Scope of Supply

Grady Hospital in Atlanta – BUDGET
(FLX Boilers and Packaged Water Systems)

Attention: Jack Nelson, P.E.
Company: Oakwell
Project: Grady Hospital in Atlanta – BUDGET
From: Kevin Schmidt (Applications Engineer)
Date: June 30, 2025

At Frank I. Rounds, we are committed to our customers' needs for energy-related products, service, and parts. We are the preeminent supplier of boiler quality products produced by leading manufacturers, and we pride ourselves on our knowledge of product applications, our superior user support, and our outstanding level of customer service.

Established in 1936, Frank I. Rounds Company has been serving New England for over 80 years and has developed a unique customer service and support system. We go the extra mile to make sure that our customers receive the highest quality products, service support and aftermarket care available in the industry today. While other companies focus on sales, our focus is on customer satisfaction. We are not through until you are satisfied.

We appreciate the opportunity to bid on your project and hopefully our dedicated team has gone the extra mile in assisting in this bid. We look forward to working on this project together and are here to support you through this project the entire way.

System Requirements

Scope of Supply: 39880074 / Scope Date: 06/30/25

Job Name: Grady Hospital in Atlanta - BUDGET / Project Name: FLX Boilers and Packaged Water Systems

First System Requirements: Watertube Boiler	
Application:	Steam
Fuel Series:	Natural Gas, #2 Oil
Boiler Capacity:	18,500 MBTU Input
Design Pressure:	150lb ST
Operating Pressure:	70 psig
Safety Valve Setpoint:	100lb
Gas NOx Emissions Level:	30 ppm
Oil NOx Emissions Level:	90 ppm
Gas CO Emissions Level:	100 ppm
Oil CO Emissions Level:	50 ppm
Available Site Voltage:	460/3/60
Available Site Gas Pressure:	106 in. w.c.
Approximate Site Altitude:	700 ft. ASL
Field Assembled Unit:	No
Insurance Requirements:	NFPA-85_2011 (XL-Gap), FM
Proposed System Solution:	**FLX-IB-200-1850-150ST (460/3/60)-STD/CFG (Qty: 3)**

Second System Requirements: Packaged Water System	
Application:	Feedwater Tank
Required Feedwater Components:	Tank, Controls (Trim), Stand, Pump
Feedwater Tank Type:	Deaerator
Feedwater Tank Design Pressure:	50 lb
Feedwater Tank Storage Time:	10 Minutes
Number of Boiler Sets:	1
Tank Sizing Criteria:	Total Boiler Horsepower
Main Power Voltage:	460/3/60
Boiler Set #1:	**Boiler Quantity:** 3
	One (1) Backup Boiler: Yes
	Boiler Capacity (Each): 552.711 HP Input
	Operating Pressure: 70 psig
	Total Pumpset System Operating Pressure: 85 psig
	Safety Valve Setpoint: 100 lb
	Feedwater Pumpset System: (3) - 1 Pump Per Boiler w/ 1 Pump Backup, Intermittent Operation, TEFC Motor Type
Feedwater Tank Water:	**Primary Source:** Condensate
	Primary Source Pressure: 50 psig
	Secondary Source: MakeUp
	Secondary Source Pressure: 50 psig
	Low Temperature Condensate Return Flow Rate: 70%
	Low Temperature Condensate Return Temperature: 175°F
	High Temperature Condensate Return Flow Rate: 20%
	High Temperature Condensate Return Temperature: 233°F
	Makeup Water Flow Rate: 10%
	Makeup Water Temperature: 60°F
Proposed System Solution:	**FW(IND)SM-45-840-ADAC-4000(460/3/60)-PS1-(2P-1BU)-15SV-4N-I-10HP-T/-STD/CFG (Qty: 1)**

Third System Requirements: Packaged Water System	
Application:	Transfer Tank
Feedwater Tank Design Pressure:	
Feedwater Tank Storage Time:	Minutes
Required Transfer Components:	Tank, Controls (Trim), Stand, Pump
Transfer Tank Type:	Surge
Transfer Tank Design Pressure:	Atmospheric
Transfer Tank Storage Time:	10 Minutes
Number of Boiler Sets:	1
Tank Sizing Criteria:	Total Boiler Horsepower
Main Power Voltage:	460/3/60
Boiler Set #1:	**Boiler Quantity:** 3
	One (1) Backup Boiler: Yes
	Boiler Capacity (Each): 552.711 HP Input
	Operating Pressure: 30.3 psig
	Total Pumpset System Operating Pressure: 45.3 psig
	Safety Valve Setpoint: 45.3 lb
Transfer Pumpset System:	(2) - 1 Pump w/ 1 Standby, Continuous Operation, TEFC Motor Type

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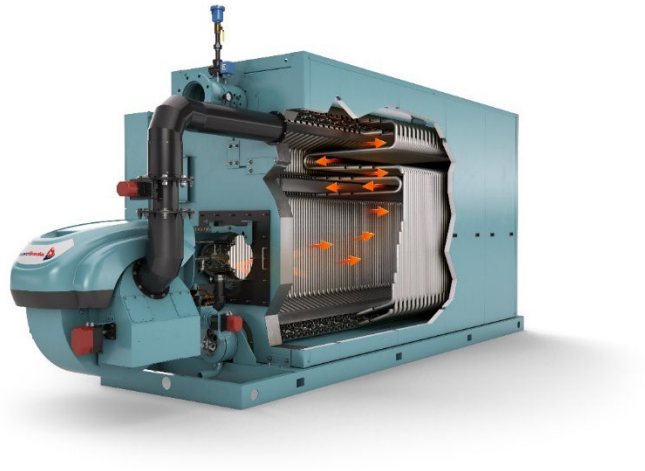
Transfer Tank Water:	**Primary Source:** Condensate
	Primary Source Pressure: 50 psig
	Secondary Source: MakeUp
	Secondary Source Pressure: 50 psig
	Low Temperature Condensate Return Flow Rate: 70%
	Low Temperature Condensate Return Temperature: 175°F
	High Temperature Condensate Return Flow Rate: 20%
	High Temperature Condensate Return Temperature: 233°F
	Makeup Water Flow Rate: 10%
	Makeup Water Temperature: 50°F
Proposed System Solution:	**XFER(IND)SRG-900-ADAC-4000(460/3/60)-XFER-(1P-1STDBY)-CR20-2K-C-7.5HP-T/-STD/CFG (Qty: 1)**

Fourth System Requirements:	**Water Softener**
Application:	Simplex (1 Tank)
Feedwater Makeup Flow Rate:	20 gpm
Total Grain Tank Capacity:	100000
Operating Pressure:	70 psig
Operating Temperature:	70°F
Proposed System Solution:	**WS-FSE-120-1-1/2-ED-Simplex(115/60/1)-STD/CFG (Qty: 1)**

Model FLX (Flexible Watertube)

PRODUCT CAPABILITIES



BOILER TYPE:	**Flexible Watertube Boiler**
BOILER APPLICATIONS:	**Steam, Hot Water**
BURNER FUEL TYPES*:	**Natural Gas, Propane, Digester Gas, Town Gas, #2 Oil, Dual Fuels**
BOILER CAPACITIES*:	**1.5 – 25.0 MMBtu/hr Input**
DESIGN PRESSURES*:	**15, 150, 200, 250 psig**
NOX EMISSIONS*:	**9, 30 ppm or Uncontrolled**

***Some combinations of burner fuel types, boiler capacities, design pressures, and NOx emissions may not be available.**

Model FLX (Flexible Watertube)

Packaged Boiler & Burner System

- Completely integrated boiler, burner, and control systems offer high efficiency, flexibility, reliability, safety, and ease of maintenance.
- Single-source boiler and burner manufacturer providing excellent service and support for all products, components, and accessories throughout the lifetime of the system.
- Designed, constructed, and hydrostatically tested in accordance with the ASME BPVC.
- UL/cUL and CSA tested, approved, listed, and labeled.

Patented Five-Pass Flexible Watertube Boiler Design

- Uniform boiler heat transfer to all tubes at all loads for steam or hot water applications.
- Removable side panel casing for easy access to fireside maintenance.
- Compact watertube boiler design reduces boiler room footprint requirements.
- Field-erectable Model FLE boilers available for 1.5 to 25.0 MMBTU/H input capacities.
- Standard 25-year pressure vessel warranty (contact Cleaver-Brooks for more details).

ProFire® Packaged Burner Design

- 10:1 maximum high-to-low fire turndown for select boiler capacities and NOx emissions.
- 9 ppm natural gas NOx emissions available without selective catalytic reduction (SCR).
- Hinged burner door offers quick maintenance and internal component inspection.

HAWK – Integrated Boiler Combustion Control System (Optional)

- Individual actuator control of burner fuel and combustion air for fuel-to-air ratio control.
- Integrated burner management system (BMS) with combustion control system (CCS).
- System configuration, combustion settings, process monitoring, alarm management, and history displayed on a colored graphical human-machine interface (HMI).

Level Master – Water Level Control System (Optional, Steam Only)

- Non-contact and non-wearing stainless steel float using magnetostrictive technology.
- Microprocessor-based electronic controller including an alphanumeric LCD display, alarms, continuous float monitoring, blowdown reminders, and blowdown history.
- Constructed in accordance with the ASME BPVC and bears the UL Listing Mark.

Model SRG (Surge Tank)

PRODUCT CAPABILITIES
SURGE TANK TYPE: CONDENSATE RETURN STORAGE TANK
BOILER APPLICATIONS: STEAM, HOT WATER
SURGE TANK CAPACITY: 300-3,000 GALLONS
OPERATING PRESSURE: ATMOSPHERIC

Model SRG (Surge Tank)

Condensate Return Storage Tank Design

- Provides additional storage time and allows high volume swings in condensate returns.
- Reduces chemical, energy, and makeup water costs by using condensate returns.

Durable 1/4 in. Thick (Minimum) Carbon Steel Tank

- Extends lifespan of system from higher quality tank materials and fabrication.
- Standard ASME flanged and dished (torispherical) carbon steel heads.
- Stainless steel tank available for corrosion resistance applications.

Internal Pump Suction Vortex Breakers

- Reduces NPSHA losses and cavitation created by vortices within pump suction piping.

Atmospheric Venting

- Accepts gravity and low-pressure returns from zero pressure resistance in the tank.

Standard Components Included

- Thermometer, gauge glass, required vessel tappings, and manway.

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Job Name: Grady Hospital in Atlanta - BUDGET / Project Name: FLX Boilers and Packaged Water Systems

Product Model: FLX-IB-200-1850-150ST (460/3/60)-STD/CFG		
Item	**Qty.**	**Description**
#1	3	**Watertube Boiler Model:** FLX-IB-200-1850-150ST **Project Market**: United States **Boiler Capacity (Input) at 700 ft:** 18960MBTU (Output: 15168MBTU) **Application Environment:** Indoor - Typical Boiler Room **Project NEMA Rating:** NEMA 1 **Boiler Tube Wall Thickness:** 0.095in **Fuel:** Natural Gas, #2 Oil Oil Supplied to Boiler From Day Tank (2 Oil) **Design Pressure:** 150lb ST **Operating Pressure:** 70 psig **Safety Valve Setting:** 100lb **Safety Valve Relieving Requirement:** Full Capacity **Safety Valve Relieving Capacity:** 15525 lbs/hr **Voltage:** 460/3/60 **Customer Site Voltage:** 460 V **Electrical Panel Configuration:** Control Panel / High Voltage Panel / J-Box (Burner Mount) **Insurance Requirement: NFPA-85** **Insurance Requirement: FM** **Packaged Boiler UL Label:** UL **Configuration Check:** Standard Selections
#2	3	**Integral 30 Burner Information:** **Hinged:** Open to Left **Burner Modulation:** Full Modulation **Blower Motor:** Blower Motor: 40 HP TEFC (460/3/60) **Blower Motor Starter**: Variable Speed Drive NEMA1 **Altitude:** 700 ft ASL **Burner Input Capacity:** 18960 MBTU **Gas (Natural Gas) Emissions Level:** 30 ppm **Gas (NG) CO Emissions Level:** 100 ppm **Minimum Gas Flow:** 2055.6 SCFH **Maximum Gas Flow:** 18960 SCFH **Burner Gas Turndown:** 9.2 : 1 **Oil Atomization Type:** Air - Remote Drive Compressor Set **Minimum Burner Oil Flow:** 16.5 **Maximum Burner Oil Flow:** 132.1 **Burner Oil Turndown:** 8:1 **Burner Modulation:** Full Modulation **Burner Ignition Type:** Spark Ignited Gas **Economizer included Separately with Boiler Package:** No
#3	3	**Kunkle Safety Valve Arrangement (100lb HPS):** Safety Valve #1: Inlet Size - 2in (Full Capacity) Safety Valve #2: Inlet Size - 1 1/2in (Full Capacity) Safety Valve #3: Inlet Size - 1 1/2in (Full Capacity) See product specifc boiler book for outlet sizes
#4	3	**Boiler Pressure Vessel Package** **Steam Pressure Vessel Connections:** Stack Connection: 24in Flanged Steam Nozzle Connection: 8in Flanged 300lb. R.F. Feedwater Connection: 2.5in Flanged 150lb. F.F. (Back) Blowdown Connection: 2in NPT (Front and Back) Surface Blowoff Connection: 1in NPT Overflow Connection: 0.75in NPT Chemical Feed Connection: 0.5in NPT **Pressure Vessel Accessories:** Seismic Design Anchor Bolt Provisions: Weld to Base
#5	3	**Steam Valve Arrangement:** Steam Valve Arrangement: Arrangement 4 Steam Valves: Two Stop Valves **Note: Spool pieces between valves and/or steam nozzle are not included in the proposal. Spool piece sizing, layout, and Code compliance is not the responsibility of Cleaver-Brooks and is by others.** Steam Stop Valves: 8in 300FL (SL)

#6	3	**Boiler Valves and Piping Arrangement :** **2 Quick / 2 Slow 2in Blowdown Valve Arrangement - Shipped Loose:** Slow Blowdown Valve: NPT Class 250 Iron (QTY: 2 Per Boiler) Quick Blowdown Valve: NPT Class 250 Iron (QTY: 2 Per Boiler) **Feedwater Valve Arrangement (Factory Assembled):** Feedwater Globe Valve and Check Valve: 2.5in NPT Class 200 **Surface Blow Off Valve Arrangement (Ship Loose):** Surface Blowoff Collector Pipe
#7	3	**Level Control Package with Sch 80 Carbon Steel Piping** **Main Low Water Cutoff With Accessories:** Main Low Water Cutoff: LevelMaster Automatic Reset Modulating Float Gauge Glass Protector Ball Check Gauge Cocks Try Cocks **Auxiliary Low Water Cutoff:** Auxiliary Low Water Cutoff (ALWCO): MCDM1575 Manual Reset On/Off External Probe **High Water Alarm:** High Water Alarm: McD-M 150 Automatic Reset External Probe
#8	3	**Miscellaneous Trim Options Package:** Vent Extension with O2 Probe Tapping for Cleaver Brooks 3in Dial Stack Thermometer 4.5in Dial 0-300 psig Pressure Gauge

#9	3	**Fuel Train Package for 200 Series:** **Primary Gas Train for Natural Gas:** **Nema Rating:** NEMA 1 **Piping Material:** Carbon Steel **Primary Gas Train Mounting Location:** Left Side **Customer Site Gas Pressure:** 106 in. w.c. (3.83 psig) **Components from Customer Connection to Burner:** Manual Valve #1: 2.5in Lubricated Safety Shutoff Valves: Siemens Dual_Motorized_2_POCs SSOV Double Valve: 2.5in Manual Valve #2: 2.5in Lubricated Butterfly Valve: 2.5in Customer Connection: 2.5in **Primary Gas Train Accessories:** High Gas Pressure Switch Low Gas Pressure Switch Vent Valve Plugged Leakage Test Cock: 0.25in Brass Ball 2.5in Steel Pressure Gauges with Bronze Shutoff Cocks at the Following Locations: Manifold Inlet//SSOV Inlet/SSOV Outlet **Primary Oil Train:** **Oil Train Oil Pump Motor on Right Side:** Motor Size: 0HP Motor Type: ODP (460/3/60) **Oil Train Metering Pump Motor on Right Side:** Motor Size: 0HP Motor Type: ODP(460/3/60) **Air Atomization Oil Train Accessories:** Bypass Oil Train Nozzle (QTY: 1 Per Boiler) Safety Shutoff 2 Way Valve Motorized with POC Safety Shutoff 3 Way Valve Motorized with POC Low Oil Pressure Switch High Oil Pressure Switch Pressure Gauges at the following Locations: Suction Side/Discharge Side/Return Side **Air Atomization Air Compressor Motor on Right Side (Boiler Mounted):** Motor Size: 7.5HP Motor Type: ODP (460/3/60) **Air Atomization Air Accessories:** Manifold Block Atomizing Air Switch Pressure Gauge **Natural Gas Pilot Gas Train Accessories:** **Natural Gas Customer Inlet Gas Pressure (in. w.c.):** 106 in. w.c. Natural Gas Gas Pressure Regulator: Maxitrol 325-3 Manual Shutoff Cock: Bronze Solenoid Valve: Aluminum Body Second Solenoid Valve: Aluminum Body Brass Body Vent Valve

#10	3	**Boiler Controls Package:** **Standard Non-Parallel Positioning Controls:** Modulating Control: Transmitter (Pressure) Operating Pressure Limit Control High Limit Control: Steam Pressure Control Piping and Elbow Plugs: 0.75in Sch 80 Carbon Steel **Parallel Positioning Controls: Hawk 4000** Touchscreen:15in Advanced Multi-Touch Dual Fuel Manual Selector Switch Boiler Panel Ethernet Hub: 5 Port Expanded Annunciation (200 Series) **Standard Transmitter Package:** Stack Temperature Transmitter Water Temperature Transmitter Combustion Air Temperature Transmitter **Hawk Actuator Package (Type: Quick Disconnect):** Primary Fuel Actuator Secondary Fuel Actuator Air Actuator FGR Actuator **Cleaver Brooks O2 Trim System with the Following Accessories:** **CB780EUV Combustion Flame Safeguard:** **Draft Control Package:** Integrated Draft Control With Damper Assembly Draft Control Draft Pressure Transmitter 24" D, 2 blades, 136 in-lbs Draft Damper Assembly
#11	1	**Boiler Room System Controls** **BAS System:** BACnet MSTP Protcol Translator: ProtoNode Remote Communication Panel Remote Communications Panel Ethernet Hub: 5 Port

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#12	3	**Boiler Electrical Package:** **Main Power Distribution Type - Rotary Fused Disconnect:** Amps:200 **Blower Motor Starter:**Variable Speed Drive NEMA1 **Individual Power Distribution Type - Fuse Package Mounted in Control/Entrance Panel:** CCT Protection: 3 Amp Fuse (Qty:3) Blower Motor Protection: 100 Amp Fuse (Qty:3) Air Compressor Protection: 15 Amp Fuse (Qty:3) Oil Pump Protection: 1 Amp Fuse (Qty:3) Oil Metering Pump Protection: 1 Amp Fuse (Qty:3) **Boiler Panel Configuration And Panel Accessories:** Electrical Wiring Accessories for all Panels Wiring Type: Rigid and Sealtite Side Mounted Control / Burner Panel Enclosure Configuration **NEMA 12** with Panel Accessories: Single Point Connection: - 460/3/60 Panel Key Lock Circuit Wire: 16 AWG (Hawk Panel Internal Wire Always 16 AWG) Variable Speed Drive Entrance Panel **NEMA 1**with Panel Accessories: Panel Key Lock Left Side Mounted High Voltage Panel Enclosure **NEMA 1** (Power Connection)with Panel Accessories: Panel Key Lock J-Box Panel Burner Mount and Pull Through Enclosure: **NEMA 1** **Boiler Panels Individually Labeled with UL508a Stamps:** Control Panel High Voltage Panel Protocol Translator **22 mm LED Light Package with Standard Labels Mounted on Control/Burner Panel:** White Power On Light Red Auxiliary Low Water Cutoff (ALWCO) Light Red Excess Steam Pressure Light **Remote Contact Point Package with Terminals Mounted in Entrance Panel:** Low Water Contact Common Alarm Contact Excess Steam Press Contact Point High Gas Pressure Contact High Oil Pressure Contact Power Outage Lockout (Relay) and Wire Changes (Terminals in Entrance Panel)
#13	1	**Submittal Package for FLX-IB:** Dimensional Diagram Wiring Diagram Test Fire Report ASME Data Report

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Product Model: FW(IND)SM-45-840-ADAC-4000(460/3/60)-PS1-(2P-1BU)-15SV-4N-I-10HP-T/-STD/CFG		
Item	**Qty.**	**Description**
#14	1	**Cleaver-Brooks Model**: FW(Individual) SM-45-840-ADAC-4000(460/3/60)-PS1-(2P-1BU)-15SV-4N-I-10HP-T/ **System Information:** Project Market: United States Application Environment: Indoor - Typical Boiler Room Project NEMA Rating: NEMA 1 Feedwater Components: Tank Controls (Trim), Stand, Pump **Boiler System Information:** Number of Boiler Sets: 1 Feedwater / Transfer Tank Size Based on Total Boiler Horsepower System Voltage: 460/3/60 Customer Voltage: 480 Boiler Set 1: (3) 552.711 HP Boilers with (1) Backup Operating at 70 psig with 100 Safety Valve Setting **Feedwater Water Source Information:** Feedwater Primary Water Source: Condensate at 50 psig Low Condensate Return Flow: 70 Percent at 175 F High Condensate Return Flow: 20 Percent at 233 F Feedwater Secondary Water Source: MakeUp at 50psig Make Up Flow Entered: 10 Percent at 60 F **Feedwater Tank Information:** Model: Spraymaster Tank Size: 840 Gallons (10 mins of Storage) Spray Size: 45 Pump Control Type: ADAC Controls Package: ADAC
#15	1	Feedwater Primary MUV 3 Valve Bypass: 2" Steel
#16	1	Feedwater Secondary MUV 3 Valve Bypass: 2" Steel
#17	1	Feedwater Tank Material - Grade 516 70 Carbon Steel
#18	1	Feedwater Tank Construction - 50 lb ASME Stamp (Operating Pressure: 5 psig)
#19	1	Feedwater Tank Manway: 28in Davited (SA106)
#20	1	Feedwater Packaging: Full
#21	1	Feedwater Tank Corrosion Allowance: 1/16"
#22	1	Feedwater System Seismic Design Formal Calculation: Destination Zip Code: 30303 Seismic Design Ss: .183 Site Class: D Seismic Design Ip: 1.5 Seismic Design SDS: Seismic Design z: 0 Seismic Design h: 1
#23	1	Feedwater Tank Seismic Design Previously known as Zone 4
#24	1	Feedwater Tank Insulation
#25	1	Feedwater Magnesium Anode: 18"
#26	1	Feedwater Chemical Feed Quill (316SS)
#27	1	Feedwater Make Up Tee and Check Valve (304SS) - 2"
#28	1	Feedwater Dissolved Oxygen Test Kit
#29	1	Feedwater Tank Drain Valve: 2"
#30	1	Feedwater Sample Tapping Valve
#31	1	Feedwater Sample Cooler: SC-22 (Water Sample)
#32	1	Feedwater High Temp Diffuser 3" NPT tank connection, 2.5" FF Flange customer connection
#33	1	PWS Tanks Pump Piping Stand
#34	1	Feedwater System 1 Suction Tapping: 4in 150lb Flange
#35	3	**Feedwater System 1 Pump Model:** 15SV4GH4_66NW **Pumpset Information:** (3) - 1 Pump Per Boiler w/ 1 Pump Backup, Intermittent **Pump Info:** - Connection Size: 2in - Flow: 62.1gpm - Design Head: 194.5263158 ft - Dead Head: 269.9 ft - Motor: 10HP (460/3/60;TEFC) - NPSHr: 3 ft
#36	3	Feedwater System 1 Suction Piping: 2.5in Class: 150 Type: Carbon Steel

#37	1	System 1 Feedwater Suction Manifold Includes Isolation Valve and Emergency ByPass Connection and Additional Emergency Bypass Isolation Valve 4in Class: 150 Type: Carbon Steel
#38	3	Feedwater System 1 Discharge Piping: 2in Class: 150 Type: Carbon Steel with 2in Throttling Valve
#39	3	Feedwater System 1 Discharge Piping Pressure Gauge: Dry
#40	1	Feedwater Stand Height: 7 ft Construction: Stand Material
#41	1	Feedwater Control Panel: 1 Tank Individual ADAC-4000 (Nema 12)
#42	2	Feedwater Level Control Panel and Pump Control Panel UL 508a Label
#43	1	Wire all PLC I/O to Terminal Block (including unused)
#44	1	ADAC Feedwater Option 3 - 1 Tank
#45	1	ADAC Feedwater Option 2 - 1 Tank
#46	1	ADAC Feedwater Option 1 - 1 Tank
#47	1	Feedwater Control Touchscreen: 7in Color
#48	1	Feedwater Ethernet Hub: 5 Port
#49	1	Feedwater Tank Temperature Transmitter (E and H)
#50	1	Feedwater Steam Pressure Transmitter (E and H)
#51	1	Feedwater Equilizing Piping Isolation and Drain Valve
#52	1	Feedwater Level Control Transmitter Type: Magnetic - 4-20mA
#53	1	Feedwater Primary MakeUp Valve: 1 1/4" Siemens 599 Sizing Info: Based on Full System Flow, max. flow is 76.2 gpm (Cv: 16)
#54	1	Feedwater Secondary MakeUp Valve: 1 1/4" Siemens 599 Sizing Info: Based on Full System Flow, max. flow is 76.2 gpm (Cv: 16)
#55	1	Feedwater Level Indication: Magnetic (Length: 29in)
#56	1	Feedwater Low Water Alarm: Transmitter Function
#57	1	Feedwater High Water Alarm: Transmitter Function
#58	1	Feedwater Low Water Cut Off and Alarm: Nema 1 Switch
#59	1	PRV (FULL CAPACITY): 3" SPENCE ED-250psig **Sizing Information:** PRV Sized to Provide to Deaerator: 6703.6 lb/hr Safety Relief Valve Capacity Required: 14507.3lb/hr Steam Supply Pressure: 70psig Steam Supply Safety Valve Setting: 100psig
#60	1	PRV ByPass with Strainer: 3" 150lb
#61	1	Safety Valve #1: 3 M" Kunkle, NPT Tank Connection
#62	1	Safety Valve #2: 2 J" Kunkle, NPT Tank Connection
#63	1	Feedwater Entrance Panel Enclosure: NEMA 1
#64	1	Feedwater Control Circuit Transformer Rating: 0.5kVA
#65	1	Feedwater Entrance Panel UL 508a Label
#66	3	Feedwater System 1 Individual Power Distribution: Fused 30AMPS (FW Entrance Panel - NEMA 1)
#67	3	Feedwater System 1 Motor Starter: Contactor (16 AMPS) (FW Entrance Panel)
#68	1	Feedwater Audible Alarm: Electronic Sounder
#69	3	Feedwater Rigid and Sealtite Conduit
#70	1	Feedwater Low Water Cut Off Light: Red
#71	3	Feedwater Pump Run Light: Green (INFORMATIONAL ONLY)
#72	3	Feedwater Chemical Feed Contact
#73	1	Submittals - Dimensional Diagram (Feedwater Tank)
#74	1	Submittals - Wiring Diagram (Feedwater Tank)
#75	1	Submittals - ASME Data Report (Feedwater Tank)

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Product Model: XFER(IND)SRG-900-ADAC-4000(460/3/60)-XFER-(1P-1STDBY)-CR20-2K-C-7.5HP-T/-STD/CFG		
Item	**Qty.**	**Description**
#76	1	**Cleaver-Brooks Model**: XFER(Individual) SRG-900-ADAC-4000(460/3/60)-XFER-(1P-1STDBY)-CR20-2K-C-7.5HP-T/ **System Information:** Project Market: United States Application Environment: Indoor - Typical Boiler Room Project NEMA Rating: NEMA 1 Transfer Components: Tank, Controls (Trim), Stand, Pump **Boiler System Information:** Number of Boiler Sets: 1 Feedwater / Transfer Tank Size Based on Total Boiler Horsepower System Voltage: 460/3/60 Customer Voltage: 480 Boiler Set 1: (3) 552.711 HP Boilers with (1) Backup Operating at 30.3 psig with 45.3 Safety Valve Setting **Transfer Water Source Information:** Transfer Primary Water Source: Condensate at 50 psig Low Condensate Return Flow: 70 Percent at 175 F High Condensate Return Flow: 20 Percent at 233 F Transfer Secondary Water Source: MakeUp at 50 psig Make Up Flow Entered: 10 Percent at 50 F **Transfer Tank Information:** Model: Surge Tank Size: 900 Gallons (10 mins of Storage) Pump Control Type: ADAC Controls Package: ADAC
#77	1	Transfer Secondary MUV 3 Valve Bypass: 3/4" Steel
#78	1	PWS Tanks Pump Piping Stand
#79	1	Transfer Suction Tapping: 3" 150lb Flange
#80	1	Transfer Recirculation Tapping: 1.5" 300lb Flange
#81	2	**Transfer Pump Model:** CR20-2K **Pumpset Information:** Continuous **Pump Info:** - Connection Size: 2in - Flow: 108gpm (includes 16gpm minimum flow) - Design Head: 90 ft - Motor: 7.5HP (460/3/60;TEFC) - NPSHr: 7.26 ft
#82	2	Transfer System Suction Piping: 3in Class: 150 Type: Carbon Steel
#83	1	Transfer Suction Manifold: 3in Class: 150 Type: Carbon Steel
#84	2	Transfer System System Discharge Piping: 2.5in Class: 150 Type: Carbon Steel with 2.5in Throttling Valve
#85	2	Transfer System System 1 Discharge Piping Pressure Gauge: Dry
#86	2	Transfer System Recirculation Piping: 1.5in Class: 300 Type: Carbon Steel
#87	1	Transfer Recirculation Manifold: 1.5in Class: 300 Type: Carbon Steel
#88	1	Transfer Stand Height: 8 ft Construction: Stand Material
#89	2	Feedwater Level Control Panel and Pump Control Panel UL 508a Label
#90	1	Wire all PLC I/O to Terminal Block (including unused)
#91	1	Feedwater Control Touchscreen: 7in Color
#92	1	Feedwater Ethernet Hub: 5 Port
#93	1	Feedwater Pump Discharge Transmitter (E and H)
#94	1	Feedwater Tank Temperature Transmitter (E and H)
#95	1	Feedwater Steam Pressure Transmitter (E and H)
#96	1	Feedwater Level Control Transmitter Type: Differential Pressure - 4-20mA
#97	1	Feedwater Entrance Panel UL 508a Label
#98	1	Transfer Tank Material: 304 Stainless Steel 900 gal.
#99	1	Transfer Tank Construction: Tank Material
#100	1	Transfer Tank Manway - 20in Davited (304 Stainless Steel)
#101	1	Transfer Packaging: Full

#102	1	Transfer System Seismic Design Formal Calculation: Destination Zip Code: 30303 Seismic Design Ss: .183 Site Class: D Seismic Design Ip: 1.5 Seismic Design SDS: Seismic Design z: 0 Seismic Design h: 1
#103	1	Transfer Seismic Design Previously known as Zone 4
#104	1	Transfer Tank Drain Valve: 2"
#105	1	Transfer Internal Steam Heater: ET134-2 Sizing Info: High Pressure (30-250 psig); 30 psig Entered; 50 F Temp Rise; ET134-2" Steam Control Valve and Strainer Size
#106	1	Transfer Control Panel: 2 Tank Combined ADAC-4000 (1 Pressure Control Loop Only) (Nema 12) **Feedwater Tank must be within 300 Feet to utilize the 2 Tank Combined Control System**
#107	2	Transfer Level Control Panel and Pump Control Panel UL 508a Label
#108	1	ADAC Transfer Option 3 - 2 Tank
#109	1	ADAC Transfer Option 2 - 2 Tank
#110	1	ADAC Transfer Option 1 - 2 Tank
#111	1	Transfer Pump Discharge Transmitter (E and H)
#112	1	Transfer Equilizing Piping Isolation and Drain Valve
#113	1	Transfer Level Control Type: Differential Pressure - 4-20mA
#114	1	Transfer Secondary MakeUp Valve: 1/2 Cv: 1.6" Siemens 599 Sizing Info: Based on System Make Up Only, max. flow is 7.6 gpm (Cv:)
#115	1	Transfer Level Indication: Magnetic (Length: 39in)
#116	1	Transfer Low Water Alarm Type: Transmitter Function
#117	1	Transfer High Water Alarm Type: Transmitter Function
#118	1	Transfer Low Water Cut Off and Alarm Nema 1 Switch
#119	1	Transfer Entrance Panel: NEMA 1
#120	1	Transfer Control Circuit Transformer Rating: 0.5kVA (XFER Entrance Panel)
#121	1	Transfer Entrance Panel UL 508a Label
#122	2	Transfer Individual Power Distribution: Fused 30 AMPS (XFER Individual Disconnect Panel)
#123	2	Transfer Motor Starter: Contactor (XFER Entrance Panel)
#124	1	Transfer Audible Alarm: Electronic Sounder
#125	1	Transfer Low Water Cut Off Light: Red
#126	2	Transfer Pump Run Light: Green
#127	1	Submittals - Dimensional Diagram (Transfer Tank)
#128	1	Submittals - Wiring Diagram (Transfer Tank)

Scope Summary

Scope of Supply: 39880074 / Scope Date: 06/30/25

Job Name: Grady Hospital in Atlanta - BUDGET / Project Name: FLX Boilers and Packaged Water Systems

Product Model: WS-FSE-120-1-1/2-ED-Simplex(115/60/1)-STD/CFG		
Item	**Qty.**	**Description**
#129	1	**Water Softener Model:** WS-FSE-120-1-1/2-ED-Simplex-(115/60/1) **Model Information:** Number of Boilers: 3 - (1) Backup Boiler Total Boiler Horsepower: 1200 HP Evaporation Rate: 82.8 gpm MakeUp Rate: 30 % MakeUp Return: 20 gpm Water Hardness: 3 gpg Hours On Line: 24 hrs Safety Factor: 25% Total Grain Capacity: 100000 grains Operating Pressure: 70 psi Operating Temperature: 70 F
#130	1	Submittals - Dimensional Diagram (Water Softener)
#131	1	Submittals - Wiring Diagram (Water Softener)