

December 16, 2022

Jeff Jiang, P.E.
CITY OF HOLLYWOOD
Department of Public Utilities
Engineering and Construction Services Division
Post Office Box 229045
Hollywood, Florida 33022

City of Hollywood
Emergency Bypass Bar Screen
City Project No. 2023-9217

Dear Mr. Jiang:

As requested, Hazen and Sawyer, D.P.C. (Hazen) is pleased to offer engineering services for the development of an emergency bypass bar screen for the Southern Regional Wastewater Treatment Plant (SRWWTP).

BACKGROUND

The bar screens at the City of Hollywood's SRWWTP provide the primary means of protection for the downstream treatment works and accompanying equipment from debris inherent in raw wastewater. Recent storm events carried excessive debris to the SRWWTP, clogging and severely damaging the existing screens, threatening the collection system with an overflow of sewage. To reduce risk of a system overflow and to protect public health, the installation of an emergency bypass screen is desired. The purpose of this Scope of Services is to develop a basis of design and provide a detailed design for implementation of an emergency bypass bar screen.

SCOPE OF SERVICES

Task 1 – Basis of Design Memorandum

Hazen shall collect and compile existing drawings, record information and operating data related to the existing bar screen system and perform a field inspection to confirm key information defined in the existing documentation. Hazen will develop a Technical Memorandum summarizing the basis of design and submit to the City for review and comment. The screen is anticipated to be located proximate to the existing interceptor box and used on an emergency basis only. The project will study a single, automatic bar screen and identify up to three screen manufacturers. No screening building design is envisioned, although covers similar to the grit chambers will be assumed to suppress odors. No odor control system is envisioned. Contract work by others for ductbank installation at the South Electric Service Center will be addressed in the memorandum. After city review, Hazen will finalize the memorandum for use in pursuing regulatory acceptance and develop an opinion of probable construction cost (OPCC). The OPCC shall be classified as an order of magnitude estimate as defined by the Association for Advancement of Cost Engineering (AACE) International.

Task 2 – Detailed Design

Hazen shall prepare contract documents (plans and specifications) for bidding/construction of the emergency bypass bar screen as outlined in the Technical Memorandum developed under Task 1. The screen is anticipated to be located proximate to the existing interceptor box and used on an emergency basis only. The design will be limited to a single, automatic bar screen with washer/compactor and specifications will name a maximum of three screen manufacturers. No screening building design is included, although covers similar to the grit chambers are envisioned. No odor control system is included. The design approach will address minimal downtime of the existing facilities. Due to the prevalence of underground utilities, a suite of subsurface utility excavations will be performed to enable design of utility crossings including existing the 54-in force main, electrical duct banks, potable water lines and the existing 72-in influent line to the grit chambers. A robust landscaped hedge will be included as a barrier to the Eco Grande Golf Course patrons. Hazen shall provide City with electronic PDF copies of the plans and specifications. Hazen shall meet with City staff to receive and discuss City's review comments at the 90% design stage. The 90% design milestone submittal shall consist of the entire contract document set including the City's front end documents, technical specifications and construction drawings for all work proposed. Fourteen calendar days of review time for the City have been provided for in Hazen's time of performance. A preliminary drawing list is attached.

Task 3 – Permitting and FPL Coordination

It is anticipated that construction permits will be required for this project from the Broward County Resilient Environment Department (RED), Florida Department of Environmental Protection (FDEP) and the City of Hollywood Building Department. Hazen shall provide signed and sealed contract documents for permitting. Hazen will provide permitting services for FDEP and RED and assist the City with pre-permitting activities with the City of Hollywood Building Department. The City will pay all permit fees. It is noted that overhead high voltage power lines are in the vicinity of the work. Hazen will meet with FPL and the City and coordinate the design and construction approach.

Task 4 – Bidding Services

Hazen shall assist the City during the bidding phase for the project. Activities to be performed are as follows: attend a pre-bid conference, reply to bidders' questions, draft up to two addenda to the technical specifications and drawings for City distribution, review the Bid Proposal form, prepare a Bid Tabulation, check contractor references of the lowest responsive bidder, and issue a recommendation of award. Contract document packages will be produced and sold by the City.

KEY ASSUMPTIONS

Key assumptions concerning this scope are:

- City will provide access to all necessary facilities for execution of the work. This includes, but is not limited, to exposing manholes and/or clearing easements for truck/van access. No owner-furnished / pre-purchasing of equipment is anticipated.
- The design approach will address minimal downtime of the existing operating facilities.
- Value engineering and other outside reviews (other than City staff review) are not anticipated.

- No local minority business enterprise or local small business enterprise participation is envisioned.
- The City will competitively bid the project and enter into an agreement with an outside Contractor to complete the work. No prequalification of Contractors will be performed.
- The City will provide front end documents applicable to the project.
- Services during construction will be included under a separate work order.

COMPENSATION

The engineering services for this project will be performed for the not-to-exceed amount of \$422,000. A fee breakdown is attached.

SCHEDULE

Engineering services will be completed within nine (9) months from Notice-to-Proceed. However, this schedule is dependent on services by others (regulatory approvals, FPL input, bid award, etc.).

Engineering services for the project will be performed as part of our Professional Services Agreement for General Engineering Consultant Services (Agreement) dated August 2017. Services provided by Hazen and Sawyer, D.P.C. shall be limited to those services specifically identified in this work order.

We look forward to your reply. In the meantime, should you have any questions, please contact us.

Very truly yours,

Hazen AND SAWYER, P.C.



J. Philip Cooke, P.E.
Senior Associate

c: *File No. 4321-016/1.0*

Attachments

CITY OF HOLLYWOOD
SOUTHERN REGIONAL WASTEWATER TREATMENT PLANT
EMERGENCY BAR SCREEN BYPASS
Fee Breakdown

<u>Tasks</u>	Labor Hours										<u>Subtotal</u>	<u>Fee</u>
	<u>Senior Officer</u>	<u>Senior Associate</u>	<u>Associate</u>	<u>Senior Principal Engineer</u>	<u>Principal Engineer</u>	<u>Engineer</u>	<u>Senior Designer</u>	<u>Principal Designer</u>	<u>Senior Drafter</u>	<u>Admin Assistant</u>		
LABOR												
Task 1 - Basis of Design TM	0	24	0	48	72	88	0	80	80	8	400	\$ 57,879
Task 2 - Detailed Design	40	80	120	160	468	640	40	92	280	48	1968	\$ 293,130
Task 3 - Permitting and FPL Coordination	4	0	0	40	80	0	0	0	4	4	132	\$ 22,348
Task 4 - Bidding Services	8	0	0	40	0	0	0	0	24	24	96	\$ 13,527
Subtotal	52	104	120	288	620	728	40	172	388	84	2,596	\$ 386,884
DIRECT EXPENSES												
Survey (estimated)												\$ 20,000
Subsurface Utility Engineering (est 20 test holes)												\$ 15,000
Out-of-pocket												\$ 100
Subtotal												\$ 35,100
Total												\$ 421,984
Maximum Hourly Labor Rate	274.12	261.80	212.52	181.72	166.32	123.20	151.84	147.84	95.48	73.92		

Hollywood Southern Regional WWTP - Emergency Bypass Screen

DWG	TITLE
GENERAL	
G-1	TITLE SHEET, LOCATION MAP, DRAWING LIST
G-2	ABBREVIATIONS, SYMBOLS, SECTIONS AND DETAIL IDENTIFICATION
G-3	GENERAL NOTES
G-4	EXISTING SITE PLAN
G-5	STAGING PLAN
CIVIL	
C-1	BOUNDARY SURVEY
C-2	TOPOGRAPHIC SURVEY
C-3	SOIL BORING LOCATIONS AND TEST HOLE LOCATIONS
C-4	PROPOSED SITE PLAN
C-5	YARD PIPING KEY MAP AND NOTES
C-6	YARD PIPING PLAN - SHEET 1
C-7	YARD PIPING PLAN - SHEET 2
C-8	MISCELLANEOUS CIVIL DETAILS - SHEET 1
C-9	MISCELLANEOUS CIVIL DETAILS - SHEET 2
MECHANICAL	
M-1	HEADWORKS PROCESS FLOW SCHEMATIC
M-2	BYPASS BAR SCREEN - PLAN VIEW
M-3	BYPASS BAR SCREEN - SECTION VIEW 1
M-4	BYPASS BAR SCREEN - SECTION VIEW 2
M-5	MISCELLANEOUS MECHANICAL DETAILS SHEET 1
M-6	MISCELLANEOUS MECHANICAL DETAILS SHEET 2
STRUCTURAL	
S-1	STRUCTURAL GENERAL NOTES
S-2	BAR SCREEN TOP PLAN
S-3	BAR SCREEN BOTTOM PLAN
S-4	BAR SCREEN EXCAVATION DETAILS - SHEET 1
S-5	BAR SCREEN EXCAVATION DETAILS - SHEET 2
S-6	BAR SCREEN STRUCTURAL DETAILS - SHEET 1
S-7	BAR SCREEN STRUCTURAL DETAILS - SHEET 2
S-8	MISCELLANEOUS STRUCTURAL DETAILS SHEET 1
S-9	MISCELLANEOUS STRUCTURAL DETAILS SHEET 2
INSTRUMENTATION	
I-1	INSTRUMENTATION AND CONTROLS SYMBOLS AND LEGEND
I-2	CONTROL SYSTEM BLOCK DIAGRAM
I-3	BAR SCREEN BYPASS
I-4	MISCELLANEOUS SYSTEMS / DETAILS
ELECTRICAL	
E-1	ELECTRICAL LEGEND AND SYMBOLS
E-2	ABBREVIATIONS AND INSTRUMENTATION NOTES
E-3	ELECTRICAL GENERAL NOTES
E-4	ELECTRICAL SITE PLAN - SHEET 1
E-5	BAR SCREEN ELECTRICAL PLAN
E-6	BAR SCREEN MCC SINGLE LINE DIAGRAM
E-7	BAR SCREEN RISER DIAGRAM
E-8	CONDUIT AND CABLE SCHEDULES
E-9	MISCELLANEOUS SCHEMATICS, SCHEDULES AND DETAILS
E-10	ELECTRICAL DETAILS SHEET 1
E-11	ELECTRICAL DETAILS SHEET 2
44	TOTAL NUMBER OF DRAWINGS