EXCELLENCE IN AFFORDABLE HOUSING

J.ALLEN MANAGEMENT CO.,INC.
PROPERTY MANAGEMENT & CONSULTANTS

HHA Lyerly Apartments
75 Lyerly
Houston, Texas 77022
J. Allen Management – Managing Agent

Scope of Work:

1. ***Boiler Replacement with Double Vertical Boiler System (1 Million btu each)***
2. ***Water Pump Replacement (Both House Pumps)***

Work to be done in timely fashion and coordinated with the property management with progress reports (status of work and time without hot water).

All work to be done 8-5 Monday – Friday while staff is present. All **Code** compliance is mandatory, example building permits, insurance, state, federal and local**. Contractor is responsible for system startup and turn in all copies of city, state, and federal compliance to management team.**

All schedules will be coordinated with staff to inform residents so that onsite management can (give written notice) of work 48 hours in advance.

All debris (old equipment, ducts, old piping etc.) will be put immediately into refuse containers provided by contractor for proper disposal according to code and not temporarily left in parking lot or on grass areas.

All work will be done in accordance with the requirements of Exhibit B SOW. All bids must have line item details of work, but wording must also state price as per supplied scope.

Also see 7.3.8 in IFB (Invitation For Bid)

Permits:

Required, to be copied and given to Management Team.

All equipment must be NS61 compliant. Documentation must be provided upon completion of install.

All bidders required to do a site visit to look at existing systems and determine removal of old equipment and installation of new equipment.

All bided equipment must be items stated, or comparable equipment. Also see 7.3.9 in IFB (Invitation For Bid)

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Requirements For Bidding –

-State on bid equipment model
-State on bid equipment specs – i.e. (BTU's) 1 million per boiler minimum
-State on bid installation of separate gas train per boiler
-State on bid installation of sequence controller to the two boiler operation
-State on bid all piping material for boiler to be cooper
-State on bid that size tank (minimum 200 gallons)
-State on bid specs (for comparison to specs given in scope)
-Paper work i.e.

1.) Conflict of interest
2.) Minority-Woman Business Enterprise Form or MWBE
3.) Certificate of Insurance
4.) Section 3 Requirements & Commitment
5.) HUD 5370 EZ
6.)Bid Bond

House Pump Replacement

House Pump Replacement

- Pumps must be NS61 Led Compliant Pumps (current system is not lead compliant)
- Pumps to be Genius E2, Duplex or **comparable**
- Remove existing equipment
- Modify piping to accommodate new system
- Disconnect and/or cap non used piping (System only has one inlet and outlet/Current system has 2)
  Domestic house pump description
- Duplex, Completely Pre-Packaged Pumping System or with End Suction Pumps, Variable Frequency Drive pressure control and third party certification by UL 2011-65YF and including the following features.
- **NSF 61 Rated Pumps**, End Suction Centrifugal Booster Pump Package providing a net boost pressure of 89 PSI, or 15 HP.
- 460 volt 3-phase motor
- Pump Details: Pump #1 & Pump #2
- **GPM Per pump 119**
- **Boost in PSI 89**
- Sets individual Suction & Discharge isolation valves
- Duplex, stainless steel structural support frame (standard steel not acceptable)

- NEMA I, (UL-508A Listed), touch-safe controller with programmable EEPROM module, pressure transmitter, liquid-filled gauges and 256 Color, including low suction protection with auto-reset.
- Starter Type: Pump #1 & Pump #2
- Horsepower 15 / Voltage 460 volt to 24V power supply with circuit breaker
- Completely pre-wired 24 volt control logic circuitry
- Pump motor branch circuit protection, circuit breakers (**Contains no fuses**)
- Main disconnect with door interlock
- Duplex, 4" Flanged Manifold with 1.5" suction and discharge branches
- 1 Year Warranty minimum
- Start-up and owner training to be included

Boiler Specs: (2 Boilers)

- Each Vertical boiler to RBI brand or **comparable** to,
- **Boiler to be a Vertical Copper Tube Boiler with a 200 gallon tank**
- Boiler to have Copper Nickel Heat Exchanger for hard water areas (**Copper only Heat Exchangers not allowed**)
- Boiler pump is to be sized for hard water service
- Minimum 85% Efficiency
- Boiler to have Gasketless Heat Exchanger (**Heat Exchangers utilizing O Ring Gaskets are not allowed**)
- Low NOx
- Pilot to have UV detection (Hot Surface Ignition not allowed)

Storage Tank

- **Tank must minimum 200 Gallon Storage capacity(Both tanks)**
- **Tank must be Glass Lined (Both tanks)**
- **Tank must be Jacketed and Insulated (Both tanks)**
- **Tank water pressure must be minimum 150 psi (Both tanks)**
- **Tank must have a 5 year warranty (Both tanks)**

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Lyerly Removal & Installation Specs: Also See Boiler Installation Detail

Boilers are to be installed individually, on different days.

First boiler is to be installed while the existing (Sellers boiler is still in place).

Remove (Sellers Boiler) after first vertical boiler is installed.

*Note – Sellers Boiler will have to be dismantled (cut up) to remove from the property.

Second boiler to be installed after Sellers Boiler is removed. Any additional plumbing to be capped or removed, to include piping, old valves etc.

Detail Boiler Specs:

- Both Vertical boilers shall be CSA design certified and shall not release any condensate during operation. Boilers shall be designed for operation with natural gas and have a CSA certified input rating as noted on the drawings, and a thermal efficiency rating of 85%.
- **All access covers must seal completely** as not to disrupt the sealed combustion process. **All gas train components and blower motor must be accessible and able to adjust without the removal of covers or cabinet components**.
- Both vertical boilers shall include a diagnostic control panel indicating power on, operator, high limit, low water, low air, trial for ignition, main burner, flame failure, and inlet/outlet temperatures incorporated into the boiler.
- Both **Combustion chambers shall be constructed of stainless steel**. Chamber shall be air-cooled and not require additional insulation.
- Both **heat exchangers shall be inspected and bear the A.S.M.E**. Section IV seal of approval. The heat exchanger shall be a four-pass **heat exchanger with a maximum working pressure of 160 psi**. Each end of the water tubes shall be strength rolled into the header. The heat exchanger shall be gasket less (**Heat Exchangers that require O ring Gaskets on the tubes or Gaskets on the headers will not be acceptable**). Each individual tube can be retubed without the disturbance of the surrounding tubes. A pressure relief valve of 50 lb/sq in shall be equipped with the boiler and factory mounted. The headers shall be of cast iron construction.
- Jackets: 18 gauge galvanized steel with factory applied baked enamel.

- Gas Burners: The burner shall be constructed of low alloy steel and nickel-plated

- The burner shall be capable of 85% efficiency without exceeding a NOx reading above 10 ppm.
- Burner Ignition: The boiler will use a proven pilot interrupted spark ignition system. The boiler shall use a **UL approved flame safeguard ignition** control system using UV detection flame sensing. (**Hot Surface Ignition Systems with flame rectification from the Igniter or via a Flame Rod will not be accepted)**
- Gas Train: Manual gas valves (2), redundant main gas valves (solenoid/diaphragm, motorized), firing valve, 'B' valve, pilot gas pressure regulator, and automatic pilot gas valve. All components to be factory mounted.

INSTALLATION

A. Install boilers level and plumb, according to manufacturer's written instructions and referenced standards.

B. **Install gas fired boilers according to NFPA 54**.

C. **Support boilers on 4 in (100 mm) thick concrete base, 4 in (100 mm) larger on each side than base of unit.**

D. Install electrical devices furnished with boiler, but not specified to be factory mounted.

E. **Install a 1" drain valve on the outlet piping prior to the first shut off valve**.

A. Flush and clean boilers on completion of installation.

B. After completing boiler installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finishes including chips, scratches, and abrasions with manufacturer's touchup paint.

AHRI CERTIFIED®
www.ahridirectory.org

Certificate of Product Ratings

AHRI Certified Reference Number: 2121353 Date: 1/28/2016 †Status: Active

Product: Commercial Boiler Heating Equipment
Model Number: FB1000
Manufacturer: RBI WATER HEATERS DIVISION OF MESTEK, INC.
Trade/Brand name: RBI WATER HEATERS

Rated as follows in accordance with Department of Energy (DOE) Boiler test procedures as published in the latest edition of the Code of Federal Regulations, 10 CFR Part 431 and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

Combustion Efficiency:	85.0 %
Thermal Efficiency:	85.0 %

The following data is for reference only and is not certified by AHRI:

Material:	Copper
Location:	Indoor
Fuel Type:	Natural Gas, Propane Gas
Input:	1000 MBTUH
Gross Output:	850 MBTUH
Ignition Type:	Intermittent/Electronic Ignition
Heating Medium:	Water
Draft Type:	Forced Draft
CO2:	8.0

* Ratings followed by an asterisk (*) indicate a voluntary rerate of previously published data, unless accompanied with a WAS, which indicates an involuntary rerate.

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[Genius E Series]

End Suction Centrifugal Pump System

Genius E features the most intelligent variable speed pump technology, designed to control high flow-low boost conditions. Our systems are highly compact and customizable to a number of designs and sizes, with stainless steel end-suction pumps and enclosed panel-mounted variable frequency drives.

Each system includes our award-winning variable speed pressure control software iQFlo™, with GreenFlo™ ASHRAE/ANSI/IES Standard 90.1 compliant low-flow energy optimization algorithm.

[Explore More Genius E Features and Benefits]

- Competitively Priced for Bid and Spec Projects
- 304 Stainless Steel Frame and Headers
- Glycerin-Filled Suction/Discharge Gauges
- 256 Color Touch Screen with Alarm Log File
- Compact Design (Most Fit Through a 36" Doorway)
- Long Service Life and Simple to Maintain
- ASHRAE 90.1 Compliance with Logic – No Remote Sensors Needed
- NSF 61 Rated 304 Stainless Steel End Suction Pumps
- Grooved-End or Flanged-End Connections
- Variable Speed Drive Control – NO PRV's
- Factory Tested and Pre-Set to Site Conditions

Discover the Intelligence of Genius E with a FREE Consultation

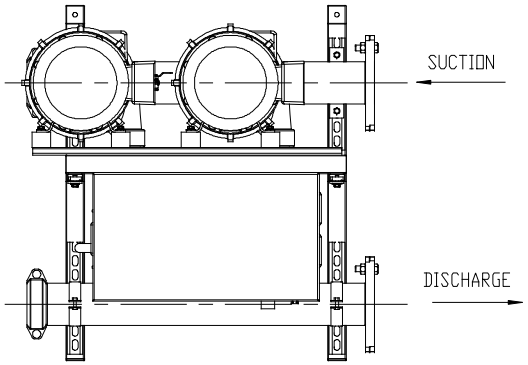
QuantumFlo
an exponential leap in pump technology

NSF 61 Certification #N-5946
NSF 372 Certification #7626

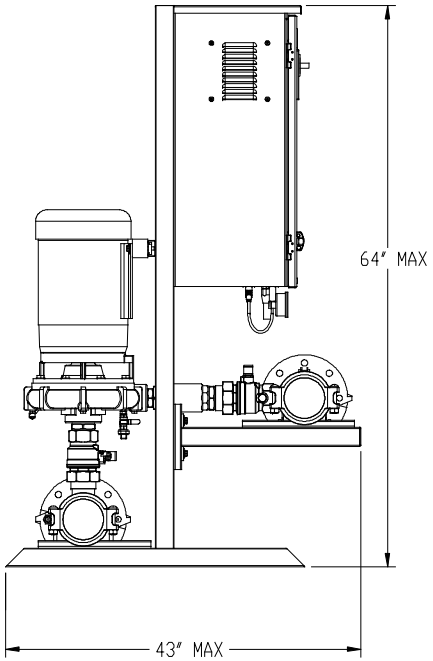
Packaged Pumping System 38LW

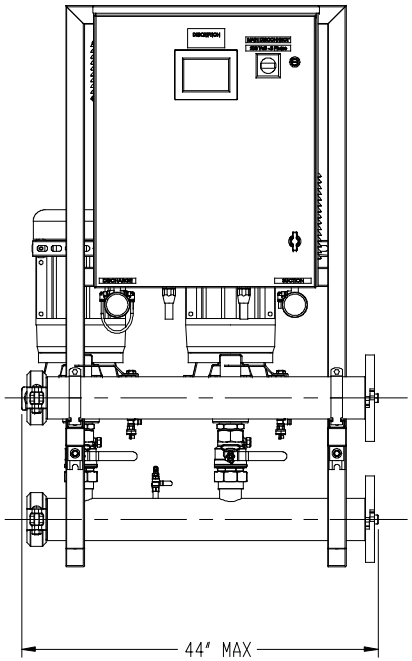
Industrial Control Panels 508A

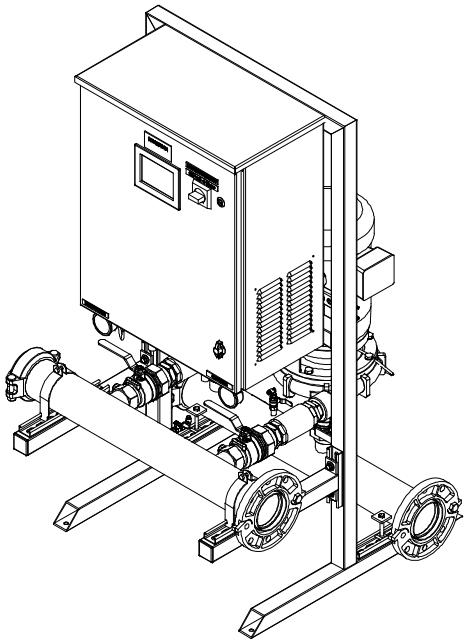
www.QuantumFlo.com
Phone: 386-753-9702
Email: info@QuantumFlo.com



THIS DRAWING IS INTENDED FOR A GENERAL FOOTPRINT OF STANDARD UNITS







ESTIMATED WEIGHT = 1000 LBS.

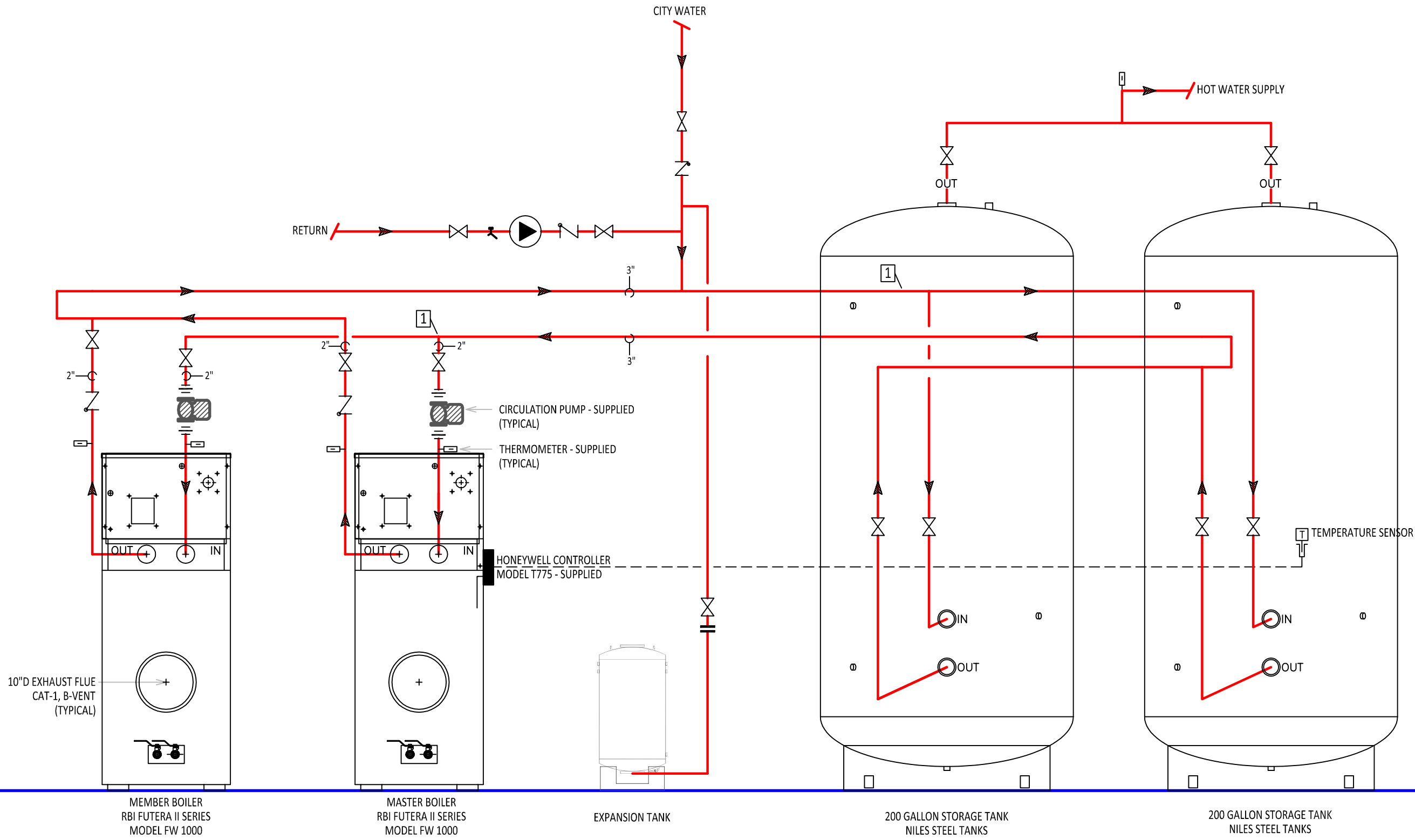
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	DRAWN	NLF	7/21/10
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL	COMMENTS:		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

QuantumFlo

TITLE: GENIUS E2
15 HP STANDARD
DIMENSIONAL DRAWING

SIZE	DWG. NO.	REV
B		

SCALE: 1:20	WEIGHT:	SHEET 1 OF 1



GOES
HEATING SYSTEMS
465 West 38th Street
Houston, TX 77018

GoesHeatingSystems.com
Tel: 713.699.5344
Fax: 713.699.0915

DO NOT USE FOR CONSTRUCTION.
CONCEPTUAL DRAWING ONLY.

NOTES:

1. 2.5" x 2.5" x 2" TEE WITH 2.5" x 2" REDUCER

LEGEND:

	DIRECTION OF FLOW
	TRIPLE DUTY VALVE
	CHECK VALVE
	WAFER VALVE
	PUMP
	3-WAY VALVE
	THERMOMETER
T	TEMPERATURE SENSOR
	WELL
	SERVICE VALVE
	PRESSURE RELIEF VALVE
	UNION CONNECTION
	AIR VENT
	INLINE BOILER CIRCULATION PUMP
	HOSE BIB

JOB NAME:

SUBMITTED TO:

DATE DRAWN:
October 25,2011

REVISED:
JANUARY 28, 2016

PAGE - TITLE:
DOMESTIC PIPING DIAGRAM - (2) FW1000, (2) STORAGE TANKS

DRAWN BY:
MAXWELL KNECHT