Work Authorization No. 01

Scope and Fees

Water Treatment Plant Lime Softening Facilities, Chemical Storage, and Ground Storage Tank Rehabilitation Evaluation and Design

The services rendered pursuant to this Work Authorization No. 01 are in accordance with the terms and conditions of the Agreement for Consulting/Professional Services between the City of Pompano Beach (City) and Globaltech Inc. (Consultant), dated January 19th, 2016 and approved by City Ordinance No. 2016-26. This Work Authorization, when executed, shall be incorporated in and become an integral part of the Agreement for Consulting/Professional Services, hereafter referred to as the Agreement.

Project Background:

Several of the City's various process and storage tanks and the chemical storage facilities at the Water Treatment Plant (WTP) and Reuse Plant are in need of repair and coating. The Consultant is submitting this Work Authorization No. 01 to evaluate and recommend repair options for the various facilities and prepare a set of Bid Documents for performing the repair work.

Scope of Services:

The work will include evaluating the existing coatings and developing recommendation for recoating and/or removing existing coatings for the following areas:

- Ground storage tanks (two (2) at the WTP; one (1) at the Reuse Plant)
- Two (2) lime softening Units, including evaluating lining the inside of the northern softener.
- Gravity thickener including evaluating installation of an inner liner
- Acid storage room
- Antiscalant room
- Caustic room
- Sequestrant room
- Lime sludge pump station
- Backwash basins pump station
- Vacuum filter presses and building
- Lime/Polymer rooms
- Lime slurry piping tray and supports
- Miscellaneous exterior items

Work also includes mechanical and structural evaluation and design for the following areas:

- Extensive steel repair on the southern softening unit including launder replacement with new carbon steel or stainless-steel launders.
- New stainless-steel baseplates for the lime sludge blowdown pumps.
- Modifications to the lime slurry piping tray including either structural strengthening or relocating to a below-grade installation.
- Modifications to the acid storage room pump skid piping and containment including new containment curbs around the acid pumps and potentially, removal of the out-of-service acid storage tank and associated supports.
- Replacement of the lime softener spray wash piping
- Repair the gravity thickener inner process ring
- Minor steel or concrete repair work, including concrete crack repairs, at the facilities listed in the coatings section above.

The Consultant will provide the following consulting services to the CITY:

Task 1 – Research

- Consultant will review all existing information/drawings that are provided by City.
- Background information on the structures for evaluation to be provided by City shall include:
    - As-built drawings for year built/installed/erected
    - Last coating/lining contract and construction documents
    - Chemical make-up/concentrations of surrounding environment and or immersion solution/s.
    - O&M and/or shop drawing submittals
    - Any other pertinent information that City may have

Task 2 – Evaluation

- Consultant will obtain the services of a NACE-certified coating inspector and a structural engineer to assist with performing this work.
- Consultant will conduct an initial field/site inspection to examine and familiarize themselves with the site and those items that may require specific action in the specification document.
- Multiple field inspections will follow to identify existing conditions and determine the exposure environment. These inspections shall include both visual observations, physical testing (non-destructive & destructive) and sample collection. The observations are intended to document existing conditions such as failures; consisting of lifting, peeling, blistering, cracking, etc. Patterns will be possibly identified from exposure to previously unidentified elements (spills, splash, etc.). Depending on the materials of construction, the testing may include thickness, adhesion, pH, salts, etc.
- Consultant will evaluate access to each component of the inspection, as this process is critical should repairs and or compatible products be required in the selected rehabilitative work. It will be important to ensure that all surfaces and conditions are correctly identified,

observed, and tested. Samples of any products applied and or materials of construction may be collected for laboratory testing. Laboratory testing may be required to identify the generic type of product(s) applied to or on an asset, if historical information from Task 1 is not adequate for evaluation. Testing, if required, will be performed under the allowance.

Task 3 – Presentation

- Consultant will review all compiled data following site visits and laboratory testing,
- Consultant will prepare a technical report summarizing the site visits and detailing test results and rehabilitative options. The advantages and disadvantages of each option for each component will be presented along with estimated costs and time to complete.
- These options typically include one or more of the following:
  - Do Nothing – This may occur if the asset has remaining life/performance remaining with the existing materials of construction and or protection (coatings/linings).
  - Spot Repairs – When the percentage of damaged and or failure is less than 10% scattered or 20-25% isolated.
  - Spot Repairs w/Overcoat – When the visual affects of a spot repair is unwanted and a cosmetic coat is required and/or preferred.
  - Zone Repairs – When a spot repair is large enough that the area has the same procedures and approach as a total removal and replacement; typically, when the failed area is isolated and >25% in size.
  - Complete Removal & Replacement – 100% removal of all coatings/linings/treatments and replaced.
- Consultant will hold meeting to present options and discuss how City will proceed with the repairs of the project components. Items to be discussed in meeting to include: allowable contract duration time, preferred materials, preferred suppliers, and site restrictions.
- Consultant will further evaluate and present to City, one or more options, determined to be viable, for consideration for a final decision. To include one additional site visit for additional inspection.

Task 4 – Engineering/Consultation

- From final decision, Consultant will develop 60%, 90%, and 100% project drawings, specifications, and construction cost estimates.
- Consultant will hold a design submittal review meeting with City following the 60% and 90% design submittals.
- Consultant will develop required Bid documents
- Consultant will assist City with Bidding phase of project
- Consultant will review Bids from prospective Contractors and make recommendation for project award

Assumptions:

Services to be provided by the City and other related key assumptions include:

- Any and all access will be provided by the City.
- City will provide Consultant all as-built, record drawings, submittals, and previous project contracts for Consultant review and use for evaluation.
- The Consultant reserves the right to perform destructive testing to confirm the existing coatings, thicknesses, and material of ground storage tanks and softeners.
- The field/site inspections and the report preparation will be performed by a Nace Certified Coating Inspector subconsultant.
- Laboratory testing under the evaluation phase of the project will be paid under the allowance.
- The scope of this project is limited to the specific facilities listed in this work authorization.

Work Authorization Compensation and Deliverables

The compensation for the work set forth in this Work Authorization shall be a lump sum amount of $168,115.00. Attachment A provides a breakdown of the fee for the various activities.

Deliverables:

- Field inspection technical report and necessary testing/lab results
- Report to discuss rehabilitative options, which shall include recommendations to proceed
- 60%, 90%, and 100% design drawings and specifications
- Bid package documents

Project Schedule:

The duration and completion times of all tasks are summarized as follows:

Task	**Time to Complete from Notice to Proceed**
Task 1 – Research	60 Days
Task 2 – Evaluation	105 Days
Task 3 – Presentation	135 Days
Task 4 – Engineering/Consultation	260 Days

The field/site inspection to evaluate the existing structures will occur after Consultant has reviewed documents provided by City.

The Consultant shall not commence work on this Work Authorization as approved by the City to include as part of the Agreement referenced above without a written "Notice to Proceed" from the City.

"CITY":

Witnesses:

CITY OF POMPANO BEACH

_____

By:_____
LAMAR FISHER, MAYOR

_____

By:_____
GREGORY P. HARRISON, CITY MANAGER

Attest:

_____ (SEAL)
ASCELETA HAMMOND, CITY CLERK

Approved As To Form:

_____
MARK E. BERMAN, CITY ATTORNEY

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this _____ day of _____, 2018 by **LAMAR FISHER** as Mayor, **GREGORY P. HARRISON** as City Manager and **ASCELETA HAMMOND** as City Clerk of the City of Pompano Beach, Florida, a municipal corporation, on behalf of the municipal corporation, who are personally known to me.

NOTARY'S SEAL:

_____
NOTARY PUBLIC, STATE OF FLORIDA

_____
(Name of Acknowledger Typed, Printed or Stamped)

_____
Commission Number

"CONSULTANT":

Globaltech, Inc.
(Print or type name of company)

By: _____

Witnesses:

Rebecca Thomas

Rebecca Thomas

Niurka Molina

Print Name: David A. Schuman, P.E

Title: Vice President of Engineering

ACKNOWLEDGMENT OF CONSULTANT, IF A CORPORATION

STATE OF FLORIDA }
} ss:
COUNTY OF PALM BEACH }

RACHAEL M. STOLPMAN
MY COMMISSION # GG 112730
EXPIRES: June 7, 2021
Bonded Thru Notary Public Underwriters

On this 7th day of June, 2018, before me personally came and appeared, personally known to me, who, being by me duly sworn, did depose and say that he resides at Globaltech, Inc. that he is the Vice President of Engineering of Globaltech, Inc., the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the impressions affixed to said instrument is an impression of such seal; that he is the proper official of said corporation designated to execute such contract, that he has authority so to do, that he executed same for and in behalf of said corporation, and this his act is the act and deed of said corporation.

Witness my hand and official notarial seal at Palm Beach County the day and year above written.

Notary Public

My Commission Expires: June 7, 2021

ATTACHMENT A
City of Pompano Beach
Work Authorization No. 01 - WTP Lime Softener and GST Coating Rehab Evaulation and Design
Engineering Fee Details

Task	Task Description	E6 $175.00	E5 $165.00	E4 $150.00	E1 $85.00	CADD $85.00	Adm 3 $75.00	Adm 1 $50.00	Total Labor	Expense/ Subconsul. Fee	Subconsul.
1	**Research**										
	Project Management	2		10			2	2	$2,100		
	Project Start-up Meeting		2	2	4				$970		
	Document Review		2	6				2	$1,330		
2	**Evaluation**										
	Project Management			8			2	2	$1,450		
	Initial Field/Site Evaluation			8	4				$1,540	$ 9,750.00	CPI*
3	**Presentation**										
	Project Management			6			4	2	$1,300		
	Lab/Testing Results Review			2					$300		
	Develop Rehab Options			8					$1,200		
	Prepare Technical Memo		2	12		6		2	$2,740		
	Structural Engineering Eval and Recommendations			2			2		$450	$ 22,250.00	WGI*
	NACE Inspector Eval and Recommendations			2			2		$450	$ 15,550.00	CPI*
	Evaluation/Memo Review Meeting		4	6					$1,560		
	Site Inspection			4					$600		
	Finalize Rehab Options Memo		2	6		2		2	$1,500		
4	**Engineering/Consultation**										
	Project Management	2		20			2	4	$3,700		
	60% Design		8	66	32	60		1	$19,090		
	90% Design		4	48	24	32		1	$12,670		
	100% Design		4	24	16	24		2	$7,760		
	Structural Engineering Design			2		2		1	$520	$ 22,25000	WGI*
	NACE Inspector Design			2		2		1	$520	$ 17,000.00	CPI*
	Design Review Meetings (2)		4	8					$1,860		
	Bid Document Preparation			10		6		8	$2,410		
	Bid Assistance			4					$600		
	Bid Review/Recommendation		1	2					$465		
	Project Closeout			2			2	2	$550		
	Labor Total Hours	4	33	270	80	134	16	32	569		
	Labor Total	$700	$5,445	$40,500	$6,800	$11,390	$1,200	$1,600	**$67,635**		
	Subconsultant Labor Total									$86,800	
	Subconsultant Multiplier									1.1	
	Subcontract Total									**$95,480**	
	Laboratory Testing Allowance									**$5,000**	
	Expenses									$0	
	Expenses Multiplier									1.15	
	Expense Total									**$0**	
	ENGINEERING TOTAL									**$168,115**	

*CPI - Corrosion Probe, Inc.
*WGI -Wantman Group, Inc.