



Alabama Port Authority
Requisition and Proposal

Project Name Old Administration Building HVAC Controls

Project # 11100 Task # 2

To: **Prospective Bidders**

Date: August 2022

Delivery of Proposal Alabama State Port Authority Locations identified below in NOTES #1	Delivery of Work Alabama State Port Authority, Main Docks Complex Old Administration Building, Mobile, AL
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Description of Work
<p>This Requisition solicits proposals for upgrading the controls for the heating, ventilation and air conditioning system in the Alabama State Port Authority (ASPA) Old Administration Building at the Main Docks Facility in Mobile, Alabama. Work will be in accordance with the requirements stated herein, attached drawings with specifications, attached insurance requirements, and applicable State of Alabama Laws. The work consists principally of providing bonds, labor, materials, equipment, insurance, and supervision necessary for the work described in this package.</p> <p>All Contractors submitting bids are to carefully examine the site of the proposed work by appointment only and thoroughly review the contract requirements prior to submission of a bid proposal. Each Bidder shall satisfy oneself as to the character, quality, and quantities of work to be performed, and as to the requirements of the proposed contract. The submission of a proposal shall be proof that the bidding Contractor has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed Contract. All bidding Contractors must hold the appropriate license for this type work from the State Licensing Board for General Contractors, Montgomery, Alabama.</p> <p>A mandatory pre-bid meeting is scheduled for Thursday, September 1 at 9:00 a.m. Meet in the Lobby of the International Trade Center (250 North Water Street, Mobile, AL). A site visit will be included.</p> <p>The work performed under this contract shall not commence until the Contractor has submitted the following in an acceptable form: a Performance Bond, a Labor & Material Bond, and a Certificate of Insurance. Performance Bond shall be in an amount equal to 100% of the contract price; Labor & Material Bond equal to 100% of the contract price; and Certificate of Insurance shall be as per the attached requirements and countersigned by a licensed resident agent in the State of Alabama.</p> <p>The Contractor will be required to complete the work under the Contract within 45 calendar days after receipt of a "Notice to Proceed". The work will have to be scheduled and performed in a manner that will not interfere with the operations of the facility ongoing in the immediate and adjacent areas. Work will start not later than 10 calendar days after receipt of notice to proceed. It is ASPA's intent is that work hours will be during normal day light hours.</p>



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Description of Work continued

The Contractor shall comply with all Federal and State laws, local ordinances and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work.

The Contractor shall place a competent superintendent on the Project who shall have experience in the work being performed under the Contract. The assigned superintendent shall have the responsibility for the day-to-day operations of the work and shall remain on the Project site while the work under the Contract is being performed.

Time is an essential element in the contract. As the prosecution of the work will inconvenience occupants of the building and interfere with business, it is important that the work be pressed vigorously to completion. Also, the cost to the Alabama State Port Authority of the administration of the contract, supervision, inspection and engineering will be increased as the time occupied in the work is lengthened. Therefore, exclusive of Sundays and national holidays, for each day that the work remains incomplete after the time specified, an amount of \$100.00 shall be paid by the contractor to the Alabama State Port Authority as liquidated damages for the loss sustained by the State because of failure of the contractor to complete the work within the specified time.

IMPORTANT NOTICE TO BIDDERS REGARDING EMPLOYMENT PRACTICES: Effective October 1, 2011, the Beason-Hammon Alabama Taxpayer and Citizen Protection Act ("the Act") requires that any business entity contracting with or providing any grant or incentives to the state, including the Alabama State Port Authority, certify compliance with the Act. All Bidders must certify such compliance by executing the enclosed "Certificate of Compliance" and returning it to the Alabama State Port Authority with your bid package. In addition, the bidding company shall submit with their bid evidence that the company is enrolled in the E-Verify system. The following E-Verify website link is provided for convenience: <https://www.e-verify.gov/>.

IMPORTANT NOTICE TO BIDDERS REGARDING ACCESS TO ASPA RESTRICTED FACILITIES:

ALL individuals doing any work on this project, including operators, supervisors, maintenance personnel, providing fuel, truck drivers, etc., must have a TWIC Card, ASPA Badge, and an ASPA Vehicle Decal with no exceptions. ASPA's access policy is provided on the ASPA website at the link below: <https://www.alports.com/port-access>



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Contractor's Proposal – Schedule of Prices	
The Contractor hereby agrees to provide specified equipment and perform the specified work for the prices outlined in the following schedule. ASPA reserves the right due to budgetary constraints to remove any of the listed items.	
Description	Lump Sum Price
1. Project Bonds and Insurance.	\$ _____
2. Mobilization including Port Access Credentials and Demobilization including cleanup	\$ _____
3. Provide, Install and configure AHU-1 Controls (1 st floor)	\$ _____
4. Provide, Install and configure AHU-2 Controls (2nd floor)	\$ _____
5. Provide, Install and configure AHU-3 Controls (1 st floor)	\$ _____
6. Provide, Install and configure AHU-4 Controls (1 st floor)	\$ _____
7. Provide, Install and configure AHU-5 Controls (2nd floor)	\$ _____
TOTAL BID	\$ _____



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NOTES:

1. Sealed bid proposals will be received via courier to the Alabama State Port Authority, 1400 Alabama State Docks Blvd, Room 216, Administration Building, Mobile, AL 36602 by 9:00 a.m. on Thursday, September 8, 2022. Sealed bid proposals can also be hand delivered from 8:45 a.m. to 9:00 a.m. on Thursday, September 8, 2022 to the Alabama State Port Authority in the International Trade Center building, 250 North Water Street, 1st floor lobby, Mobile, AL. The official bid opening will be conducted on the 4th floor of said International Trade Center building at 9:00 a.m. on Thursday, September 8, 2022. No faxed or electronic bids will be accepted. **Sealed bids shall have the bidder's name, contractor's license number, project name, and time and date of bid opening shown on the outside.**
2. A Bid Bond or Certified Check made payable to the Alabama State Port Authority and equal to five (5%) percent of the amount bid, not to exceed \$10,000, must accompany the Bid Proposal.
3. Authority reserves the right to refuse to issue a proposal form or a contract to a prospective bidder for any of the following reasons:
 - a) Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contract in force with the Authority.
 - b) Contractor default under previous Contract with the Authority.
 - c) Proposal withdrawal or Bid Bond forfeiture on previous project with the Authority.
 - d) Unsatisfactory work on previous contract with the Authority.
4. Authority may make such investigations as deemed necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish all such information and data for this purpose as the Authority may request. The Authority reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Authority that such bidder is properly qualified to carry out the obligations of the Contract.
5. Any questions regarding the procurement should be directed to Pete Olivero, Project Manager, at phone number (251) 622-2688 or email pete.olivero@alports.com
6. The right is reserved, as the interest of the Alabama State Port Authority may require, to reject any and all bids and to waive informalities in bids received.



Alabama Port Authority
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SIGNATURES

Receipt of following addendums is acknowledged:

Addendum No. _____

Addendum No. _____

Addendum No. _____

ATTACHED DOCUMENTS

Project 11100 Drawings with Specifications (Dwgs. M1.0, M2.0, M3.0, M3.1, M3.2 and M3.3)
Alabama State Port Authority –Insurance Requirements
Beason-Hammon Alabama Taxpayer and Citizen Protection Act Certificate of Compliance

Contractor's Signature: _____		
Contractor Company _____		
Name	Title	Date

Pete Olivero

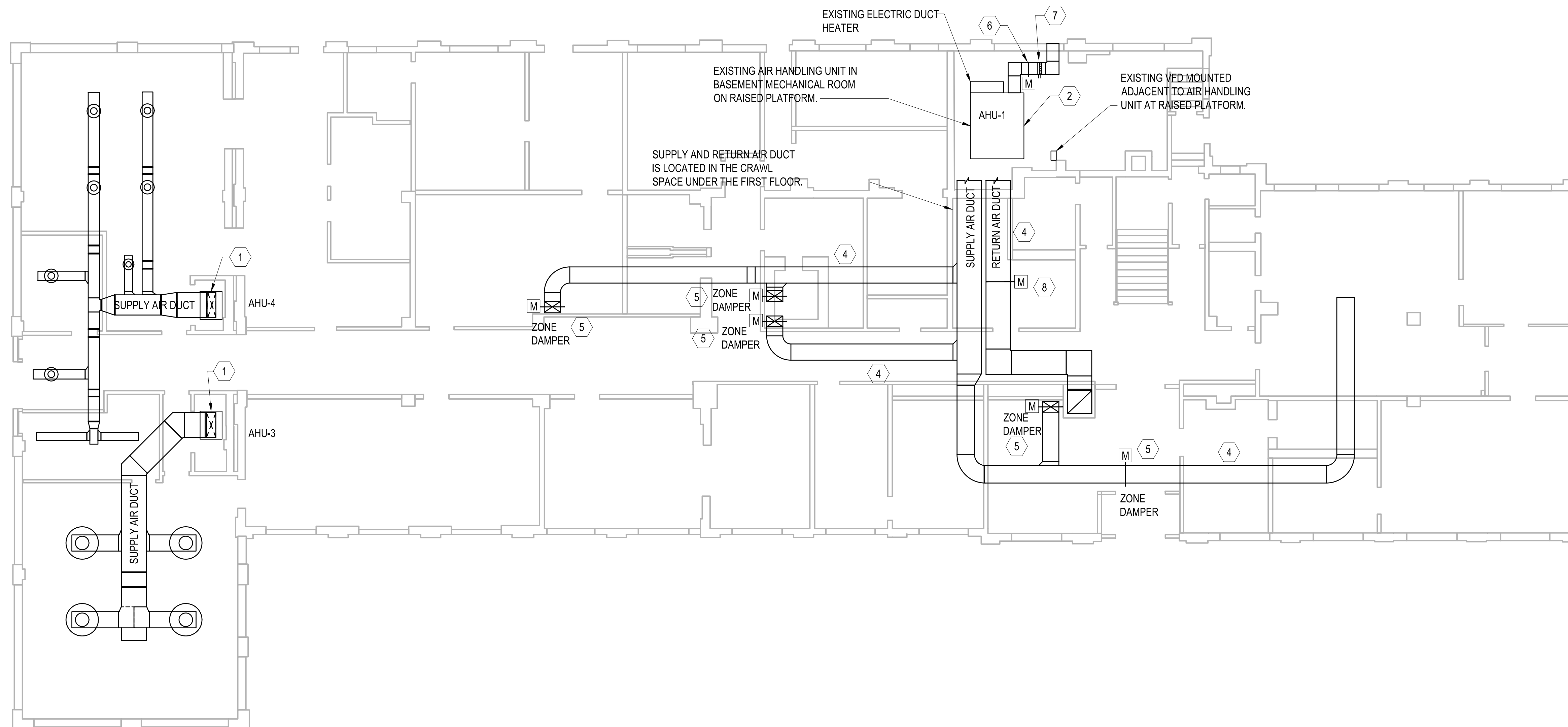
August 17, 2022

Pete Olivero, PE, PLS
Project Manager

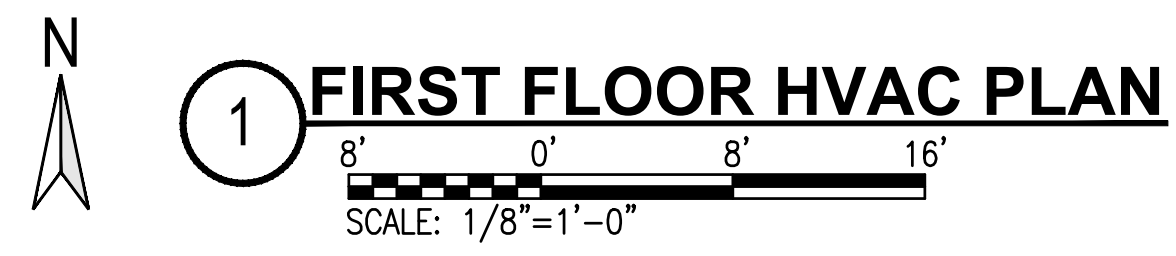
Date

SHEET NOTES

- 1 SINGLE ZONE, SINGLE STAGE DX, CONSTANT VOLUME AIR HANDLING UNIT.
- 2 FIVE ZONE, TWO STAGE DX, AIR HANDLING UNIT WITH VFD.
- 3 DUCT ROUTE UNDER FIRST FLOOR IN THE CRAWL SPACE.
- 4 DUCT TURNS UP THROUGH FLOOR AND EXTENDS UP INTO FIRST FLOOR CEILING FOR DISTRIBUTION. THE MOTORIZED DAMPER IS LOCATED WITHIN THE CRAWL SPACE BELOW THE FLOOR. CONTRACTOR SHALL FIELD VERIFY THE ACTUAL DUCT SIZE AND MOTORIZED DAMPER SIZE PRIOR TO BEGINNING ANY WORK.
- 5 FIELD VERIFY MOTORIZED DAMPER OPERATION. PROVIDE FULL MAINTENANCE ON DAMPERS TO ENSURE IT FUNCTIONS PROPERLY. PROVIDE WRITTEN REPORT OF ANY DEFICIENCIES. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW ACTUATOR ON THE DAMPER AS WELL AS THE ASSOCIATED ZONE THERMOSTAT. FIELD VERIFY LOCATION OF EXISTING THERMOSTAT AND REPLACE NEW.
- 6 NEW MOTORIZED OUTSIDE AIR DAMPER AND ACTUATOR. FIELD VERIFY EXISTING DUCT SIZE PRIOR TO BEGINNING ANY WORK. FIELD VERIFY SUITABLE LOCATION FOR INSTALLATION.
- 7 NEW AIR FLOW MEASURING STATION IN OUTSIDE AIR DUCT. FIELD VERIFY A SUITABLE LOCATION FOR INSTALLATION. FIELD VERIFY EXISTING DUCT SIZE.
- 8 NEW MOTORIZED DAMPER IN RETURN AIR DUCT. FIELD VERIFY EXISTING DUCT SIZE. FIELD VERIFY SUITABLE LOCATION FOR INSTALLATION.



THE GENERAL SCOPE OF WORK FOR THIS PROJECT IS TO MODIFY THE EXISTING HVAC EQUIPMENT AS NECESSARY TO INCORPORATE A DEHUMIDIFICATION CYCLE TO ENHANCE THE FUNCTION OF THE EXISTING EQUIPMENT.



1 FIRST FLOOR HVAC PLAN

Smith Mechanical
Consulting & Design

ALABAMA CERTIFICATE OF AUTHORIZATION: CA-3777-E
7150 CHARLANDA CT.
MOBILE, AL 36688
(251) 402-1384
ROGER J. SMITH, P.E. 24744
www.smithmechanicalconsulting.com

ALABAMA
STATE • ALIBOLU • ALU
PORT

**HVAC UPGRADES
FOR THE
ADMINISTRATION BUILDING**

MOBILE, ALABAMA 36602

PROJECT NO: 19-053

REVISIONS:

ISSUE DATE: 08-12-22

NOT VALID UNLESS SIGNED

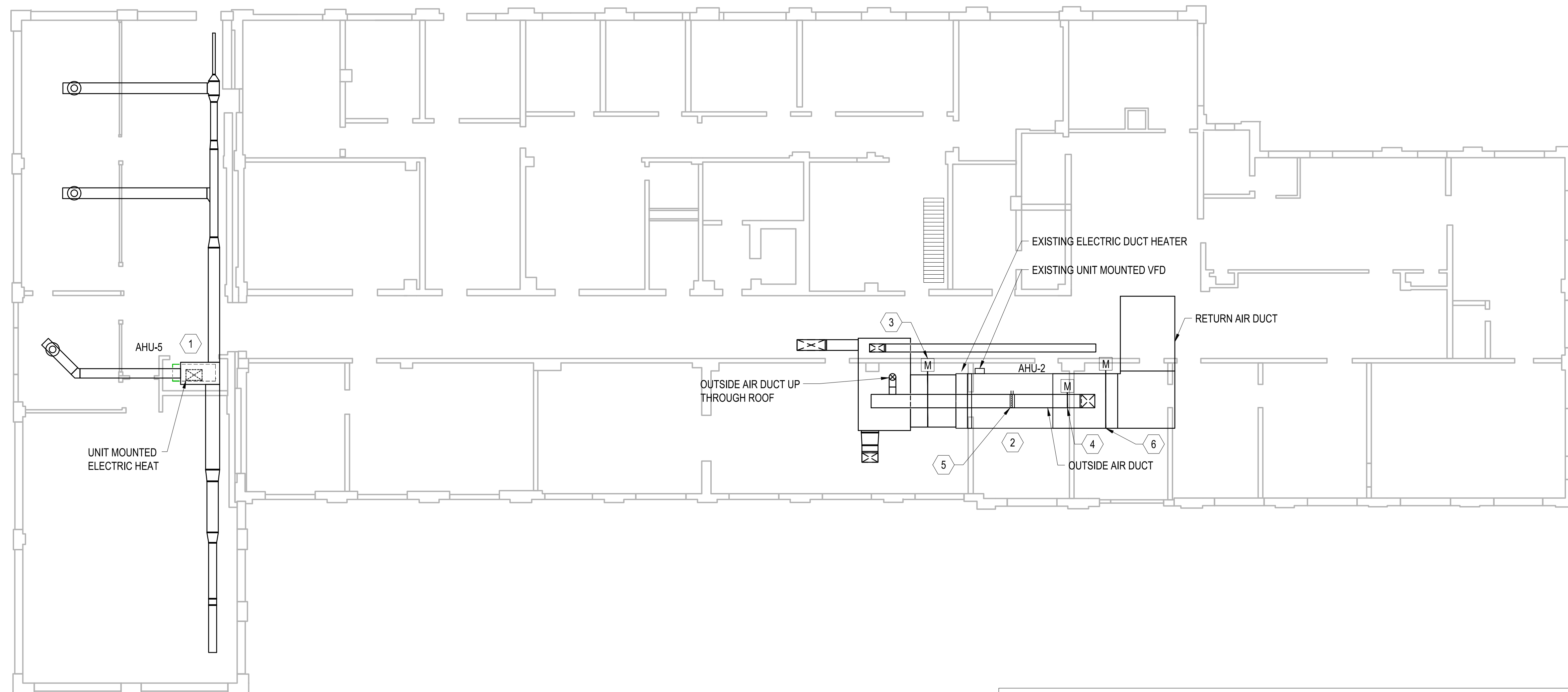
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SHEET TITLE:
FIRST FLOOR HVAC PLAN

SHEET NUMBER:
M1.0

SHEET NOTES

- 1 SINGLE ZONE, SINGLE STAGE DX, CONSTANT VOLUME AIR HANDLING UNIT.
- 2 SINGLE ZONE, TWO STAGE DX, AIR HANDLING UNIT WITH VFD.
- 3 COORDINATE OPERATION OF SUPPLY AIR DUCT MOTORIZED DAMPER WITH CONTROLS CONTRACTOR. DAMPER SHALL BE LOCKED IN FULL OPEN POSITION.
- 4 NEW MOTORIZED OUTSIDE AIR DAMPER AND ACTUATOR. FIELD VERIFY EXISTING DUCT SIZE PRIOR TO BEGINNING ANY WORK. FIELD VERIFY SUITABLE LOCATION FOR INSTALLATION.
- 5 NEW AIR FLOW MEASURING STATION IN OUTSIDE AIR DUCT. FIELD VERIFY A SUITABLE LOCATION FOR INSTALLATION. FIELD VERIFY EXISTING DUCT SIZE.
- 6 NEW MOTORIZED DAMPER IN RETURN AIR DUCT. FIELD VERIFY EXISTING DUCT SIZE. FIELD VERIFY SUITABLE LOCATION FOR INSTALLATION.



THE GENERAL SCOPE OF WORK FOR THIS PROJECT IS TO MODIFY THE EXISTING HVAC EQUIPMENT AS NECESSARY TO INCORPORATE A DEHUMIDIFICATION CYCLE TO ENHANCE THE FUNCTION OF THE EXISTING EQUIPMENT.

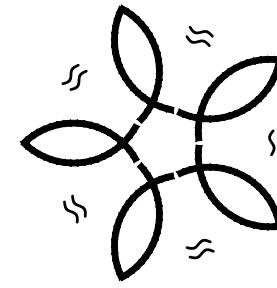


1 SECOND FLOOR HVAC PLAN

8' 0' 8' 16'
SCALE: 1/8"=1'-0"

Smith Mechanical
Consulting & Design

ALABAMA CERTIFICATE OF AUTHORIZATION: CA-3777-E
7150 CHARLANDA CT.
MOBILE, AL 36688
(251) 402-1364
ROGER J. SMITH, P.E. 24744
www.smithmechanicalconsulting.com



**HVAC UPGRADES
FOR THE
ADMINISTRATION BUILDING**

MOBILE, ALABAMA 36602

PROJECT NO: 19-053

REVISIONS:

NO.	DESCRIPTION	DATE

ISSUE DATE: 08-12-22

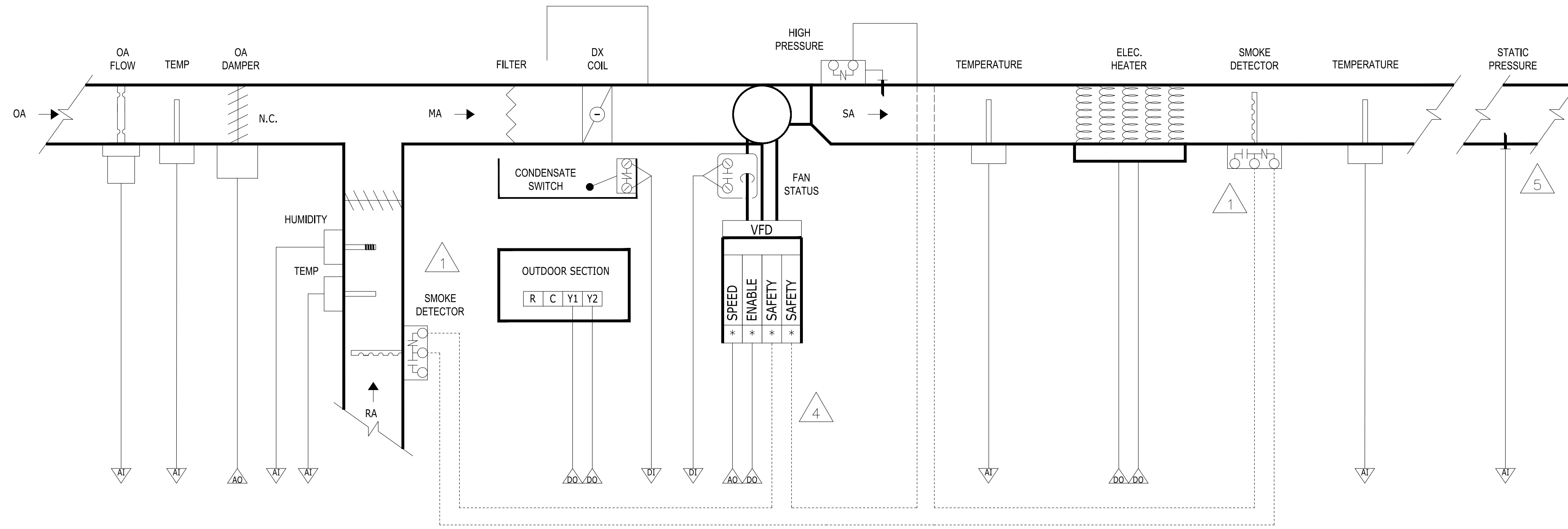


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SECOND FLOOR HVAC PLAN

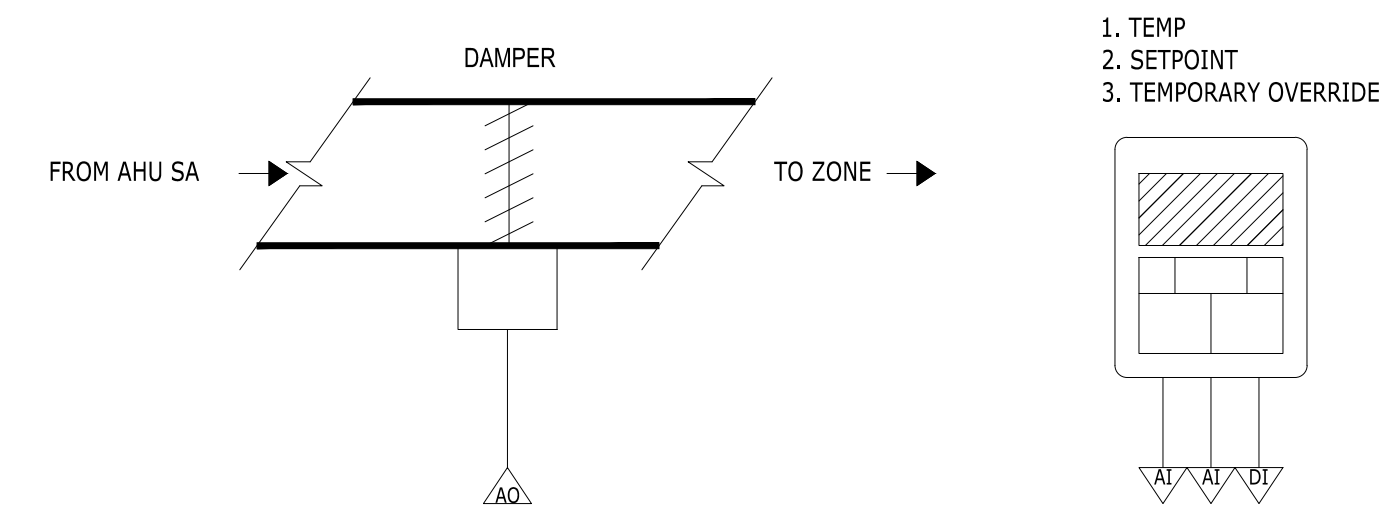
SHEET NUMBER:
M2.0

FOR AHU-1 MULTIZONE SYSTEM



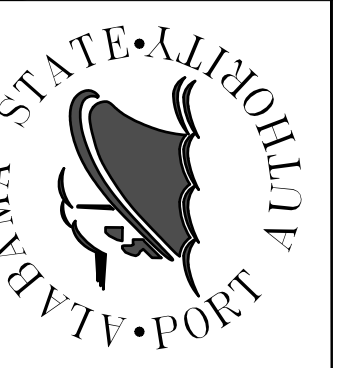
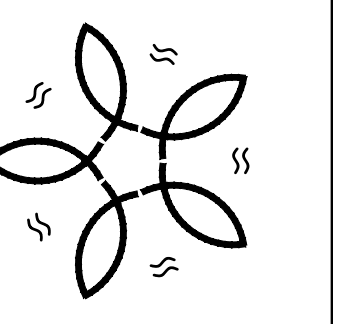
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AO = ANALOG OUTPUT
DI = DIGITAL INPUT
DO = DIGITAL OUTPUT

TYPICAL ZONE DAMPER



- 1 SMOKE DETECTOR FOR FAN SHUT-DOWN. ELECTRICAL CONTRACTOR TO WIRE FOR SHUTDOWN & ALARM.
- 2 ALL WIRING IN MECHANICAL ROOMS IN CONDUIT. ALL LOW VOLTAGE CONTROL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- 3 INSTALLER MUST LABEL EACH END OF WIRE WITH MANUFACTURED TAGS
- 4 VERIFY VOLTAGE OF SAFETY SHUTDOWN CIRCUIT OF VFD/STARTER. IF CIRCUIT IS 120V OR ABOVE, DO NOT RUN IN SAME CONDUIT AS LOW VOLTAGE CONTROL WIRE
- 5 MOUNT PRESSURE PROBES 2/3 DOWN LONGEST DUCT

1 HVAC CONTROLS DIAGRAM
NOT TO SCALE



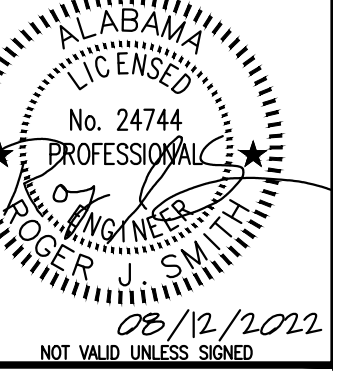
HVAC UPGRADES
FOR THE
ADMINISTRATION BUILDING
MOBILE, ALABAMA 36602

PROJECT NO: 19-053

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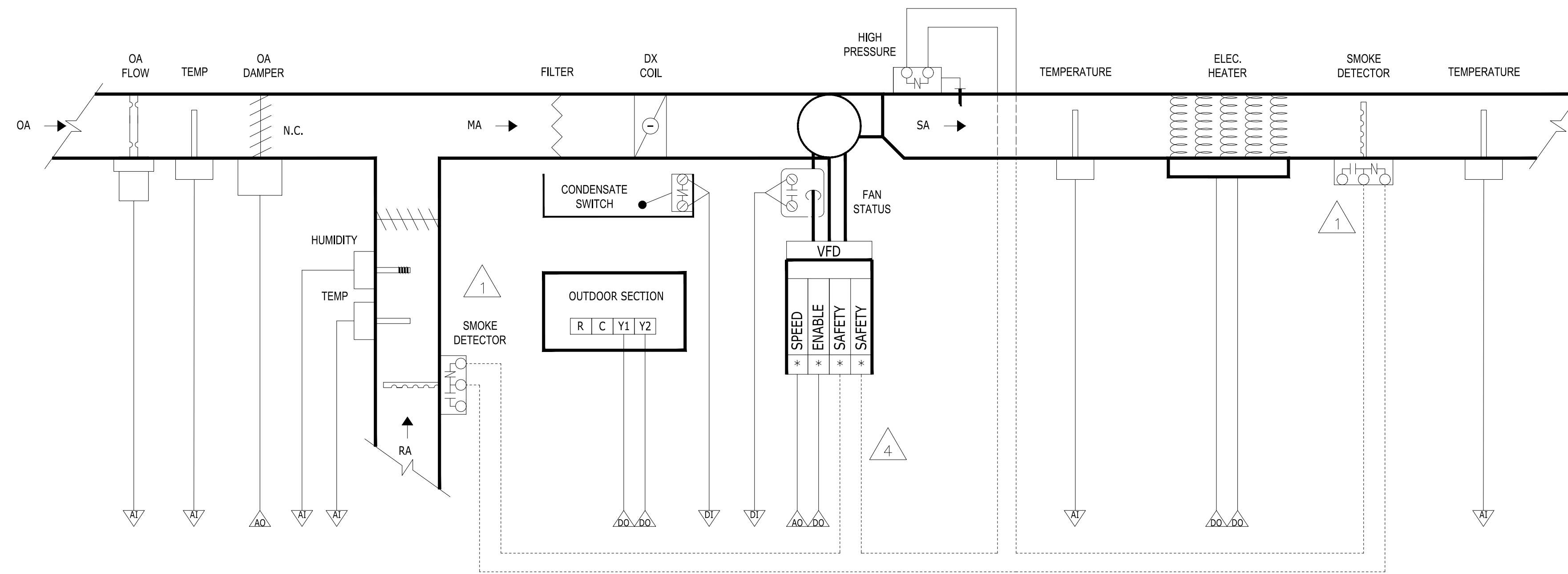


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SHEET TITLE:
HVAC CONTROLS

SHEET NUMBER:
M3.0

AHU-2 SINGLE ZONE VARIABLE VOLUME SYSTEM

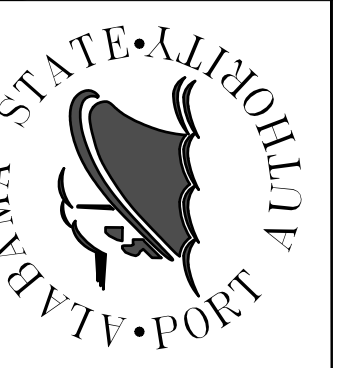
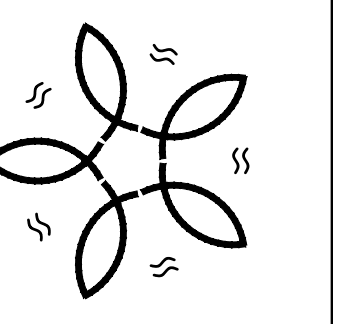
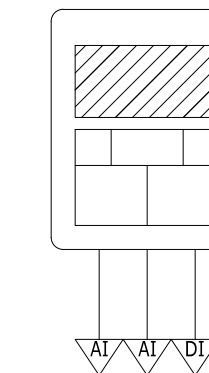


AI = ANALOG INPUT
 AO = ANALOG OUTPUT
 DI = DIGITAL INPUT
 DO = DIGITAL OUTPUT

- 1. SMOKE DETECTOR FOR FAN SHUT-DOWN. ELECTRICAL CONTRACTOR TO WIRE FOR SHUTDOWN & ALARM.
- 2. ALL WIRING IN MECHANICAL ROOMS IN CONDUIT. ALL LOW VOLTAGE CONTROL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- 3. INSTALLER MUST LABEL EACH END OF WIRE WITH MANUFACTURED TAGS
- 4. VERIFY VOLTAGE OF SAFETY SHUTDOWN CIRCUIT OF VFD/STARTER. IF CIRCUIT IS 120V OR ABOVE, DO NOT RUN IN SAME CONDUIT AS LOW VOLTAGE CONTROL WIRE
- 5. MOUNT PRESSURE PROBES 2/3 DOWN LONGEST DUCT

1 HVAC CONTROLS DIAGRAM NOT TO SCALE

- 1. TEMP
- 2. SETPOINT
- 3. TEMPORARY OVERRIDE



HVAC UPGRADES FOR THE ADMINISTRATION BUILDING MOBILE, ALABAMA 36602

PROJECT NO: 19-053

REVISIONS:

NO.	DESCRIPTION	DATE

ISSUE DATE: 08-12-22

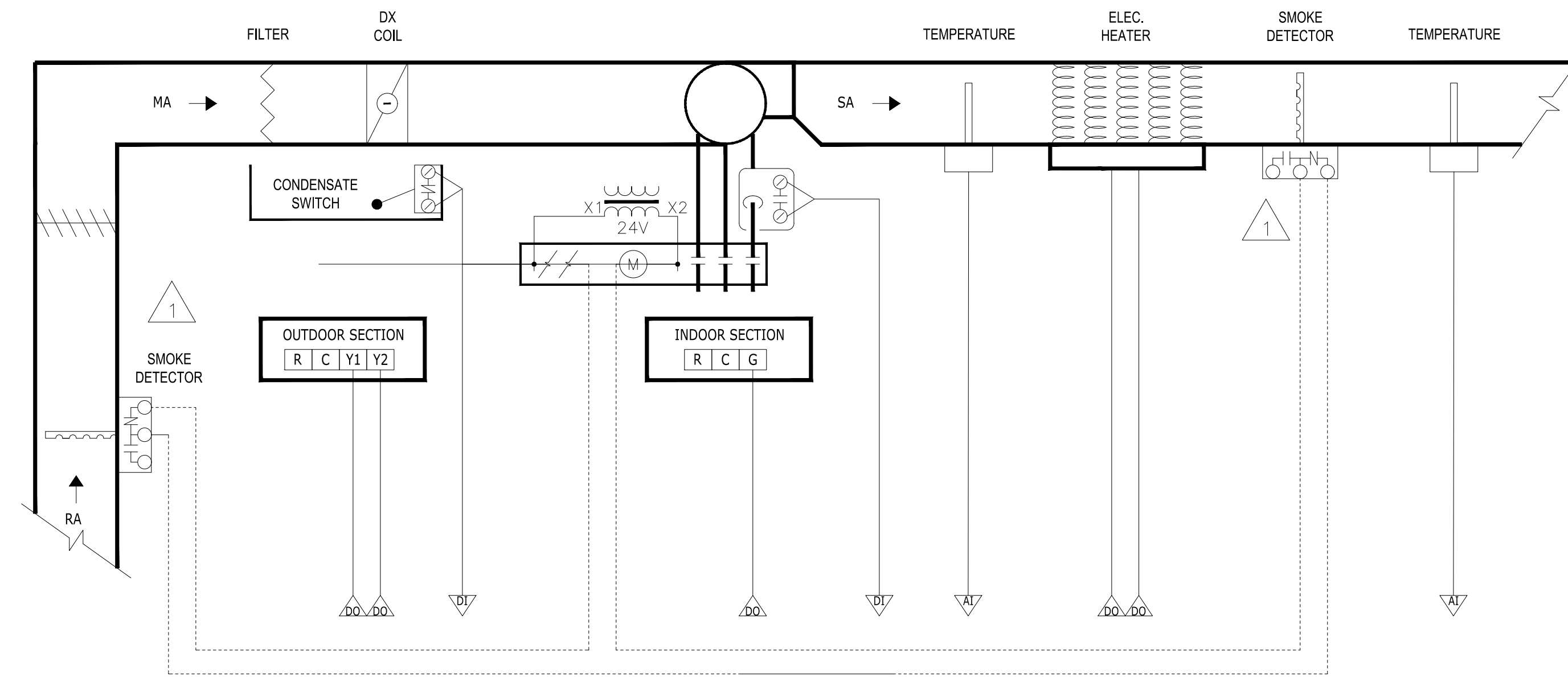


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SHEET TITLE:
 HVAC CONTROLS

SHEET NUMBER:
M3.1

AHU-3, -4, & -5 SINGLE ZONE CONSTANT VOLUME SYSTEMS

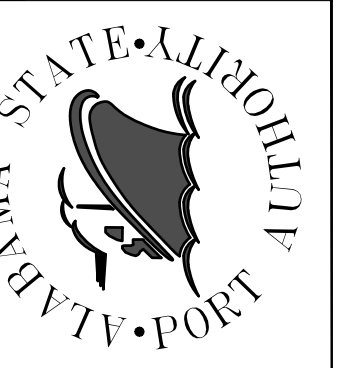
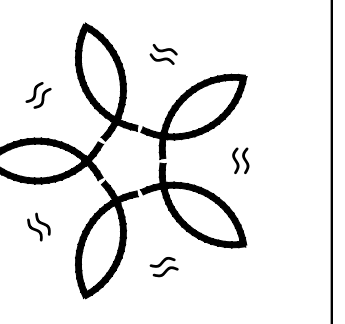
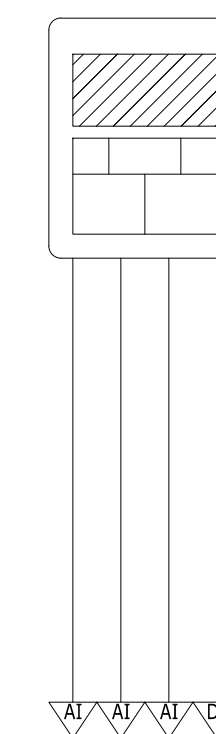


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AD = ANALOG OUTPUT
DI = DIGITAL INPUT
DO = DIGITAL OUTPUT

- 1 SMOKE DETECTOR FOR FAN SHUT-DOWN. ELECTRICAL CONTRACTOR TO WIRE FOR SHUTDOWN & ALARM.
- 2 ALL WIRING IN MECHANICAL ROOMS IN CONDUIT. ALL LOW VOLTAGE CONTROL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- 3 INSTALLER MUST LABEL EACH END OF WIRE WITH MANUFACTURED TAGS
- 4 VERIFY VOLTAGE OF SAFETY SHUTDOWN CIRCUIT OF VFD/STARTER. IF CIRCUIT IS 120V OR ABOVE, DO NOT RUN IN SAME CONDUIT AS LOW VOLTAGE CONTROL WIRE
- 5 MOUNT PRESSURE PROBES 2/3 DOWN LONGEST DUCT

1 HVAC CONTROLS DIAGRAM
NOT TO SCALE

- 1. TEMP
- 2. SETPOINT
- 3. HUMIDITY
- 4. TEMPORARY OVERRIDE



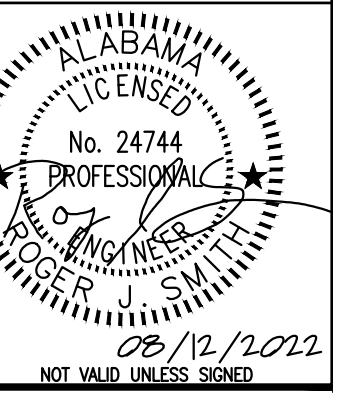
HVAC UPGRADES FOR THE ADMINISTRATION BUILDING
MOBILE, ALABAMA 36602

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SHEET TITLE:
HVAC CONTROLS

SHEET NUMBER:
M3.2

SEQUENCE OF OPERATIONS

AIR HANDLER -1 (MULTI-ZONE)

THE SYSTEM IS AN AUTO CHANGEOVER, VOTE BASED VVT SYSTEM (VARIABLE VOLUME, VARIABLE TEMP), AS VVT ZONES CALL FOR HEATING OR COOLING, VOTES ARE TALLIED BY THE AHU CONTROLLER AND BASED ON THE MAJORITY OF VOTES RECEIVED, THE HVAC UNIT OPERATES IN THE MODE OF MAJORITY VOTES. IF MAJORITY CHANGES, THE SYSTEM CONTROLLER WILL AUTOMATICALLY INITIATE A CHANGEOVER SEQUENCE WITH BUILT IN TIME DELAYS TO PROTECT THE EQUIPMENT BEFORE CHANGING OVER TO THE NEW MODE OF OPERATION.

WHEN THE LAST CALLING ZONE IS SATISFIED (IN EITHER HEAT OR COOL MODE), THE AHU CONTROLLER WILL TERMINATE OUTPUTS TO THE HVAC UNIT AFTER THE NEXT "POLL"; AND THE BLOWER OUTPUT WILL DE-ENERGIZE (UNLESS CONTROLLER IS CONFIGURED FOR CONSTANT FAN) AFTER A 3-MINUTE PURGE CYCLE. DURING THE PURGE CYCLE NO HEAT OR COOL CALLS ARE RECOGNIZED.

THE HVAC UNIT'S LEAVING AIR TEMPERATURE IS CONTINUOUSLY MONITORED AND COMPARED AGAINST CONFIGURABLE LOW AND HIGH LIMITS. WHEN THE LOW LIMIT IS EXCEEDED THE CONTROLLER WILL CEASE COOLING OPERATION TO PREVENT COIL FREEZE-UP AND PROTECT THE COMPRESSOR(S). WHEN THE HIGH LIMIT IS EXCEEDED THE CONTROLLER WILL CEASE HEATING OPERATION TO PROTECT THE UNIT'S HEAT EXCHANGER AND/OR COMPRESSOR(S). AFTER A 3-MINUTE PURGE CYCLE, THE CONTROLLER WILL ENSURE THAT THE LEAVING AIR TEMPERATURE DOES NOT EXCEED THE LOW OR HIGH LIMITS BEFORE RESUMING SYSTEM OPERATION.

FAN SPEED CONTROL

A STATIC PRESSURE SENSOR SHALL BE MOUNTED 2/3 DOWN THE MAIN SUPPLY DUCT. THE AHU CONTROLLER SHALL MODULATE THE VARIABLE SPEED DRIVE TO MAINTAIN DESIRED STATIC PRESSURE.

THE CONTROLLER SHALL NOT ALLOW THE LEAVING AIR TEMPERATURE TO GO BELOW THE LOW LIMIT WHILE COMPRESSORS ARE RUNNING. IF THE LEAVING AIR TEMPERATURE DROPS BELOW THE LOW LIMIT, THE VARIABLE SPEED DRIVE MINIMUM SPEED SHALL INCREASE TO KEEP THE LEAVING AIR ABOVE THE LOW LIMIT TO PREVENT COIL FREEZE-UP AND PROTECT THE COMPRESSOR(S). (DURING COMPRESSOR MINIMUM RUN TIME DELAYS)

DEHUMIDIFICATION (DURING COOLING MODE)

THE CONTROLLER SHALL MONITOR SPACE HUMIDITY LEVELS. IF THE HUMIDITY RISES ABOVE 55% (ADJUSTABLE) THE UNIT SHALL STAGE THE COMPRESSORS TO MEET COOLING DEMAND AS NORMAL. THE FAN SPEED SHALL MODULATE TO MAINTAIN LEAVING AIR TEMPERATURE AT 52°F (ADJUSTABLE). WHEN ONLY ONE COMPRESSOR IS RUNNING, THE VARIABLE SPEED DRIVE WILL SLOW DOWN. WHEN BOTH COMPRESSORS ARE RUNNING, THE VARIABLE SPEED DRIVE SHALL SPEED UP.

DEHUMIDIFICATION (DURING HEATING MODE)

THE CONTROLLER SHALL MONITOR SPACE HUMIDITY LEVELS. IF THE HUMIDITY RISES ABOVE 55% (ADJUSTABLE), THE CONTROLLER SHALL STAGE ON A COMPRESSOR AND ALSO ENGAGE THE STAGES OF ELECTRIC HEAT TO SATISFY HEATING DEMAND.

OUTSIDE AIR CONTROL

PROVIDE AIR FLOW MONITORING STATION IN THE OUTSIDE AIR DUCT TO MODULATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE OUTSIDE AIR VOLUME AT A CONSTANT VOLUME REGARDLESS OF FAN SPEED OR FILTER LOADING. THE OUTSIDE AIR DAMPER SHALL BE OPEN DURING OCCUPIED MODE AND CLOSE DURING UNOCCUPIED MODE.

SAFETY CONTROL

SMOKE DETECTORS: SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY/RETURN AIR DUCTS WHERE SHOWN ON DRAWINGS TO STOP FAN AND SIGNAL THE FIRE ALARM SYSTEM.

HIGH STATIC PRESSURE LIMIT: A MANUAL RESET HIGH PRESSURE SWITCH SHALL BE INSTALLED DOWNSTREAM OF THE FAN. IF STATIC PRESSURE RISES ABOVE 4.0 IN. W.G. (ADJUSTABLE) THE FAN SHALL SHUTDOWN.

CONDENSATE SWITCH: A CONDENSATE SWITCH MOUNTED IN THE DRAIN PAN OR P-TRAP SHALL DISABLE COOLING AND SIGNAL AN ALARM

PRESSURE DEPENDENT VVT ZONE DAMPER, (WITHOUT LOCAL REHEAT)

MODE CONTROL.

SYSTEM TEMPERATURE SET POINTS SHALL BE PLACED IN THE OCCUPIED OR UNOCCUPIED MODE OF OPERATION BY THE CENTRAL VVT ZONE CONTROLLER OCCUPANCY SCHEDULE. PRIOR TO SCHEDULED OCCUPIED PERIODS, THE CENTRAL VAV AHU SHALL START AND PROVIDE MORNING WARM UP AND OR COOLING TO ALLOW THE ZONES TO PRECONDITION THE SPACE TO ENSURE OCCUPIED SET POINT IS ACHIEVED AT THE SCHEDULED OCCUPIED TIME. A MORNING WARM UP COMMAND FROM THE CENTRAL VAV AHU SHALL FORCE THE ZONE TO MAXIMUM DAMPER POSITION AND ALLOW THE CENTRAL VAV AHU TO PRECONDITION THE SPACE WHEN HEATING IS REQUIRED.

DURING UNOCCUPIED PERIODS, THE VVT AHU SHALL CYCLE ON WITH HEATING OR COOLING DEMANDS ACCORDINGLY TO ALLOW THE VVT ZONES TO SATISFY THE UNOCCUPIED TEMPERATURE SET POINTS. DURING UNOCCUPIED AND STANDBY PERIODS AND SUBJECT TO VVT AHU UNIT MODE OF OPERATION, THE VVT ZONE SHALL MODULATE IN RESPONSE TO HEATING AND COOLING DEMANDS ACCORDINGLY TO SATISFY THE UNOCCUPIED AND STANDBY TEMPERATURE SET POINTS.

THE STANDBY MODE OF OPERATION IS FOR PERIODS OF TEMPORARY VACANCY AND SHALL USE OWNER DETERMINED STANDBY TEMPERATURE SET POINTS AND CAN BE TRIGGERED BY LOCAL HARDWIRED OCCUPANCY MOTION SENSOR OR VIA NETWORK MOTION DETECTION COMMAND FROM SMART LIGHTING CONTROL SYSTEMS, OR OTHER EMS COMMAND.

SYSTEM SHALL AUTOMATICALLY REVERT TO THE PROPER MODE OF OPERATION AFTER RESTORATION OF POWER AFTER A POWER FAILURE.

OCCUPANT SCHEDULE OVERRIDE CONTROL.

DURING THE UNOCCUPIED MODE, EACH ROOM TEMPERATURE SENSOR WALL MODULE OVERRIDE BUTTON SHALL PROVIDE THE ROOM OCCUPANT WITH ABILITY TO PLACE THE SYSTEM IN THE OCCUPIED MODE OF OPERATION FOR 120 MINUTES (ADJUSTABLE).

THE EMS FRONT END SHALL MONITOR THE VVT ZONES AND SHALL RETURN THE VVT AHU TO THE OCCUPIED MODE OF OPERATION ANYTIME A VVT ZONE IS PLACED IN THE OVERRIDE MODE.

TEMPERATURE CONTROL.

A PID ALGORITHM SHALL BE EMPLOYED FOR ALL MODULATING CONTROL. THE VVT AHU DISCHARGE AIR TEMPERATURE SHALL BE MONITORED BY THE VVT ZONE DAMPER CONTROLLER VIA THE DDC NETWORK AND SHALL BE USED BY THE VVT ZONE DAMPER TO CONTROL THE VVT ZONE DAMPER IN A HEATING ACTION (RA) OR COOLING ACTION (DA) BASED ON THE CURRENT VVT AHU UNIT MODE OF OPERATION.

WHEN COOLING IS BEING PROVIDED BY THE VVT AHU AND THE VVT ZONE REQUIRES COOLING, THE VVT ZONE DAMPER SHALL MODULATE BETWEEN AN ADJUSTABLE MINIMUM AND MAXIMUM DAMPER POSITION TO SATISFY THE ZONES COOLING DEMAND.

WHEN HEATING IS BEING PROVIDED BY THE VVT AHU AND THE VVT ZONE REQUIRES HEATING, THE VVT ZONE DAMPER SHALL MODULATE BETWEEN AN ADJUSTABLE MINIMUM AND MAXIMUM DAMPER POSITION TO SATISFY THE ZONES HEATING DEMAND.

WHEN THE VVT AHU UNIT IS IN A MODE OF OPERATION OPPOSITE OF WHAT IS REQUIRED IN THE VVT ZONE, THE VVT ZONE DAMPER SHALL BE ALLOWED TO OVERRIDE THE MINIMUM DAMPER POSITION AND FULLY CLOSE TO PREVENT THE ZONE FROM OVER COOLING OR OVERHEATING UNTIL THE VVT AHU UNIT IS NO LONGER ACTIVELY HEATING OR COOLING OR HAS CHANGED OVER TO THE MODE OF OPERATION REQUIRED BY THE ZONE.

DURING UNOCCUPIED PERIODS AND SUBJECT TO APPROPRIATE OUTDOOR AIR LOCKOUTS, THE ASSOCIATED VVT ZONES TERMINAL LOAD DEMAND SHALL TRIGGER THE VVT AHU TO START AND OPERATE IN THE HEATING OR COOLING MODE UNTIL THE HEATING OR COOLING DEMAND HAS BEEN SATISFIED FOR ALL VVT ZONES.

WALL TEMPERATURE SENSOR MODULE SHALL ALLOW LIMITED LOCAL TEMPERATURE ADJUSTMENTS AND UNOCCUPIED BYPASS VIA THE WALL MODULE SET POINT ADJUSTMENT KNOB OR SLIDER AND BYPASS PUSH BUTTON. THE LOCAL WALL MODULE SET POINT ADJUSTMENT SHALL GIVE ROOM OCCUPANTS THE ABILITY TO VARY THE LOCAL HEATING AND COOLING OCCUPIED SET POINTS WITHIN THE OWNER DETERMINED ALLOWABLE OFFSET SUCH AS +/- 2°F LIMITS.

AIR HANDLERS 3, -4, & -5 (SINGLE-ZONE)

THE AHU CONTROLLER SHALL STAGE THE COMPRESSORS AND ELECTRIC HEAT AS NEEDED TO MAINTAIN SPACE TEMPERATURE

DEHUMIDIFICATION

THE CONTROLLER SHALL MONITOR SPACE HUMIDITY LEVELS. IF THE HUMIDITY RISES ABOVE 55% (ADJUSTABLE), THE CONTROLLER SHALL STAGE ON THE COMPRESSORS AND ALSO ENGAGE THE STAGES OF ELECTRIC HEAT TO SATISFY SPACE TEMPERATURE SETPOINT

SAFETY CONTROL

SMOKE DETECTORS: SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY/RETURN AIR DUCTS WHERE SHOWN ON DRAWINGS TO STOP FAN AND SIGNAL THE FIRE ALARM SYSTEM

CONDENSATE SWITCH: A CONDENSATE SWITCH MOUNTED IN THE DRAIN PAN OR P-TRAP SHALL DISABLE COOLING AND SIGNAL AN ALARM

AIR HANDLER (AHU-2) - (SINGLE-ZONE) VARIABLE VOLUME

THE SYSTEM IS AN AUTO CHANGEOVER, SINGLED ZONE VARIABLE VOLUME SYSTEM.

WHEN THE ZONE IS SATISFIED (IN EITHER HEAT OR COOL MODE), THE AHU CONTROLLER WILL TERMINATE OUTPUTS TO THE HVAC UNIT AND THE BLOWER OUTPUT WILL DE-ENERGIZE (UNLESS CONTROLLER IS CONFIGURED FOR CONSTANT FAN) AFTER A 3-MINUTE PURGE CYCLE. DURING THE PURGE CYCLE NO HEAT OR COOL CALLS ARE RECOGNIZED.

THE HVAC UNIT'S LEAVING AIR TEMPERATURE IS CONTINUOUSLY MONITORED AND COMPARED AGAINST CONFIGURABLE LOW AND HIGH LIMITS. WHEN THE LOW LIMIT IS EXCEEDED THE CONTROLLER WILL CEASE COOLING OPERATION TO PREVENT COIL FREEZE-UP AND PROTECT THE COMPRESSOR(S). WHEN THE HIGH LIMIT IS EXCEEDED THE CONTROLLER WILL CEASE HEATING OPERATION TO PROTECT THE UNIT'S HEAT EXCHANGER AND/OR COMPRESSOR(S). AFTER A 3-MINUTE PURGE CYCLE, THE CONTROLLER WILL ENSURE THAT THE LEAVING AIR TEMPERATURE DOES NOT EXCEED THE LOW OR HIGH LIMITS BEFORE RESUMING SYSTEM OPERATION.

FAN SPEED CONTROL

THE FAN SHALL RUN AT MINIMUM SPEED WHEN ONLY ONE COMPRESSOR IS RUNNING. THE FAN SPEED SHALL INCREASE WHEN THE SECOND COMPRESSOR IS RUNNING.

THE CONTROLLER SHALL NOT ALLOW THE LEAVING AIR TEMPERATURE TO GO BELOW THE LOW LIMIT WHILE COMPRESSORS ARE RUNNING. IF THE LEAVING AIR TEMPERATURE DROPS BELOW THE LOW LIMIT, THE VARIABLE SPEED DRIVE MINIMUM SPEED SHALL INCREASE TO KEEP THE LEAVING AIR ABOVE THE LOW LIMIT TO PREVENT COIL FREEZE-UP AND PROTECT THE COMPRESSOR(S). (DURING COMPRESSOR MINIMUM RUN TIME DELAYS)

DEHUMIDIFICATION (DURING COOLING MODE)

THE CONTROLLER SHALL MONITOR SPACE HUMIDITY LEVELS. IF THE HUMIDITY RISES ABOVE 55% (ADJUSTABLE) THE UNIT SHALL STAGE THE COMPRESSORS TO MEET COOLING DEMAND AS NORMAL. THE FAN SPEED SHALL MODULATE TO MAINTAIN LEAVING AIR TEMPERATURE AT 52°F (ADJUSTABLE). WHEN ONLY ONE COMPRESSOR IS RUNNING, THE VARIABLE SPEED DRIVE WILL SLOW DOWN. WHEN BOTH COMPRESSORS ARE RUNNING, THE VARIABLE SPEED DRIVE SHALL SPEED UP.

DEHUMIDIFICATION (DURING HEATING MODE)

THE CONTROLLER SHALL MONITOR SPACE HUMIDITY LEVELS. IF THE HUMIDITY RISES ABOVE 55% (ADJUSTABLE), THE CONTROLLER SHALL STAGE ON A COMPRESSOR AND ALSO ENGAGE THE STAGES OF ELECTRIC HEAT TO SATISFY HEATING DEMAND.

OUTSIDE AIR CONTROL

PROVIDE AIR FLOW MONITORING STATION IN THE OUTSIDE AIR DUCT TO MODULATE THE OUTSIDE AIR DAMPER TO MAINTAIN THE OUTSIDE AIR VOLUME AT A CONSTANT VOLUME REGARDLESS OF FAN SPEED OR FILTER LOADING. THE OUTSIDE AIR DAMPER SHALL BE OPEN DURING OCCUPIED MODE AND CLOSED DURING UNOCCUPIED MODE.

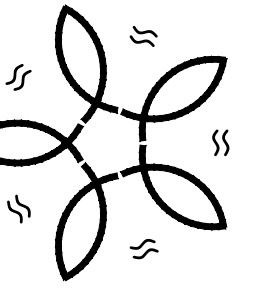
SAFETY CONTROL

SMOKE DETECTORS: SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY/RETURN AIR DUCTS WHERE SHOWN ON DRAWINGS TO STOP FAN AND SIGNAL THE FIRE ALARM SYSTEM.

CONDENSATE SWITCH: A CONDENSATE SWITCH MOUNTED IN THE DRAIN PAN OR P-TRAP SHALL DISABLE COOLING AND SIGNAL AN ALARM

Smith Mechanical
Consulting & Design

ALABAMA CERTIFICATE OF AUTHORIZATION: CA-3777-E
7150 CHARLANDA CT.
MOBILE, ALABAMA 36602
(251) 402-1364
ROGER J. SMITH, PE 24744
www.smithmechanicalconsulting.com



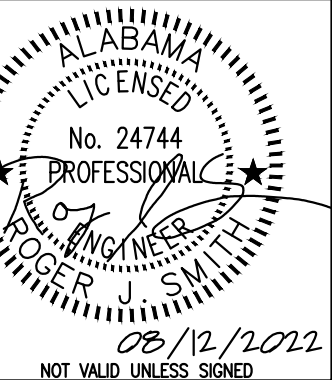
HVAC UPGRADES
FOR THE
ADMINISTRATION BUILDING
MOBILE, ALABAMA 36602

PROJECT NO: 19-053

REVISIONS:

NO.	DATE	DESCRIPTION

ISSUE DATE: 08-12-22



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SHEET TITLE:
HVAC CONTROLS

SHEET NUMBER:
M3.3

ALABAMA STATE PORT AUTHORITY **INSURANCE REQUIREMENTS FOR CONTRACT WORK**

INDEMNIFICATION

The Contractor shall assume all liability for and shall indemnify and save harmless the State of Alabama and the Alabama State Port Authority, doing business as Alabama State Docks (ASD), and its officers and employees from all damages and liability for injury to any person or persons, and injury to or destruction of property, including the loss of use thereof, by reason of an accident or occurrence arising from operations under the contract, whether such operations are performed by himself or by any subcontractor or by anyone directly or indirectly employed by either of them occurring on or about the premises, or the ways and means adjacent during the term of the contract, or any extension thereof, and shall also assume the liability for injury and/or damages to adjacent or neighboring property by reason of work done under the contract.

INSURANCE REQUIREMENTS

The Contractor shall not commence work under the contract until he has obtained all insurance required under the following paragraphs and until such insurance has been approved by ASD, nor shall the Contractor allow any subcontractor to commence work until all similar applicable insurance has been obtained by the subcontractor or the Contractor has provided coverage for the subcontractor. The Contractor shall provide, at his expense, insurance in accordance with the following:

General Requirements (applicable to all policies)

All policies of insurance must be written with companies acceptable to ASD. The Contractor shall furnish to ASD certificates of insurance, signed by the licensed agent, evidencing required coverages. ASD reserves the right to require certified copies of any and all policies. Each policy of insurance shall provide, either in body of the policy or by endorsement, that such policy cannot be substantially altered or cancelled without thirty (30) days' written notice to ASD and to the insured. **Except for Workers Compensation, said policies will identify Alabama State Port Authority, its officers, officials, agents, servants and employees as Primary and Non-contributory Additional Insureds in connection with work performed for, on behalf of, or on the property of ASD.**

Commercial General Liability

The Contractor shall take out and maintain during the life of the contract Commercial General Liability insurance, including Blanket Contractual and Completed Operations coverages, in an amount not less than \$2,000,000 for any one occurrence for bodily injury, including death, and property damage liability.

Business Automobile Liability

The Contractor shall take out and maintain during the life of the contract Business Automobile Liability insurance covering any auto in an amount not less than \$1,000,000 for any one occurrence for bodily injury, including death, and property damage liability.

Workers Compensation

The Contractor shall take out and maintain during the life of the contract Workers Compensation and Employers Liability insurance providing coverage under the Alabama Workers Compensation Act in an amount not less than that required by Alabama law.

Where applicable, Contractor shall take out and maintain during the life of the contract insurance providing coverage as required by Federal statute, including but not limited to U.S. Longshoremen and Harborworkers' Compensation Act (USL&H), Jones Act, and Railroad Federal Employers Liability Act (FELA).

State of _____

County of _____

CERTIFICATE OF COMPLIANCE WITH THE BEASON-HAMMON ALABAMA TAXPAYER AND CITIZEN PROTECTION ACT (ACT 2011-535, as amended by Act 2012-491)

DATE: _____

RE Contract/Grant/Incentive (describe by number or subject):

_____ by and between
_____ (Contractor/Grantee) and
_____ (State Agency, Department or Public Entity)

The undersigned hereby certifies to the State of Alabama as follows:

1. The undersigned holds the position of _____ with the Contractor/Grantee named above, and is authorized to provide representations set out in this Certificate as the official and binding act of that entity, and has knowledge of the provisions of THE BEASON-HAMMON ALABAMA TAXPAYER AND CITIZEN PROTECTION ACT (ACT 2011-535 of the Alabama Legislature, as amended by Act 2012-491) which is described herein as "the Act".
2. Using the following definitions from Section 3 of the Act, select and initial either (a) or (b), below, to describe the Contractor/Grantee's business structure.

BUSINESS ENTITY. Any person or group of persons employing one or more persons performing or engaging in any activity, enterprise, profession, or occupation for gain, benefit, advantage, or livelihood, whether for profit or not for profit. "Business entity" shall include, but not be limited to the following:

a. Self-employed individuals, business entities filing articles of incorporation, partnerships, limited partnerships, limited liability companies, foreign corporations, foreign limited partnerships, foreign limited liability companies authorized to transact business in this state, business trusts, and any business entity that registers with the Secretary of State.

b. Any business entity that possesses a business license, permit, certificate, approval, registration, charter, or similar form of authorization issued by the state, any business entity that is exempt by law from obtaining such a business license and any business entity that is operating unlawfully without a business license.

EMPLOYER. Any person, firm, corporation, partnership, joint stock association, agent, manager, representative, foreman, or other person having control or custody of any employment, place of employment, or of any employee, including any person or entity employing any person for hire within the State of Alabama, including a public employer. This term shall not include the occupant of a household contracting with another person to perform casual domestic labor within the household.

- ____ (a) The Contractor/Grantee is a business entity or employer as those terms are defined in Section 3 of the Act.
 ____ (b) The Contractor/Grantee is not a business entity or employer as those terms are defined in Section 3 of the Act.

3. As of the date of this Certificate, Contractor/Grantee does not knowingly employ an unauthorized alien within the State of Alabama and hereafter it will not knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama;
4. Contractor/Grantee is enrolled in E-Verify unless it is not eligible to enroll because of the rules of that program or other factors beyond its control.

Certified this _____ day of _____ 20 _____

Name of Contractor/Grantee/Recipient

By: _____

Its _____

The above Certification was signed in my presence by the person whose name appears above, on

this _____ day of _____ 20 _____.

WITNESS: _____

Printed Name of Witness