

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
EQUIPMENT AND PROCUREMENT DIVISION
BID INVITATION**

Bid Number: M-12-002P

BID OPENING LOCATION:
AHTD Equipment and
Procurement Division
11302 W. Baseline Road
Little Rock, AR 72209

MAIL TO:
AHTD Equipment and
Procurement Division
P.O. Box 2261
Little Rock, AR 72203

DELIVER TO:
AHTD Equipment and
Procurement Division
11302 W. Baseline Road
Little Rock, AR 72209

Bid Opening Date: July 12, 2011 Time: 11:00 a.m.

Sealed bids for furnishing the commodities and/or services described below, subject to the Conditions on Page 2 of this Bid Invitation will be received at the above-noted mail and delivery locations until the above-noted bid opening date and time, and then publicly opened at the above-noted bid opening location. **Bids must be submitted on this form, with attachments when appropriate, or bids will be rejected. Late bids and unsigned bids will not be considered.**

In compliance with this Bid Invitation and subject to all the Conditions thereof, the undersigned offers and agrees to furnish any and all items upon which prices are quoted, at the price set opposite each item.

Company Name: _____

Name (Type or Print): _____

Address: _____

Title: _____

Phone: _____ Fax: _____

City: _____ State: _____ Zip: _____

E-mail Address: _____

Federal Tax ID or Social Security No.: _____

Signature: _____

Signature must be legible, original (not photocopied) and in ink.
Unsigned bids will be rejected.

Item No.	Description	Quantity	Unit	Unit Price	Amount
1.	<p>HVAC Renovation at the District Two Headquarters Administration Building, 4900 Hwy. 65 South, Pine Bluff, Arkansas as per Arkansas State Highway and Transportation Department Specifications and Plans attached to and made a part of this bid.</p> <p align="right">LUMP SUM _____</p> <p>CONTACT PERSON: Richard Strasburg (501-569-2625)</p> <p>Bid price shall include all labor, materials, and equipment necessary to perform the work as specified, and shall further include all licenses, fees, permits, royalties, and <u>all taxes</u>. Bid price shall represent full compensation for completion of the work. This provision supersedes Condition 4 on page 2 of Bid Invitation. Payment will be made in accordance with Arkansas Highway & Transportation Department Standard Specifications and Applicable Special Provisions.</p> <p>Subsection 105.04, 108.07, 109.01 and 109.02 of the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, Edition of 2003, will be in effect. (Specifications are accessible on our web site at www.arkansashighways.com.)</p> <p>Bid Bond in the amount of 5% of total bid price required of all bidders at time of bid opening or bid will be rejected. <u>Personal and company checks are not acceptable as Bid Bonds.</u> See Condition 3 on page 2 of Bid Invitation.</p> <p>Performance Bond <u>only</u> (no checks of any kind allowed) in the amount of 100% of total bid price will be required of successful bidder prior to providing goods/services. See Condition 3 on page 2 of Bid Invitation.</p> <p>The successful bidder will be required to begin within 10 days after notice to begin and complete within 100 working days after notice to begin.</p> <p>Arkansas Contractor's License No. _____; Current Arkansas Contractor's License Number must be listed or bid will be rejected (A.C.A. ¶17-25-101 <i>et seq.</i>).</p> <p>Bids and Specifications are available on-line by going to the AHTD Web Site – www.arkansashighways.com and clicking on "Commodities and Services Bids/Contracts Information". Tabulations will also be available at this site within 72 hours after bid opening. If you have any questions, call this office at 501-569-2667.</p> <p>(32-0036)</p>				<p align="center">TOTAL BID</p>

STANDARD BID CONDITIONS

M-12-002P

1. **ACCEPTANCE AND REJECTION:** The Arkansas State Highway and Transportation Department (AHTD) reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
2. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
3. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by AHTD or fails to honor their bid. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
4. **TAXES:** The AHTD is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the AHTD as an addition thereto, and should be added to the billing to the AHTD. The AHTD is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the AHTD.
5. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
6. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
7. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
8. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
9. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.
10. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of AHTD request, and free demonstrations within 30 days, unless AHTD extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by AHTD. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
11. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
12. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the AHTD, as soon as possible, of the reason for any delay and the expected delivery date. The AHTD has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
13. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by AHTD after delivery. Default in promised delivery or failure to meet specifications authorizes the AHTD to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
14. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

NOTICE OF NONDISCRIMINATION

The Arkansas State Highway and Transportation (Department) complies with the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, Title VI of the Civil Rights Act of 1964 and other federal equal opportunity laws and therefore does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in admission or access to and treatment in Department programs and activities, as well as the Department's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Department's nondiscrimination policies may be directed to James B. Moore, Jr., Section Head - EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501) 569-2298, (Voice/TTY 711), or the following email address: james.moore@arkansashighways.com.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.

04/12/07
Rev. 12/03/08
Rev. 01/06/11

SP-108-1

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

SPECIAL PROVISION

LIQUIDATED DAMAGES

As specified in the Contract, liquidated damages for this project will be as shown in the following table:

WORKING DAY PROJECTS

<u>ORIGINAL CONTRACT AMOUNT</u>		
FROM MORE THAN	TO AND INCLUDING	RATE
\$ 0	\$ 50,000	\$ 400
50,000	100,000	700
100,000	500,000	800
500,000	1,000,000	1100
1,000,000	2,000,000	1300
2,000,000	5,000,000	1500
5,000,000	10,000,000	1900
10,000,000	15,000,000	2000
15,000,000	20,000,000	2100
20,000,000	-----	2500

FIXED DATE PROJECTS

<u>ORIGINAL CONTRACT AMOUNT</u>		
FROM MORE THAN	TO AND INCLUDING	RATE
\$ 0	\$ 50,000	\$ 90
50,000	100,000	100
100,000	500,000	200
500,000	1,000,000	250
1,000,000	2,000,000	320
2,000,000	5,000,000	400
5,000,000	10,000,000	600
10,000,000	-----	750

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
SPECIFICATIONS
JOB 2-37
HVAC RENOVATION
DISTRICT 2 HEADQUARTERS ADMINISTRATION BUILDING
PINE BLUFF, ARKANSAS**

SCOPE

Work under this item shall consist of HVAC Renovation for the District 2 Headquarters Administration Building located at 4900 Hwy 65 South, Pine Bluff, Arkansas. All work for the complete HVAC Renovation shall be as indicated on the Plans, as called for in these Specifications, or as directed by the Engineer. These Specifications and the Plans cover the furnishing of all materials, labor, tools, equipment, machinery, caulking, drayage, rigging, fees, permits, and any and all incidental items required to complete the work.

LOCAL CONDITIONS

Bidders are required to visit the site prior to submission of proposal to familiarize themselves with local conditions, including general characteristics of the existing structure and contents and accessibility of the work.

PERMITS

The Contractor, if awarded the Contract for the HVAC Renovation, shall obtain and also pay for all permits required, shall give all legal notices, and shall pay for all fees and taxes required for the work.

EXAMINATION OF PLANS AND SPECIFICATIONS

The Contractor shall examine the Plans and Specifications and shall become fully informed as to the extent and character of the work to be performed. No consideration will be given to alleged misunderstanding of materials to be furnished or work to be required under this Contract. Submission of a proposal is an implied consent to the conditions of these Specifications and of the Plans.

PROTECTION OF EXISTING FACILITY

The Contractor is advised that the work is to be performed in an existing building which is occupied. The Contractor shall exercise care and caution to prevent interference with those working in these facilities. The Contractor is also advised that he is responsible for protecting the existing facilities and occupants against damage or injury from his workmen, work in progress, or the elements.

SCHEDULING AND COMPLETION OF WORK

The Contractor shall schedule his work so as to create a minimum amount of inconvenience to the normal work routine of the District Personnel.

All work for air handler, boiler, chiller, pumps, expansion tanks, ductwork, piping, and related items shall be completed so as the installation and/or connections to the new multi-zone air handler will take as little time as possible. The air handler installation and connections shall be performed from the hours of 5:00 p.m. on Friday afternoon to 3:00 a.m. the following Monday so the Facility is not without heat or cooling during any normal work day/time. The District Engineer shall be notified a minimum of 24 hours before any heating/cooling is taken out of service.

ACCESS TO THE WORK

The Engineer or his representatives shall have access to the work at all times and shall be permitted to approach, enter or examine all stages or phases of the work as it progresses, and shall have authority to reject work which is defective in workmanship or material.

REQUIRED SUPERVISION

The Contractor shall keep on the job at all times, when work is in progress, a competent superintendent satisfactory to the Engineer. The superintendent shall represent the Contractor in his absence and all instructions given to him shall be binding on the Contractor. Workmanship shall be by craftsmen skilled in their trade and shall be in accordance with the best standard practice.

ACCIDENT PREVENTION

Precaution shall be exercised at all times for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment and other hazards shall be guarded in accordance with safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable laws. The Contractor shall be responsible for any damage which may be caused by workmen during the performance of the work.

CONTRACT TIME LIMIT

The Contractor shall begin within ten (10) days after notice to begin and shall complete the work within one hundred (100) working days (including delivery time for equipment) after notice to begin.

QUALITY OF MATERIAL

All material, appliances or appurtenances furnished under these Specifications shall be new, unused, and shall be free from defects and imperfections. Any material, appliance or appurtenance found to be defective shall be replaced by the Contractor at no additional cost to the Arkansas Highway and Transportation Department, for material or labor. All material shall comply with the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, Edition of 2003 and these Specifications. Any material not covered in the above Specifications or on the Plans shall be approved by the Engineer.

SUBSTITUTION OF MATERIAL

It is intended that the Contractor have the option of substituting a material or appliance that will perform the function equally as well as the one named. The Engineer shall be given written notice two (2) weeks prior to the proposed use of a substitution so that a decision can be made as to the equal merits of the two (2) products. No substituted items shall be installed until written approval is received by the Contractor.

CLEAN-UP

The Contractor shall not allow any waste material or rubbish caused by his employees to accumulate in or about the premises but shall promptly remove same. At completion of the work, all rubbish, tools, scaffolding and surplus materials shall be removed and the Contractor shall leave the site clean and ready to use.

MATERIALS AND CONSTRUCTION METHODS

GENERAL

This work shall include: removal of existing multi-zone air handling unit, boiler, and related items as required; furnishing and installation of new multi-zone air handling unit with chilled and hot water coils; furnishing and installation of new boiler; extension of hot water and chilled water piping with insulation from new boiler to new air handler; antifreeze hot water and chilled water systems to -30°F; removal of three-way valves in hot loop; extension of electrical service to new boiler and air handler, including switchgear, conduit, wire and devices; fabrication and installation of plenum ductwork to connect new zone dampers to existing ductwork, with new rigid interior duct insulation; vacuum of any and all existing reused underground and above ground ductwork; all clean-up; and furnishing all materials, labor, tools, machinery, hardware, fasteners, caulk, paint and any and all incidental items required for the complete HVAC Renovation, complete, in place and operating.

EXISTING EQUIPMENT

The existing multi-zone air handler and boiler, and related items to be removed from service shall become the property of the Contractor, and shall be removed from the premises.

AIR HANDLING UNIT

Remove existing multi-zone air handler and related items. Furnish and install a new multi-zone Air Handler equipped with a chilled and hot water coil as indicated and scheduled on the Plans.

SEQUENCE OF OPERATION:

The unit fan is started by a push button station at fan starter. The cold deck temperature is maintained by continuously circulating chilled water from the chiller through the chilled water coil. The hot deck temperature is maintained by continuously circulating hot water from the boiler through the hot water coil. Hot water temperature shall be maintained by an automatic temperature device (Aquastat) located on the boiler. Provide a flow switch which shall be interlocked with the boiler so the boiler will fire only when there is an adequate flow of water in the hot water lines. Existing Automated Logic Control System and hardware to be reused. The fresh air controller shall include a stop controller and outside reset master/sub master cold deck ductstat which shall control a modulating damper motor to deliver the required amount of outdoor air into the conditioned area. An adjustable enthalpy control shall be provided to prevent excessive moisture laden outside air from entering by returning the damper motor to the minimum position.

BOILER

Remove existing boiler from mechanical room and related items including 3-way hot water valve and piping. Furnish and install a new boiler and related items as indicated and scheduled on the Plans.

PIPING

- A. CHILLED AND HOT WATER PIPING AND CITY WATER PIPING - All chilled and hot water piping shall be Type "L" hard-drawn copper with wrought copper fittings and sil-fos solder.
- B. EXPANSION - All piping connections shall be made to allow for expansion and contraction with swing joints or expansion loops required.
- C. CONDENSATE AND DRAIN PIPING - All condensate and drain piping shall be Type "M" hard-drawn copper with wrought copper fittings and sil-fos solder.
- D. GAS PIPING - All gas piping shall be steel or wrought iron, with malleable, ductile or cast iron fittings.

VALVES

- A. All Valves shall be located in accessible locations. Provide Valves for all equipment to allow disconnection for servicing or repair.

- B. GATE VALVES - All gate valves shall be Crane #428, 250 pound solid wedge disk, brass, or approved equal.
- C. PIPE HANGERS - All piping shall be supported from the building structure by approved hangers to maintain the required grade, prevent vibration, and provide for expansion and contraction. Hanger spacing shall not exceed ten feet (10'). Install saddles on all insulated piping.
- D. AIR VENTS - Air vents shall be placed at all high points in the systems with drains at low points. Run piping so as to avoid air pockets.
- E. Flexible Connectors shall be provided on each side of pump and each side of chiller and shall be US Flex, BMHN, 250 psi, 350 degree with bronze braid, annular or helical construction, or approved equal. Piping shall be supported independently of connectors.
- F. THERMOMETERS - Thermometers shall be Trerice Econ-O-Therm #4352, 6-1/2" case length, red appearing mercury tube, stainless steel frame front, separable brass socket, range of 30 degree F. to 240 degree F., or approved equal.
- G. GAUGES - Gauges shall be Marshalltown Catalog # 43, range of 0 to 300' of water, or approved equal.

DUCTWORK

- A. Furnish and install new Ductwork where indicated on the Plans and as required. Ductwork shall be fabricated in accordance with the latest edition of the ASHRAE Guide, of standard gauge galvanized steel sheets, or approved equal. Ducts over eighteen inches (18") in width shall be cross broken. All elbows shall have turning vanes, no exceptions.
- B. Flexible canvas connections shall be provided at the inlet and outlet of each duct.
- C. Ducts shall be lined with one-inch (1") thick mat faced flexible fiberglass duct liner as manufactured by Owens-Corning, Guston Bacon, or approved equal. This shall be attached to ducts with a fire retardant adhesive, Minnesota Mining No. EC 1329, or approved equal. Use mechanical fasteners of welded pins or Sticlips at 16" centers when duct width exceeds 12".
- D. Existing balancing dampers may be reused.
- E. Any and all existing reused ductwork shall be vacuumed and cleaned, with the debris collected in plastic bags and disposed of by Contractor.

CHILLED AND HOT WATER PIPING INSULATION

Chilled and Hot Water Piping shall be insulated with one-inch (1") thick fiberglass pipe insulation with factory furnished vapor barrier adhesive, and end joints wrapped and sealed with factory furnished vapor barrier strips applied with vapor barrier adhesive. Valves, fittings, and flanges shall be wrapped with two-inch (2") thick ultrafine blanket insulation and then covered with open mesh cloth or glass fabric heavily coated with vapor barrier adhesive. All outside piping shall be covered with 0.010" corrugated aluminum jacket with 3/8" wide aluminum band and shall be waterproof.

VIBRATION ISOLATION

New air handler and boiler shall be provided with vibration isolation pads designed to prevent the transmission of equipment vibration to the building.

ROOF PENETRATIONS AND REPAIRS

Flues, etc., penetrating the roof shall have the necessary flashing, counter-flashing as required. Any roofing repairs shall be by a licensed roofing contractor and shall be guaranteed against the intrusion of water for not less than two (2) years. Existing flue penetration may be reused; however any size modifications to be subject to these specifications.

PAINTING

All conduit, piping, etc., shall be painted following the same color code in the existing facility.

ELECTRICAL INSTALLATION

- A. GENERAL CONDITIONS - All portions of these Specifications which apply or could apply to the Electrical portion of the Specifications are made a part of this Section.
- B. SWITCHGEAR - Existing disconnect switches, breakers, contacts, controls and wiring may be reused, if of a size and type as indicated on the Plans. The existing panelboard shall be modified as necessary.
- C. WIRE AND CONDUIT - All wiring shall be Code Type THHN, copper of the sizes indicated on the Plans. No wire smaller than #12 AWG shall be used.

No conduit smaller than 3/4" shall be used. All steel conduit shall be galvanized inside and outside and shall be Electronite, or approved equal, and shall include all necessary fittings, connectors, hangers, etc., required for a complete installation. The conduit system shall be electrically continuous for grounding purposes. For motor connections in exterior or damp locations, use polyvinylchloride (PVC) jacketed flexible conduit.

D. GROUNDING - All equipment shall be permanently and effectively grounded in accordance with the National Electrical Code.

WARRANTY

All materials and workmanship shall be warranted against defects for a period of one (1) year from date of acceptance by the Arkansas Highway and Transportation Department, with a two (2) year guarantee on any roof repairs.

METHOD OF MEASUREMENT

HVAC Renovation, complete, in place and operating, as indicated on the Plans, as called for in these Specifications, or as directed by the Engineer and accepted, will be measured for payment by the "Lump Sum".

BASIS OF PAYMENT

Work completed and accepted under this item and measured as provided above, will be paid for at the lump sum price bid for "HVAC Renovation", which price shall be full compensation for all materials, labor, tools, equipment, machinery, caulking, drayage, rigging, fees, permits, clean-up, guarantees and any and all incidental items required to complete the work.

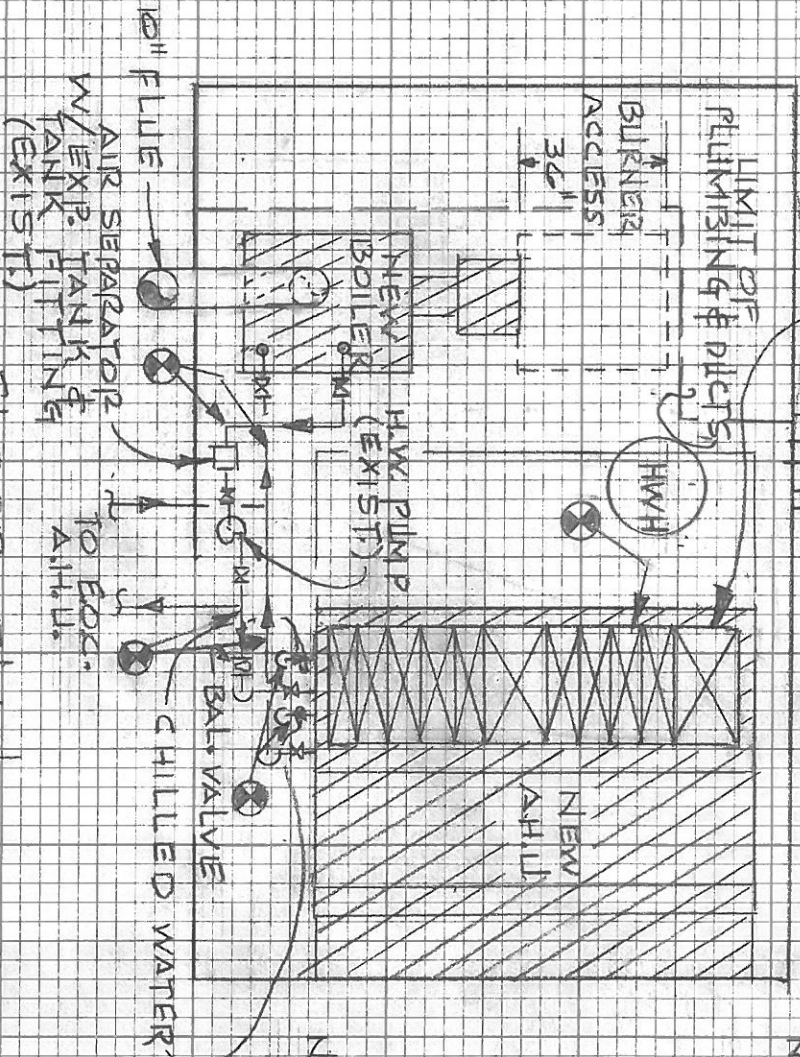
PAY ITEM

PAY UNIT

HVAC Renovation

Lump Sum

EXIST. DUCTWORK
CONNECTED TO NEW
DAMPERS W/ CANVAS CONN.



LEGEND

- 5 HOT WATER PIPING W/ INSULL. UNON.
- 5 BALANCING VALVE
- 5 GATE VALVE
- 5 H.W. PUMP (EXIST. RETAIN)
- 5 WATER FLOW DIRECTION
- 5 THE INTO EXISTING

FLOOR PLAN

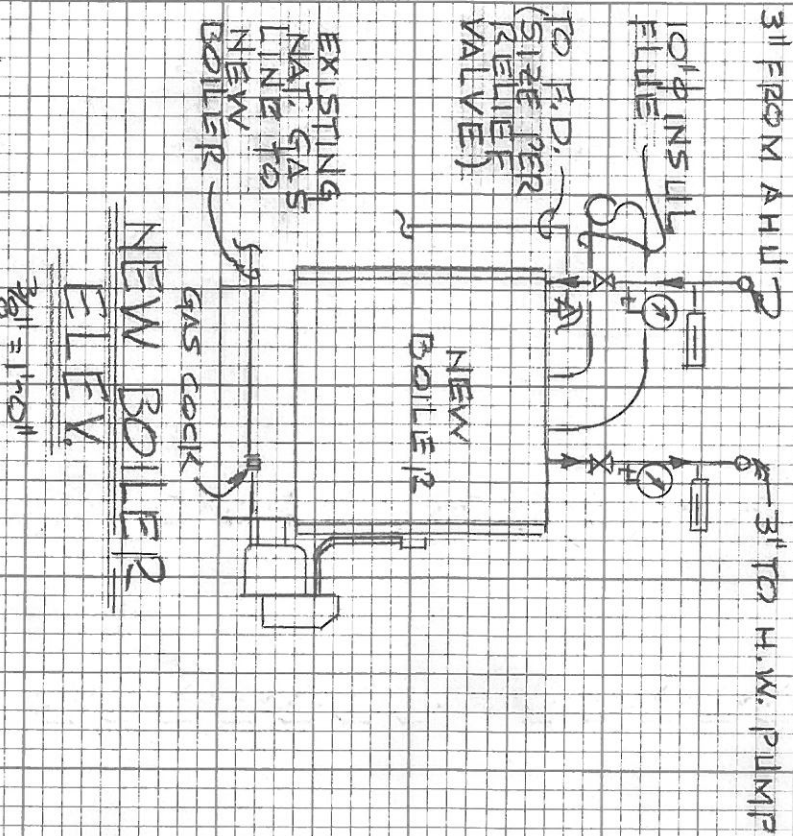
MECH. SCHEDULE

NEW BOILER - BRYAN HE-CLM 90-W,
OR EQUAL. NATURAL GAS,
8 1/2" EQUAL. FORCED DRAFT,
85% EFF. INPUT 765 MBH,
900 MBH INPUT FLEXIBLE
OUTPUT 23 SHIP EXHIBIBLE
WATER TUBE WATER TEMP.
CONTROL AUTO. OPERATING
GAS VALVE SAFETY GAS
VALVE PILOT IGNITION ASST,
MANUAL GAS SHUT-OFF
VALVE, LOT COCK, PILOT
AND MAIN GAS PRESSURE
REGULATORS, AIR SAFETY
SWITCH, MODULATING
BURNER, 10" FLUE

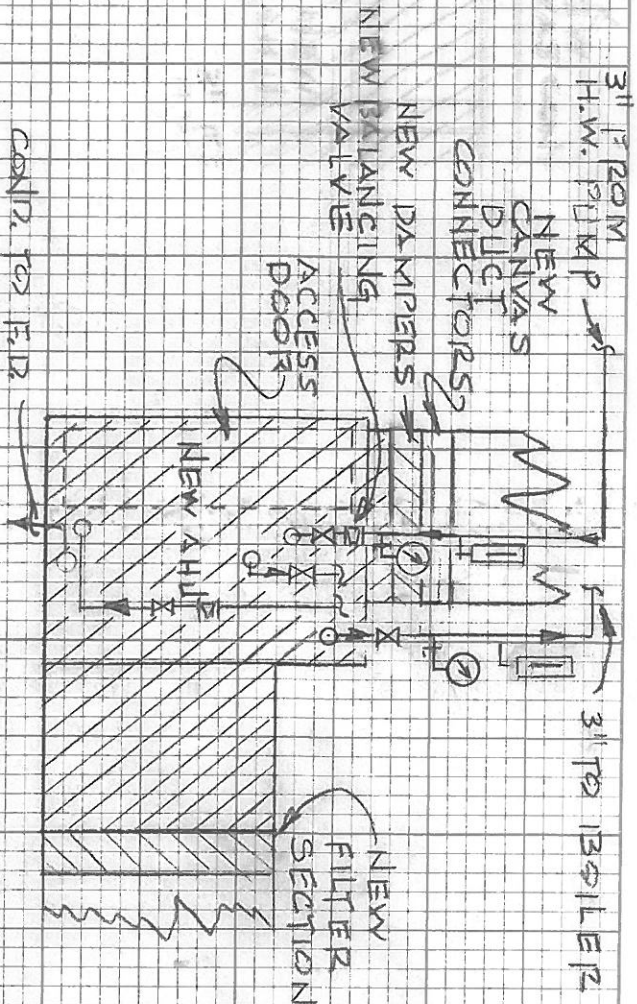
NEW AHU - TEMPTROL MODEL B,
SIZE 21 D-LE OR EQUAL
3 LOW-T DRU MULTI-ZON PRESS,
DUPLEX FC FANS, LOW PRESS,
DAMPER SECTION, PLAT
FILTER SECTION, 21 FILTERS,
(2 SETS) 13-8" ZONES,
480V 3P
FAN 10000 @ 4" E.S.P.
COOLING 256.5 MBH 77.5°
E.D.B. E.A.T. 64.5 F.W.B. E.A.T.
57.9° F.I.P. 56.0 F.W.B. E.A.T.
HEATING 351 MBH 55.1 G.P.M.,
2.35 P.D. 67.5 F.D.B. E.A.T.,
100° F. D.B. L.A.T. 180° F. E.W.T.,
160° F. L.W.T. 10" AIR OUTLET,
RIGHT COIL IN LEFT.

HVAC RENOVATION, D-2 HQ

REV 6/7/11 SHT 1 OF 2
6/21/11



NEW BOILER
FLEV.
 $\frac{3}{8}'' = 1'-0''$



NEW A.H.U.
FLEV.
 $\frac{3}{8}'' = 1'-0''$

- NOTES:
1. ALL ELECT. TO BE RECONNECTED AS PER NEC. LATEST EDITION.
 2. EXIST. H.W. PUMP EXR TANK FITTING AND AIR SEPARATOR MAY BE REUSED, HOWEVER.
 3. WAY BYPASS VALVE AND RELATER PIPING TO BE REMOVED.
 3. EXIST. H.C.H. WITH REMOVED PRESSURE GAUGES AND BALANCING VALVES TO BE REMOVED AND REPLACED EXCLUDING CHILLER.
 4. EXISTING AUTOMATIC TEM. CONTROL SYSTEM TO BE REINSTALLED AND REUSED.

HVAC RENOVATION, D-2 HQ

REV. 6/20/11

SHT 2 OF 2