Agenda Item #3K-3

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY

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Meeting Date: April 7, 2009 | **Consent [X]** | **Regular [ ]** | **Public Hearing [ ]**

Submitted By: Water Utilities Department
Submitted For: Water Utilities Department

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I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: A) Work Authorization No. 14 to the Optimization and Improvements Design/Build Services with Globaltech, Inc. (R2008-2323) for repair of the Town of Mangonia Park elevated water storage tank in the amount of $427,636 and; **B)** Interlocal Agreement with the Town of Mangonia Park for the elevated storage tank repair.

Summary: On December 16, 2008, the Board approved the Water Utilities Department Optimization and Improvements Design/Build Services Contract with Globaltech, Inc. for treatment plant and regional pump station projects. This Work Authorization is a guaranteed maximum price for repair of the Mangonia Park 100,000 gallon elevated water storage tank utilizing Community Development Block Grant (CDBG) funds from Housing and Community Development (HCD). The elevated water storage tank bowl must be repaired and the riser pipe replaced to insure integrity under hurricane conditions prior to the start of the hurricane season. In addition, the tank legs will be stiffened and the entire tank painted. The Mangonia Park Town Council approved the recommendations for repairs and replacement on January 22, 2009. The interlocal agreement specifies the responsibilities of each party. The Small Business Enterprise (SBE) participation goal established by the SBE Ordinance (R2002-0064) is 15% overall. The contract with Globaltech, Inc. provides for SBE participation of 75.00% overall. This authorization includes 36.60% overall participation. The cumulative SBE participation, including this work authorization, is 55.30% overall. (WUD Project No. 09-032) District 7 (JM)

Background and Justification: This Work Authorization is for repair of the Town of Mangonia Park elevated water storage tank bowl and replacement of the riser pipe. Inspections found the elevated tank bowl to be structurally unsound. On June 4, 2008 the Palm Beach County Health Department issued a consent order requiring repairs to be completed by June 4, 2009. On October 1, 2008 CDBG funding for the project became available from HCD. On December 16, 2008, the Board approved the Water Utilities Department Optimization and Improvements Design/Build Services with Globaltech, Inc. (R2008-2323). On December 17, 2008 the Water Utilities Department approved Consultant Services Authorization No. 2 to Globaltech, Inc. to study the necessary improvements and to provide a guaranteed maximum price for the necessary work to comply with the consent order. Globaltech, Inc. has recommended repair of the tank bowl and replacement of the riser pipe along with stiffening of the tank legs and repainting the entire tank structure. The Mangonia Park Town Council approved the recommendations for repairs on January 22, 2009. On March 17, 2009 the Mangonia Park Town Council approved the Interlocal Agreement designating each party's responsibilities. Globaltech, Inc. is a SBE but this Work Authorization does not meet the SBE goal due to the specialized nature of the work which must be sub-contracted.

Attachments:
1. Location Map
2. Two (2) Original Work Authorization No. 14
3. Three (3) Original Interlocal Agreement with the Town of Mangonia Park
4. Budget Availability Statement

Recommended By: _____
Department Director **Date**

Approved By: _____ 4/2/09
for **Assistant County Administrator** **Date**

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	**2009**	**2010**	**2011**	**2012**	**2013**
Capital Expenditures	$427,636.00	0	0	0	0
External Revenues	0	0	0	0	0
Program Income (County)	0	0	0	0	0
In-Kind Match County	0	0	0	0	0
NET FISCAL IMPACT	$427,636.00	0	0	0	0
# ADDITIONAL FTE POSITIONS (Cumulative)	0	0	0	0	0

Budget Account No.: Fund 1101 Agency 143 Org. 1431 Object 8101
Program Code/Period BG168-GY08

Is Item Included in Current Budget? Yes X No ___

Reporting Category **N/A**

B. Recommended Sources of Funds/Summary of Fiscal Impact:

One time expenditure from Housing and Community Development Community (HCD) Development Block Grant funds (CDBG).

C. Department Fiscal Review: Debra M West

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:

3-31-09
OFMB

Contracts Development and Control 4/1/09

B. Legal Sufficiency:

4/2/09
Assistant County Attorney

This item complies with current County policies.

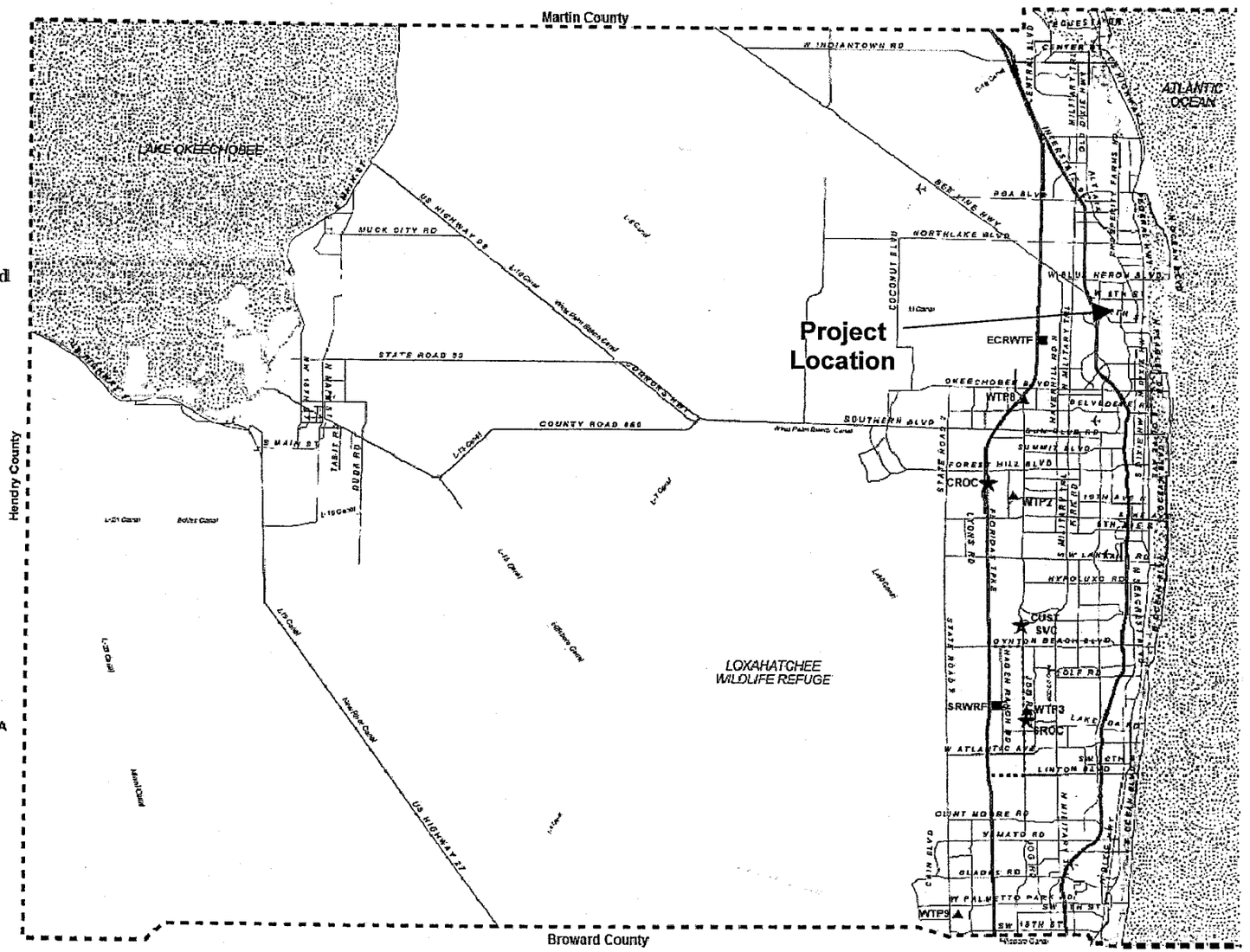
C. Other Department Review:

Department Director

This summary is not to be used as a basis for payment.

ATTACHMENT 1

Palm Beach County Water Utilities Department Service Area (SA) and Major Facilities



Legend

- P.B.C.W.U.D. SA
- MANDATORY RECLAIMED SA
- COUNTY LIMITS
- Administration
- Water Reclamation Plant
- Water Treatment Plant
- Wetlands

NOT TO SCALE

Project Name WUD # 09-032

WORK SERVICES AUTHORIZATION NO. 14

Project No. WUD 09-032
Budget Line Item No. 1101-143-1431-8101- BG168 - GY08

Project Title: **TOWN OF MANGONIA PARK ELEVATED TANK REPAIR/REPLACEMENT, PHASE II - CONSTRUCTION**

District No.: 1

THIS AUTHORIZATION No. 14, to the Contract for Optimization and Improvements Design-Build Services dated December 16, 2008 with an effective date of December 16, 2008 (Optimization and Improvements Design-Build Contract R2008-2323), by and between Palm Beach County and the Design-Build Entity identified herein, is for the Construction Services described in Item 3 of this Authorization. The Contract provides for 75% SBE participation overall. This Consultant Services Authorization includes 36.60% overall participation. The cumulative SBE participation, including this authorization is 55.30% overall.

1. DESIGN-BUILD ENTITY: **Globaltech, Inc.**

2. ADDRESS: **1075 Broken Sound Pkwy NW, Suite 103, Boca Raton, FL 33487**

3. Description of Services to be provided by the Design-Build Entity:

   Provide design-build services to repair the Town of Mangonia Park Elevated Tank. Planned repairs include replacing the container, lid and riser pipe, stiffening the existing supports to meet 140 mph wind load ratings, repairing and reinstalling the existing ladders and painting the interior and exterior of the renovated tank. As part of this project, a chlorine residual analyzer will be installed and connected to a new autodialer and the Town's existing valve will be installed.

   See EXHIBIT "A".

4. Services completed by the Design-Build Entity to date:

   See EXHIBIT "B" and "C".

5. Design-Build Entity shall begin work promptly on the requested services.

6. The compensation to be paid to the Design-Build Entity for providing the requested services shall be:

   A. Computation of time charges plus expenses, not to exceed $ N/A

   B. Fixed price of $427,636.00

Budget Line Item No. 1101-143-1431-8101 - BG168 - GY08

7. This Authorization may be terminated by the County without cause or prior notice. In the event of termination not the fault of the Design-Build Entity, the Design-Build Entity shall be compensated for all services performed through the date of termination, together with reimbursable expenses (if applicable) then due.

8. EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, conditions and obligations of the Contract dated 12/16/08 with an effective date of 12/16/08 remain in full force and effect.

PROJECT NO. 09-032 **AUTHORIZATION NO. 14**

Budget Line Item No. 1101-143-1431-8101 - BG168 - GY08

IN WITNESS WHEREOF, the Board of County Commissioners of Palm Beach County, Florida, has made and executed this Contract on behalf of the said County and caused the seal of the said County to be affixed hereto, and the Design-Build Entity has hereunto set his hand and seal the day and year written. The Design-Build Entity represents that it is authorized to execute this contract on behalf of itself and its Surety.

ATTEST:

SHARON R. BOCK
CLERK AND COMPTROLLER

PALM BEACH COUNTY, FLORIDA, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA
BOARD OF COUNTY COMMISSIONERS

By: _____
John F. Koons, Chairman

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

_____
Assistant County Attorney

APPROVED AS TO TERMS AND CONDITIONS

_____ for
Bevin A. Beaudet, Director
Water Utilities Department

GLOBATECH, INC.

By: _____
Title: President

_____
(Witness signature)

Florida
(Insert state of corporation)

David Schuman
(Witness name printed)

2/2/09
(Date of execution)

_____
(Witness signature)

1075 Broken Sound Pkwy NW, Suite 103
(Design-Build Entity's Official Address)

BRUCE RAHMANI
(Witness name printed)

Boca Raton, FL 33487
(Design-Build Entity's City, State, Zip Code)

(Corporate Seal)

PALM BEACH COUNTY
INTER-OFFICE MEMORANDUM

DATE: January 27, 2009

TO: Steve McGrew, P.E., Manager
Water Utilities Department

FROM: Edward W. Lowery, Director
Housing & Community Development

RE: **Budget Availability Statement**
Town of Mangonia Park - Water Tower Replacement

This represents our Budget Availability Statement (BAS) for the referenced project as follows:

Budget Account No:	**Amount**	**Purpose**
Fund 1101 Dept 143 Org 1431 Obj 8101 Program Code/Period BG168-GY08	$429,636	Construction Costs/Asbestos Survey/Asbestos Abatement
// **Total**	$429,636	//

If you require any further information on the above, please contact Amin Houry, Manager, Housing and Capital Improvements, at 233-3625.

Edward W. Lowery, Director
Housing and Community Development

cc: Larry Brown, HCD.

S:\CapImprv\MUNICIPAL\MangoniaPark\WaterTowerReplcmnt\BAS2.wpd

EXHIBIT A

WORK AUTHORIZATION NO. 14

PALM BEACH COUNTY WATER UTILITIES DEPARTMENT
DESIGN-BUILD SERVICES

SCOPE OF WORK
FOR
TOWN OF MANGONIA PARK ELEVATED TANK REPAIR/REPLACEMENT,
PHASE II - CONSTRUCTION

INTRODUCTION

Palm Beach County (COUNTY) entered into an agreement entitled Contract for Optimization and Improvements Design-Build Services - Palm Beach County Utilities Department Project No. WUD 08-078 (CONTRACT) with. **Globaltech, Inc.** (DESIGN-BUILD ENTITY) to provide design-build services for various general activities on (Reference Document R2008-2323). This Work Authorization will be performed under that CONTRACT.

SCOPE OF SERVICES

This project involves repairing an existing 100,000 gallon elevated steel tank located at the Town of Mangonia Park (TOWN) Water Treatment Plant. The tank has been previously evaluated by Liquid Engineering, who submitted a report to the TOWN in December 2007 which found the tank to be in poor condition and recommended immediate rehabilitation. The repair work included in this Scope of Services is based on the recommendations of the Liquid Engineering report and the scope of repairs submitted by Pittsburg Tank to the Town in July 2008. The tank, after refurbishment, will have the life expectancy of a new tank, as long as proper maintenance is conducted.

Planned repairs include replacing the container, lid, riser pipe and accessories, stiffening the existing supports to meet 140 mph wind load ratings, repairing and reinstalling the existing ladders and painting the interior and exterior of the renovated tank. As part of this project, a chlorine residual analyzer will be installed and connected to a new autodialer and a 10" flanged gate valve, previously purchased by the TOWN, will b e installed.

Description of Services

Task 1 – Administrative

1. Prepare detailed construction schedule to include as a minimum; design modification and review, site mobilization, detailed construction activities, scheduled shut downs and durations, equipment/material delivery times, testing, and startup and commissioning

2. Prepare submittals (or confirmation of compliance with PBCWUD design standards), administer and track submittal process.
3. Schedule meetings, inspections, and testing with County and TOWN staff
4. Prepare submittal drawings and materials to the TOWN for building permits. Our understanding is that there is no fee for the building permit. No other permits will be required for this work.
5. Prepare record drawings.
6. Prepare O&M manual for the chlorine residual analyzer at close of project.
7. If necessary, apply for a Consent Order time extension from the Palm Beach County Health Department.
8. Obtain the services of a qualified and experienced elevated tank repair firm. The tank repair firm will provide the structural design for the repairs.
9. Obtain the services of an independent tank inspector to confirm that the structural design meets design standards and the welding and the paint application meet design specifications.

Task 2 – Construction Services

1. Establish staging areas with TOWN staff; mobilize to facilities
2. Conduct elevated tank repairs as follow:
    a. Clean the area around the anchor bolts, weld around the circumference of the bolt-to-nut and nut-to-base plate connections to reinforce.
    b. Extend the overflow down the exterior to grade with 6" pipe, with standoffs every 10' on center. Install a flapper valve and screen to prevent ingress of contaminants into the water supply. Install a splash pad to direct water away from the tank foundation.
    c. Install AWWA and OSHA approved cable climbs on all ladders. Tower, cone, roof and shell ladders will be reused. Install an aluminum lockable ladder guard to prevent unauthorized use. Post a "Fall Protection Required" sign. Install a new interior container ladder with safety climb.
    d. Adjust the windage rods and riser stays as needed, to withstand 140 mph winds blowing from any direction.
    e. Install an aluminum vacuum/pressure, frost-proof vent and screen. Vent shall be flanged to allow removal and installation of a fan for painting purposes.
    f. Install two (2) 24" diameter roof openings 180° from each other and install handrails around all roof openings.
    g. Install a new riser on the existing tank starting at the above-ground connection and include a new expansion joint. The entire container will be replaced with the aforementioned accessories including the cone, shell and roof as detailed. The existing structural girder where the cone attaches to the tower will be left in place and reused.

h. New interior steel will be shop sandblasted to SSPS #10 (near white blast), the seams and welds will be stripe coated and a potable grade epoxy will be applied to 4-6 mils dry film thickness.
i. In the field, rusted, abraded and weld seam interior steel areas will be sandblasted to SSPC #10 and spot primed. All interior surfaces will then be painted with a potable grade epoxy to achieve a total coating thickness of 8-10 mils dry film thickness.
j. Existing steel interior areas, if any, will be pressure washed and/or hand tool cleaned, spot primed and finish coated with potable grade epoxy.
k. New exterior steel will be shop sandblasted to SSPC #6 then stripe coated and finish coated with an epoxy system of 4-6 dry mils.
l. In the field, rusted, abraded and weld seam new exterior steel will be sandblasted to SSPC #6 then spot coated with epoxy and finish coated with polyurethane.
m. Existing exterior steel will be pressure washed with TSP detergent injection (minimum 3,500 psi at 3.0 gpm) then loose rust and scale will be removed with wire brushes and hand scrapers in accordance with SSPC #2 (hand tool cleaning). One full coat of mastic and one finish coat of polyurethane will be applied.

3. Disinfect elevated tank, collect bacteriological samples and submit them to an approved laboratory. Place elevated tank back into service after two negative samples.
4. Provide and install the chlorine residual analyzer and autodialer.
5. Install a line-stop in the line going to the elevated tank. Install a new butterfly valve with valve-box in the line.
6. Install the 10" flanged gate valve previously purchased by the TOWN.
7. Cleanup work area and demobilize from site

Task 3 – Commissioning Services

1. Provide Florida P.E. certification that the repaired elevated tank meets 140 mph wind load ratings.
2. Disinfect new bowl and place back into service.
3. Provide chlorine residual analyzer vendor startup services with TOWN.

ASSUMPTIONS

1. The proposed contract completion time is exclusive of permit acquisition time
2. County will review all submittals and provide comments within one calendar week and notify Globaltech of status
3. Liquidated Damages will not be assessed for this Work Authorization.
4. Work assumes that existing elevated tank does not contain lead or asbestos. County's Risk Management Department will inspect and test facilities for lead and asbestos and advise Globaltech accordingly.

5. The elevated tank will not be shrouded during the repair work.
6. Inclement weather may affect the painting schedule.
7. Davis-Bacon wage rates apply to this project.

COMPENSATION

Compensation for Work Authorization No. 14 will not exceed the Lump Sum Amount (inclusive of allowances) of $427,636.00. Attachment A provides the cost breakdown and fee.

SCHEDULE

The milestone completion schedule is provided in Attachment B. A detailed construction activity schedule will be provided under Task 1.1 of this WA.

M/WBE PARTICIPATION

As prescribed under Section 7.5 of the CONTRACT, M/WBE participation is included in Attachment B under this Authorization. The attached Schedule 1 defines the M/WBE participation.

ATTACHMENT – A	**Budget Summary (2 Pages)**
ATTACHMENT – B	**Project Schedule**
ATTACHMENT – C	**SBE Schedules 1&2**
ATTACHMENT – D	**Location Map**

PUBLIC CONSTRUCTION BOND

BOND NUMBER: 091022

BOND AMOUNT: $427,636.00

CONTRACT AMOUNT: $427,636.00

CONTRACTOR'S NAME: Globaltech, Inc.

CONTRACTOR'S ADDRESS: 1075 Broken Sound Pkwy NW #103
Boca Raton, FL 33487

CONTRACTOR'S PHONE: 561-997-6433

SURETY COMPANY: First Sealord Surety, Inc.

SURETY'S ADDRESS: 4901 17th Way #304
Ft. Lauderdale, FL 33309

OWNER'S NAME: PALM BEACH COUNTY

OWNER'S ADDRESS: 8100 Forest Hill Boulevard (P. O. Box 16097)
West Palm Beach, FL 33413

OWNER'S PHONE: (561) 493-6000

DESCRIPTION OF WORK: Repairs to elevated water storage tank for the Town of Mangonia Park, Florida

PROJECT LOCATION: Town of Mangonia Park, Florida

LEGAL DESCRIPTION: Town of Mangonia Park Elevated Tank Repair/Replacement
WUD 09-032

PUBLIC CONSTRUCTION BOND

This Bond is issued in favor of the County conditioned on the full and faithful performance of the Contract.

KNOW ALL MEN BY THESE PRESENTS: that Contractor and Surety, are held and firmly bound unto

Palm Beach County Board of County Commissioners
301 N. Olive Avenue
West Palm Beach, Florida 33401

as Obligee, herein called County, for the use and benefit of claimant as herein below defined, in the amount of Four Hundred Twenty Seven Thousand Six Hundred Thirty Six And No/100 ---------- Dollars ($427,636.00)

(Here insert a sum equal to the Contract Price)

for the payment whereof Principal and Surety bind themselves, their heirs, personal representatives, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated _____, 200_, entered into a contract with the County for

Project Name: Town of Mangonia Park Elevated Tank Repair/Replacement, Phase II - Construction
Project No.: WUD 09-032
Project Description: Repairs to existing elevated water storage tank for the Town of Mangonia Park to include; repair/replacement of existing lower tank bowl, miscellaneous structural repairs, painting, and addition of new valve and residual chlorine monitoring systems.
Project Location: 5705 Candlewood Street
Mangonia Park, FL 33407

in accordance with Design Criteria Drawings and Specifications prepared by

Name of Design Firm: Globaltech, Inc.
Location of Firm: Boca Raton, FL 33487
Phone: 561-997-6433
Fax: 561-997-5811

which contract is by reference made a part hereof in its entirety, and is hereinafter referred to as the Contract.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the contract dated , 200 , between Principal and County for the design and construction of , the contract being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05, Florida Statutes,

supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and

3. Pays County all losses, damages (including liquidated damages), expenses, costs, and attorneys' fees, including appellate proceedings, that County sustains because of a default by Principal under the contract; and

4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.

5. Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond and Surety waives notice of such changes.

6. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of construction liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against the bond.

7. Principal and Surety expressly acknowledge that any and all provisions relating to consequential, delay and liquidated damages contained in the contract are expressly covered by and made a part of this Performance, Labor and Material Payment Bond. Principal and Surety acknowledge that any such provisions lie within their obligations and within the policy coverage's and limitations of this instrument.

8. Section 255.05, Florida Statutes, as amended, together with all notice and time provisions contained therein, is incorporated herein, by reference, in its entirety. Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes. This instrument regardless of its form, shall be construed and deemed a statutory bond issued in accordance with Section 255.05, Florida Statutes.

9. Any action brought under this instrument shall be brought in the state court of competent jurisdiction in Palm Beach County, Florida and not elsewhere.

Witness

Principal (Seal)
Globaltech, Inc.

PRESIDENT
Title

Witness

Surety (Seal)
First Sealord Surety, Inc.

Title Shawn A. Burton
Attorney-in-Fact

FORM OF GUARANTEE

GUARANTEE FOR (Contractor and Surety Name) Globaltech, Inc. and First Sealord Surety, Inc.

We the undersigned hereby guarantee that the **Town of Mangonia Park Elevated Tank Repair/Replacement, Phase II, Project No. WUD 09-032,,** Palm Beach County, Florida, which we have constructed and bonded, has been done in accordance with the plans and specifications; that the work constructed will fulfill the requirements of the guaranties included in the Contract Documents. We agree to repair or replace any or all of our work, together with any work of others which may be damaged in so doing, that may prove to be defective in the workmanship or materials within a period of one year from the date of Substantial Completion of all of the above named work by the County of Palm Beach, State of Florida, without any expense whatsoever to said County of Palm Beach, ordinary wear and tear and unusual abuse or neglect excepted by the County. When correction work is started, it shall be carried through to completion.

In the event of our failure to acknowledge notice, and commence corrections of defective work within five (5) calendar days after being notified in writing by the Board of County Commissioners, Palm Beach County, Florida, we, collectively or separately, do hereby authorize Palm Beach County to proceed to have said defects repaired and made good at our expense and we will honor and pay the costs and charges therefore upon demand.

DATED _____
(notice of completion filing date)

SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY

Countersigned Resident Agent in Florida:

Brown & Brown of Florida, Inc.
(Agent)

By _____
(Signature) Shawn A. Burton
Attorney-in-Fact

Globaltech, Inc. (Seal)
(Contractor)

By: _____
(Signature)

First Sealord Surety, Inc. (Seal)
(Surety)

By: _____
(Signature)
Shawn A. Burton, Attorney-in-Fact

END OF SECTION

First Sealord Surety, Inc.
Power of Attorney

Power No: MIA-0036-08-13892

KNOW ALL MEN BY THESE PRESENTS: That First Sealord Surety, Inc., a corporation of the Commonwealth of Pennsylvania, (hereinafter the "Company") has made, constituted and appointed, and by these presents does make, constitute and appoint

Gerald J. Arch, Shawn A. Burton, James F. Murphy and/or Joanne M. Mursell all of Ft. Lauderdale, Florida

its true and lawful Attorney-in-Fact, to make, execute and deliver on its behalf insurance policies, surety bonds, undertakings and other instruments of a similar nature as follows:

********** **Not To Exceed Five Million Dollars----------($5,000,000.00)** **********

Such insurance policies, surety bonds, undertakings and instruments for said purposes, when duly executed by the aforesaid Attorney-in-Fact, shall be binding upon the said Corporation as fully and to the same extent as if signed by the duly authorized officers of the Corporation and sealed with its corporate seal; and all the acts of said Attorney-in-Fact, pursuant to the authority hereby given, are hereby ratified and confirmed.

This appointment is made pursuant to the following By-Laws which were duly adopted by the Board of Directors of the said Corporation on April 7, 2003 with all Amendments thereto and are still in full force and effect:

"Article XII: Policies, Bonds, Recognitions, Stipulations, Consents of Surety, Underwriting Undertakings, and Instruments Relating Thereto.

Section 12-1. Insurance policies, bonds, recognitions, stipulations, consents of surety and underwriting undertakings of the Corporation, and releases, agreements and other writings relating in any way thereto or to any claim or loss thereunder, shall be signed in the name and on behalf of the Corporation: a) by the Chairman of the Board, the President or a Vice President, and by the Secretary or an Assistant Secretary; or b) by an Attorney-in-Fact for the Corporation appointed and authorized by the Chairman of the Board, the President, or a Vice President to make such signature; or c) by such other officers or representatives as the Board may from time to time determine. The seal of the Corporation shall if appropriate be affixed thereto by any such officer, Attorney-in-Fact or representative. The authority of such Attorney-in-Fact and Agents shall be as prescribed in the instrument evidencing their appointment. Any such appointment and all authority granted thereby may be revoked at any time by the Board of Directors or by any person empowered to make such appointment."

IN WITNESS WHEREOF, First Sealord Surety, Inc. has caused these presents to be duly signed and its corporate seal to be hereunto affixed and duly attested this 20th day of January, 2004.

First Sealord Surety, Inc.

(Seal) Attest: _____ By: _____

Gary L. Bragg, Secretary — Joel D. Cooperman, Vice President

Commonwealth of Pennsylvania
County of Montgomery

On this 20th day of January, 2004, before me personally appeared Joel D. Cooperman, Vice President of First Sealord Surety, Inc., with whom I am personally acquainted, who, being by me duly sworn, said that he resides in the Commonwealth of Pennsylvania, that he is Vice President of First Sealord Surety, Inc., the corporation described in and which executed the foregoing instrument; that he knows the corporate seal of the said Corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Corporation; and that he signed his name thereto as Vice President of said Corporation by like authority.

(Seal) _____ - Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Anthony T. Stewart, Notary Public
Lower Merion Twp., Montgomery County
My Commission Expires Aug. 5, 2010
Member, Pennsylvania Association of Notaries

CERTIFICATE

I, the undersigned Secretary of First Sealord Surety, Inc. do hereby certify that the original Power of Attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this Certificate and I do further certify that the Officer who executed the said Power of Attorney was one of the Officers authorized by the Board of Directors to appoint an Attorney-in-Fact as provided in Section 12-1 of the By-Laws of First Sealord Surety, Inc. This Certificate may be signed and sealed by facsimile under and by authority of the following provisions of the By-Laws of First Sealord Surety, Inc.:

"Section 12-2. The use of a printed facsimile of the corporate seal of the Corporation and of the signature of the Secretary or an Assistant Secretary on any certification of the correctness of a copy of an instrument executed by an authorized person pursuant to Article XII, Section 12-1 of the By-Laws appointing and authorizing an Attorney-in-Fact to sign in the name and on behalf of the Corporation surety bonds, underwriting undertakings, or other instruments described in said Section 12-1, with like effect as if such seal and such signature had been manually affixed and made."

In Witness Whereof, I have hereunto set my hand and affixed the corporate seal of the Corporation to these presents

this _____ day of _____, 20____.

This power of attorney is void unless the Bond number is inserted in this paragraph (insert Bond # here 091022), the bond number is the same number as on the original bond, and the bond number has been inserted by an officer or employee of the Company or by the agent.

(seal)

_____
Gary L. Bragg, Secretary

ATTACHMENT – A (ENGINEERING)

WA #14 - Town of Mangonia Park Elevated Tank Repair/Replacement Phase II - Construction

Budget Summary

Task No.	Task Description	Labor Classification and Hourly Rate							
		E6	E5	E2	T4	T2	Office	Total Labor	*Sub-Consultant Services
		$50.00	$45.00	$28.00	$28.00	$17.00	$20.00		
1	Develop subcontracts with tank repair contractor and tank inspector								
			8				8	$520.00	
								$0.00	
	Project Management	4	24				8	$1,440.00	
								$0.00	
	Subtotal Task 1	4	32	0	0	0	16	$1,960.00	$0.00
2	Meet with Town and coordinate repair schedule								
			8					$360.00	
	Coordinate electrical protection		8	8				$584.00	
	Prepare submittal for building permit		4		8		4	$484.00	
								$0.00	
								$0.00	
								$0.00	
	Subtotal Task 2	0	20	8	8	0	4	$1,428.00	$0.00
3	Chlorine Residual Analyzer		6	4				$382.00	
	Design pipe connections		4	4	8			$516.00	
	Asbuilts, permit closeout		16	8	8			$1,168.00	
	Construction Site Visits		20	20				$1,460.00	
	Subtotal Task 2	0	46	36	16	0	0	$3,526.00	$0.00
	Labor Subtotal Hours	4	98	44	24	0	20		$0.00
	Labor Raw Costs	$200.00	$4,410.00	$1,232.00	$672.00	$0.00	$400.00	$6,914.00	
	Labor Multiplier	3.00	3.00	3.00	3.00	3.00	3.00		
	Labor SubTotal	$600.00	$13,230.00	$3,696.00	$2,016.00	$0.00	$1,200.00	$20,742.00	
	Labor Total							$20,742.00	
	Subconsultant Labor Total							$0.00	
	Subconsultant Multiplier							$1.10	
	Subcontract Total							$0.00	
	Reimbursable Expenses							$1,292.00	
	Project Total							$22,034.00	

ATTACHMENT – A (CONSTRUCTION)

WA #14 - - Town of Mangonia Park Elevated Tank Repair/Replacement, Phase II - Construction

Budget Summary

CSI Division	Task Description	Labor Classification and Hourly Rate						Total Labor	Materials	*Sub-Contractor Services
		PRO8	PRO6	PRO6	NEO4	NEO2	Office			
		$60.00	$40.00	$35.00	$24.00	$18.00	$20.00			
1a	**Temporary Facilities**									
	Container Rental				8	8		$336.00	$600.00	
	Sanitary		4					$160.00	$225.00	
	Jobsite Supplies/Misc		4	8			4	$520.00	$500.00	
	Waste Hauling		8	8			4	$680.00	$2,000.00	
	Electrical Hookup		8	8			4	$680.00	$1,200.00	
	Subtotal Div 1a	**0**	**24**	**16**	**8**	**8**	**12**	**$2,376.00**	**$4,525.00**	**$0.00**
1b	**General Conditions**									
	Submittals			16			4	$640.00	$200.00	
	O&M Manuals			8			8	$440.00	$200.00	
	Document Production			8			8	$440.00	$200.00	
	Construction Photos			16			4	$640.00	$200.00	
	Permits			8				$280.00		
	Meetings	24						$1,440.00		
	Site Visits/Reveiws			48				$1,680.00		
	Pay requests	12						$720.00		
	Scheduling		16				2	$680.00		
	Subtotal Div 1b	**36**	**16**	**104**	**0**	**0**	**26**	**$6,960.00**	**$800.00**	**$0.00**
2	**Sitework/Staging**									
	Site Staging/Mobilize		24		24	24		$1,968.00		
	Superintendent		40					$1,600.00		
	Sod		8	8				$600.00	$1,000.00	
	Cleanup		20		20	20		$1,640.00		
	Subtotal Div 2	**0**	**92**	**8**	**44**	**44**	**0**	**$5,808.00**	**$1,000.00**	**$0.00**
5	**Miscellaneous Metals/Supp/Fstnrs**									
	Unistrut/Anchors		8	8				$600.00	$500.00	
	Subtotal Div 5	**0**	**8**	**8**	**0**	**0**	**0**	**$600.00**	**$500.00**	**$0.00**
9	**Finishes**									
	Misc. Pipe				8	8		$336.00	$250.00	
	Subtotal Div 9	**0**	**0**	**0**	**8**	**8**	**0**	**$336.00**	**$250.00**	**$0.00**
11	**Equipment**									
	Chlorine Residual Analyzer		16	8				$920.00	$3,500.00	
	Autodialer		16	8				$920.00	$1,000.00	
	Subtotal Div 11	**0**	**16**	**8**	**0**	**0**	**0**	**$1,840.00**	**$3,500.00**	**$0.00**
13	**I&C**									
	Misc minor I&C		8					$320.00		
	Subtotal Div 13	**0**	**8**	**0**	**0**	**0**	**0**	**$320.00**	**$0.00**	**$0.00**
15	**Mechanical**									
	Tank Repair Subcontractor		40		40	40		$3,280.00		$257,320.00
	Tank Inspector Subcontractor							$0.00		$13,800.00
	Line Stop		8	8		8		$744.00	$5,250.00	
	Valve		16	16		16		$1,488.00	$1,000.00	
	Piping		16	16		16		$1,488.00	$5,000.00	
	Install Existing Valve		4	4		4		$372.00	$270.00	
	Disinfect Tank		8	8		8		$744.00	$250.00	
	Consumable/Tools							$0.00	$1,750.00	
	Subtotal Div 15	**0**	**92**	**52**	**40**	**92**	**0**	**$8,116.00**	**$13,520.00**	**$271,120.00**
16	**Electrical**									
	Misc. minor electrical		8	8				$600.00	$500.00	
								$0.00		
	Subtotal Div 16	**0**	**8**	**8**	**0**	**0**	**0**	**$600.00**	**$500.00**	**$0.00**
	SUBTOTALS:							**$26,956.00**	**$24,595.00**	**$271,120.00**
	Labor @ Markup (1.36x1.084x1.15)							**$45,701.20**		
	Materials @ Markup (1.15)								**$28,284.25**	
	Subcontract Services @ Markup (1.1)									**$298,232.00**
	PROJECT CONSTRUCTION SUBTOTAL									**$372,217.45**
	PROJECT ENGINEERING SUBTOTAL (From previous Page)									**$22,034.00**
	PBC WUD Allowance									**$25,000.00**
	PROJECT SUBTOTAL									**$419,251.45**
	Bonding (2%)									**$8,385.03**
	PROJECT TOTAL:									**$427,636**

ATTACHMENT – B

WA #14 –Town of Mangonia Park Elevated Tank Repair/Replacement, Phase II-Construction

PROJECT SCHEDULE

SCHEDULE

The completion dates for this work will be as follows (starting from DESIGN-BUILD ENTITY'S receipt of Notice-to-Proceed).

Construction Services	Substantial Completion	Final Completion
Line Stop and Valve Installation	3 Weeks	NA
Chlorine Residual Analyzer Installation	8 Weeks	10 Weeks
Tank Repairs	12 Weeks	16 Weeks

ATTACHMENT C

SCHEDULE #1

LIST OF PROPOSED SBE-M/WBE PRIME/SUBCONTRACTORS

PROJECT NAME: WA#14 - Town of Mangonia Park Elevated Tank Repair/Replacement Phase II-Construction

PROJECT NUMBER: WUD 09-032

NAME OF PRIME BIDDER: Globaltech, Inc.

CONTACT PERSON: Paul Gandy, P.E.

BID OPENING DATE:

ADDRESS: 1075 Broken Sound Parkway NW, Suite 103, Boca Raton, FL 33487

PHONE NO. 561-997-6433 FAX NO. 561-997-5811

DEPARTMENT:

PLEASE IDENTIFY ALL APPLICABLE CATEGORIES

Name, Address, Telephone Number of SBE-W/MBE Contractor	(Check one or both Categories)		Dollar Amount				
	Minority Business	Small Business	Black	Hispanic	Women	Caucasian	Other (Please Specify)
Globaltech	..	þ	$0.00	$0.00	$0.00	$156,516.00	$0.00
	..		$0.00	$0.00	$0.00	$0.00	$0.00
	..		$0.00	$0.00	$0.00	$0.00	$0.00
		..	$0.00	$0.00	$0.00	$0.00	$0.00
	..	..	$0.00	$0.00	$0.00	$0.00	$0.00
PRIME CONTRACTOR TO COMPLETE:		TOTAL:	$0.00	$0.00	$0.00	$156,516.00	$0.00

BID PRICE: $427,636.00 Total Value of SBE Participation: $156,516.00

NOTE:

1. The amount listed on this form for a Subcontractor must be supported by price or precentage included on Schedule 2 or a proposal from each Subcontactor listed in order to be counted toward goal attainment.
2. Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both a SBE and M/WBE, please indicate the dollar amount under the appropriate category.
3. M/WBE information is being collected for tacking puposes only.

PALM BEACH COUNTY
OFFICE OF SMALL BUSINESS ASSISTANCE

CERTIFIES THAT

GLOBALTECH, INC.

VENDOR # GLOB0059

is a Small Business Enterprise as prescribed by section 2-80.21 – 2-80.34 of the Palm Beach County Code for a three year period from September 27, 2006 to September 26, 2009.

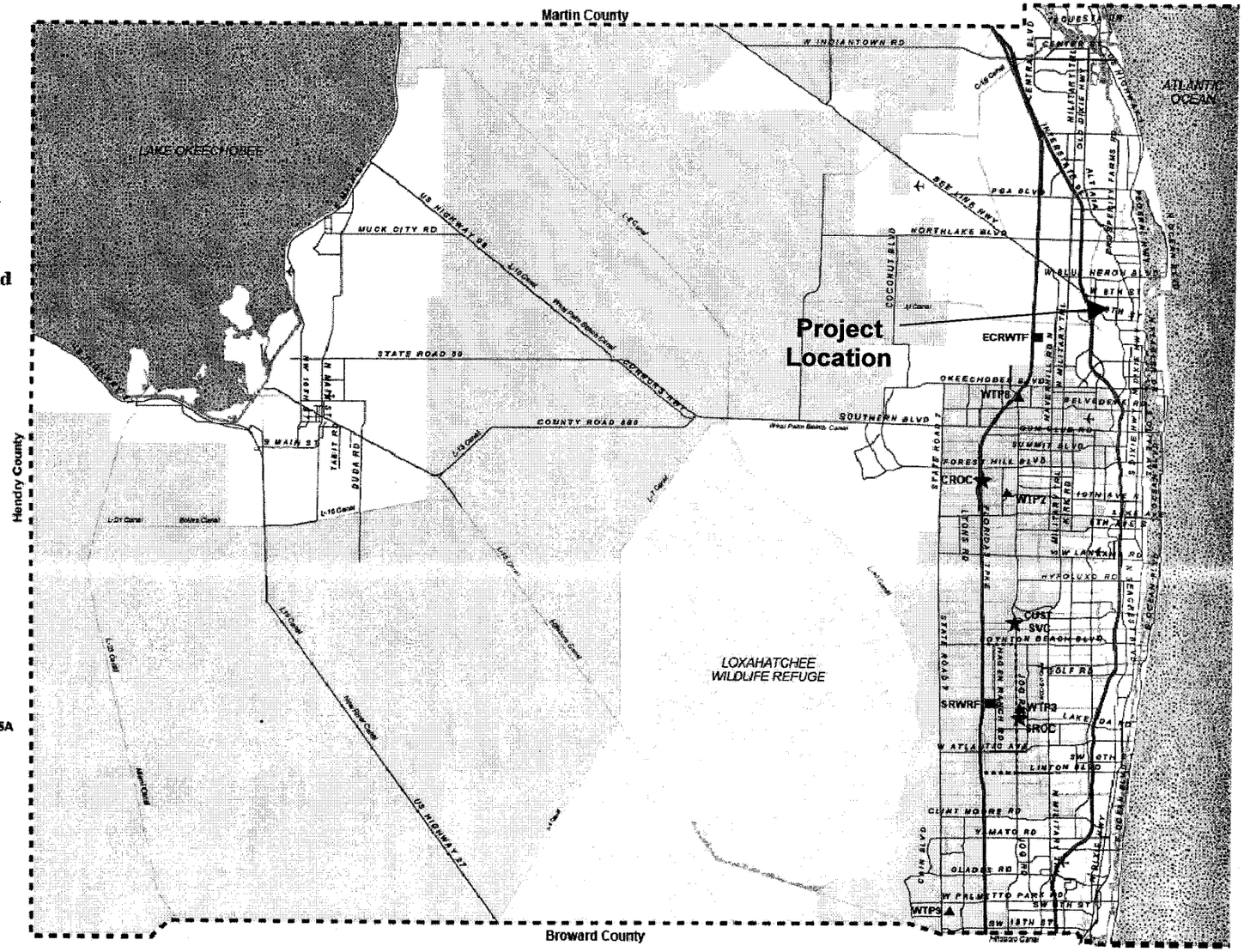
The following Services and/or Products are covered under this certification:

Mechanical Contractor
Consulting Engineers
General Contractor

Hazel Oxendine, Director

PALM BEACH COUNTY FLORIDA

Palm Beach County Water Utilities Department Service Area (SA) and Major Facilities



Project Name WUD # 09-032

Date: 1/29/2009

EXHIBIT - B

AUTHORIZATION STATUS REPORT

(CONTINUED)

SUMMARY AND STATUS OF
REQUESTS FOR AUTHORIZATIONS

Auth. No.	Description	Status	Project Total Amount	Date Approved	WUD No. Assigned	Globaltech Project No.
	CONSULTANT SERVICE AUTHORIZATIONS					
CSA-1	Beeline Rechloramination Facility	Approved	$67,871.00	12/17/2008	09-006	GT 08-20-140
CSA-2	Mangonia Park Elevated Tank Repair/Replacement - Phase 1	Approved	$35,364.00	12/17/2008	09-032	GT 08-20-141
CSA-3	WTP 10 Membrane Improvements	Approved	$48,716.00	12/17/2008	08-074	GT 08-20-142
	WORK AUTHORIZATIONS					
WA-1	WTP 3, 9, & SRWRF Hypochlorite I&C Improvements	Approved	$198,732.00	12/17/2008	08-059	GT 08-20-143
WA-14	Town of Mangonia Park Elevated Tank Repair/Replacement, Pahse II - Construction	Pending			09-032	
Total			**$350,683.00**			

Date: 1/29/2009

EXHIBIT - C

AUTHORIZATION STATUS REPORT
OPTIMIZATION AND IMPROVEMENTS DESIGN-BUILD CONTRACT

(CONTINUED)

SUMMARY AND STATUS OF
SBE / MINORITY BUSINESS TRACKING SYSTEM

WA#14 - Town of Mangonia Park Elevated Tank Repair/Replacement, Phase II - Construction

	Total
Current Proposal	
Value of Consultant Service Authorization	$0.00
Value of Work Authorization	$427,636.00
Value of CSA and WA	$427,636.00
Value of SBE Minority Letter of Intent	$156,516.00
Acutal Percentages	36.60%
Signed / Approved Authorizations	
Total Value of Approved Consultant Service Authorization	$151,951.00
Total Value of Approved Work Authorization	$198,732.00
Total Value of CSAs and WAs	$350,683.00
Total Value of SBE Signed Subcontracts	$273,963.00
Acutal Percentages	78.12%
Signed Authorizations Plus Current Proposal	
Total Value of Approved CSAs Plus Current CSA Proposal	$151,951.00
Total Value of Approved WAs Plus Current WA Proposal	$626,368.00
Total Value of Approved and Proposed CSAs and WAs	$778,319.00
Total Value of SBE Subcontracts and Letters of Intent	$430,479.00
Acutal Percentages	55.30%
GOAL	75%

Globaltech
A DESIGN - BUILD COMPANY

TECHNICAL MEMORANDUM
1075 Broken Sound Pkwy NW, Suite 103
Boca Raton, Florida 33487
Phone: 561.997.6433, Fax: 561.997.5811
Email: solutions@globaltechdb.com

DATE: January 29, 2009

TO: Palm Beach County Water Utilities Department

FROM: David Schuman, P.E./Globaltech

CC: Lee Leffingwell/Town of Mangonia Park
Paul Gandy, P.E./Globaltech

SUBJECT: Town of Mangonia Park Elevated Tank Repair/Replacement, Phase I
Preliminary Design Technical Memorandum

Introduction

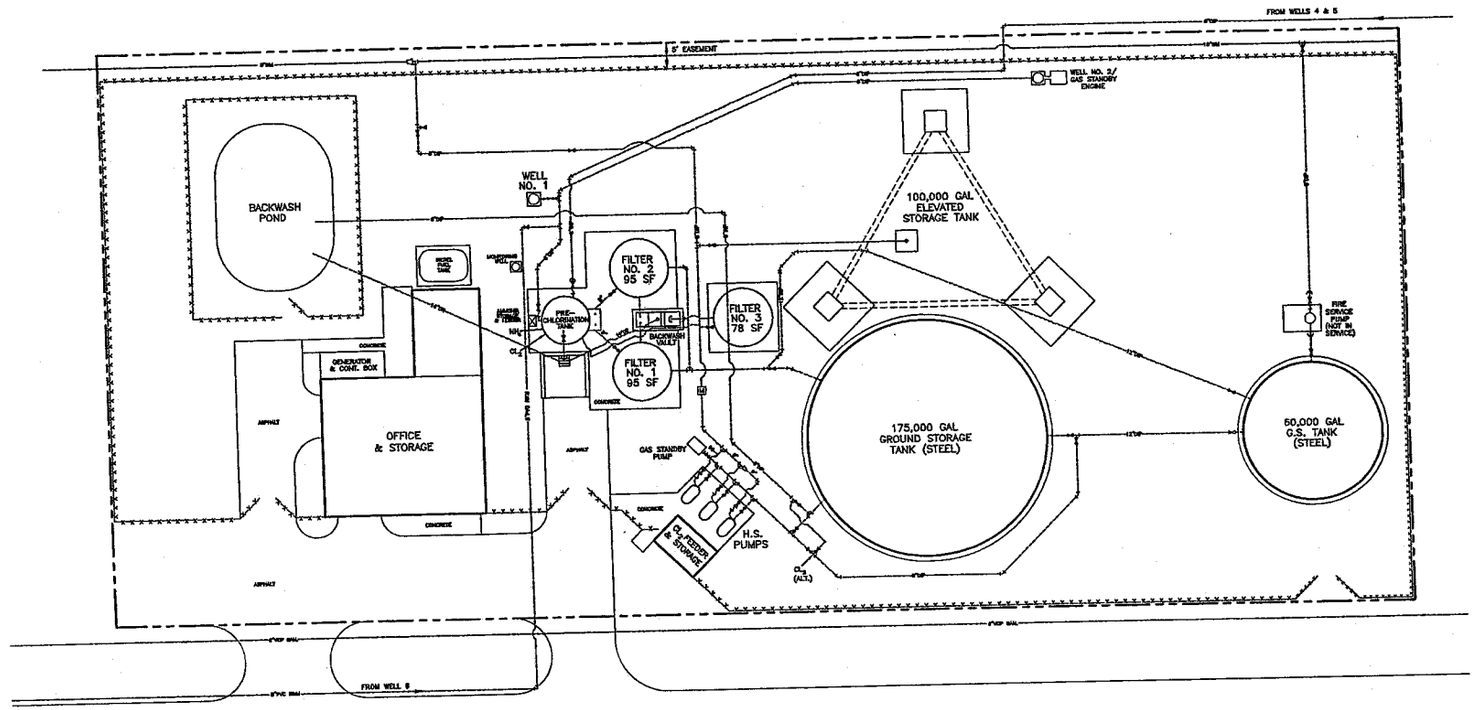
On June 4, 2008, the Palm Beach County Health Department (PBCHD) issued Consent Order HD-009-08-58 and HD-010-08-58 to the Town of Mangonia Park (TOWN) for various noncompliance issues at the Mangonia Park Water Treatment Plant (WTP). The TOWN has resolved several of the issues but the repair/replacement of the elevated tank and the installation of a loss of chlorine analyzer have not been completed. Liquid Engineering Corp. submitted a Tank Inspection Report to the TOWN in December 2007. The Tank Inspection Report identified numerous particular areas that required rehabilitation and stated that "Catastrophic failure appears imminent".

The Palm Beach County Water Utility Department (PBCWUD) has authorized Globaltech, Inc. to prepare this Preliminary Design Technical Memorandum to evaluate the repair and replacement options and to make a recommendation for repair or replacement, based on available reports.

The Consent Order deadline for repair/replacement of the elevated tank is June 4, 2009.

Water Treatment Plant Location

The Town of Mangonia Park Water Treatment Plant (WTP) is located on a compact site within a residential neighborhood, Figure 1. The setback requirements on this site are 10 feet on the north/south sides and 25 feet for the front (east) or back (west) sides of the property. There is a fifteen foot wide Town easement running along the rear of the WTP property. The 25 foot rear setback starts at the western edge of the easement; therefore the setback distance from the rear fence is also 10 feet. There are existing structures at the WTP that are currently located within the setback distances (Well No. 2, western support leg of elevated tank).



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: _____
DRAWN BY: _____
SHEET CHK'D BY: _____
CROSS CHK'D BY: _____
APPROVED BY: _____
DATE: JANUARY 2009

Globaltech
A DESIGN - BUILD COMPANY

1075 BROKEN SOUND PKWY NW, SUITE 103
BOCA RATON, FLORIDA 33487
PH: (561) 997-6433
FAX: (561) 997-5811
LICENSE No. E.B.-0007225
LICENSE No. C.G.C-1507230

TOWN OF MANGONIA PARK
WATER TREATMENT PLANT SITE PLAN

PROJECT NO. / FILE NAME: FIGURE 1
SHEET NO.
FIGURE 1

01-14-09

None of the evaluated options will result in a structure taller than the existing elevated tank; therefore, a height variance will not be required. The facilities shall be designed for a wind speed of 140 mph with an Importance Factor of 1.15 and an Exposure Category of B.

Existing Facilities

The existing significant facilities at the WTP include the following:

- One Spiractor
- Three 11-foot diameter AVGF filters
- One 100,000 gallon elevated tank (operating range of 24 feet)
- One 175,000 gallon steel ground storage tank
- One 60,000 gallon steel ground storage tank
- Three 20 HP high service pumps
- One 30 HP 600 gpm fire pump (out of service)
- One emergency generator
- One 1,500 gallon diesel fuel tank
- 150-lb cylinder gas chlorination equipment (vacuum system)
- Aqueous ammonia equipment (drums and metering pumps)

The existing ground storage tanks (GSTs) are both painted steel, each about 16 feet tall and each buried about 2 feet in the ground. Both tanks have overflow outlets set at about 1 foot below top of the tanks. Tank penetrations enter through the sides of the tanks.

The WTP uses chloramines for disinfection and both chlorine and ammonia are added in the Spiractor. Currently, the WTP does not need to meet any disinfection detention time regulations since all of the processes are covered. Under the pending Ground Water Rule, the WTP will need to provide 4-log virus removal since the Spiractor is open-top. The filters provide for 2-log virus removal, therefore the WTP must meet an additional 2-log virus removal in their disinfection process. The 2-log virus removal criterion is based on the "CT" concept. CT is equal to disinfection concentration (C) multiplied by time (T), where T is defined as the period that 90 percent of the volume of water treated would have contact with the disinfectant. The CT calculations are based on chloramines disinfection which requires much greater T values than free chlorine. The WTP could reduce their required disinfection volumes if they changed their disinfection protocol so that the water was subjected to free chlorine prior to ammonia addition.

The total existing storage is 335,000 gallons. The bottom 5 feet of the ground storage tanks cannot be effectively pumped out. This 79,300 gallons is essentially "lost storage, although it can be used to meet disinfection CT requirements. To meet the pending disinfection CT requirements, approximately 113,000 gallons of storage is required for disinfection volume, based on using 4 mg/l of chloramines and a water temperature of 25 °C. Table 1 shows the CT calculations. CT volume could be reduced by modifying the inlet/outlet configuration of the existing GST's or by installing tank baffles or mixers. If the existing tanks were baffled then the required future CT volume could be reduced to 36,000 gallons.

Table 1

Mangonia Park Water Treatment Plant - CT Calculations[1]

Path = From Filters to Water Main - Chloramines

Flow= 1.08 mgd

Section	Path Description	Number of Sections in Service	Length (ft)	Dia. (in)	Width (ft)	Height (ft)	Theoretical Storage Volume (ft^3)	Theoretical Storage Volume (gal)	Flow (mgd)	Theoretical Contact Time (min)	T_{10}/T Ratio	Estimated T_{10} Contact Time (min)	Total Chlorine	CT	Comments
Storage in 2 filters using chloramines															
First Filter	Filter 1	1	NA	132	NA	13.75	1,306	9,769	0.5	26.05	0.3	7.82	4	**31.26**	Assumes 1/2 flow
Second Filter	Filter 3	1	NA	132	NA	13.75	1,306	9,769	0.5	26.05	0.3	7.82	4	**31.26**	Assumes 1/2 flow
													Subtotal for Filters	**31.26**	use smaller value
Individual Discharge Lines to Common Header															
First Filter	Filter 1	1	33	10	NA	NA	18	135	0.5	0.36	1	0.36	4	**1.44**	Assumes 1/2 flow
Second Filter	Filter 3	1	20	10	NA	NA	11	82	0.5	0.22	1	0.22	4	**0.87**	Assumes 1/2 flow
													Subtotal for Individual Discharge Lines to Common Header	**0.87**	Use smaller value
Common Header to GST															
Common Header to GST	To Existing GST	1	30	10	NA	NA	16	122	1.1	0.16	1	0.16	4	**0.65**	
													Subtotal for Header to GST	**0.65**	
Existing GST															
Existing Large GST	175,000 gallons GST	1	NA	540	NA	9.5	15,101	112,959	1.1	150.61	0.3	45.18	4	**180.73**	Assume 5' min depth and 60,000 gal tank out of service
													Subtotal for Existing Large Tank	**180.73**	
Existing 60,000 GST															
Existing Small GST	60,000 gallons GST	0	NA	312	NA	7.5	3,980	0	1.1	0.00	0.3	0.00	4	**0.00**	
Item 3 Discharge Piping															
GST to Pumps		1	27	10	NA	NA	15	110	2.2	0.07	1	0.07	4	**0.29**	Assume PHF = 2* MDF
Pumps to Main		1	135	8	NA	NA	47	352	2.2	0.23	1	0.23	4	**0.94**	Assume PHF = 2* MDF
													Subtotal for Discharge Piping	**1.23**	Sum
													Subtotal for Existing Facilities w/o small tank	**214.75**	
													Total Calculated CT[2]		
													2-log CT Required at 20 °C	321	Does NOT Meet Requirement for Chloramine
													2-log CT Required at 25 °C[3]	214	Meets Requirement
													2-log CT Required at 28 °C	182	Meets Requirement

[1] Per FAC 62-55.320(12) - Disinfection of Drinking Water and Pending Ground Water Rule. No CT required under existing regulations.

[2] Based on Table E-13 in Appendix E of the United States Environmental Protection Agency's (USEPA's) *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources*, 1991 (the Surface Water Guidance Manual).

[3] Water temperature measured at WTP in January was 25°C

Repair/Replacement Options

There were several different elevated tank repair/replacement options that were evaluated. The options included repairing the existing elevated tank, replacing the elevated tank with a new elevated tank, and replacing the elevated tank with a new GST. GST options included a tank at the same elevation as the existing GST and a tank at a higher elevation than the existing GST.

Regulatory Issues

The rules regulating water treatment plants have changed since the Mangonia Park WTP and the elevated tank were constructed. Storage volume, high service pumping, fire flow, and backup power requirements have all been increased since the WTP was constructed. The Consent Order only addresses the physical condition of the elevated tank; it does not specifically state that storage volume needs to be increased to meet the current rules. We have contacted the PBCHD to discuss this issue and they agree that if the elevated tank is just repaired then the storage volume issues do not need to be addressed, however they did state that the new rules may be enforced when and if the TOWN needs to apply for a new PBCHD permit. Replacing the elevated tank will require a PBCHD construction permit, which will require the new facilities to comply with the current regulations.

Existing WTP Flows

The WTP is currently rated for 1.08 MGD. Table 2 shows the WTP flows since 2004. The plant flow meter is located between the high service pumps and the elevated tank. Since the elevated tank can accept or supply water the flow meter does not actually measure the instantaneous flow into the distribution system, so it cannot be used to determine the peak hour flows. It can be used to determine the daily and monthly flows. The average day flow (ADF) since 2004 is 277 gpm.

As shown in Table 2, the maximum day flow has reached over 90-percent of the WTP's rated capacity. However, other than for four months, the MDF has not exceeded 69-percent of the rated capacity. Both the ADF and the MDF have been reduced since mid 2007, when the water restrictions were imposed. The MDF/ADF peaking factor is 1.41 which is higher than typically seen, but not unusual for a small system. The Town could reduce their required storage if their actual MDF was lower than the design value of 1.08 MGD. While the recent MDFs have not exceeded 0.67 MGD, historical MDFs have reached 1.02 MGD and there are many unoccupied properties. Therefore we recommend that the WTP provide storage volume for the WTP's rated capacity of 1.08 MGD.

Based on this recommendation, the WTP should provide 270,000 gallons of usable storage, excluding fire flow.

Table 2 Mangonia Park WTP MOR Data (FDEP Rated Capacity is 1,080,000 gpd)				
Month	**Average Day (gpd)**	**Max Day (gpd)**	PF	Max Day/Permit Limit
Jan-04	574,000	680,000	1.18	62.96%
Feb-04	590,000	660,000	1.12	61.11%
Mar-04	617,000	680,000	1.10	62.96%
Apr-04	639,000	740,000	1.16	68.52%
May-04	611,000	700,000	1.15	64.81%
Jun-04	603,000	670,000	1.11	62.04%
Jul-04	618,000	750,000	1.21	69.44%
Aug-04	561,000	650,000	1.16	60.19%
Sep-04	472,800	600,000	1.27	55.56%
Oct-04	551,000	630,000	1.14	58.33%
Nov-04	566,000	680,000	1.20	62.96%
Dec-04	561,000	640,000	1.14	59.26%
Jan-05	534,000	610,000	1.14	56.48%
Feb-05	573,000	650,000	1.13	60.19%
Mar-05	558,000	630,000	1.13	58.33%
Apr-05	568,000	630,000	1.11	58.33%
May-05	583,000	650,000	1.11	60.19%
Jun-05	555,000	620,000	1.12	57.41%
Jul-05	509,000	630,000	1.24	58.33%
Aug-05	414,000	500,000	1.21	46.30%
Sep-05	397,000	450,000	1.13	41.67%
Oct-05	354,000	580,000	1.64	53.70%
Nov-05	393,000	470,000	1.20	43.52%
Dec-05	389,000	470,000	1.21	43.52%
Jan-06	391,000	460,000	1.18	42.59%
Feb-06	404,000	850,000	2.10	78.70%
Mar-06	460,000	570,000	1.24	52.78%
Apr-06	430,000	530,000	1.23	49.07%
May-06	470,000	680,000	1.45	62.96%
Jun-06	450,400	549,000	1.22	50.83%
Jul-06	436,968	542,000	1.24	50.19%
Aug-06	453,613	654,000	1.44	60.56%
Sep-06	446,400	582,000	1.30	53.89%
Oct-06	481,484	683,000	1.42	63.24%
Nov-06	507,000	1,021,000	2.01	94.54%
Dec-06	484,613	1,002,000	2.07	92.78%
Jan-07	440,935	546,000	1.24	50.56%
Feb-07	422,643	518,000	1.23	47.96%
Mar-07	497,355	925,000	1.86	85.65%
Apr-07	407,200	506,000	1.24	46.85%
May-07	381,968	453,000	1.19	41.94%
Jun-07	352,133	448,000	1.27	41.48%
Jul-07	341,452	410,000	1.20	37.96%
Aug-07				
Sep-07	369,867	480,000	1.30	44.44%
Oct-07	387,839	669,000	1.72	61.94%
Nov-07				
Dec-07	357,839	436,000	1.22	40.37%
Jan-08	347,065	515,000	1.48	47.69%
Feb-08	346,966	466,000	1.34	43.15%
Mar-08	342,000	427,000	1.25	39.54%
Apr-08	362,000	501,000	1.38	46.39%
May-08	384,200	470,000	1.22	43.52%
Jun-08	377,000	485,000	1.29	44.91%
Jul-08	364,000	485,000	1.33	44.91%
Aug-08	348,000	441,000	1.27	40.83%
Sep-08	348,633	452,000	1.30	41.85%
Oct-08	359,483	429,000	1.19	39.72%
Nov-08	355,900	423,000	1.19	39.17%
Average	**398,391**	**1,021,000**	**1.41**	

[1] Data from June 2006 through March 2008 taken from Calvin Giordano MOR data evaluation. Remainder of data provided by PBCHD.

The existing WTP has 335,000 gallons of storage, of which 113,000 gallons is required for CT volume, which leaves 222,000 gallons of usable volume. This is less than the regulatory storage requirement, even without providing any fire flow volume.

Fire Flow

The TOWN's required fire flow is not clear. A fire hydrant close to the WTP was tested as part of this evaluation. The hydrant was able to produce 750 gpm at a constant rate without the WTP losing pressure. It was able to reach a maximum of 920 gpm but the pressure varied at this rate.

The TOWN believes that they may be rated for up to 2,500 gpm of fire flow. The resulting storage volume for this fire flow would be 300,000 gallons, which is not provided at the WTP. The existing fire pump, which is out of service, is only rated for 600 gpm. The West Palm Beach Fire Marshall was not able to provide a definitive value for the TOWN's fire flow and he referred us to the ISO guidelines. The ISO guidelines list a number of different fire flow rates starting at 250 gpm and going up.

Calculation of the TOWN's recommended fire flow rate is a complicated evaluation that is outside the scope of this report. Based on the size of the WTP, the size of the pipelines and the estimated maximum flow that can be delivered by the existing WTP we would expect the reasonable fire flow to be 500-1,000 gpm. The resulting storage volumes would therefore be 60,000-120,000 gallons. However, it is not uncommon for commercial areas to have fire flow ratings in excess of 1,500 gpm, which would require a minimum of 180,000 gallons of fire flow storage. The actual selection of a desired fire flow rate is the TOWN's decision.

The Town has an existing interconnect with Riviera Beach that can be opened if needed to fight fires. The fire hydrant on the Riviera Beach side of the interconnect was tested as part of this evaluation. This hydrant produced 1,050 gpm at a constant rate at a pressure of 40 psi.

Peak Hour Flows

The new facilities need to be able to meet peak hour flow (PHF) and MDF plus fire flow. The WTP does not have any peak hour flow data. Typically MDF is 1.2-1.3 times the ADF and PHF is 2 times the ADF, although smaller plants generally have higher peaking factors.

In an attempt to estimate peak hour flows, Globaltech and plant staff collected hourly and instantaneous flow data, from the high service pumps, on Monday December 29 from 6:00 a.m. to 6:00 p.m. The resulting hourly pump data is shown below in Table 3. Because the elevated tank is filling and draining, the pumping rates do not necessarily correspond to actual peak hour flows. During the high flow periods all three pumps were on and the tank was filling. At 6:00 a.m. with all three pumps on, an instantaneous flow rate of 650 gpm was measured, while the tank was filling. The pressure gauge at the WTP read 57 psi but generally did not move during the data collection period. The circular chart in the control building showed a pressure of 53 to 56 psi.

Table 3 Mangonia Park Hourly Pumping Rates	
Time	Hourly Pumping Rate (gpm)
6:00 a.m.	
7:00 a.m.	533 (all 3 pumps on for most of hour)
8:00 a.m.	0
9:00 a.m.	0
10:00 a.m.	33
11:00 a.m.	750
12:00 p.m.	317
1:00 p.m.	0
2:00 p.m.	50
3:00 p.m.	867
4:00 p.m.	0
5:00 p.m.	83
6:00 p.m.	667 (two pumps on for entire hour)

Based on the data collected it appears that the peak hour flow during the testing period had to be less than 867 gpm (since the tank was filling at this time). In actuality, it is likely that the flow reading for the 3:00 p.m. value is incorrect, since it appears that the pumps cannot pump more than 700 gpm at normal system pressures; however in an effort to be conservative, we'll assume that the 3:00 p.m. value is valid. At 867 gpm, the PHF peaking factor is 3.1. To ensure that the new pumps can accommodate the peak hour flow a very conservative peaking factor will be applied. Assuming a conservative peaking factor of 4, results in a PHF of 1,108 gpm. This value is still less than the MDF plus fire flow rate, which is 1,208 gpm for a 500 gpm fire flow, 1,708 gpm for a 1,000 gpm fire flow, and 2,708 for a 2,000 gpm fire flow. Therefore the pumps will be sized to meet MDF plus fire flow.

Storage Volume

Per Chapter 62-555.320(19)(a) of the Florida Administrative Code, the required useful storage volume for the WTP shall be at least 25 percent of the maximum day flow excluding any design fire-flow demand. Useful storage is defined as storage that can be used, in other words it is total storage minus storage required to meet disinfection CT and/or the volume at the bottom of the tanks that cannot realistically be pumped out of the tanks.

Table 4 lists the storage volumes required based on disinfection CT, fire flow and maximum day flow requirements. Note that the unusable volume at the bottom of the tanks is included in the disinfection CT volume.

Table 4 Mangonia Park Storage Volumes			
Disinfection CT Storage Volume (gallons)	Maximum Day Flow Storage Volume (gallons)	Fire Flow Storage Volume (gallons)	Total Required Storage Volume (gallons)
500 gpm Fire Flow			
113,000	270,000	60,000	443,000
1,000 gpm Fire Flow			
113,000	270,000	120,000	503,000
2,000 gpm Fire Flow			
113,000	270,000	240,000	623,000

As stated earlier, the existing storage volume is 335,000 gallons, currently the WTP does not need to provide any CT volume until the Pending Ground Water Rule is ratified and there is 79,300 gallons of unavailable storage at the WTP, which is included in the CT volume.

New Ground Storage Tank (GST) Material of Construction

The new GST can be constructed of pre or post-stressed concrete or glass-fused steel. Prestressed concrete tanks are circular while poststressed concrete options include any geometric shape. Circular is the most economical option. Crom and Precon are the main prestressed concrete circular tank manufacturers in Florida. We contacted two other tank manufacturers that can construct poststressed non-circular tanks, Dutchland and Durastor. Dutchland has a tank in the State, but they typically do not work south of Virginia and cannot be cost competitive with circular tanks. Durastor works in Florida but does not have any existing tanks in the State and is not a pre-approved PBCWUD vendor. Their rectangular tanks are more cost competitive but are still 30 percent higher than circular tanks. Crom has numerous tanks in Florida and Palm Beach County. We have worked with them before which should streamline construction. Crom should be able to construct a tank of this size in about 2 months, after authorization, excluding site preparation/demolition. A concrete tank can be constructed on the site, the rear fence may need to be temporarily relocated and the power lines may need to be shielded during construction.

Florida Aquastor is the glass-fused steel tank manufacturer. They have several tank installations in Florida. A glass-fused steel tank can be constructed on the site. Construction of the tank is very quick; however current conditions at the factory have resulted in a 5 month delivery schedule. Once the equipment is on site it's about another 4 weeks to erect the tank. Therefore it's unlikely that the glass-fused steel tank option can be constructed by June 2009 Consent Order date. The PBCHD has confirmed that they would be willing to issue an extension to the Consent Order if the tank replacement project was under construction and the TOWN has made a good faith effort to comply with the Consent Order. With the extension, the glass-fused steel tank can be installed at the site. The glass-fused steel tanks can be easily expanded in the future by simply adding additional rings to the top of the wall. In addition, this type of tank could actually be moved or sold in the future.

Both types of tanks can be buried two feet in the ground and they are similar in costs in this size range.

Pump Station

The existing high service pumps (HSP's) are 20 HP pumps rated for approximately 375 gpm at 135 feet. This rating is estimated from field measurements as the pump nameplate data incomplete and no pump curve information was available. If the elevated tank is removed then the high service pump station will need to provide all of the flow for every demand condition. Depending on the fire flow desired, the preliminary design point for the new high service pumps would be between 570-680 gpm at 140 feet. Therefore the existing HSP's are too small to be reused for the new HSP application. The new HSPs will be approximately 30-40 HP and depending on fire flow, 3-5 HSP's will be required. The larger HSP station will require a new electrical service, a new backup generator and a new diesel fuel tank.

Under the options that include a new taller GST a new transfer pump station (TPS) will be required. The preliminary design point for the TSP pump is approximately 700 gpm at 19 feet. This point is not within the range of the existing HSP's so they cannot be reused for TPS service. The new TPS pumps will likely be 3-5 HP

Electrical Existing Conditions

The existing electrical service from FPL is 120/240 volt, 3 phase, closed delta with a high leg which is derived from 3 each 50KVA pole mounted transformers that are located in the back of the plant. The service comes in overhead through a weather head to the 400 amp FPL meter located outside of the electrical room. From the FPL meter the service runs to the 400 amp automatic transfer switch located inside the electrical room. An electrical code issue with the automatic transfer switch is that it is the first means of disconnect and it is not service entrance rated due to it containing molded case switches instead of molded case breakers. The automatic transfer switch is also fed from a standby generator rated at 75 kW, 94 kVA, and it is located next to the FPL meter outside the electrical room. From the automatic transfer switch, the service goes to two 200 amp panelboards. One panelboard contains the100 amp breaker to feed well #2; while the other panelboard contains 3-100 amp breakers to feed the 3 high service pumps (#1, #2, and #3). Both panelboards contain other miscellaneous smaller loads and house loads. The motor starters for the high service pumps are located in the electrical room. The well #2 starter is located locally next to the well, but is controlled from the electrical room through a remote push button station. Well #6 is also controlled from the electrical room through a control panel, but well #6 has its own electrical service and starter locally next to the well.

Evaluation of Options

The paragraphs below describe the requirements for each of the evaluated options. The significance of the fire flow rate is that it controls how much storage needs to be provided, as shown in Table 4.

All options that include a new GST will require construction of a new HSP station. During construction of the HSP station a temporary pumping facility will need to be utilized at the site.

Option 1 - Repair Existing Elevated Tank. Repairing the existing tank is the simplest and the least expensive option. This option would entail making the recommended improvements listed in the Tank Inspection Report. This option would not require any new electrical, new pumps, new tanks, demolition, or permitting (other than possibly a building permit). This option would also not provide sufficient storage volume to meet the current regulations. The rehabilitation contractor would provide certification that the repaired elevated tank meets the current code wind loading requirements. It is anticipated that this work can be completed within three (3) months, although depending on weather conditions the TOWN may have to wait months to paint the outside of the tank. While this option is technically allowable under the Consent Order, we cannot recommend an option that does not provide the new regulatory requirements for storage volume.

This option does not change any load on the electrical system. No electrical work will be done.

Option 2 - Construct New Approximately 300,000 Gallon Elevated Tank. Under this option the existing elevated tank would be demolished and a new larger elevated tank would be constructed in its place. This would give the TOWN a new elevated tank which meets the regulatory storage requirements for 500 gpm fire flows. PBCHD and building permits would be required. The existing electrical power lines would have to be relocated to construct the new tank. This option does not require any new electrical, pumps or generator. It will take approximately 365 days to construct this option which does not meet the time limit of the Consent Order.

This option does not change any load on the electrical system. No electrical work will be done.

Option 3 – Replace Elevated Tank with 16-foot Tall GST to Provide 500 gpm Fire Flow. The existing elevated tank and the small GST would be demolished. The new GST would be approximately 268,000 gallons. Assuming a maximum water depth of 15 feet results in a GST 56 feet in diameter (ID), which will fit on the site. The new GST elevation will be the same as the existing GST so new transfer pumps will not be required. Three new 40 HP VFD high service pumps each rated for 605 gpm at 130 feet will be required. Two pumps will be operated in tandem to meet the design condition of 1,210 gpm at 130 feet. One pump operating at reduced speed can meet the ADF condition of 277 gpm at 138 feet. One pump will be a spare.

This option increases the load on the electrical system. Under this option a new 400 amp service entrance rated main breaker would be installed upstream of the existing automatic transfer switch to fix the electrical code issue with the automatic transfer switch. The existing panelboards would be replaced with one 400 amp panelboard to feed all the electrical in the plant. New VFDs with the associated conduit and cable would be installed to feed the new 40 HP pumps. The existing generator would be replaced with a larger kW generator and diesel fuel tank.

Option 3A – Replace Elevated Tank with 24-foot Tall GST to Provide 500 gpm Fire Flow. The existing elevated tank and the small GST would be demolished. A smaller diameter GST results in easier installation and more clear space at the WTP site. Under this option, filtered water would gravity flow to the existing 175,000 gallon GST. A small transfer pump station will be required to transfer water from the 175,000 gallon GST to the larger new GST, which will be built slab-on-grade. This option facilitates future expansion as new rings can be added to the tank later to increase storage volume. Otherwise the requirements for this option are identical to Option 3. Assuming a maximum water depth of 23 feet results in a GST 45 feet in diameter, which fits on the site.

Option 4 – Replace Elevated Tank with 16-foot Tall GST to Provide 1,000 gpm Fire Flow. The existing elevated tank and the small GST would be demolished. The new GST would be approximately 328,000 gallons. Assuming a maximum water depth of 15 feet results in a GST 61 feet in diameter (ID), which will fit on the site, although it is unlikely that a Crom style concrete tank can be constructed under this scenario; therefore a glass-fused steel tank would be the only option that can be constructed. It appears from aerial photos that a tank of this size will not encroach in the setback distances although a new survey will be required to confirm this. The new GST elevation will be the same as the existing GST so new transfer pumps will not be required. Four new 30 HP VFD high service pumps each rated for 570 gpm at 130 feet will be required. Three pumps will be operated in tandem to meet the design condition of 1,710 gpm at 130 feet. One pump operating at reduced speed can meet the ADF condition of 277 gpm at 138 feet. One pump will be a spare.

This option increases the load on the electrical system. Under this option a new 400 amp service entrance rated main breaker would be installed upstream of the existing automatic transfer switch to fix the electrical code issue with the automatic transfer switch. The existing panelboards would be replaced with one 400 amp panelboard to feed all the electrical in the plant. New VFDs with the associated conduit and cable would be installed to feed the new 30 HP pumps. The existing generator would be replaced with a larger kW generator and diesel fuel tank.

Option 4A – Replace Elevated Tank with 24-foot Tall GST to Provide 1,000 gpm Fire Flow. The existing elevated tank and the small GST would be demolished. A smaller diameter GST results in easier installation and more clear space at the WTP site. Under this option, filtered water would gravity flow to the existing 175,000 gallon GST. A small transfer pump station will be required to transfer water from the 175,000 gallon GST to the larger new GST, which will be built slab-on-grade. This option facilitates future expansion as new rings can be added to this tank later to increase storage volume. Otherwise the requirements for this option are identical to Option 4. Assuming a maximum water depth of 23 feet results in a GST 50 feet in diameter which fits on the site.

Option 5 – Replace Elevated Tank with 16-foot Tall GST to Provide 2,000 gpm Fire Flow. The existing elevated tank and the small GST would be demolished. The new GST would be

approximately 448,000 gallons. Assuming a maximum water depth of 15 feet results in a GST 72 feet in diameter (ID), which will not fit on the site under any construction method.

Option 5A – Replace Elevated Tank with 27-foot Tall GST to Provide 2,000 gpm Fire Flow. The existing elevated tank and the small GST would be demolished. A smaller diameter GST results in easier installation and more clear space at the WTP site. Under this option, filtered water would gravity flow to the existing 175,000 gallon GST. A small transfer pump station will be required to transfer water from the 175,000 gallon GST to the larger new 448,000 gallon GST, which will be built slab-on-grade. Five new 40 HP VFD high service pumps each rated at 677 gpm at 130 feet will be required. Four pumps will be operated in tandem to meet the design condition of 2,710 gpm at 130 feet. One pump operating at reduced speed can meet the ADF condition of 277 gpm at 138 feet. One pump will be spare. Assuming a maximum water depth of 26 feet results in a GST 55 feet in diameter. A tank of this diameter will fit on the site.

This option increases the load on the electrical system. Under this option all the electrical equipment will have to be replaced including the FPL transformers and meter. FPL will have to upgrade the pole mounted transformers to larger kVA transformers. A new 800 amp FPL meter will be installed. A new 800 amp service entrance rated automatic transfer switch will be installed feeding a new 800 amp panelboard to feed all the electrical in the plant. New VFDs with the associated conduit and cable would be installed to feed the new 40 HP pumps. The existing generator would be replaced with a larger kW generator and diesel fuel tank.

Option 6 - Repair Existing Elevated Tank and Construct 16' Tall GST to Provide 770 gpm Fire Flow. Under this option the elevated tank would be repaired as under Option 1 but the existing small GST would be demolished and a new 48 foot diameter 16 foot tall glass-fused steel GST would be constructed. The elevation of the new 200,000 gallon GST will be the same as the existing GST so new transfer pumps will not be required and since the elevated tank will remain, high service pumps will not be required. The elevated tank improvements can be completed within 3 months which will meet the Consent Order deadline. Construction of the GST should not begin until the elevated tank heavy construction is completed. Therefore, the GST will not be constructed by the deadline; however, its construction is outside the scope of the Consent Order.

This option provides approximately 770 gpm of fire flow. Fire flow capacity can be increased in the future by adding more rings to the new GST (which will also require a transfer pump station and re-piping). Raising the GST to 19 feet results in 1,000 gpm of fire flow and raising the GST to 27 feet results in a fire flow of 2,000 gpm. Alternately, the TOWN could also modify their disinfection protocol or install baffles in both GSTs to increase the WTP fire flow capacity in the future.

This option does not change any load on the electrical system. No electrical work will be done.

Emergency Generator and Fueling System

All options that result in new high service pumps will require a new backup generator. The PBCHD requires a minimum 14 days of fuel storage, based on average demands, for a water treatment plant generator. PBCHD references the Palm Beach County Unified Land Development Code Chapter B Section 8.A.17 to enforce this rule.

The new generator shall include a 12-24 hour dual-wall belly tank and a sound-attenuating weather-proof enclosure. To meet the 14 days of storage, a separate dual-wall concrete and steel (Convault style) diesel fuel storage tank will also be installed.

The generator and fuel tank will both be located outside on a diked slab. Both the belly tank and the Convault are double walled. All fuel piping will be installed exposed, on the slab. The slab will have a sump in it but will not include an automatic sump pump. Both fuel tanks will carry FDEP approval certifications and will incorporate overfill protection, interstitial leak detection, high level alarms and a fuel gauge which is visible during filling.

The generator/fuel facility is located within a Zone 2 Area of Influence for a Production Well, therefore a shallow monitoring well (approximately 15-20' deep) must be installed on the downstream side of this slab. The monitoring well will need to be sampled for diesel fuel constituents twice a year. It is not known whether there is already a monitoring well.

Instrumentation and Control

All options that result in installing new high service pumps with VFDs, a new control panel will be installed to control the VFDs. The new control panel will have a PLC that will control each high service pump VFD depending on the pressure from a new pressure transmitter installed on the discharge side of the high service pumps.

A new chlorine analyzer will be installed to monitor the residual chlorine levels in the finished distribution water. To monitor the chlorine analyzer for an alarm signal, a voice alarm autodialer will be installed. This voice alarm autodialer will call preset phone numbers with a message or numeric number to preset pager numbers during an alarm from the chlorine analyzer.

Recommendations

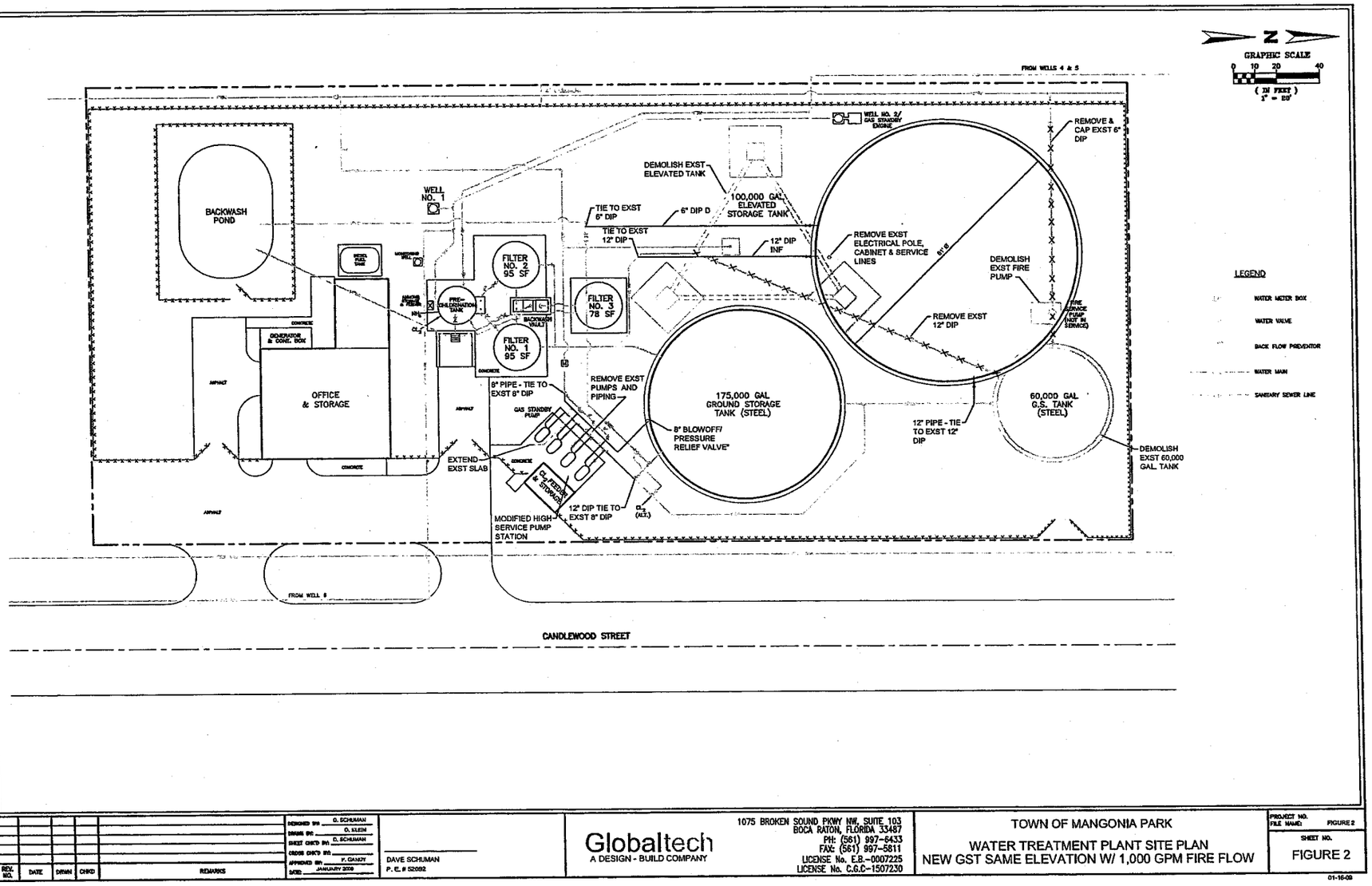
The recommendations are highly influenced by the desired fire flow rate. The selection of an appropriate fire flow is the TOWN's decision. For small systems, like the TOWN's we often see a fire flow rate of 500 gpm. Table 5 shows the cost for the tank repair replacement options.

Figures 2, 3 and 4 show the WTP layout with new GSTs located on the site. Figure 3 shows a 61 foot diameter tank and Figure 4 shows a 55 foot diameter tank with a transfer pump station. These diameters represent the largest sizes for the respective options. Figure 4 shows a new 48 foot diameter tank constructed on the site with the elevated tank remaining.

Table 5 Mangonia Park Elevated Tank Repair/Replacement Option Matrix					
No.	Description	Fire Flow (gal)	Meets Reg. Storage Volume	Comments	Order of Magnitude Costs
1	Repair Existing Elevated Tank	Unknown Estimate None	No	New container, riser, accessories, stiffeners, painting	$368,000
2	Construct New Elevated Tank Approx. 300,000 gallons	Estimate	Yes	Cannot be Constructed within Consent Order Time Limit	
3	Construct New GST 16' Tall	500	Yes	Demolish elev. tank, small GST, fire pump, high service pumps generator, fuel tank and electrical, Install new GST, high service pumps, generator, fuel tank and electrical. New TPS for tall tank option	$1,148,000
3A	Construct New GST 24' Tall	500	Yes		$1,289,000
4	Construct New GST 16' Tall	1,000	Yes		$1,323,000
4A	Construct New GST 24' Tall	1,000	Yes		$1,467,000
5	Construct New GST 16' Tall	2,000	Yes	Cannot be Constructed on the Site	
5A	Construct New GST 27' Tall	2,000	Yes	Same as Options 3-4A	$1,860,000
6	**Repair Existing Elevated Tank and Construct New GST 16' Tall**	**770**	**Yes**	**New container, riser, accessories, stiffeners, painting. Demo small GST install new GST**	**$792,000**

Note that costs do not include installing the chlorine residual analyzer, installation of a new valve to the elevated tank or a contingency.

Under every option the elevated tank would be taken off-line during construction and the TOWN would need to rely on the Riviera Beach interconnect for assistance to maintain water service to their customers. The TOWN's WTP would still operate during the interconnect period. The interconnect must be tested over a period of at least a few days prior to beginning construction.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: O. SCHUMAN
DRAWN BY: O. KLEIN
SHEET CHK'D BY: O. SCHUMAN
CROSS CHK'D BY: K. GANJOY
APPROVED BY: DAVE SCHUMAN P. E. # 52082
DATE: JANUARY 2009

Globaltech
A DESIGN - BUILD COMPANY

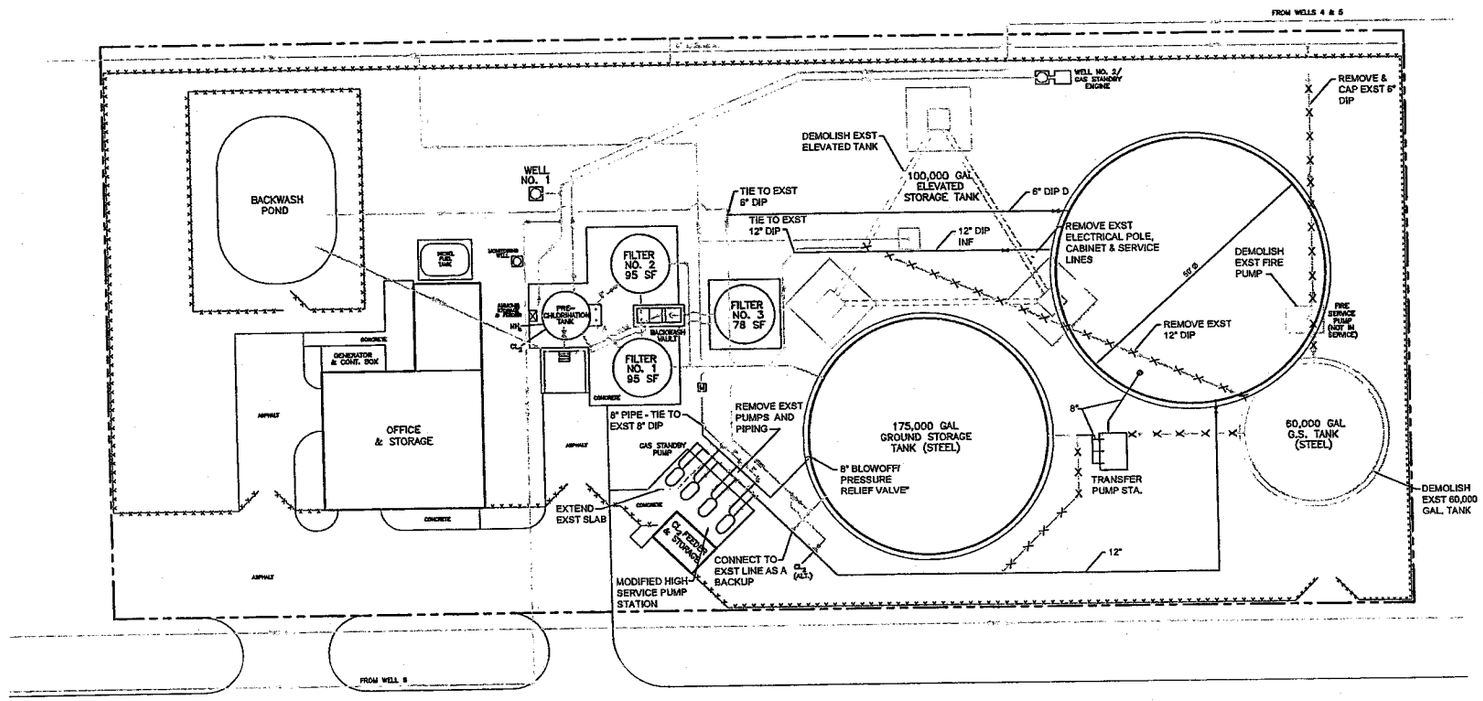
1075 BROKEN SOUND PKWY NW, SUITE 103
BOCA RATON, FLORIDA 33487
PH: (561) 997-6433
FAX: (561) 997-5811
LICENSE No. E.B.-0007225
LICENSE No. C.G.C-1507230

TOWN OF MANGONIA PARK

WATER TREATMENT PLANT SITE PLAN
NEW GST SAME ELEVATION W/ 1,000 GPM FIRE FLOW

PROJECT NO.
FILE NAME: FIGURE 2
SHEET NO.
FIGURE 2

01-16-09



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: D. SCHUMAN
DRAWN BY: D. KLEIN
SHEET CHK'D BY: D. SCHUMAN
CROSS CHK'D BY:
APPROVED BY: P. GANDY
DATE: JANUARY 2009

DAVE SCHUMAN
P. E. # 52092

Globaltech
A DESIGN - BUILD COMPANY
1075 BROKEN SOUND PKWY NW, SUITE 103
BOCA RATON, FLORIDA 33487
PH: (561) 997-6433
FAX: (561) 997-5811
LICENSE No. E.B.-0007225
LICENSE No. C.G.C.-1507230

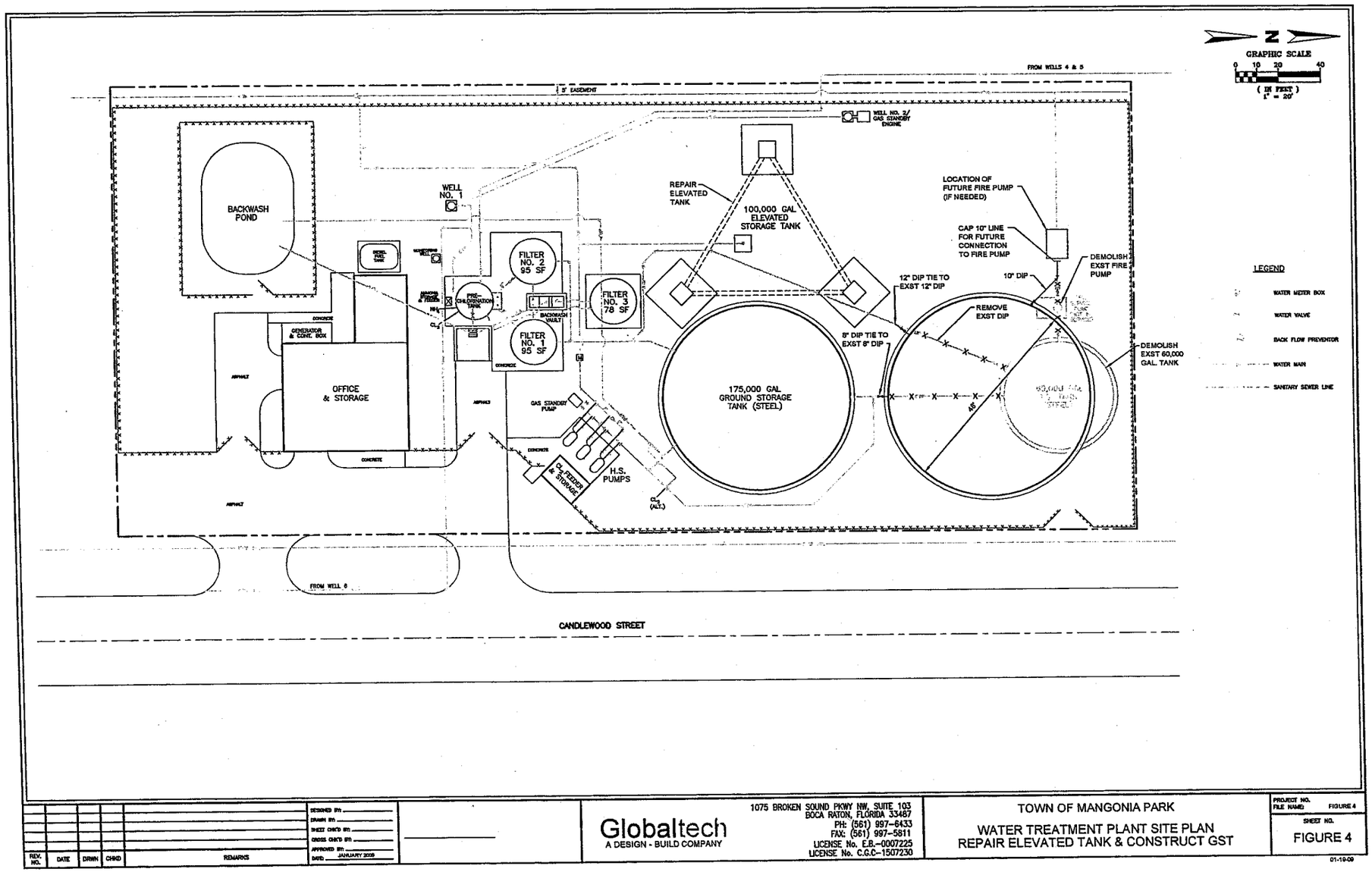
TOWN OF MANGONIA PARK

WATER TREATMENT PLANT SITE PLAN
NEW TALLER GST W/ 1,000 GPM FIRE FLOW

PROJECT NO.
FILE NAME: FIGURE 3

SHEET NO.
FIGURE 3

01-16-09



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: _____
DRAWN BY: _____
SHEET CHKD BY: _____
CROSS CHKD BY: _____
APPROVED BY: _____
DATE: JANUARY 2009

Globaltech
A DESIGN - BUILD COMPANY

1075 BROKEN SOUND PKWY NW, SUITE 103
BOCA RATON, FLORIDA 33487
PH: (561) 997-6433
FAX: (561) 997-5811
LICENSE No. E.B.-0007225
LICENSE No. C.G.C.-1507230

TOWN OF MANGONIA PARK

WATER TREATMENT PLANT SITE PLAN
REPAIR ELEVATED TANK & CONSTRUCT GST

PROJECT NO.
FILE NAME: FIGURE 4

SHEET NO.
FIGURE 4

01-19-09

For each of the options that involve eliminating the elevated tank, a return line with an altitude valve will be installed to discharge water back to the GST when the system pressure reaches a pre-set point. This will reduce the start/stop times of the high service pumps and also reduce water hammer. This return line will eliminate the need for a surge tank.

We recommend Option 6 which provides for a fire flow in excess of 500 gpm at the lowest cost. This option can be constructed on the site within the Consent Order time limit. The existing elevated tank will remain in service, but improvements identified in the Pittsburg Tank Proposal No. 308147 previously submitted to the TOWN in July 14, 2008. These improvements include replacing the container, riser and accessories, stiffening the existing supports to meet a 140 mph wind rating and painting the inside and outside.

To meet current budget constraints, the project can be constructed in two separate phases. The elevated tank can repaired first, to meet the Consent Order conditions and a glass-fused steel ground storage tank can be constructed when the funds are available.

This option will provide 770 gpm of fire flow. Additional rings can be added to the tank to increase fire flow capacity. In the event more fire flow is needed then the Riviera Beach interconnect should be opened.

We recommend automating the Riviera Beach interconnect so that it opens automatically upon loss of pressure on the Mangonia Park side. In addition a new interconnect could be constructed to the City of West Palm Beach line which runs very close to the TOWN's line on the south side of 45th Street. We also recommend that the TOWN evaluate repairing their existing fire pump.

Permitting

The following permits will be required for new facilities at the WTP. Repair of the elevated tank will not require any permits and construction of a replacement elevated tank will only require the FDEP/PBCHD permit plus the TOWN Building Permit.

FDEP/PBCHD	Application for a Specific Permit to Construct PWS Components
FDEP	Environmental Resource Permit
PBCERM	Diesel Fuel Tank
PBCERM	Construction in Zone 2 of Wellfield Zone of Influence
TOWN	Building Permit

In addition to the permits, the neighbors will need to be notified of the proposed facilities.

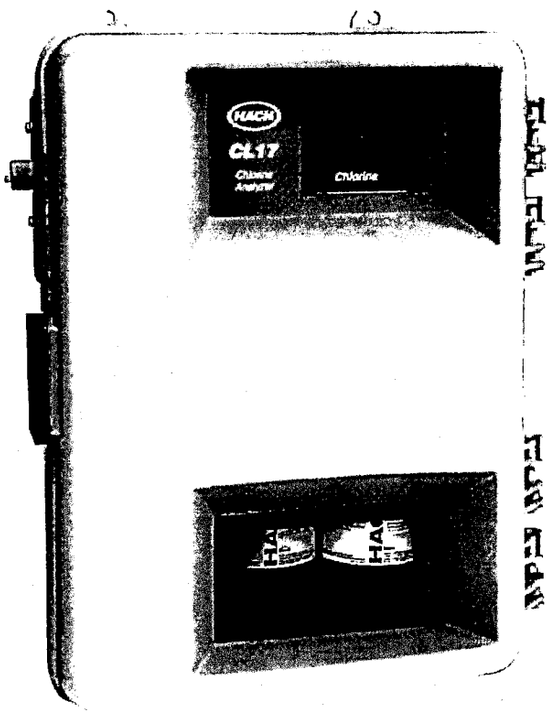
Chlorine Residual Analyzer

In addition to the elevated tank repair/replacement, a chlorine residual analyzer will be installed. There is no above-grade location downstream of the filter and prior to the GSTs that will ensure sampling from all three filters; therefore, the chlorine residual analyzer will be installed on the header piping just upstream of the high service pumps.

The proposed analyzer is a Hach C17. A copy of the cut-sheet is attached.

The analyzer will have a local readout and an alarm that will be connected to a new autodialer. The autodialer will send the alarm to locations designated by the TOWN. It is estimated that the costs to install the chlorine residual analyzer will be $10,000.

CL17 Chlorine Analyzer



The Hach CL17 Chlorine Analyzer uses fast, reliable, and economical DPD chemistry for up to 30 days of unattended operation. No electrodes and minimal use of reagents means low operating costs.

Features and Benefits

Reliable and Economical Chlorine Analysis

The Hach CL17 Chlorine Analyzer uses colorimetric DPD chemistry to continuously monitor water for free or total residual chlorine. This CL17 is a dependable and economical alternative to instruments that rely on costly electrodes or complex procedures. The analysis method is unaffected by even large swings of pH and measurements are more accurate and precise than those of other systems.

Manual or Automatic Feed Pump Control

Both an alarm for manual chlorine feed control and a 4-20 mA output for automatic control of chlorine feed pumps is available in the CL17 Analyzer. When set for manual control, the instrument notifies the operator of out-of-limit chlorine levels for manual intervention in the disinfection process as needed. For automatic control of chlorine feed pumps, the CL17 can use one of two methods:

1. **On-Off Control** turns the feed pumps on when chlorine levels fall too low for disinfection and off when levels rise above a pre-set limit.
2. **Proportional Control** adjusts the amount of chlorine in proportion to the strength of the CL17's output signal.

Simple Maintenance

Routine maintenance can typically be performed in 15 minutes per month because the sample cell and reaction chamber are easy to clean and the case provides quick access. (Difficult samples may require more frequent cleaning.) The CL17 is also equipped with self-testing diagnostics.

Method of Analysis

Free Residual Chlorine—The CL17 Chlorine Analyzer uses an aqueous buffered colorimetric indicator—N,N-diethylpphenylenediamine (DPD)—to determine levels of chlorine. DPD turns a magenta color in response to the amount of free residual chlorine (as hypochlorous acid or hypochlorite ion). The reaction takes place at a buffered pH of 6.3 to 6.6.

Total Residual Chlorine—To measures total residual chlorine (free residual chlorine plus mono-, di- and trichloramines) an additional reagent is used. By adding potassium iodide to the sample, chloramines in the sample oxidize iodide to iodine, which then oxidizes the DPD indicator to the magenta color at a buffered pH of 5.1.

Applications

Drinking Water—The CL17 Chlorine Analyzer can be used in finished water where residual chlorine levels must be maintained during distribution. It can also be used to monitor raw water to facilitate preoxidation, disinfection, and control of taste and odor problems.

Wastewater—Large tubing and fittings and a Self-Cleaning By-Pass Y-Strainer Kit for the CL17 ensures continuous operation without clogging.

Industrial—The CL17 can be used to monitor disinfection and prevent biological build-up in applications that involve chemical or industrial processes (feed water), heating and cooling water, or food and beverage applications. It is also useful in systems that use reverse osmosis, to protect expensive cellulose acetate membranes.

Specifications*

Range
0 to 5 mg/L free or total residual chlorine

Accuracy
±5% or ±0.035 mg/L as CL_2, whichever is greater

Precision
±5% or 0.005 mg/L as CL_2, whichever is greater

Minimum Detection Limit
0.035 mg/L

Cycle Time
2.5 minutes

Inlet Pressure to Instrument
1 to 5 psig (1.5 psig is optimum)

Inlet Pressure to Sample Conditioning
1.5 to 75 psig

Air Purge (optional)
0.1 cfm instrument quality air at 20 psig maximum

Sample Flow
200 to 500 mL per minute minimum required

Sample Temperature
5 to 40°C (41 to 104°F)

Operating Temperature
5 to 40°C (41 to 104°F)

Operating Humidity
90% at 40°C (90% at 104°F) maximum

Interferences
Other oxidizing agents such as bromide, chlorine dioxide, permanganate and ozone will cause a positive interference. Hexavalent chromium will cause a positive interference:
1 mg/L Cr^{6+} = approximately 0.02 mg/L as Cl_2.
Hardness must not exceed 1,000 mg/L as $CaCO_3$.

Recorder Outputs
One 4-20 mA with an output span programmable over any portion of the 0 to 5 mg/L range, 130 V isolation from earth ground, 500 ohm maximum

One isolated recorder output, 4–20 mA (can be adjusted to 0–20 mA), recommended load impedance 3.6 to 500 ohms. Optional AquaTrend® Network interface

Alarm Relay Outputs
Two alarms selectable for sample concentration alarm, analyzer system warning, or analyzer system shut-down alarm. Each is equipped with an SPDT relay with contacts rated for 5A resistive load at 230 Vac.

Sample Inlet Connection
1/4-inch OD polyethylene tube, quick-disconnect fitting

Drain Connection
1/2-inch ID flexible hose, hose barb

Air Purge (optional)
1/4-inch OD tube, quick-disconnect fitting, 0.1 cfm instrument quality air at 20 psig maximum

Certification
CE approved
ETL listed to UL 1262
ETL certified to CSA 22.2 No. 142

Enclosure
ABS plastic, two clear polycarbonate windows,
IP62-rated with the gasketed door latched

Mounting
Wall mount

Display
LCD, 3-digit measurement readout and six-character alphanumeric scrolling text line

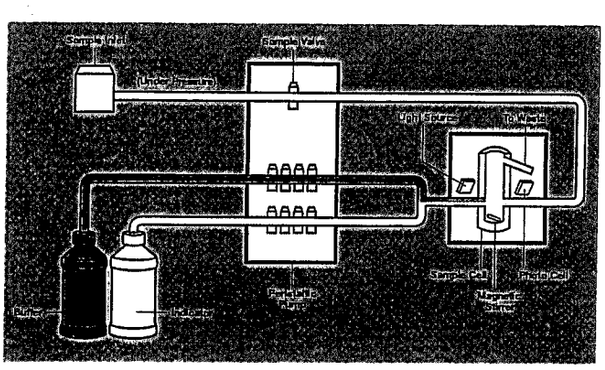
Light Source
Class 1 LED (light emitting diode) with a peak wavelength of 520 nm;
50,000 hours estimated minimum life

Power
100 to 115/230 Vac, 50/60 Hz (switch selectable), 95 VA maximum, 2.5 Amp fuse

Dimensions
34.3 x 41.9 x 19.1 cm
(13.5 x 16.5 x 7.5 in.)

Shipping Weight
11.3 kg (25 lbs.)

**Specifications subject to change without notice.*



Principle of Operation

The CL17 Chlorine Analyzer has three operating components:

- *A linear peristaltic pump to precisely control the volume of incoming samples and reagents.*
- *A colorimeter with seal-free, solid-state mixing system that includes a self-cleaning stir bar.*
- *One-month supply of reagents (indicator and buffer)*

A zero reference point is established with the first sample in the cycle by measuring blank absorbance. (This compensates for the sample's color intensity and turbidity before the chlorine measurement is made.) Then, indicator and buffer reagents are added to the sample while a magnetic stirrer mixes the solution and the sample changes color. A compact colorimeter then measures the light transmitted through the sample. The measured color intensity is compared to a reference standard. Finally, the sample cell is flushed with new sample so that the cycle can repeat itself every 2.5 minutes.

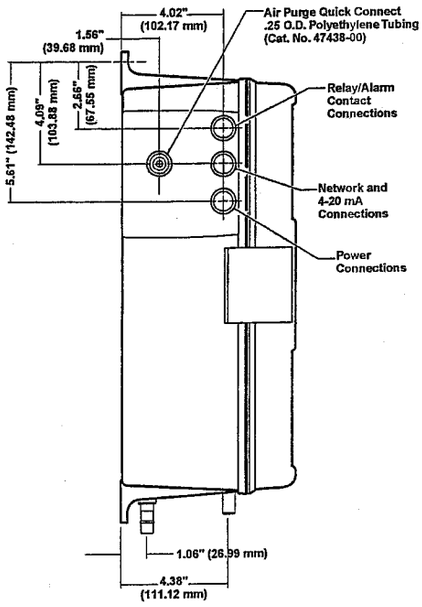
Engineering Specifications

1. The chlorine analyzer shall employ a DPD colorimetric method of measurement using DPD indicator and a buffer solution.
2. The analyzer shall be capable of measuring free or total residual chlorine by changing the indicator and buffer solutions.
3. A measurement shall be taken every 2.5 minutes and results displayed by a three digit LCD readout in the range of 0 to 5 mg/L.
4. The analyzer shall be designed for 30-days unattended operation and use only 473 mL of each reagent per month.
5. The analyzer shall operate with an LED light source with a peak wavelength of 510 nm.
6. The instrument shall measure a sample blank before each sample measurement to provide automatic zero reference to compensate for sample color and turbidity and changes in light intensity due to voltage fluctuations or light source aging.
7. The instrument shall provide a minimum detection limit of 0.035 mg/L or better, precision better than ± 5% or 0.005 mg/L as Cl_2, and accuracy better than ± 5% or 0.035 mg/L as Cl_2.
8. The analyzer shall be microprocessor-controlled and provide a 4-20 mA recorder output as well as 2 alarms.
9. Each alarm shall be user-selectable for sample concentration alarms (high or low), analyzer system warnings, or analyzer system shut-down alarms.
10. The sample concentration alarms shall be fully adjustable through the entire range.
11. The system warning shall activate for minor variations in analyzer performance.
12. A system alarm shall activate for major variations in analyzer performance and it shall shut down the analyzer until corrective action is taken.
13. The microprocessor shall provide self-diagnostic functions accessible through an alphanumeric, menu-driven keyboard.
14. Two SPDT normally open/normally closed dry contact relays rated at 5A resistive load at 230 Vac shall be provided.
15. Recorder outputs shall be a 4-20 mA.

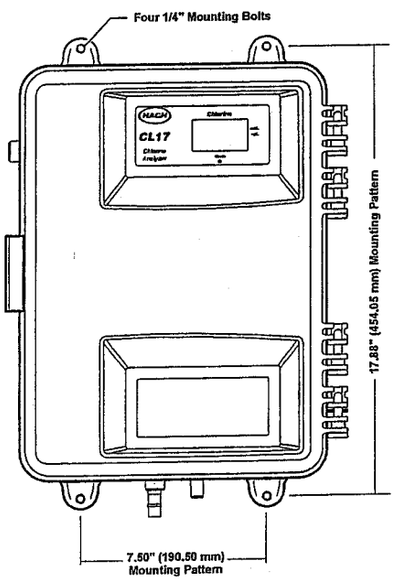
Dimensions

The CL17 is designed to be wall-mounted with four 1/4-inch screws. Adequate clearance must be left at the sides and bottom of the case for plumbing and electrical connections. The sample inlet connection is 1/4-inch quick-disconnect fitting and the drain connection is 1/2-inch I.D. flexible hose. Electrical connections are inside the instrument case. Holes for three 1/2-inch conduit fittings are provided.

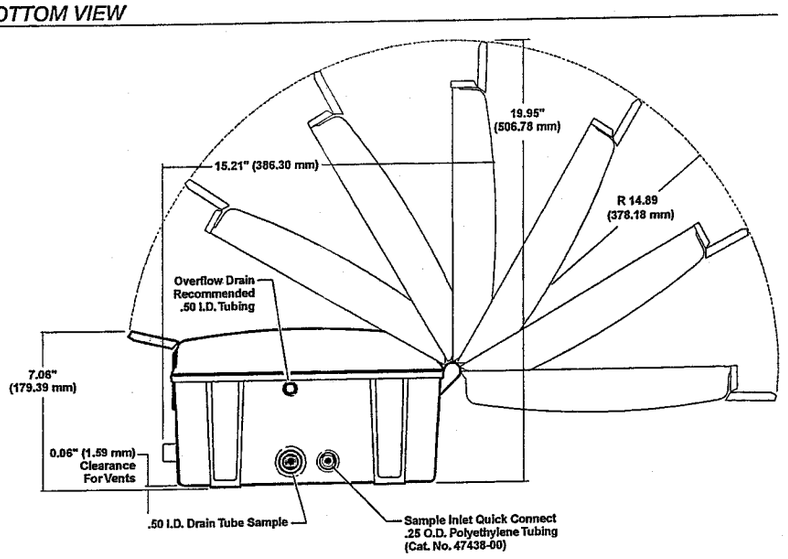
SIDE VIEW



FRONT VIEW



BOTTOM VIEW



16. Recorder span minimum and maximum values shall be operator programmable at the menu-driven keypad over the entire operating range.
17. The chlorine analyzer shall be housed in an IP-62 rated, ABS plastic enclosure designed for wall mounting.
18. The enclosure shall have two clear polycarbonate windows for viewing the measurement readout and reagent levels.
19. Power requirements shall be 100-115/230 Vac, 50/60 Hz, switch selectable, 95 VA maximum.
20. The instrument shall be the Model CL17 Chlorine Analyzer, manufactured by Hach Company.

Ordering Information

Hach CL17 Chlorine Analyzers are shipped with a one-month supply of reagents, maintenance kit, installation kit, and manual. (The power cord is ordered separately.)

54400-01 Model CL17 Free Residual Chlorine Analyzer

54400-02 Model CL17 Total Residual Chlorine Analyzer

54400-03 Model CL17 Free Residual Chlorine Analyzer with AquaTrend® Network Capability

54400-04 Model CL17 Total Residual Chlorine Analyzer with AquaTrend® Network Capability

Accessories

54488-00 Power Cord, 125V, 10A, 1.83 m (6 ft.)

54489-00 Power Cord, 230V, 10A, 1.83 m (6 ft.), continental European plug

54443-00 Maintenance Kit, 1 year, includes tubing, caps, funnel, and fittings

54443-01 Maintenance Kit with preassembled tubing, 1 year, includes tubing, caps, funnel, and fittings

46436-00 Flow Meter with 1/4-inch OD tubing

44278-00 Serial I/O Kit

54490-00 CL17 CAL/Verification Kit

Reagents

Reagent sets include all three of the required reagents [DPD indicator powder (added to indicator solution), indicator and buffer solutions] is sufficient for a 30-day operating period.

25569-00 Reagent Set, CL17 free chlorine

25570-00 Reagent Set, CL17 total chlorine

22972-55 DPD Indicator Powder (free and total)

23140-11 Free Chlorine Indicator Solution, 473 mL

23141-11 Free Chlorine Buffer Solution, 473 mL

22634-11 Total Chlorine Indicator Solution, 473 mL

22635-11 Total Chlorine Buffer Solution, 473 mL

28359-00 Calibration Refill Kit

At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...

Keep it pure.

Make it simple.

Be right.

For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.

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U.S.A.
Telephone: 800-227-4224
Fax: 970-669-2932
E-mail: orders@hach.com
www.hach.com

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HACH COMPANY World Headquarters
P.O. Box 389
Loveland, Colorado 80539-0389
U.S.A.
Telephone: 970-669-3050
Fax: 970-461-3939
E-mail: intl@hach.com
www.hach.com

In Europe, the Middle East, and Mediterranean Africa, contact:

HACH LANGE GmbH
Willstätterstraße 11
D-40549 Düsseldorf
GERMANY
Tel: +49 (0) 211 5288-0
Fax: +49 (0) 211 5288-143
E-mail: info@hach-lange.de
www.hach-lange.com

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INTER-LOCAL AGREEMENT WITH THE TOWN OF MANGONIA PARK FOR REPAIRS TO THE ELEVATED WATER STORAGE TANK

THIS AGREEMENT is made and entered into this **17th** day of **March**, **2009**, by and between The TOWN OF MANGONIA PARK, a municipal corporation of the State of Florida, hereinafter "TOWN," and PALM BEACH COUNTY, a political subdivision of the State of Florida, hereinafter "COUNTY."

WITNESSETH:

WHEREAS, the 100,000 gallon Elevated Water Storage Tank located at 5705 Candlewood Street, Mangonia Park, Florida, hereinafter "TANK," was inspected for the Mangonia Park Utilities Department on December 11, 2007 and found to need immediate repair; and

WHEREAS, on June 4, 2008 the Palm Beach County Health Department issued a Consent Order HD-009-08-58 to repair or replace the TANK within 365 days, and

WHEREAS, the COUNTY Housing and Community Development Department issued a Community Development Block Grant, hereinafter "CDBG," to fund TANK repairs on October 1, 2008 in the amount of $465,000.00; and

WHEREAS, the TOWN wants the COUNTY to assist with repairs to the TANK utilizing a COUNTY-provided Design-Build contract with Globaltech, Inc., hereinafter "CONTRACTOR"; and

WHEREAS, on January 22, 2009 the TOWN voted to allow the COUNTY to repair the TANK utilizing CONTRACTOR; and

WHEREAS, the repair of the TANK may reduce pressure and flow during peak hour demand and during fire flows; and

WHEREAS, the COUNTY and TOWN believe that these efforts serve a public purpose to prevent failure of the TANK; and

WHEREAS, the TOWN will be responsible for the perpetual maintenance of the TANK.

NOW, THEREFORE, in consideration of the mutual covenants, promises, and agreements herein contained, the parties agree as follows:

1. The above recitals are true, correct, and are incorporated herein.

2. Prior to the execution of this Agreement, COUNTY shall provide evidence of CONTRACTOR'S insurance naming COUNTY AND TOWN as additional insured for repair of the TANK.

3. TOWN agrees to provide access to the work site and to accommodate the CONTRACTOR and their subcontractors for repair of the TANK by providing a staging area.

4. COUNTY agrees to require the CONTRACTOR to have a licensed professional Engineer in the State of Florida review the TANK to determine recommended improvements to meet wind loads required by the Florida Building Code.

5. COUNTY agrees to require the CONTRACTOR to repair TANK and to complete recommended improvements to meet wind loads required by the Florida Building Code as allowed by the CDBG grant. The TOWN shall have the right to approve the specific method of repair, which may include the replacement of the water tank ball, based upon the options that have been presented to the TOWN by the CONTRACTOR.

6. TOWN agrees to open the emergency potable water interconnect with the Town of Rivera Beach to provide an additional source of water during the TANK repairs and to pay all fees for the water.

7. COUNTY agrees to require CONTRACTOR to have Florida licensed professional Engineer inspect and certify the tank in accordance with

Rule 62-555.530(2), FAC and submit a copy of the certification to the Palm Beach County Health Department.

8. TOWN agrees to pay all fees and costs associated with complying with Consent Order HD-009-08-58.

9. In the event a claim or lawsuit is brought against COUNTY, its officers, employees, servants or agents relating to the IMPROVEMENTS or any item which is the responsibility of TOWN, TOWN hereby agrees to indemnify, save and hold harmless COUNTY, its officers, employees, servants or agents, and to defend said persons from any such claims, liabilities, causes of action and judgments of any type whatsoever arising out of or relating to the existence of the IMPROVEMENTS or the performance by TOWN as may relate to this Agreement. TOWN agrees to pay all costs, attorney's fees and expenses incurred by COUNTY, its officers, employees, servants or agents in connection with such claims, liabilities or suits except as may be incurred due to the negligence of COUNTY. As set forth in Paragraph 21. below, Nothing contained herein shall be construed as a waiver by COUNTY, by TOWN or by any of the parties, of the liability limits established in Section 768.28, Florida Statutes.

10. This Agreement must be fully-executed by both parties hereto before commencement of the installation of the TANK repairs by COUNTY. TOWN must execute this Agreement no later than March 17, 2009, or the installation of the planned IMPROVEMENTS by COUNTY shall be canceled.

11. COUNTY shall require CONTRACTOR engaged by COUNTY for work associated with this Agreement to maintain Commercial General Liability coverage, including vehicle coverage, in combined single limits of not less than ONE MILLION AND 00/100 DOLLARS ($1,000,000.00). TOWN shall be included in the coverage as an additional insured.

12. COUNTY and TOWN agree that no person shall, on the grounds of race, color, national origin, sexual orientation, religion or creed, sex, age, or handicap be discriminated against in performance of the Agreement.

13. COUNTY may, at COUNTY'S discretion and for the duration of IMPROVEMENTS, install signs within the public property or easement, notifying the public that the IMPROVEMENTS were funded with CDBG dollars.

14. In the event that any section, paragraph, sentence, clause, or provision hereof is held invalid by a court of competent jurisdiction, such holding shall not affect the remaining portions of this Agreement and the same shall remain in full force and effect.

15. All notices required to be given under this Agreement shall be in writing, and deemed sufficient to each party when sent by United States Mail, postage prepaid, to the following

AS TO COUNTY

Director, Engineering Division
Palm Beach County Water Utilities Department
8100 Forest Hill Blvd.
West Palm Beach, Florida 33413

AS TO TOWN

Town Manager
Town Mangonia Park
1755 East Tiffany Drive
Mangonia Park, FL 33407

17. This Agreement shall be construed and governed by the laws of the State of Florida. Any and all legal action necessary to enforce this Agreement shall be held in Palm Beach County. No remedy herein conferred upon any party is intended to be exclusive of any other remedy, and each and every other remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or

otherwise. No single or partial exercise by any party of any right, power, or remedy shall preclude any other or further exercise thereof.

18. Any costs or expenses (including reasonable attorney's fees) associated with the enforcement of the terms and conditions of this Agreement shall be borne by the respective parties; provided, however, that this clause pertains only to the parties to the Agreement.

19. Except as expressly permitted herein to the contrary, no modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and equality of dignity herewith.

20. Each party agrees to abide by all laws, orders, rules and regulations and TOWN will comply with all applicable governmental codes in the maintenance and replacement of the IMPROVEMENTS.

21. The parties to this Agreement shall not be deemed to assume any liability for the negligent or wrongful acts or omissions of the other party (or parties). Nothing contained herein shall be construed as a waiver by COUNTY, by TOWN or by any of the parties, of the liability limits established in Section 768.28, Florida Statutes.

22. TOWN shall promptly notify COUNTY of any lawsuit-related complaint, or cause of action threatened or commenced against it which arises out of or relates, in any manner, to the performance of this Agreement.

23. Notwithstanding anything to the contrary contained herein, TOWN acknowledges that COUNTY is performing all of the obligations assumed by COUNTY pursuant to this agreement as an accommodation to TOWN, to enable TOWN to comply with the requirements of Consent Order HD-009-08-58. As a result, TOWN waives any and all claims, of any nature, which TOWN has or may

in the future have against COUNTY arising, in any manner, out the COUNTY's performance of, or failure to perform, this Agreement. Additionally, TOWN agrees to pursue any and all claims which it has, or may in the future have, arising out of the design or repair of the TANK directly against CONTRACTOR. COUNTY shall perform all reasonable acts required to enable TOWN to pursue any claims which it may have against CONTRACTOR.

24. The parties expressly covenant and agree that in the event any of the parties is in default of its obligations under this Agreement, the parties not in default shall provide to the defaulting party thirty (30) days written notice before exercising any of their rights.

25. The preparation of this Agreement has been a joint effort of the parties, and the resulting document shall not, solely as a matter of judicial constraint, be construed more severely against one of the parties than the other.

26. This Agreement represents the entire understanding among the parties, and supersedes all other negotiations, representations, or agreements, written or oral, relating to this Agreement.

27. A copy of this Agreement shall be filed with the Clerk of the Circuit Court in and for Palm Beach County, Florida.

28. This Agreement shall take effect upon execution and the effective date

shall be the date of execution.

INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the parties have executed this Agreement and it is effective on the date first above written.

TOWN OF MANGONIA PARK

TOWN OF MANGONIA PARK
BY ITS TOWN COUNCIL

ATTEST:

By: _____
Sherry Albury, Town Clerk

By: _____
WILLIAM H. ALBURY, III, MAYOR

(TOWN SEAL)

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

By: _____
Keith W. Davis, Town Attorney

PALM BEACH COUNTY

(COUNTY SEAL)

PALM BEACH COUNTY, FLORIDA, BY ITS BOARD OF COUNTY COMMISSIONERS

ATTEST:

SHARON R. BOCK, CLERK AND COMPTROLLER

By: _____
DEPUTY CLERK

By: _____
JOHN F. KOONS, CHAIRMAN

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

By: _____
ASSISTANT COUNTY ATTORNEY

APPROVED AS TO TERMS AND CONDITIONS

By: _____
DIRECTOR OF UTILITIES

PALM BEACH COUNTY
INTER-OFFICE MEMORANDUM

DATE: January 27, 2009

TO: Steve McGrew, P.E., Manager
Water Utilities Department

FROM: Edward W. Lowery, Director
Housing & Community Development

RE: **Budget Availability Statement**
Town of Mangonia Park - Water Tower Replacement

This represents our Budget Availability Statement (BAS) for the referenced project as follows:

Budget Account No:	**Amount**	**Purpose**
Fund 1101 Dept 143 Org 1431 Obj 8101 Program Code/Period BG168-GY08	$429,636	Construction Costs/Asbestos Survey/Asbestos Abatement
// **Total**	$429,636	//

If you require any further information on the above, please contact Amin Houry, Manager, Housing and Capital Improvements, at 233-3625.

Edward W. Lowery, Director
Housing and Community Development

cc: Larry Brown, HCD.

S:\CapImprv\MUNICIPAL\MangoniaPark\WaterTowerReplcmnt\BAS2.wpd