	**154.5**	**23,197.48**
Task 3 - Inspection Report												
3.1 Inspection Report	0	0	24	16	40	0	0	0	0	0	80	12,507.88
Task Total	**0**	**0**	**24**	**16**	**40**				**0**	**0**	**80**	**12,507.88**
Task 4 – Design/Repair Plans												
4.1 Develop Design Plans	0	0	16	32	40	0	0	40	0	0	128	18,015.12
4.2 Cost Estiamte	0	0	4	4	16	0	0	0	0	0	24	3,461.02
4.3 Project Specifications/ Repair Procedures	0	0	8	24	8	0	0	0	0	0	40	6,691.48
Task Total	**0**	**0**	**12**	**28**	**24**				**0**	**0**	**64**	**28,167.62**
Task 5 – Bidding Services												
4.1 Coordinate Authorization to Advertise	2	0	2	0	0	0	2	0	0	0	6	1,353.23
4.2 Pre-bid meeting	1	0	1	0	0	0	0	0	0	0	2	493.22
4.3 Addenda and RFI's	0	0	4	0	8	0	0	0	0	0	12	1,794.70
4.4 Attend Bid Opening	1	0	1	0	0	0	0	0	0	0	2	493.22
4.5 Prepare Bid-Tabs and provide recommendation to award	0	0	4	4	8	0	0	0	0	0	16	2,475.90
Task Total	**4**	**0**	**12**	**4**	**16**				**0**	**0**	**38**	**6,610.26**

EnTech Estimated Hours and Fee	**6**	**6**	**114**	**84**	**172**				**13**	**32**	**471**	**71,929.48**
Reimbursable expenses -												
Asbestos Samples (27 @ $60)												1,620.00
Lead Samples (3 @ $15)												45.00
PCB's Samples (3 @$100)												300.00
Structural/Geotechnical Evaluation allowance												20,000.00
												-
Reimbursable Expenses Total												**21,965.00**
Direct Expense: Travel, Parking, Copies												**500.00**
TOTAL CONSULTANT FEE												**94,394.48**

HOUR AND FEE ESTIMATE

Project: **Adams Street Wastewater Treatment Plant Primary Clarifiers**

Position	Labor Hour Estimate					
	Senior Structural Engineer QA/QC	Lead Structural Engineer	Structural Engineer	CAD/ENG Technician		
Hourly Rate	$ 235.00	$199.00	$131.00	$ 113.00		
Task 1 Kick Off Meeting						
1.1 Kickoff Meeting	0	2	2	0	4	660.00
						-
Task Totals	**0**	**2**	**2**	**0**	**4**	**660.00**
Task 2 – Field Review/Investigation						
2.1 Environmental Assesment	0	0	0	0	0	-
2.2 Document Review and Hazmat Sampling Plan	0	2	4	0	6	922.00
2.3 Hazmat Sampling	0	0	0	0	0	
2.4 Structural Assesment	0	48	48	0	96	15,840.00
Task Total	**0**	**50**	**52**	**0**	**102**	**16,762.00**
Task 3 - Inspection Report						
3.1 Hazmat Report	0	0	0	0	0	-
3.2 Structural Report	1	3	9	0	13	2,011.00
Task Total	**1**	**3**	**9**	**0**	**13**	**2,011.00**
Task 4 – Design/Repair Plans						
4.1 Develop Design Plans	1	8	24	12	45	6,327.00
4.2 Cost Estiamte	0	0	0	0	0	-
4.3 Project Specifications/ Repair Procedures	1	8	24	4	37	5,423.00
Task Total	**2**	**16**	**48**	**16**	**82**	**11,750.00**
Task 5 – Bidding Services						
4.1 Coordinate Authorization to Advertise	0	0	0	0	0	-
4.2 Pre-bid meeting	0	1	1	0	2	330.00
4.3 Addenda and RFI's	0	3	3	0	6	990.00
4.4 Attend Bid Opening	0	0	0	0	0	-
4.5 Prepare Bid-Tabs and provide recommendation to award	0	0	0	0	0	-
Task Total	**0**	**4**	**4**	**0**	**8**	**1,320.00**
Ramboll Estimated Hours and Fee	**3**	**75**	**115**	**16**	**209**	**32,503.00**
Reimbursable expenses -						
Travel - 2 staff, 3 trips, with mileage or flight, overnight stay, and rental @ $750 per trip per person						4,500.00
						-
Reimbursable Expenses Total						**4,500.00**
Direct Expense: Travel, Parking, Copies						**-**
TOTAL CONSULTANT FEE						**37,003.00**

Our Commitment to Excellence

EnTech is dedicated to providing the North Hudson Sewerage Authority with exceptional engineering services. We understand the importance of addressing the clarifier issues promptly and effectively, and we are prepared to deliver high-quality results, on time and within budget. We value our partnership with the North Hudson Sewerage Authority and are excited about the prospect of collaborating to ensure the long-term integrity of this critical wastewater infrastructure.

We welcome the opportunity to discuss our proposal in more detail and answer any questions you may have. Thank you for considering EnTech as a partner for the Adams Street WWTP Primary Clarifiers Repair Project. We are confident that our submission demonstrates why EnTech is the right partner for the North Hudson Sewerage Authority and look forward to discussing further how we can add significant value to this project. If you have any inquiries or require clarification on our proposal, please feel free to reach out to me directly at gsholy@entech.nyc or 732.796.4792.

Very truly yours,

EnTech Engineering, PC

George Sholy
Senior Vice President / NJ Office Head
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