



SCOPE OF SERVICES

**RFQ No. 2022-122-ND – Resolution No. 2022-32175
HAZEN AND SAWYER SERVICE ORDER No. 39**

**CITY OF MIAMI BEACH PUBLIC WORKS DEPARTMENT
Pump Station 28 - Engineering Services During Construction**

PROJECT BACKGROUND

HAZEN has been providing engineering services for the detailed design of a complete rehabilitation of Pump Station No. 28 (PS 28) including a new segment of 30-inch discharge force main. This work has been underway since 2021. The design of the Pump Station 28 and Force Main Upgrades project is nearing completion and the CITY plans to bid the project before the end of 2024. HAZEN is proposing to provide engineering services during construction as outlined in the scope of services below.

SCOPE OF SERVICES

The construction period for this project is assumed to be 730 calendar days for Substantial Completion with an additional 90 calendar days for Final Completion. Engineering services provided by the HAZEN during the construction period shall include the following:

Task 1 - Project Management and Project Controls

HAZEN will provide services for the management of engineering services during the construction. Such management activities shall include project coordination with the CITY, subconsultants, permitting agencies and Contractor, coordinating and scheduling specialty inspections, and general correspondence with the CITY, construction contractor and subcontractors.

HAZEN will develop, execute, and maintain a document management system. Procore software will be used for this purpose for Contractor submittals required by the Contract Documents and daily reports and photos. HAZEN will maintain orderly electronic and hard-copy files for general correspondence, meeting minutes, shop drawings and sample submission, reproductions of original Contract Documents including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the contract, clarifications and interpretations of the Contract Documents, progress reports, and other project related documents. Electronic files will be turned over to the CITY at the end of the project.

Task 2 –Meetings

HAZEN will attend various project meetings throughout the project as follows:

Preconstruction Conference – HAZEN will conduct a preconstruction conference attended by representatives of the CITY, construction contractor, and other project stakeholders. HAZEN will prepare the meeting minutes.

Preconstruction Coordination Meetings: HAZEN shall participate in meetings with the CITY and Contractor to discuss procurement of permits, shop drawings, procurement of materials, and other topics related to the project prior to the start of construction. HAZEN shall chair the meetings and prepare and issue the agenda and meeting minutes. Up to four meetings is assumed for preconstruction coordination.

Progress Meetings – HAZEN shall participate in meetings with the CITY and Contractor to discuss the project progress. HAZEN shall chair the meetings and prepare and issue the agenda and meeting minutes. It is assumed that meetings will be held bi-weekly for the duration of the construction period.



Resident Information Meeting – HAZEN shall attend resident meetings to provide project status updates, answer resident questions, and produce meeting minutes.

This assumes: 1 preconstruction conference, 6 preconstruction coordination meetings, 24 progress meetings, 6 resident information meetings.

Task 2: Deliverables

1. Preconstruction conference meeting, material and minutes.
2. Preconstruction coordination meetings, materials and minutes
3. Progress meetings, materials and minutes.
4. Resident Information meetings, materials and minutes.

Task 3 – Shop Drawing and O&M Manual Submittals

HAZEN shall receive and review shop drawings and any other submittals which the construction contractor is required to submit. Review shall be completed within twenty-one (21) calendar days of HAZEN's receipt of the submittal except for special items requiring longer review time if so noted in the Contract Documents. The review shall be for conformance with the design intent and compliance with the information presented in the Contract Documents. HAZEN shall determine the acceptability of materials and equipment proposed by the construction contractor. Submittals shall be returned to the contractor for distribution. Shop drawing logs, submittal history, review status and related information shall be tracked by HAZEN. HAZEN shall maintain a file of one copy of each shop drawing that shall be provided to the CITY after substantial completion.

A total of 255 submittals are anticipated to be reviewed in this task inclusive of resubmittals, and operation and maintenance manuals.

Task 3: Deliverables

1. Shop drawing tracking log.
2. Reviewed shop drawings and O&M manuals.

Task 4 – Responses to Requests for Information (RFI)

HAZEN shall issue as necessary technical interpretations and clarifications of the Contract Documents in the form of responses to Requests for Information from the Contractor. Responses will be provided in a timely manner, not to exceed five (5) calendar days from HAZEN's receipt of the request from the Contractor. HAZEN shall determine the acceptability of the construction contractor's work and make recommendations on all requests of the construction contractor and the CITY as to the acceptability of construction or interpretation of the technical requirements of the Contract Documents.

A total of 256 RFIs are anticipated to be reviewed in this task.

Task 4: Deliverables

1. RFI tracking log.
2. Responses to RFIs.

Task 5 – Review of Pay Requests and Schedule Updates

HAZEN shall review the construction contractor's monthly applications for payment and accompanying data, determine the amounts owed to the construction contractor, and recommend approval of payments



due to the construction contractor. HAZEN's recommendation of any payment requested in an application for payment shall constitute a representation by the Engineer to the CITY, based on the HAZEN's on-site observations of construction in progress as an experienced and qualified professional and on HAZEN's review of the application for payment and the accompanying data and schedules, that: (1) construction has progressed to the point indicated; (2) to the best of the Engineer's knowledge, information and belief, the quality of construction is in substantial accordance with the Construction Contract Documents, subject to an evaluation of construction upon substantial completion, to the results of any subsequent tests called for in the Construction Contract Documents and any qualifications stated in the recommendation; and (3) the construction contractor is due the amount recommended. However, by recommending any payment HAZEN shall not thereby be deemed to have represented that any examination has been made to ascertain how or for what purpose the construction contractor has used the monies paid or to be paid or that title to any labor, materials or equipment has passed to CITY free and clear of any liens.

HAZEN shall examine and review construction schedules, and updates thereof, submitted by any Contractor in connection with the construction of the Project. HAZEN shall advise the CITY in writing with respect to the adequacy or inadequacy of any such schedules or updates. Schedule updates will be included in the final pay requests submitted to the CITY by HAZEN for processing for payment.

A total of 30 pay requests are anticipated to be reviewed in this task.

Task 5: Deliverables

1. Approved pay application packages for processing by the CITY.

Task 6 – Full Time Construction Observations

HAZEN will provide inspections as follows:

- HAZEN will conduct on-site observations on a full time basis of construction in progress (including field tests), to assist in determining if construction is proceeding in substantial accordance with the Contract Documents, and that completed construction conforms to the Contract Documents. Inform CITY and the Construction Contractor whenever HAZEN believes that any construction is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests or approval required to be made, or has been damaged before final payment. Immediately inform the Construction Contractor upon the commencement of any construction requiring a submittal if the submittal has not been accepted. Visually inspect and review suitability and method of storage of materials, equipment and supplies delivered to the construction site in accordance with the Contract Documents.
- Keep observation logs for days on-site that will include hours on the job site, weather conditions, data pertaining to questions of extras or deductions, list of visiting officials and representatives of manufacturers, permitting agencies, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as in observing test procedures. HAZEN shall use Procore to record all daily reports. HAZEN shall forward the completed daily reports to the CITY on a regular basis.
- Notify the CITY of any and all unacceptable work or material and report immediately, within 24 hours both verbally and in writing, whenever any work or material fails to conform to the Contract Documents, submittals, and shop drawings. Such notification will include complete information of the circumstances, location, and approximate quantities of the unacceptable material. Notices of non-compliance will be issued when appropriate by the Engineer in cooperation with the CITY.
- HAZEN shall recognize hazards that any reasonable non-safety professional might be expected to recognize.



- HAZEN will ensure the Contractor is in compliance with maintenance of traffic (MOT) plans that have been approved by agencies having jurisdiction.
- Coordinate substantial and final completion inspections, coordinate delivery of spare parts, warranties, and maintain the project punch list.
- Provide a photographic record of the construction, beginning with pre-construction documentation and completing with post-construction photographs. Photographs shall be digital type taken to define the progress of the project and unusual or important construction events as deemed necessary. Photos will be part of the daily reports as stored in Procore.

This assumes full time field inspection for a period of 24 months.

Task 6: Deliverables

1. Daily reports and photos provided through Procore. City will be provided access to Procore during construction and will be provided an electronic copy of the daily reports and photos from Procore at the end of the project.

Task 7 – Engineering and Special Inspections

HAZEN will perform site visits/specialty inspections by qualified design team members, by appropriate discipline, to review progress and quality of the construction work being conducted. These specialty inspections may occur during critical activity periods such as major concrete pours, control system configuration, testing and startup etc. HAZEN shall plan their site visits based on the Contractor's baseline schedule. HAZEN will perform special inspections as required by Code and the City issued Building permit, in order to provide the required certifications for permit closeout. Engineering inspections will inspect the Contractor's work for the purpose of ensuring the design intent of the contract document is met.

HAZEN will provide an observation report for each engineering site visit.

Task 7: Deliverables

1. Engineering field reports and photos.

Task 8 – Change Orders

HAZEN shall negotiate with the Contractor the scope and cost of contract change orders. HAZEN shall prepare an analysis of the change request with a statement noting whether the requested cost impacts are fair and reasonable. HAZEN's analysis of the change request shall be forwarded to the CITY for processing. It is noted that the HAZEN's services do not include claims analysis or litigation support.

Task 8: Deliverables

1. Approved change orders for processing.

Task 9 – Permit Closeouts/Certification

The completed project will require permit closeout and/or certification by the various permitting entities described herein. These certifications require signed completion documents to be submitted to various permitting entities. HAZEN shall prepare and submit the required documentation to close out the permits described herein.

- DERM Sewer Extension
- City Building Permits



- FDEP Fuel Storage Tank Registration
- Miami Dade County Municipal Permit
- DERM Demolition Asbestos Permit

Task 9: Deliverables

1. Certification of Completion of Construction package for DERM and FDEP certification.
2. A log of project permits

Task 10 – Systems Startup and Testing Assistance

Prior to substantial completion of the work, HAZEN will provide engineering expertise to assist the CITY in start-up and initial operation of the upgraded facilities. HAZEN shall provide the following startup services, including startup of individual components, pump station startup, and performance testing:

1. Subsystem startup – provide oversight during field testing of individual components such as pumps, motorized valves, electrical gear, vendor control panels, etc.
2. Pump Station startup – provide oversight during startup of the unit processes under operational conditions. Services will consist of operation of all the subsystem components together and will be performed prior to performance testing.
3. Performance testing – Upon successful completion of the previous activities, oversee entire pump station performance to ensure the entire facility will operate as intended. HAZEN shall oversee testing to confirm compliance with specified standards. HAZEN shall notify the contractor, and the CITY of any startup and performance testing deviation from the Contract Documents requirements.

Task 10: Deliverables

1. System startup plans (provided by Contractor, reviewed and approved by HAZEN) for placing facilities into operation

Task 11 – Substantial and Final Completion/ Project Certification

Upon receiving notice from the Contractor advising HAZEN that the Project is substantially complete, HAZEN will schedule and conduct a review of the Project, develop a list of items needing completion or correction, forward said list to the Contractor and provide written recommendations to the CITY concerning the acceptability of work done and the use of the Project. Also, HAZEN shall perform final inspection in conjunction with the CITY, and assist the CITY in closing out the construction contract. These services shall include providing recommendations concerning acceptance of Project, and preparing necessary documents such as lien waivers, final operations and maintenance manuals turnover of spare parts, Contractor's final affidavit, and warranty letters from Contractor.

Engineer's Certification: At the time of Final Completion, the ENGINEER will sign and seal and certify in writing that the construction conforms with the design intent, as required by the Contract Documents and permit conditions.

Task 11: Deliverables

1. Punch List.
2. Final project documentation



- 3. Certificate of Substantial and Final completion
- 4. Project Certification

Task 12 – As-builts / Record Drawings

HAZEN will meet with the Contractor and review the prepared redline drawings on a monthly basis to determine installation is consistent with the design plans and observations by HAZEN’s field personnel. HAZEN shall review Contractor-prepared record drawings upon completion of the project to determine if drawings are consistent with final installations and observations by HAZEN’s field personnel. HAZEN shall prepare, sign and seal record drawings based on Contractor’s red-line drawings. The record drawings shall be submitted in its final AutoCAD and PDF format electronically to the CITY. Two (2) hard copy sets shall also be provided by HAZEN.

Task 12: Deliverables

- 1. Final Record Drawings in ACAD and PDF format.

ASSUMPTIONS

This scope of services is based on the following assumptions:

- 1. Responses to various inquires shall be made based on the best available information provided to HAZEN at the time of the review.
- 2. The CITY acknowledges that HAZEN’s scope is based on information made available at the time of this Task Order and data gathered during site visits and meetings.
- 3. Permitting fees have been included in a reimbursable allowance account. HAZEN will request reimbursement for any permit fees that result in exceedance of this amount.
- 4. HAZEN will follow the provisions of the City of Miami Beach Public Works Manual as relevant and appropriate.
- 5. The review of any additional shop drawings submittals or requests for information/clarification above and beyond the amounts estimated will only be performed if additional compensation is provided to HAZEN.
- 6. Value engineering or redesign of any portion of the PS 28 and Force Main Improvements is not included in this scope of work.

PERFORMANCE SCHEDULE

The Notice to Proceed (NTP) defines the official commencement of the HAZEN's contract. It is assumed that HAZEN will receive NTP concurrently with the awarded CONTRACTOR receiving their first NTP (NTP 1). The scope of services outlined herein will occur over a period of 30 months from issuance of HAZEN’s NTP and the CONTRACTOR’s NTP 1, as outlined in the table below.

Milestone Description	Milestone Duration (months)	Cumulative Months
Notice to Proceed 1 (NTP 1) to Contractor	3	0
Construction (NTP 2)	24	3
Substantial Completion	3	27
Final Completion	--	30



METHOD OF COMPENSATION

HAZEN shall perform the services defined in this scope of services for a subtotal fee of \$2,303,220 and reimbursable expenses of \$10,000.00 for a total fee of \$2,313,220. Please refer to Table 1 below for a breakdown of subtasks and the type of compensation for each.

1	Project Management and Project Controls	Lump Sum	\$ 229,999
2	Meetings	Lump Sum	\$ 121,287
3	Shop Drawing and O&M Manual Submittals	Lump Sum	\$ 418,106
4	Responses to RFIs	Lump Sum	\$ 121,153
5	Review of Pay Requests and Schedule Updates	Lump Sum	\$ 69,946
6	Construction Observation	T&M	\$ 786,185
7	Engineering and Special Inspections	T&M	\$ 165,167
8	Change Orders	Lump Sum	\$ 82,755
9	Permit Closeouts/Certification	Lump Sum	\$ 76,305
10	Systems Startup and Testing Assistance	T&M	\$ 94,946
11	Substantial and Final Completion / Project Certification	T&M	\$ 40,499
12	Record Drawings	Lump Sum	\$ 96,871
	Travel and Permit Expenses		\$ 10,000
TOTAL			\$ 2,313,220

Reimbursable expenses for travel and permitting fees up to \$10,000 are included. Any permitting fees in excess of this amount, HAZEN reserves the right to request additional compensation to cover the additional fees, or will request for the CITY to pay the fees directly. Travel expenses shall only be utilized for actual travel related expenditures made by HAZEN's project team subject matter experts in the interest of the project. Justification for travel would include necessary site visits by HAZEN subject matter experts that will come from outside the Miami Dade County limits. Travel reimbursement will be in accordance with the City's travel policy OD.20.01 "Travel on City Business." Invoices will be submitted to the CITY monthly and will define the current percent complete for the project.

The breakdown of fees per task is detailed in Appendix A – Fee Estimate.

Authorization

Jayson Page, PE
Vice President

City of Miami Beach
PUMP STATION NO. 28 UPGRADES
 Engineering Services During Construction - Fee Estimate
 Task Order No. 39

Task No.	Task Description	Vice President	Senior Associate	Associate	Associate	Sr. Principal Engineer	Principal Engineer	Assistant Engineer	Sr. Principal Designer	Sr. Field Coordinator	Administrator	Total Hours	Cost
LABOR													
Engineering Services During Construction													
1	Project Management and Project Controls		240		480			240			240	\$ 0021	99,992
2	Project Management and Project Controls		47	841	841	47		841				\$ 295	78,212
3	Shop Drawing and O&M Manual Submittals	64	128	510	255	501	913	552				\$ 0402	60,184
4	Review of Pay Requests and Schedule Updates	46	46	652	821							\$ 215	35,112
5	Review of Pay Requests and Schedule Updates		30	90	60	60		021				\$ 063	64,996
6	Engineering and Special Inspections		90	450	180					0264		\$ 0264	58,168
7	Engineering and Special Inspections		46	23	821	08		46				\$ 720	165,761
8	Systems Startup and Testing Assistance	61	46	23	821	08		46				\$ 483	55,728
9	Substantial and Final Completion / Project Certification	14	28	224	112	42		06				\$ 063	50,367
10	Substantial and Final Completion / Project Certification	8	61	23	261			04		423		\$ 291	64,949
11	Substantial and Final Completion / Project Certification											\$ 684	99,404
12	Record Drawings, No. drawings											\$	17,869
Subtotal Task 5		166	782	2064	1619	826	319	927	324	4620	240	1186	2,313.2
REIMBURSABLES													
ssneprintm x PEdl n eavr t													
												\$	00,001
-Ittbaou lSebarusibmeR												\$	00,001

TOTALS	166	782	2064	1619	826	319	927	324	4620	240	1186	\$ 2,313.2	02
2023 Billing Rates	\$280.00	\$280.00	\$222.17	\$222.17	\$203.26	\$178.45	\$133.54	\$187.90	\$170.17	\$100.45			
Category Percentages	1.39%	6.57%	17.36%	13.62%	6.95%	2.68%	7.80%	2.73%	38.87%	2.02%	100.00%		

Task	Description	Units	Qty	Hrs/Qty	Total Hours	Billing Type
1	Admin/Management/Doc Controls	Months	30	40	1200	Lump Sum
2	Meetings	Each Meeting	37	16	592	Lump Sum
3	SDs and Oms	Each Submittal	255	8	2040	Lump Sum
4	RFIs	Each RFI	256	2	512	Lump Sum
5	Pay App and Schedule	Each Pay App	30	12	360	Lump Sum
6a	Construction Observations, Limited Time	Months	3	44	132	T&M
6b	Construction Observations, Full Time	Months	24	176	4224	T&M
6c	Construction Observations, Part Time	Months	3	88	264	T&M
7	Eng (specialty) / Structural Special	Inspection Visits	90	8	720	T&M
8	Change Orders	Each CO	16	24	384	Lump Sum
9	Permit Closeout/Certification	Each Permit	6	60	360	Lump Sum
10	Startup	Each Discipline	7	60	420	T&M
11	Substantial/Final Completion	Each Discipline	8	24	192	T&M
12	Record Drawings, No. drawings	Each Drawing	162	3	486	Lump Sum
					11886	

Disciplines	Permits
Civil	FDEP Storage Tank
Mechanical	MDCounty
Plumbing	DERM RER
Hvac	Urban Forestry
I/C	Building Department
Landscaping/Irrigation	MD Municipal
Electrical	total of 6
Structural (Special Inspect)	total of 7 less structural