

Request for Quote

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
 ONE CAPITOL HILL
 PROVIDENCE RI 02908

CREATION DATE : 29-NOV-12
 BID NUMBER: 7458320
 TITLE: HEATING EQUIPMENT SERVICING AND PREVENTATIVE MAINTENANCE - DAVIES
 BLANKET START 2/1/13
 BLANKET END 11/30/17
 BID CLOSING DATE AND TIME: 27-DEC-2012 10:00:00

BUYER: Melillo, Charlotte A
 PHONE #: 401-574-8110

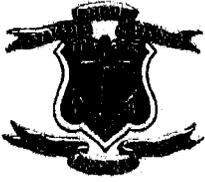
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 DOA CONTROLLER
 ONE CAPITOL HILL, 4TH FLOOR
 SMITH ST
 PROVIDENCE, RI 02908
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 RIDE WILLIAM M DAVIES CAREER & TECH HS
 50 JENCKES HILL RD
 LINCOLN, RI 02865
 US

Regulstion Number: 1295186

Line	Description	Quantity	Unit	Unit Price	Total
1	<p>2/1/13 - 11/30/17 BUYER EMAIL: charlotte.melillo@purchasing.ri.gov FOR ALL QUESTIONS PERTAINING TO THIS BID. QUESTIONS WILL BE ENTERTAINED UNTIL DECEMBER 12, 2012 AT 4:00 PM.</p> <p>THERE WILL BE A PRE-BID CONFERENCE ON DECEMBER 13, 2012 AT 9:00 AM. VENDORS WILL MEET IN THE MAIN OFFICE - DAVIES CAREER AND TECH HIGH SCHOOL, 50 JENCKES HILL ROAD, LINCOLN, RI 02865. *</p> <p>BLANKET PERIOD 2-1-2013 TO 11-30-2013 MULTI-YEAR CONTRACT FOR THE ANNUAL SERVICING AND PREVENTATIVE MAINTENANCE OF THE BOILERS AND ASSOCIATED HOT WATER HEATING EQUIP. INCLUDING CIRCULATOR PUMPS PER THE ATTACHED SPECIFICATIONS. (10 MONTHS - 1ST YEAR) PRICE TO INCLUDE START-UP AND END OF HEATING SEASON SERVICE</p>	1.00	Year		
2	<p>BLANKET PERIOD 12-1-2013 TO 11-30-2014 MULTI-YEAR CONTRACT FOR THE ANNUAL SERVICING AND PREVENTATIVE MAINTENANCE OF THE BOILERS AND ASSOCIATED HOT WATER HEATING EQUIP. INCLUDING CIRCULATOR PUMPS PER THE ATTACHED SPECIFICATIONS - PRICE TO INCLUDE START-UP AND END OF HEATING SEASON SERVICE.</p>	1.00	Year		
3	<p>BLANKET PERIOD 12-1-2014 TO 11-30-2015 MULTI-YEAR CONTRACT FOR THE ANNUAL SERVICING AND PREVENTATIVE MAINTENANCE OF THE BOILERS AND ASSOCIATED HOT WATER HEATING EQUIP. INCLUDING CIRCULATOR PUMPS PER THE ATTACHED SPECIFICATIONS. PRICE TO INCLUDE START-UP AND END OF HEATING SEASON SERVICE</p>	1.00	Year		
4	<p>BLANKET PERIOD 12-1-2015 TO 11-30-2016 MULTI-YEAR CONTRACT FOR THE ANNUAL SERVICING AND PREVENTATIVE MAINTENANCE OF THE BOILERS AND ASSOCIATED HOT WATER HEATING EQUIP. INCLUDING CIRCULATOR PUMPS PER THE ATTACHED SPECIFICATIONS. PRICE TO INCLUDE START-UP AND END OF HEATING SEASON SERVICE</p>	1.00	Year		
5	<p>BLANKET PERIOD 12-1-2016 TO 11-30-2017</p>	1.00	Year		

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer



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	MULTI-YEAR CONTRACT FOR THE ANNUAL SERVICING AND PREVENTATIVE MAINTENANCE OF THE BOILERS AND ASSOCIATED HOT WATER HEATING EQUIP. INCLUDING CIRCULATOR PUMPS PER THE ATTACHED SPECIFICATIONS. PRICE TO INCLUDE START-UP AND END OF HEATING SEASON SERVICE				
6	2/1/13 - 11/30/13 OVERTIME RATE (RATE APPLIES TO 5:00 PM TO 7:00 AM)	1.00	Hour		
7	12/1/13 - 11/30/14 OVERTIME RATE (RATE APPLIES TO 5:00 PM TO 7:00 AM)	1.00	Hour		
8	12/1/14 - 11/30/15 OVERTIME RATE (RATE APPLIES TO 5:00 PM TO 7:00 AM)	1.00	Hour		
9	12/1/15 - 11/30/16 OVERTIME RATE (RATE APPLIES TO 5:00 PM TO 7:00 AM)	1.00	Hour		
10	12/1/16 - 11/30/17 OVERTIME RATE (RATE APPLIES TO 5:00 PM TO 7:00 AM)	1.00	Hour		
11	2/1/13 - 11/30/17 PARTS AT MANUFACTURERS LIST PRICE LESS _____%			_____%	

Delivery: _____

Terms of Payment: _____

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BID SPECIFICATIONS

The William M. Davies, Jr. Career & Technical High School is soliciting bids for the Annual Servicing of the Boilers, and Associated Hydronic Equipment, as well as the Domestic Hot Water Systems Equipment. The bid award will be for a five-year period.

BOILERS AND ASSOCIATED EQUIPMENT:

I. SPECIFICATIONS AS FOLLOWS:

THE EQUIPMENT TO BE SERVICED:

A. THREE (3) CAMUS DYNAFORCE BOILERS

Boiler #1 – 3 Model No. DRNH-4000-MSI,

Serial Nos. 031112678, 03112679, 03112671

RELIEF VALVE CAP MIN 4,000 MBH, NATURAL GAS, MIN W.P.

WATER 30psi, MAX W.P. WATER 160 psi

INPUT ALIMENTATION:

BTU/HR: 4,000,000 btu/hr.

OUTPUT RENDEMENT: 3,800,000 btu/hr.

GAS ORIFACE 1/8"

DIFFERENTIAL AIR PRESSURE – 5.2 W.C.

MAX FAN SPEED – 63/23

INPUT- 4,000,000 btu/hr.

B. THREE BOILER PUMPS & CONTROLS

BLRP 1,2,3: Model No. KV 3007AE2JCB680M

MOTOR H.P. – 5 hp, IMP DIA. – 7.00 RPM 1750

C. THREE BOILER PUMP CONTROLS:

CONTROLS, 1,2,3 EATON CUTLER HAMMER

ECH 1601AAC, Style No. 84-31750-2

D. CIRCULATOR PUMPS:

HWP-1 – ARMSTRONG Model No. 4x3x10, Serial No. 501586

PUMP CAPACITY: 425 us/gpm @ 80 ft.

MOTOR: 15 hp, 1,770 rpms, FRAME 254T,

ID# 7968U10U200R082F, US ELECTRICAL MOTOR

HWP-2 - ARMSTRONG Model No. 4x3x10, Serial No. 501585

PUMP CAPACITY: 425 us/gpm @ 80 ft.

MOTOR: 15 hp, 1,770 rpms, FRAME 254T,

ID#7968U10U200R082F, US ELECTRICAL MOTOR

HWP-3 – TACO – FI-4013 BASE MOUNT CIRCULATOR PUMP

MOTOR: 30 hp, 1,760 rpms, FRAME 286T,

Serial No. C11003020273,

BALDOR RELIANCER SUPER “E” MOTOR

HWP-4 TACO – FI-4013, BASE MOUNT CIRCULATOR PUMP,

MOTOR: 30 hp, 1,760 rpms, FRAME 286T,

Serial No. C11003020273,

BALDOR RELIANCER SUPER “E” MOTOR

VARIABLE FREQUENCY DRIVES (VFDS)

AIR MODULATORS, JOHNSON CONTROLS QUANTITY (4)

CIRCULATOR BOOSTER PUMP- ARMSTRONG PUMP

Model # 826768-000, Serial No. 0-3006 3hp (pump is located in the conference room in student management office)

**E. CIRCULATOR BOOSTER PUMPS IN MECHANICAL ROOM #2
NEAR GYM**

**CIRCULATOR PUMP #1 - ARMSTRONG, Model # 3x1.5x8-4030,
Serial No. C25023, CAP 70 gpm @ 70 ft.
MOTOR 3hp, 1800rpms.**

**CIRCULATOR PUMP #2 – ARMSTRONG, Model # 3x 1.5 x8-4030
Serial No. C25024, CAP 70gpm @ 70 ft.
MOTOR 3hp, 1,800 rpms**

**F. PUMPS FOR PHASE I HVAC IN GRAPHIC ARTS/
ELECTRONICS/MACHINE SHOP AREA:**

**BOOSTER PUMP #3 ARMSTONG, Model # 2x2x10-ivs 4380,
Serial No. 62053, Cap 102gpm @ 75ft.
MOTOR 5hp, 800 rpms**

**BOOSTER PUMP #4 ARMSTRONG, Model # 2x2x10-ivs 4380
Serial No. 632054, Cap 102gpm @ 75ft.**

VARIABLE FREQUENCY DRIVES – BP-1, & BP-2

**G. RAYPAK DOMESTIC HOT WATER BOILERS & PUMPS:
LOCATED IN MECHNICAL ROOM # 1:**

**RAYPAK HOT WATER BOILER, NATIONAL BD 97530
MAX W.P. 160 psi, MIN RELIEF VALVE CAP. 1173 lbs/hr
HEATING SURFACE – 118 sq/ft.**

MFR. SN# 1291117530

BTUS/HR OUTPUT – 1,173,600, BTUS/HR INPUT 1,467,000

GAS – NATURAL

MODEL # W1-1468A-BCDRDAA CATEGORY 1 BOILER

MAX. PERMISSIBLE GAS SUPPLY PRESSURE – 14” W.C.

**MIN. PERMISSILBE GAS SUPPLY PRESSURE FOR PURPOSE OF
INPUT ADJUSTMENT – 7” W.C.**

MANIFOLD PRESSURE – 4”W.C.

ELECTRICAL RATING – 120/24V 60HZ LESS THAN 12 AMPS

PUMPS FOR RAYPAK HOT WATER BOILER:

(2) ARMSTRONG PUMPS, MODEL # 816366-041

(2) MOTORS – MODEL # XVL56T17D5524 B-L

H.P 1 ½, HZ 60, 1725 rpms

VOLTS- 208-230/460

RAYPAK DOMESTIC HOT WATER BOILER & PUMPS:

LOCATED IN MECHNICAL ROOM NEXT TO MAINTENANCE

SHOP IN BASEMENT:

RAYPAK HOT WATER BOILER, NATIONAL B.D. 97531

MAX W.P. WATER – 160 psi

MIN RELIEF VALVE CAP- 2049 lbs/hr

HEATING SURFACE – 208 sq/ft.

MFR. SERIAL # 1291117531

BTU/HR OUTPUT – 2,049,180 BTU/HR

BTU/HR INPUT – 2,499,000 BTU/HR

MODEL # W1-2500A-BEDRDAA, CATEGORY 1 BOILER

MAX PERMISSIBLE GAS SUPPLY PRESSURE 14" W.C.

**MIN. PERMISSIBLE GAS SUPPLY PRESSURE FOR PURPOSE OF
INPUT ADJUSTMENT – 7" W.C.**

MAINFOLD PRESSURE – 4" W.C.

ELECTRICAL RATING – 120/24V 60HZ LESS THAN 12 AMPS

PUMP ON RAYPAK:

ARMSTRONG PUMP, MODEL # 816366-04L-0596 WITH MOTOR

PUMPS ON TANK:

#1 TACO PUMP, MODEL # 160083E8 4.5 MOTOR ¼ HP.

#2 BELL & GOSSET PUMP, MODEL # 189105, MOTOR 1/6 H.P.

II RECOMMENDED SERVICE: END OF HATING SEASON:

A. THREE (3) CAMUS GAS FIRED HOT WATER BOILERS:

PART 10 MAINTANANCE

CAUTION

It is important that all gas appliances to be serviced by a Camus trained service technician. It is in your own interest and that of safety to ensure that all local codes, and all the "NOTES" and "WARNINGS" in this manual are complied with. To service or adjust this appliance, it is imperative that the Camus trained service technician utilize a combustion analyzer to read CO₂, CO and flue pressure according to Camus Hydronics recommendation

CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation, verify proper operation after servicing.

Listed below are items that must be checked to ensure safe reliable operations. Verify proper operation after servicing.

10.1 EXAMINE THE VENTING SYSTEM

Examine the venting system at least once a year. Check more often in the first year to determine inspection interval. Check all joints and pipe connections for tightness, corrosion or deterioration. Flush the condensate drain hose with water to clean. Clean screens in the venting air intake system as required. Have the entire system, including the venting system, periodically inspected by a qualified service agency.

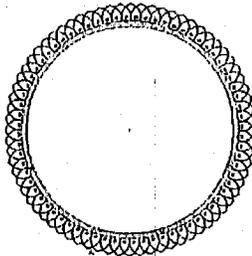
10.2 VISUALLY CHECK MAIN BURNER FLAMES

At each start up after long shutdown periods or at least every six months. A burner view port is located on the burner mounting flange.

CAUTION

The area around the burner view port is hot and direct contact could result in burns

Figure 37: Normal Burner Flame Profile (short dense and blue)



- Normal Flame: A normal flame at 100% of burner input is blue, with slight yellow tips a well defined flame and no flame lifting.
- Yellow Tip: Yellow tipping can be caused by blockage or partial obstruction of air flow to the burner.
- Yellow Flames: Yellow flames can be caused by blockage of primary air flow to the burner or excessive gas input. This condition **MUST** be corrected immediately.
- Lifting Flames: Lifting flames can be caused by over firing the burner, excessive primary air or high draft in excess of negative 0.15" W.C.

If improper flame is observed, examine the venting system; ensure proper gas supply and adequate supply of combustion and ventilation air.

10.3 FLUE GAS PASSAGEWAYS CLEANING PROCEDURES

Any sign of soot around the jacket, flue pipe connections, burner or in the areas between the fins on the stainless steel heat exchanger indicates a need for cleaning. The following cleaning procedure must only be performed by a Camus trained service technician. Proper service is required to maintain safe operation. Properly installed and adjusted units seldom need flue cleaning.

NOTE:

All gaskets/sealant on disassembled components or jacket panels must be replaced with new gaskets/sealant on re-assembly. Gasket and sealant kits are available from the factory

CAUTION

When the vent system is disconnected for any reason it must be reassembled and resealed according to vent manufacturer's instruction

10.4 CONDENSATION TREATMENT

This high efficiency appliance may operate as a condensing appliance for extended periods of time based on return water temperatures. Condensate occurs when the products of combustion are cooled below their dew point in the heat transfer process. The liquid condensate formed from this high efficiency heat transfer process is mildly acidic. The condensate will typically have a pH ranging from 4.0 to 5.0 as it is discharged from the condensate drain on the rear of the appliance. The lower jacket and base pan where condensate is collected is constructed from a corrosion resistant stainless steel. All materials external to the appliance in contact with the condensate must be corrosion resistant. This is typically accomplished by using PVC plastic pipe and synthetic tubing. Condensate must be able to flow freely from the appliance. All condensate flow is accomplished by gravity requiring a minimum downward slope of 1/4" per foot (21 mm/m) to ensure proper flow to the condensate management system and/or a suitable drain. The neutralizer **MUST** always be mounted on the same level or lower than the bottom of the appliance cabinet and downstream of the condensate trap. All condensate piping and connections must be easily accessible for routine maintenance and inspection.

10.4.1 CONDENSATE VOLUME

There are several factors effecting amount of condensation created by the appliance however for rough approximation use.

Condensation Volume, US Gallon/Hr = Input, MBH/1000 x 5.0

Many codes will require the acidic condensate to be neutralized before it can be placed in a drain system. A neutralizer to control the pH of the liquid discharged to a drain system is recommended with every appliance. The neutralizer consists of an industrial grade, non-corrosive reservoir for collection of the condensate. As the reservoir fills, it provides an extended residency time to neutralize the condensate. The neutralized condensate exits from the reservoir outlet. A 'P' trap is installed upstream of neutralizer at the heat exchanger. Prime the installed assembly with water to prevent flue gas spillage from the drain. Use standard ½" vinyl, PVC, CPVC or suitable hose to run to floor drain.

When the condensate level in the reservoir rises to the drain, it spills out into the condensate bin and from there exits to the external neutralizer. As the pH number increases in numerical value, the relative acidity of the discharge decreases. The neutralized condensate may then be discharged into a suitable drain system without fear of damage to the drain system. Always check with local codes for specific pH requirements. Neutralizers may be used in series to raise pH.

10.5 BURNER MAINTENANCE

The burner should be removed for inspection and cleaning on an annual basis. An appliance installed in a dust or dirt contaminated environment will require inspection and cleaning on a more frequent schedule. The fan assisted combustion process may force airborne dust and dirt contaminants, contained in the combustion air, into the burner. With sustained operation, non-combustible contaminants may reduce burner port area, reduce burner input or cause non-warrantable damage to the burner.

Airborne contaminants such as dust, dirt, concrete dust or dry wall dust can be drawn into the burner with the combustion air and block the burner port area. An external combustion air filter is provided with the appliance. An additional filter is located at the fan inlet (DR1000 - 5000) and like the external filter may be washed in the sink under the tap. This internal filter should be checked and cleaned at the time of appliance commissioning and on a six month interval or more often in a contaminated environment.

10.5.1 BURNER REMOVAL

Access to the burner will require the following steps:

- Turn off main electrical power to the appliance.
- Turn off main manual gas shutoff to the appliance
- Remove the top cover.
- Disconnect the gas supply connection to the fan inlet.
- Disconnect the fan motor power wires at the harness.
- Remove the hot surface igniter and the flame sensor.
- Remove the sensing tubes from the air ratio gas valve to the combustion air fan.
- Remove the 4 nuts holding the fan assembly to the heat exchanger and remove the fan assembly. On occasion the red silicone gasket may adhere to the underside of the fan's flange. Carefully pry the

flange away from the gasket prior to removing the fan assembly.

- The burner can now be lifted vertically out of the heat exchanger cavity. A ceramic paper gasket is located directly under the burner flange. This gasket must be replaced if it is damaged.
- Use care to prevent damage to the knitted metal fiber of the burner surface.
- Check all gaskets and replace as necessary. Gaskets affected by heat will not reseal properly and must be replaced.
- Replace the burner in the reverse order that it was removed. Insert the igniter and sensor before doing the final tightening on the fan mounting nuts. Evenly tighten the nuts to 20 ft-lbs.

NOTE:

When the combustion air fan is removed for any reason, the inlet to the burner must be covered to prevent further foreign objects from falling into the burner. Always look inside the burner to check for dents. Do not place a burner back into operation if the inner distribution screen has been dented during the service operation, call the factory for recommendations. Use care when removing and handling the burner, sharp objects or impact may damage or tear the metal fiber surface rendering the burner unfit for service.

10.5.2 BURNER CLEANING PROCEDURE

Remove any visible dust or dirt blockage from the surface of the burner using water from a garden hose. Wash the burner with low pressure water. Never wipe or brush the surface of the burner nor use high pressure water or air. The burner may best be cleaned by immersing the burner port area in a solution of dishwashing detergent and hot water. Allow the burner to remain in the solution for a short period of time to remove dust, dirt and oil or grease laden contaminants. Rinse the burner thoroughly with clean water to remove any residue from the detergent cleaner. The burner should be air dried after removal from the cleaning solution and rinsing. **DO NOT** use chlorine based solvents or cleaning agents on the burner.

10.6 CHANGING THE HOT SURFACE IGNITER

- The hot surface igniter is to be checked at least after every 4000 hours of operation and more frequently under high cycling conditions. This will maintain peak ignition efficiency.
- Turn off main electrical power to the appliance.
- Turn off main manual gas shutoff to the appliance.
- Locate the hot surface igniter.
- Disconnect the two power leads to the hot surface igniter.
- Loosen and remove the two screws that hold the igniter.
- Lift the igniter vertically out of the burner mounting flange. Use care, do not hit or break the silicon carbide igniter. **DO NOT** pull out by leads.
- Ensure that the ceramic paper gaskets used to seal the base and top of the igniter are reinstalled on the new igniter.

10.6.1 RE-INSTALLING THE IGNITER

- Confirm that the end of the replacement igniter has a bead of silicone sealing the gap between the metal mounting flange and the ceramic shaft of the igniter.
- Carefully insert the igniter into the mounting point on the burner flange and push into position on top of the fan's flange. The word 'OUTSIDE' on igniter faces you when inserting igniter.
- Reinstall the two mounting head screws and tighten by hand only.
- Ensure that the igniter ceramic paper gaskets are properly installed and seal the point of contact between the igniter and fan mounting flange.
- Reconnect the power leads to the igniter.
- Turn on main gas supply.
- Turn on main power.
- Test fire the appliance to ensure proper operation.
- The igniter must generate 3A to reliably prove the ignition system.

10.7 HEAT EXCHANGER INSPECTION

- The heat exchanger should be inspected at the time of burner maintenance.
- Turn off all power to the appliance.
- Turn off main gas to the appliance.
- Remove top cover.
- Remove fan assembly and burner as detailed in the Burner and Cleaning section.
- Check the heat exchanger surface for soot. If soot is present, heat exchanger must be cleaned.
- Remove the front outer jacket door.
- Remove the top wrap to expose the baffles.
- Remove baffles from the exchanger.
- Use detergent water pressure wash to remove soot from heat exchanger and surfaces of the inner wrap.
- When necessary, the heat exchanger can be removed by disconnecting all water piping and removing the six flange mounting bolts at the rear of the appliance. The heat exchanger can now be removed from the front of the appliance.
- Reinstall baffles, stainless steel bands and stainless steel wrap. Replace any damaged gaskets to ensure a proper air seal. Replace any ceramic facing tape damaged on the baffles.
- Reinstall the burner and fan assembly.
- Reassemble all gas and water piping. Test for gas leaks.
- Reassemble outer jacket panels. Keep top cover off.
- Cycle unit and check for proper operation.
- Once proper operation is confirmed replace the top cover.

10.8 RE-INSTALL HEAT EXCHANGER

- Carefully reinstall the heat exchanger if removed from the appliance
- Check all silicon and viton gaskets and replace if damaged
- Reassemble inner wrap
- Cycle unit and check for proper operation
- Replace the top cover

10.9 COMBUSTION AIR FAN

Combustion air fan should be checked every 6 months. Clean the internal filter as required when installed in a dust or dirt contaminated location. The motor and bearings on the combustion air fan are sealed and permanently lubricated requiring no addition of oil or lubricants.

10.10 COMBUSTION AND VENTILATION AIR

Check frequently to be sure that the flow of combustion and ventilation air to the appliance is not obstructed. Combustion and ventilation air must be provided to the mechanical room with openings sized per the requirements of the B149 or National Fuel Gas Code. The optional outdoor air kit brings combustion air from the outdoors directly to the appliance.

10.11 CONTROL CIRCUIT VOLTAGE

This appliance uses a transformer to supply a low voltage control circuit. The voltage on the secondary side should be 24 to 28VAC when measured with a voltmeter. A secondary voltage of 21VAC or less supplied to 24VAC components may cause operational problems. A 4A circuit breaker is provided on the secondary side of the transformer. A tripped circuit breaker indicates a short in the 24VAC controls and must be corrected.

10.12 COMBUSTIBLE MATERIALS

CAUTION

Keep appliance clear from combustible materials; do not store **GASOLINE** and other flammable vapors and liquids in the proximity of the appliance.

10.13 FREEZE PROTECTION

Installations are not recommended in areas where the danger of freezing exists. Proper freeze protection must be provided for appliances installed outdoors, in unheated mechanical rooms or where temperatures may drop to the freezing point or lower. If freeze protection is not provided for the system, a low ambient temperature alarm is recommended for the mechanical room. Damage to the appliance by freezing is non-warrantable.

- **Location** - Heating boilers, hot water supply boilers or water heaters must be located in a room having a temperature of at least 50°F (10°C)
- **Caution** - A mechanical room operating under a negative pressure may experience a downdraft in the flue of an appliance that is not firing. The cold outside air may be pulled down the flue and freeze a heat exchanger. This condition must be corrected to provide adequate freeze protection.
- Freeze protection for the appliance using an indirect coil can be provided by using hydronic system antifreeze. Follow the manufacturer's instructions. **DO NOT** use undiluted or automotive type antifreeze.
- **Shut-down and draining** - If for any reason, the unit is to be shut off where danger of freezing exists, the following precautionary measures must be taken:
 - Shut off gas supply
 - Shut off water supply
 - Shut off electrical supply
 - Drain the heat exchanger completely
 - Ensure the pump and connecting piping are fully drained

**10.14 FREEZE PROTECTION FOR A HEATING
BOILER SYSTEM (Optional)**

- Use only properly diluted inhibited glycol antifreeze designed for hydronic systems.
- Follow the instructions from the antifreeze manufacturer. Quantity of antifreeze required is based on total system volume including expansion tank volume.
- Antifreeze is denser than water and changes the viscosity of the system. The addition of antifreeze will decrease heat transfer and increase frictional loss in the boiler and related piping. Where antifreeze has been used, to maintain the temperature rise across the appliance confirm that the recommended GPM for pure water has been increased by 15% and the head loss by 20%.
- Local codes may require a back flow preventer or actual disconnect from city water supply when antifreeze is added to the system.
- When filling or topping-up the system with water mixed with the antifreeze always use distilled or RO (reverse osmosis) water. This will prevent the reaction of the water with antifreeze which can create sludge.

B. LUBRICATE ELEVEN (11) HYDRONIC SYSTEM CIRCULATOR PUMPS AND MOTORS, INSPECT COUPLINGS, SEALS AND DRIVE ASSEMBLIES, CLEAN IN LINE FILTERS. REMOVE AND CLEAN RAYPAK GAS HOT WATER HEATERS AND PILOT ASSEMBLIES

C. ASSEMBLE, TEST AND ADJUST GAS PRESSURE, TEST LIMIT AND SAFETY CONTROLS. LUBRICATE WATER HEATING SYSTEM PUMPS AND MOTORS.

D. PRESENT WRITTEN REPORT OF INSPECTIONS TO THE FACILITIES MANAGER.

III. FALL HEATING SYSTEM START-UP:

A. ACTIVATE ALL THREE CAMUS BOILERS FOR HEATING SEASON, TEST ALL SAFETY, OPERATING AND LIMIT CONTROLS

B. TEST GAS PILOTS AND TEST/ CALIBRATE MAIN GAS BURNERS IF REQUIRED PER MANUFACTURER.

C. TEST STACK GAS EMISSION AND GIVE REPORT TO FACILITIES MANAGER.

D. INSPECT RAYPAK HOT WATER HEATERS, INSPECT DRIVE COUPLINES, AND LUBRICATE AS REQUIRED ALL SYSTEM PUMPS AND MOTORS.

E. CHECK ALL OF THE VARIABLE SPEED DRIVE TO INSURE THAT THEY ARE OPERATING CORRECTLY.

IV. ANNEX BUILDING BOILERS & PUMPS EQUIPMENT

A. WEIL McCLAIN OIL FIRED HOT WATER BOILER

BOILER MOD # P-WG0-6 SERIAL # 3

D.O.E. HTG CAP.: 212,00 btu/hr

N-I=B=R RATE WATER: 184,00 btu/hr

MAX. WATER TEMP. 250 F MAWP – 50

MIN. RELIEF VALVE CAP. LB/HR OR MBH: 212

B. TACO CIRCULATOR PUMP MODEL # 0011-P4, HP-1/8

RPMS -3250, V-115.

C. END OF SEASON – OPEN UP FIRE BOX AND CLEAN, ALSO

CHECK OIL NOZZEL AND ADJUST IGNITERS.

D. INSPECT CIRCULATOR PUMP AND LUBRICATE TO

MANUFACTURERS SPECS.

E. FALL SEASON START UP:

1. START UP BOILERS AND INSURE THAT IT IS RUNNING CORECTLY. CHECK STACK GASES AND ADJUST BUNERS FOR CORRECT COMBUSTION. GIVE PRINT OUT TO FACILITES MANAGER.

2. CHECK CIRCULATOR TO MAKE SURE IT IS OPERATING CORRECTLY.

V. GENERAL REQUIRMENTS:

A. OVERTIME HOUR RATES APPLIES TO: 5:00PM TO 7:00AM

B. NO MILAGE ALLOWNACE

**C. VENDOR IS RESPONSILBE FOR MAKING APPOINTMENTS
WITH SCHOOL PRIOR TO SERVICING.**

**D. VENDOR MUST REPLY WIN 2 HOUR FOR EMERGENCY
SERVICES.**

**E. VENDOR MUST SUPPLY WITH BID COPIES OF ALL LICENSES
REEQUIRED BY THE STATE OF RHODE ISLAND TO PERFORM
THIS TYPE OF WORK.**

REQUEST FOR QUOTE 7458320

BIDDING (a) A single price shall be quoted for each item against which a proposal is submitted. This price will be the maximum in effect during the agreement period. Any price decline at the manufacturer's level shall be reflected in a reduction of the agreement price to the State. (b) Quantities, if any, are estimated only. The agreement shall cover the actual quantities ordered during the period. Deliveries will be billed at the single, firm, awarded unit price quoted regardless of the quantities ordered. (c) Bid price is net F.O.B. destination and shall include inside delivery at no extra cost. (d) Bids for single items and/or a small percentage of total items listed, may, at the State's sole option, be rejected as being non-responsive to the intent of this request. **ORDERING** (a) The User Agency(s) will submit individual orders for the various items and various quantities as may be required during the agreement period. (b) Exception - Regardless of any agreement resulting from this bid, the State reserves the right to solicit prices separately for any extra large requirements for delivery to specific destinations.

MULTI YEAR

THIS IS A MULTI-YEAR BID/CONTRACT. PER RHODE ISLAND STATE LAW 37-2-33, CONTRACT OBLIGATIONS BEYOND THE CURRENT FISCAL YEAR ARE SUBJECT TO AVAILABILITY OF FUNDS. CONTINUATION OF THE CONTRACT BEYOND THE INITIAL FISCAL YEAR WILL BE AT THE DISCRETION OF THE STATE. TERMINATION MAY BE EFFECTED BY THE STATE BASED UPON DETERMINING FACTORS SUCH AS UNSATISFACTORY PERFORMANCE OR THE DETERMINATION BY THE STATE TO DISCONTINUE THE GOODS/SERVICES, OR TO REVISE THE SCOPE AND NEED FOR THE TYPE OF GOODS/SERVICES; ALSO MANAGEMENT OWNER DETERMINATIONS THAT MAY PRECLUDE THE NEED FOR GOODS/SERVICES.

INSURANCE

AN INSURANCE CERTIFICATE IN COMPLIANCE WITH PROVISIONS OF ITEM 31 (INSURANCE) OF THE GENERAL CONDITIONS OF PURCHASE IS REQUIRED FOR COMPREHENSIVE GENERAL LIABILITY, AUTOMOBILE LIABILITY, AND WORKERS' COMPENSATION AND MUST BE SUBMITTED BY THE SUCCESSFUL BIDDER(S) TO THE DIVISION OF PURCHASES PRIOR TO AWARD. THE INSURANCE CERTIFICATE MUST NAME THE STATE OF RHODE ISLAND AS CERTIFICATE HOLDER AND AS AN ADDITIONAL INSURED. FAILURE TO COMPLY WITH THESE PROVISIONS MAY RESULT IN REJECTION OF THE OFFEROR'S BID. ANNUAL RENEWAL CERTIFICATES MUST BE SUBMITTED TO THE AGENCY IDENTIFIED ON THE PURCHASE ORDER. FAILURE TO DO SO MAY BE GROUNDS FOR CANCELLATION OF CONTRACT.

LICENSE

VENDOR (OWNER OF COMPANY) IS RESPONSIBLE TO COMPLY WITH ALL LICENSING OR STATE PERMITS REQUIRED FOR THIS TYPE OF SERVICE. A COPY OF LICENSE/PERMIT SHOULD BE SUBMITTED WITH THIS BID. IN ADDITION TO THESE LICENSE REQUIREMENTS, BIDDER, BY SUBMISSION OF THIS BID, CERTIFIES THAT ANY/ALL WORK RELATED TO THIS BID, AND ANY SUBSEQUENT AWARD WHICH REQUIRES A RHODE ISLAND LICENSE(S), SHALL BE PERFORMED BY AN INDIVIDUAL(S) HOLDING A VALID RHODE ISLAND LICENSE.

RIVIP

IT IS THE VENDOR'S RESPONSIBILITY TO CHECK AND DOWNLOAD ANY AND ALL ADDENDA FROM RIVIP. THIS OFFER MAY NOT BE CONSIDERED UNLESS A SIGNED RIVIP GENERATED BIDDER CERTIFICATION COVER FORM IS ATTACHED AND THE UNIT PRICE COLUMN IS COMPLETE. THE SIGNED CERTIFICATION COVER FORM MUST BE ATTACHED TO THE FRONT OF THE OFFER. WHEN DELIVERING OFFERS IN PERSON TO ONE CAPITOL HILL, VENDORS ARE ADVISED TO ALLOW AT LEAST ONE HOUR ADDITIONAL TIME FOR CLEARANCE THROUGH SECURITY CHECKPOINTS.

THIS OFFER MAY NOT BE CONSIDERED UNLESS BIDDER CERTIFICATION COVER FORM IS ATTACHED AND THE UNIT PRICE COLUMN IS COMPLETED. THE SIGNED CERTIFICATION COVER FORM MUST BE ATTACHED TO THE FRONT OF THE OFFER. WHEN DELIVERED OFFERS ON PERSON TO ONE CAPITOL HILL, VENDORS ARE ADVISED TO ALLOW AT LEAST ONE HOUR ADDITIONAL TIME FOR CLEARANCE THROUGH SECURITY CHECKPOINTS.

DELIVERY

DELIVERY OF GOODS OR SERVICES AS REQUESTED BY AGENCY.

WORKORDER: IN NO EVENT WILL ANY INDIVIDUAL WORK ORDER EXCEED \$5,000.00 WITHOUT PRIOR APPROVAL OF THE OFFICE OF PURCHASES.

WAGE: BIDDERS ARE ADVISED THAT ALL PROVISIONS OF TITLE 37 CHAPTER 13 OF THE GENERAL LAWS OF RI APPLY TO THE WORK COVERED BY THIS REQUEST, AND THAT PAYMENT OF THE GENERAL PREVAILING RATE OF PER DIEM WAGES AND THE GENERAL PREVAILING RATE FOR REGULAR, OVERTIME AND OTHER WORKING CONDITIONS EXISTING IN THE LOCALIITY FOR EACH CRAFT, MECHANIC, TEAMSTER, OR TYPE OF WORKMAN NEEDED TO EXECUTE THIS WORK IS A REQUIREMENT FOR BOTH CONTRACTORS AND SUBCONTRACTORS.

INSPECTION: BIDDERS ARE RESPONSIBLE FOR INSPECTION OF EQUIPMENT AND/OR LOCATION, TAKING MEASUREMENTS WHEN REQUIRED AND MAKING THEMSELVES AWARE OF THE TOTAL REQUIREMENT BEFORE SUBMITTING A BID. "MEASUREMENTS PROVIDED WITH ANY BID ARE FOR REFERENCE PURPOSES AND ARE NOT GUARANTEED TO BE COMPLETELY ACCURATE.

MULTIYEAR: THIS IS A MULTI-YEAR BID/CONTRACT. PER RHODE ISLAND STATE LAW 37-2-33, CONTRACT OBLIGATIONS BEYOND THE CURRENT FISCAL YEAR ARE SUBJECT TO AVAILABILITY OF FUNDS. CONTINUATION OF THE CONTRACT BEYOND THE INITIAL FISCAL YEAR WILL BE AT THE DISCRETION OF THE STATE. TERMINATION MAY BE EFFECTED BY THE STATE BASED UPON DETERMINING FACTORS SUCH AS UNSATISFACTORY PERFORMANCE OR THE DETERMINATION BY THE STATE TO DISCONTINUE THE GOODS/SERVICES, OR TO REVISE THE SCOPE AND NEED FOR THE TYPE OF GOODS/SERVICES; ALSO MANAGEMENT OWNER DETERMINATIONS THAT MAY PRECLUDE THE NEED FOR GOODS/SERVICES.