



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

JUDICIAL PURCHASING OFFICE
670 NEW LONDON AVENUE
CRANSTON, RHODE ISLAND 02920
TEL: 401-275-6527 FAX:401-275-6530

BID SOLICITATION INFORMATION

DATE: 8/2/16

RFP/LOI#: B2016007

Project Name: Garrahy - Replacement VAV Boxes Associated with AHU 8 Project

Opening Date, Time & Place: August 18, 2016 @ 10:00a.m.
Purchasing, 670 New London Avenue, Cranston, RI 02920

Pre-Bid/Proposal Conference: No Yes **August 11 @7:30am**

Location: Garrahy Judicial Complex, 1st floor lobby One Dorrance Plaza, Providence, RI 02903

Bonds Required:	Surety: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Bidder is required to provide a bid surety in the form of a bid bond or certified check payable to the State of Rhode Island in an amount not less than five percent (5%) of the bid price.
	Fidelity: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
	Performance: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	

The successful bidder will be required to furnish all insurance documentation as outlined in the attached Judicial Purchasing Rules & Regulations and General Terms & Conditions of Purchase for inspection at www.courts.ri.gov.

This solicitation is for the supply and installation of forty-eight (48) VAV boxes, two (2) circulating pumps and two (2) cabinet unit heaters that are associated with the area served by AHU # 8 at the Garrahy Judicial Complex.

Proposals must be mailed or hand-delivered in a sealed envelope marked with the above RFP/LOI# and Project Name to:
Rhode Island Supreme Court Purchasing
670 New London Avenue, Cranston RI, 02920
Purchasing, Room 1006

The Administrative Office of State Courts (“AOSC”) reserves the right to award on the basis of cost alone, accept or reject any or all bids, and to act in its best interest including, but not limited to, directly negotiating with any vendor who submits a proposal in response to this RFP and to award a contract for collection services based upon the results of those negotiations alone. Proposals found to be technically or substantially nonresponsive at any point in the evaluation process will be rejected and not considered further. The AOSC may, at its sole option, elect to require presentations(s) by bidders clearly in consideration for award.

Questions concerning this solicitation may be e-mailed to the Supreme Court Purchasing Office at purchasing@courts.ri.gov no later than August 12, 2016, at 10:00 AM. Please reference the RFP / LOI number on all correspondence. Answers to questions received, if any, will be posted on the internet as an addendum to this bid solicitation.

Carla Ciccone
Purchasing Agent
Rhode Island Supreme Court

THIS PAGE IS NOT A BIDDER CERTIFICATION FORM

This is a Request for Proposals, not an Invitation for Bid. Responses will be evaluated on the basis of the relative merits of the proposal, in addition to price.

INSTRUCTIONS AND NOTIFICATIONS TO BIDDERS

- Potential bidders are advised to review all sections of this Request carefully and to follow instructions completely as failure to make a complete submission as described herein may result in rejection of the proposal.
- All costs associated with developing or submitting a proposal in response to this Request, or to provide oral or written clarification of its content shall be borne by the bidder. The AOSC assumes no responsibility for these costs.
- Proposals are considered to be irrevocable for a period of not less than sixty (60) days following the opening date, and may not be withdrawn, except with the express written permission of the Judicial Purchasing Committee.
- All pricing submitted will be considered to be firm and fixed unless otherwise indicated herein.
- Proposals misdirected to other judicial locations or which are otherwise not received by the Supreme Court Purchasing Office by the time of opening for any cause, will be deemed late and will not be considered. For the purposes of this requirement, the official time and date shall be that of the time clock in the Judicial Purchasing Office.
- It is intended that an award pursuant to this Request will be made to a prime contractor, who will assume responsibility for all aspects of the work. Joint venture and cooperative proposals will not be considered, but subcontracts are permitted, provided that their use is clearly indicated in the bidder's proposal, and the subcontractor(s) proposed to be used are identified in the proposal.
- Bidders are advised that all materials submitted to the AOSC for consideration in response to this Request for Proposals shall be considered to be public records as defined in Title 38 Chapter 2 of the Rhode Island General Laws, without exception, and may be released for inspection immediately upon request once an award has been made.

BID / RFP SPECIFICATION SHEET

Pursuant to Article X (“Methods of Source Selection”) of the Judicial Purchasing Rules and Regulations, attached are the bid/ request for proposal specifications for the following project

Project Name: Garrahy - Replacement VAV Boxes Associated with AHU 8

Project Number: B2016007

Prepared by: Carla Ciccone – Purchasing Agent

All bids and/or proposal specifications are subject to and governed by the Judicial Purchasing Rules and Regulations and General Terms and Conditions of Purchase.

Contents:

- 1.0 Overview
- 2.0 Scope of Work
- 3.0 Proposal Content and Organization
- 4.0 Acknowledgment of Risk and Hold Harmless Agreement
- 5.0 Additional Insurance Requirements
- 6.0 Evaluation Criteria
- 7.0 Bid Form
- Appendix A BCI Authorization and Disclaimer Form
- Appendix B Mechanical and Electrical Drawings
- Appendix C Rhode Island Judiciary General Terms and Conditions of Purchase

1.0 Overview

The Administrative Office of State Courts (“AOSC”) is seeking a company (“Contractor” or “Vendor”) to provide and install forty-eight (48) new VAV boxes, two (2) new cabinet unit heaters and two (2) new circulating pumps at the Garrahy Judicial Complex. The new VAV boxes and new cabinet unit heaters will replace existing VAV boxes and existing cabinet unit heaters and the two (2) new pumps will be added to the HVAC system in addition to any other HVAC improvements located on the 4th and 5th floors at the Garrahy Judicial Complex located at One Dorrance Plaza, Providence, RI. This project will include the demolition and removal of the existing equipment as noted in the Specification and Drawings located in Appendix B.

2.0 Scope of Work

General Qualifications

The Contractor must comply with all applicable licensing and permitting requirements for this type of service. A copy of all required local, state and/or federal (if applicable) license(s) or permit(s) must be submitted with the RFP response.

Submission of a bid is acknowledgement that any and all work performed in relation to this bid will be performed by personnel holding the required valid local, state and/or federal license(s) and/or permit(s).

Any and all license and permit fees shall be paid by the Contractor.

If at any time, the Rhode Island Department of Labor, Division of Occupational Safety determines that the work performed by the Contractor does not comply with Rhode Island Law and/or applicable safety regulations, the Contractor shall correct the work to insure compliance at no additional cost to the AOSC.

Contractors must demonstrate they have experience installing the equipment requested.

Inspection Requirements

Bidders are responsible for inspecting the equipment and/or location, taking measurements when required, and familiarizing themselves with the totality of requirements associated with this project before submitting a bid.

Measurements provided with any bid are for reference purposes only and are not guaranteed to be completely accurate.

Safety

Safety measures shall be maintained by the Contractor while working on-site for the duration of this project. All Federal, State, OSHA and local safety codes must be followed at all times.

Pre-Bid Conference

There will be a mandatory pre-bidder’s conference to view the area where the equipment will be installed. The pre-bid conference will give bidders the opportunity to familiarize themselves with the work site and ask any questions they may have. The AOSC will not be obligated to schedule site visits after the pre-bid conference.

No claims for extra costs will be allowed due to lack of knowledge concerning verifiable conditions.

Time Frame

All work must be performed continuously until the project is complete. The Contractor must be prepared to devote adequate labor and materials to complete the project in a timely manner without delays.

Upon completion, the project will be inspected and accepted by AOSC staff, or an appropriate designee. The installation will be complete and ready to run by December 23, 2016.

Location

The location to be serviced under this contract:

Garrahy Judicial Complex
One Dorrance Plaza
Providence, RI 02903

Project Plan

A Project Plan must be submitted along with the Bid Form at time of bid submission.

The Project Plan must outline the steps the bidder will take to accomplish this project and must reflect how the vendor will implement the following plan as well as a completion date.

All outside vendors will have a clear and distinct means of identifying them as the workers associated with the project, preferably fluorescent shirts with their respective company logo on it.

Demolition

This project includes the demolition and removal of existing VAV boxes, ductwork and cabinet unit heaters and any other associated equipment as noted in the Specifications and Drawings in Appendix B. All demolition must be performed in a safe manner. All debris must be disposed of offsite and is the sole responsibility of the Contractor.

The Contractor shall leave all work areas clean and free of debris at the end of each day of work. AOSC personnel will be on hand to spot check these areas.

Installation

General Requirements

Throughout this project the Contractor will maintain a clean, safe and acceptable environment. The Contractor will be responsible for removing and properly disposing of all debris from the demolition and construction areas off site on a daily basis.

During the construction timeline, the Courts will be in regular operation. No aspect of the Courts operations can be impeded during the process, unless written notification has been given by the AOSC. A clean environment must be maintained at all time during construction.

During this project the Contractor must work with representatives from the AOSC's Facilities and Operations Department to ensure that all building codes and RFP requirements are being met. This individual will be named at time of award.

Fire Safety

After the award but prior to the start of the physical project the approved vendor will meet with the AOSC's Fire Safety representative to assure adherence to all policies

Smoke Detectors

It will be the responsibility of the Mechanical Contractor to eliminate any false or real alarms due to smoke detection.

Hot Work Permits

Hot Work Permits are required to be filled out prior to the shift and at the end of the shift. These permits are required for any work producing sparks, torches, soldering etc. **All hot work will be required to stop one (1) hour prior to the end of that shift with a dedicated fire watch with the appropriate equipment for each area of work.**

Work Times

During the project the schedule for work is between 4:30pm and 12:30am Monday through Friday with allowances made for extenuating circumstances. Any deviation from these working hours as well as any and all deliveries and/or removal of materials outside of these hours must be coordinated with the AOSC's Facilities and Operations designated contact person. This person will be named at time of award.

Charges

Charges for parking, travel, mileage, portal to portal, and other miscellaneous charges will not be covered under the contract.

Waste Removal

All waste oil (or any other type of contaminants) generated during this installation must be removed and disposed of offsite. The disposal must be in compliance with all Municipal, State and Federal laws and regulations. All costs will be the responsibility of the contractor.

Warranty

The contractor must offer a warranty of one (1) year, covering all maintenance and repairs commencing of the date of acceptance.

The warranty must include 24 hour / 7 day call back and must include monthly inspections, examinations and reports.

Security

During this contract, security measures will be in place at all court locations. The Vendor, its officers, agents, servants and employees shall comply with all security measures in place at each courthouse location, including processing through metal detectors, background checks, and signing the vendor log book at each courthouse upon entry. It is the Vendor's responsibility to inquire with the AOSC's Director of Security as to what security measures apply to the services to be provided under a

contract awarded pursuant to this RFP and to advise its officers, agents, servants and employees accordingly. There will be no exceptions.

Upon award the Vendor shall provide the AOSC's Director of Security with complete, notarized BCI Authorization and Disclaimer forms (Appendix A) for all of its officers, agents, servants and employees who may provide services pursuant to this RFP ("Personnel"). The forms must be accompanied by copies of a valid driver's license and any other personal identifying information requested by the AOSC, such as date of birth and/or social security number. All Personnel must be cleared by the AOSC Security Personnel before performing any services under a contract awarded pursuant to this RFP. Personnel who are not on the list shall not, under any circumstances, be sent to perform such services. It will be the responsibility of the Vendor to immediately inform the AOSC's Director of Security of any personnel changes.

All Courthouse deliveries and/or removal of materials will be during the hours of 4:30 pm and 12:30 am Monday through Friday. If there is a need to deliver materials outside the designated times, these deliveries must be coordinated with the Facilities and Operations assigned project manager for this project. This individual will be named at time of award. Packages will be inspected upon delivery.

No parking will be provided to the Contractor by the AOSC except limited temporary parking for the delivery and pick up of supplies.

Scope of Work

Refer to Drawings in Appendix B.

3.0 Proposal Content and Organization

Pricing must include all costs as specified in Section 2.0 – Scope of Work. Pricing for this proposal must be indicated on the Bid Form in Section 8.0 and **must be submitted in a separate, sealed envelope marked with the words "Pricing Proposal"**. Only one pricing proposal needs to be submitted. All Bid Forms must be signed.

Vendors must include on the Bid Form a list of at least four (4) references with whom they have contracted to do similar work by including the company name, telephone number, and a contact person.

Respondents must also include an overview of their company's experience including, but not limited to, the number of years the company has been providing these services, the size of the company (including the number of employees and locations), a description of past work undertaken that is similar to what is being requested in this RFP, and certifications that show a knowledge of equipment that would be serviced under this contract.

Four (4) copies of your proposal must be submitted at the time of submission. Proposals must be in the following format:

Bid Form (minus the pricing proposal)

Company overview

License/permits required

Submission of a proposal is acknowledgement and acceptance of the Judicial Purchasing Rules and Regulations and General Terms and Conditions of Purchase.

4.0 Acknowledgment of Risk and Hold Harmless Agreement

In addition to the indemnity provisions in the Judicial Terms and Conditions of Purchase, the Vendor, its officers, agents, servants, employees, parents, subsidiaries, partners, officers, directors, attorneys, insurers, and/or affiliates (Releasors) agree to release, waive, discharge and covenant not to sue the AOSC, its officers, agents, servants or employees (Releasees) from any and all liability, claims, cross-claims, rights in law or in equity, agreements, promises demands, actions and causes of action whatsoever arising out of or related to any loss, damage, expenses (including without limitation, all legal fees, expenses, interest and penalties) or injury (including death), of any type, kind or nature whatsoever, whether based in contract, tort, warranty, or other legal, statutory, or equitable theory of recovery, which relate to or arise out of a contract awarded pursuant to this RFP and the Releasors use of or presence in and/or on judicial property. The Releasors agree to defend, indemnify and hold harmless the Releasees from (a) any and all claims, loss, liability, damages or costs by any person, firm, corporation or other entity claiming by, through or under Releasors in any capacity whatsoever, including all subrogation claims and/or claims for reimbursement, including any court costs and attorneys fees, that may incur as a result of a contract awarded pursuant to this RFP or due to Releasors use of or presence in and on judicial property; and (b) any and all legal actions, including third-party actions, cross-actions, and/or claims for contribution and/or indemnity with respect to any claims by any other persons, entities, parties, which relate to or arise out of a contract awarded pursuant to this RFP or Releasors use of or presence in and on judicial property.

The Releasors acknowledge the risks that may be involved and hazards connected with use of or presence in and on judicial property but elect to provide services under any contract with the AOSC with full knowledge of such risks. Releasors also acknowledge that any loss, damage, and/or injury sustained by Releasors is not covered by Releasees insurance. Releasors agree to become fully aware of any safety risks involved with the performance of services under any contract with the AOSC and any safety precautions that need to be followed and agree to take all such precautions.

The duty to indemnify and/or hold harmless the AOSC shall not be limited by the insurance required under the Judicial Terms and Conditions of Purchase.

5.0 Additional Insurance Requirements

In addition to the insurance provisions in the Judicial Terms and Conditions of Purchase, the liability insurance coverage, except Professional Liability, Errors and Omissions or Workers' Compensation insurance required for performance of a contract with the AOSC shall include the AOSC, its divisions, officers and employees as Additional Insureds but only with respect to the Vendor's activities under the contract. The insurance required through a policy or endorsement shall include:

- a. a Waiver of Subrogation waiving any right to recovery the insurance company may have against the AOSC; and
- b. a provision that the Vendor's insurance coverage shall be primary with respect to any insurance, self insurance or self retention maintained by the State on behalf of the AOSC and that any insurance, self insurance or self retention maintained

by the State on behalf of the AOSC shall be in excess of the Vendor's insurance and shall not contribute.

There shall be no cancellation, material change, potential exhaustion of aggregate limits or non-renewal without thirty (30) days written notice from the Vendor or its insurer(s) to the Judiciary's Purchasing Agent. Any failure to comply with the reporting provision of this clause shall be grounds for immediate termination of the contract with the AOSC.

Insurance coverage required under the contract shall be obtained from insurance companies acceptable to the AOSC. The Vendor shall pay for all deductibles, self insured retentions and/or self insurance included hereunder.

The Judiciary's Purchasing Agent reserves the right to consider and accept alternative forms and plans of insurance or to require additional or more extensive coverage for any individual requirement.

6.0 Evaluation Criteria

The AOSC reserves the right to award on the basis of cost alone, accept or reject any or all proposals, and to otherwise act in its best interest including, but not limited to, directly negotiating with any Supplier who submits a proposal in response to this RFP and to award a contract for these services based upon the results of those negotiations alone.

Proposals found to be technically or substantially non-responsive at any point in the evaluation process will be rejected and not considered further. The AOSC may elect to require presentations(s) by vendors in consideration for award.

Proposals will be evaluated in two (2) phases:

1. The first phase is an initial review to determine if the proposal, as submitted, is complete. To be complete, a proposal must meet all the requirements of this RFP.
2. The second phase is an in-depth analysis and review based on criteria below and their associated weights.

<u>Evaluation Criteria</u>	<u>Importance</u>
Ability to Meet Specifications	30%
Price	50%
References	20%

7.0 Bid form

Project:

Date: _____

Submitted By: _____

(Include Name, Address and Telephone No.) _____

Will any of the work spelled out in this bid be outsourced? ___Yes ___ No

If so, please explain below:

General Information

Have you or your firm been subject to suspension, debarment or criminal conviction by the AOSC, the Judiciary, the State of Rhode Island, or any other jurisdiction?

Yes: _____ No: _____

Has the AOSC, the Judiciary and/or the State of Rhode Island ever terminated contracts with your firm for cause?

Yes: _____ No: _____

Has your firm ever withdrawn from a contract with the AOSC, the Judiciary and/or the State of Rhode Island during its performance?

Yes: _____ No: _____

Have you or your firm been involved in litigation against the AOSC, the Judiciary and/or the State of Rhode Island.

Yes: _____ No: _____

If you answered yes to any of the foregoing, please explain the circumstances below. If you or your firm has been involved in litigation against the AOSC, the Judiciary and/or the State of Rhode Island, please include the case caption, case number and status. (If more space is needed, please attach separate sheet and submit with the bid.)

Is your company bonded? Yes ____ No ____

Please describe the nature and extent of all insurance coverage:

Addenda

The following Addenda have been received. The noted modifications to the Bidding Documents have been considered and all costs are included in the Bid Sum.

Addendum #1, Dated: _____

Addendum #2, Dated: _____

Addendum #3, Dated: _____

References

Please list at least four (4) companies with whom you have contracted to provide similar services:

<p>Reference # 1</p> <p>Company Name: _____</p> <p>Contact Person: _____ Phone #: _____</p> <p>Contract Dates: _____ to _____</p>
<p>Reference # 2</p> <p>Company Name: _____</p> <p>Contact Person: _____ Phone #: _____</p> <p>Contract Dates: _____ to _____</p>
<p>Reference # 3</p> <p>Company Name: _____</p> <p>Contact Person: _____ Phone #: _____</p> <p>Contract Dates: _____ to _____</p>
<p>Reference # 4</p> <p>Company Name: _____</p> <p>Contact Person: _____ Phone #: _____</p> <p>Contract Dates: _____ to _____</p>

Did you remember to:



Initial Here

1. Place the pricing proposal in a separate sealed envelope marked "Pricing Proposal"? _____
2. Prepare four (4) separate copies of your bid response(not including the Pricing Proposal) for submission? _____

Pricing

Only one pricing proposal in a separate, sealed envelope is required.

Having examined Bid#2016007, we propose to enter into a contract with the AOSC to supply the services as per the bid specifications for the costs listed below:

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Written

Bid Form Signature

(Bidder Name – Please Print)

By: _____

(Signature)

Title: _____

Company: _____

Appendix A



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ADMINISTRATIVE OFFICE OF STATE COURTS**

250 BENEFIT STREET
PROVIDENCE, RHODE ISLAND 02903
TEL: 401-222-6700
FAX: 401-222-4740

CRIMINAL BACKGROUND INVESTIGATION AUTHORIZATION, RELEASE AND DISCLAIMER

I, _____, hereby direct and authorize the Bureau of Criminal Identification of the Department of Attorney General for the State of Rhode Island to make available to the Rhode Island Administrative Office of State Courts any criminal record that the Bureau of Criminal Identification has on file in reference to me, and I further consent to the authentication of my identity through fingerprinting, or some other process that may be required to confirm my identity.

I understand that an investigative report may be generated on me that may include information as to my criminal history records from any criminal justice agency in any or all federal, state, city and county jurisdictions, including any state Department of Motor Vehicle/Drivers' License Records, traffic citations and/or registrations.

I hereby waive and release any and all manner of actions, cause of actions, and demands of every kind, nature and description, arising from any release of criminal records and requests therefrom, whatsoever against the State of Rhode Island, the Rhode Island Administrative Office of State Courts, the Bureau of Criminal Identification, the Attorney General, and the employees of the Attorney General's Office, in both law and equity which I may now have or that may arise in the future.

Employee Name (Please Print)

Employee Signature

Maiden Name (If Applicable)

Date

Date of Birth

Employer/Company Name (If applicable)

Place of Birth

Social Security Number

Sworn to before me in the City/Town of _____, State of Rhode Island, this _____ day of _____, 20_____.

Commission expires on _____.

Notary Public (Print Name)

Notary Public (Signature)

Project Name: _____

Project # _____ Date of Bid/RFP Specifications _____

Copy of valid photo identification with date of birth must be attached to all BCI Authorization Forms. BCI 08/08

Appendix B

Drawings covering the following is supplied to each bidder on CD for :

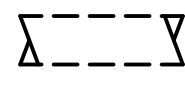
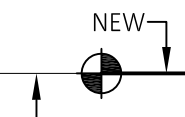

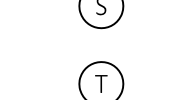
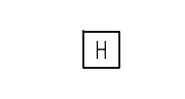

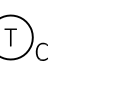
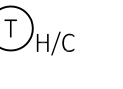






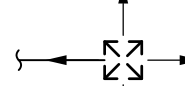
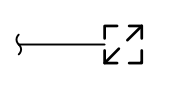
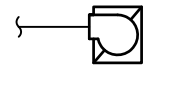
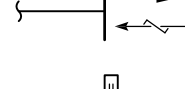



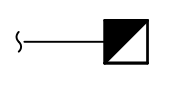
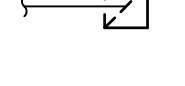


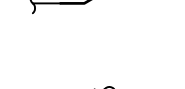



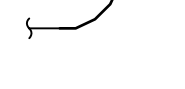




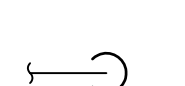
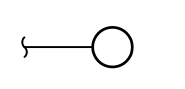
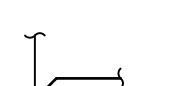

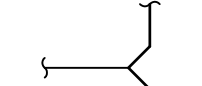



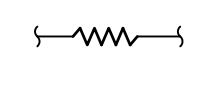
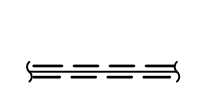
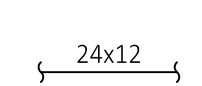
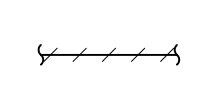

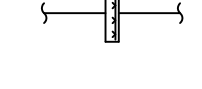
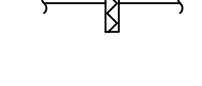
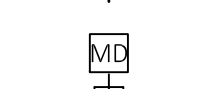







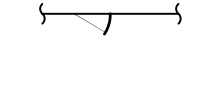







Mechanical Demolition

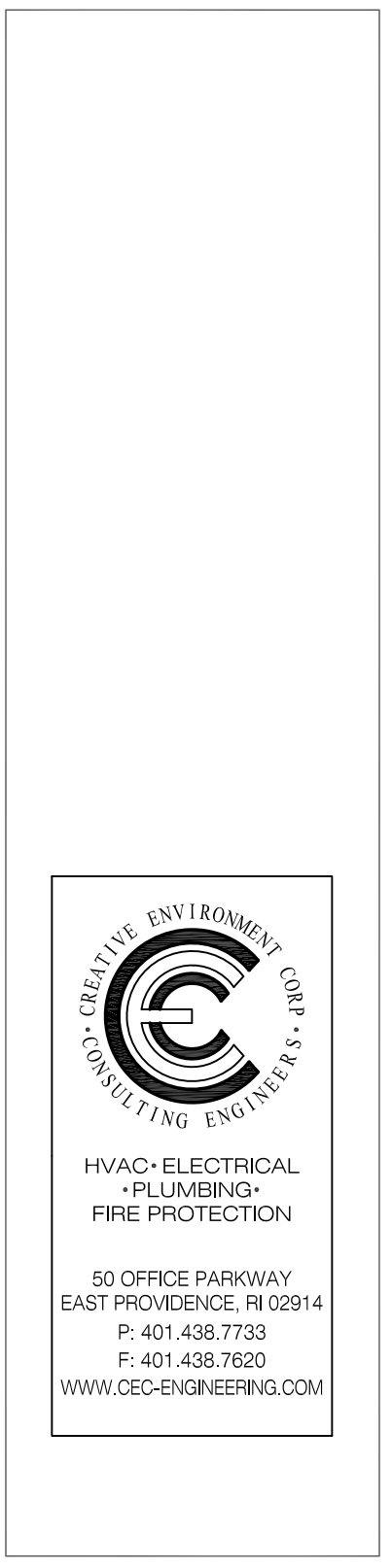
Mechanical New Work

VAV Unit Installation

Coil Piping Detail

MECHANICAL SYMBOL LEGEND
ALL ITEMS SHOWN ARE NOT NECESSARILY USED ON THIS PROJECT

GENERAL			PIPING			ABBREVIATIONS			PROJECT GENERAL NOTES					
 EQUIPMENT TO BE REMOVED  POINT TO CONNECT NEW TO EXISTING. VERIFY SIZE AND LOCATION IN FIELD PRIOR TO INSTALLATION.  SWITCH  TEMPERATURE SENSOR  WALL THERMOSTAT  WALL MOUNTED HUMIDISTAT			 COOLING THERMOSTAT (REVERSE ACTING)  HEATING/COOLING THERMOSTAT  THERMOSTAT GUARD w/ KEY LOCK BY HONEYWELL MODEL VERSAGUARD  DUCT MOUNTED STATIC PRESSURE SENSOR  DUCT MOUNTED SMOKE DETECTOR  DUCT MOUNTED HUMIDITY SENSOR  DUCT MOUNTED TEMPERATURE SENSOR  DUCT MOUNTED DEW POINT SENSOR			<p>ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THIS PROJECT</p> <p>HEATING HOT WATER SUPPLY HEATING HOT WATER RETURN CHILLED WATER SUPPLY CHILLED WATER RETURN DUAL TEMP SUPPLY (HEATING/CHILLED WATER) DUAL TEMP RETURN (HEATING/CHILLED WATER) HIGH PRESSURE STEAM (100psig) LOW PRESSURE STEAM (15psig) STEAM CONDENSATE RETURN (GRAVITY) PUMPED CONDENSATE STEAM RETURN LIQUID REFRIGERANT LINES SUCTION REFRIGERANT LINES CONDENSATE DRAIN COOLING TOWER WATER SUPPLY COOLING TOWER WATER RETURN PIPE TURNING DOWN PIPE TURNING UP TEE OFF TOP TEE OFF BOTTOM DROP AND RUN DROP AND TURN TEE UP TEE DOWN VALVE IN RISER PIPE CAP UNION (DIELECTRIC TYPE ON DISSIMILAR METALS) FLANGED (DIELECTRIC TYPE ON DISSIMILAR METALS) BALL VALVE GATE VALVE GLOBE VALVE DIAPHRAGM VALVE OS-Y GATE VALVE 3-WAY VALVE 4-WAY VALVE CHECK VALVE (SWING TYPE) CHECK VALVE w/ BALL DRIP PRESSURE REDUCING VALVE PLUG VALVE CIRCUIT SETTER w/ GAGE PORT MULTI PURPOSE VALVE AUTOMATIC BALANCING VALVE PUMP STRAINER w/ BLOW DOWN (INLINE) PIPE DRAIN w/ BALL VALVE & CAP EPDM FLEXIBLE CONNECTION EPDM FLEXIBLE CONNECTION PITCH UP/DN. IN DIRECTION OF FLOW F&T STEAM TRAP ANCHOR PIPE GUIDE WALL SLEEVE FLOW SWITCH FLOW RATE METER (IN GPM) FLOW SENSOR TEMPERATURE SENSOR SAFETY RELIEF VALVE PIPE TO FLOOR DRAIN MANUAL NON-RISING MANUAL LEVER QUICK OPEN LEVER PNEUMATIC ACTUATOR ELECTRIC ACTUATOR ELECTRIC ACTUATOR THERMOMETER w/ STOP PRESSURE GAGE w/ STOP AUTO. AIR VENT</p>			<p>ALL ABBREVIATIONS SHOWN ARE NOT NECESSARILY USED ON THIS PROJECT</p> <p>ABOVE FINISHED FLOOR AIR CONDITIONING UNIT ACCESS DOOR ABOVE FINISHED FLOOR AIR FILTER AIR HANDLING UNIT ACCESS PANEL ARCHITECT AUTOMATIC TEMPERATURE CONTROL AIR SEPARATOR AIR VENT BASEBOARD BAROMETRIC DAMPER (COUNTER BALANCED) BACKDRAFT DAMPER BRAKE HORSEPOWER BUILDING BOTTOM OF DUCT BRITISH THERMAL UNITS BTU PER HOUR BALL VALVE BOILER CHILLER BOILER COOLING COIL CEILING EXHAUST FAN CUBIT FEET PER MINUTE CEILING HEATER CHILLER CONDENSATE PUMP CONTROL PANEL CLEAN OUT CARBON DIOXIDE CENTER OF PIPE CONDENSATE RECEIVER COOLING TOWER CABINET UNIT HEATER COOLING TOWER WATER PUMP CHILLED WATER PUMP CONVECTOR CONDENSING UNIT DIRECT DIGITAL CONTROL DRY BULB DIAMETER DIFFUSER DOWN DIRECT EXPANSION DEW POINT DRAWING DOMESTIC WATER HEATER EXCHANGER EXISTING ENTERING AIR TEMPERATURE ELECTRIC BASEBOARD EFFICIENCY EXHAUST FAN ELECTRIC HUMIDIFIER ELECTRICAL ELEVATION ENERGY RECOVERY UNIT EXTERNAL STATIC PRESSURE EXPANSION TANK ELECTRIC UNIT HEATER ENTERING WATER TEMPERATURE EXPANSION DEGREES FAHRENHEIT FRESH AIR FREE AREA FLAT BOTTOM TRANSIENT FAN COIL UNIT FIRE DAMPER FULL LOAD AMPS FLEXIBLE FLOW MEASURING STATION FINS PER INCH FEET PER MINUTE FULL OIL SUPPLY FULL OIL RETURN FINNED TUBE RADIATION FLAT TOP TRANSITION FEET GALLONS GALLONIZED GENERAL CONTRACTOR GALLONS PER MINUTE GATE VALVE HEATING COIL HORSEPOWER HEAT PUMP</p>			<p>HEATING, VENTILATION, AND AIR CONDITIONING HEATING & VENTILATING UNIT HEATING WATER HEAT EXCHANGER HEAT EXCHANGER HOT WATER PUMP HOT WATER HOT WATER RETURN HOT WATER SUPPLY Hertz INCHES INTAKE ROOF VENT KITCHEN EXHAUST FAN KILOWATT LEAVING AIR TEMPERATURE LINEAR DIFFUSER LINEAR DIFFUSER LINEAR FEET LOUVERED PENTHOUSE LOW PRESSURE STEAM LOCKED ROTOR AMPS LEAVING WATER TEMPERATURE MAKE-UP AIR UNIT THOUSANDS OF BTU'S PER HOUR MINIMUM CIRCUIT AMPS MOTORIZED DAMPER MECHANICAL MAXIMUM OVER CURRENT PROTECTION MOUNTED NOT APPLICABLE NORMALLY CLOSED NONE NOT IN CONTRACT NORMALLY OPEN NOT TO SCALE OUTSIDE AIR OPPOSED BLADE DAMPER OUTSIDE DIAMETER PUMP PRESSURE DROP POUNDS PER SQUARE INCH GA. PANEL RADIATOR PRESSURE REDUCING VALVE PACKAGED TERMINAL AIR CONDITIONER RETURN RETURN AIR ROOF EXHAUST FAN REQUIRED RETURN GRILLE RELATIVE HUMIDITY REHEAT COIL RATED LOAD AMPS ROOM REVOLUTIONS PER MINUTE ROOF TOP UNIT REMOTE CONTROLLED VOLUME DAMPER SUPPLY SUPPLY AIR SOUND ATTENUATOR SUPPLY AIR TEMPERATURE SATURATED CONDENSING TEMPERATURE SMOKE DAMPER SQUARE FEET STEAM HUMIDIFIER SMOKE/FIRE DAMPER STATIC PRESSURE SQUARE SATURATED SUCTION TEMPERATURE STEEL THERMOSTAT TO BE DEMOLISHED TERMINAL UNIT TYPICAL UNDERCUT DOOR 3/4" (MIN.) UNIT HEATER UNIT VENTILATOR VARIABLE AIR VOLUME VOLUME DAMPER VARIABLE FREQUENCY DRIVE WITH WITHOUT WET BULB TEMPERATURE WATER GAUGE WIRE MESH SCREEN ZONE VALVE WATER HEATER</p>		
<h3>DUCTWORK</h3>  SUPPLY CEILING DIFFUSER THROW PATTERN  RETURN/EXHAUST CEILING REGISTER  CEILING EXHAUST FAN WITH FLEXIBLE CONNECTION  SIDE WALL GRILLE/REGISTER  LINEAR DIFFUSER  FLOOR GRILLE/REGISTER  SUPPLY DUCT UP  SUPPLY DUCT DOWN  RETURN/EXHAUST DUCT UP  RETURN/EXHAUST DUCT DN  MITERED ELBOWS 90° w/ VANES  MITERED ELBOWS 45° w/ VANES  30° PIECE CUT ELBOW  CUT ELBOW 45° 3 PIECE  CUT ELBOW 60° 3 PIECE  CUT ELBOW 90° 3 PIECE  CUT ELBOW 90° 5 PIECE  ROUND ELBOWS 90° LONG RADIUS (R/D=1.5)  ROUND ELBOWS 90° SHORT RADIUS (R/D=1.25)  ROUND ELBOWS 45° LONG RADIUS  ROUND ELBOWS 45° SHORT RADIUS  ROUND DUCT DROP  ROUND DUCT RISER  TAKE-OFF W/ BRANCH DAMPER (REFER TO DETAIL FOR TAKE-OFF TYPE)  BULLHEAD SPLIT SUPPLY  BULLHEAD CONVERGE RETURN/EXHAUST  HORIZONTAL OFFSET  FLEXIBLE CONNECTION (6" NEOPRENE)  LINED DUCT - SIZE INDICATES INSIDE DIMENSION  RECTANGULAR DUCT - FIRST FIGURE IS SIDE SHOWN  SPIRAL DUCTWORK  FLEXIBLE DUCTWORK  DUCT HUMIDIFIER  DUCT FILTER BOX  VOLUME DAMPER (OPPOSED BLADE TYPE)  MOTORIZED CONTROL DAMPER  BACK DRAFT DAMPER  DYNAMIC FIRE DAMPER HORIZONTAL  DYNAMIC FIRE DAMPER VERTICAL  OUTSIDE AIR MEASUREMENT STATION  DUCT CAP  WELDED DUCT  EXISTING DUCT TO REMAIN (SHOWN LIGHT)  EXISTING DUCT TO BE REMOVED (SHOWN DARK)  ACCESS PANEL ON BOTTOM OF DUCT  ACCESS PANEL ON SIDE OF DUCT  TRANSITION - ECCENTRIC  TRANSITION - CONCENTRIC  RECTANGULAR TO ROUND TRANSITION  EXHAUST/RETURN/INTAKE FLOW ARROW  SUPPLY AIR FLOW DIRECTION														



MECHANICAL SYSTEM
UPGRADES (4TH & 5TH FLOORS)
J. JOSEPH GARRAHAN
JUDICIAL COMPLEX
ONE DORRANCE PLAZA
PROVIDENCE, RI 02903

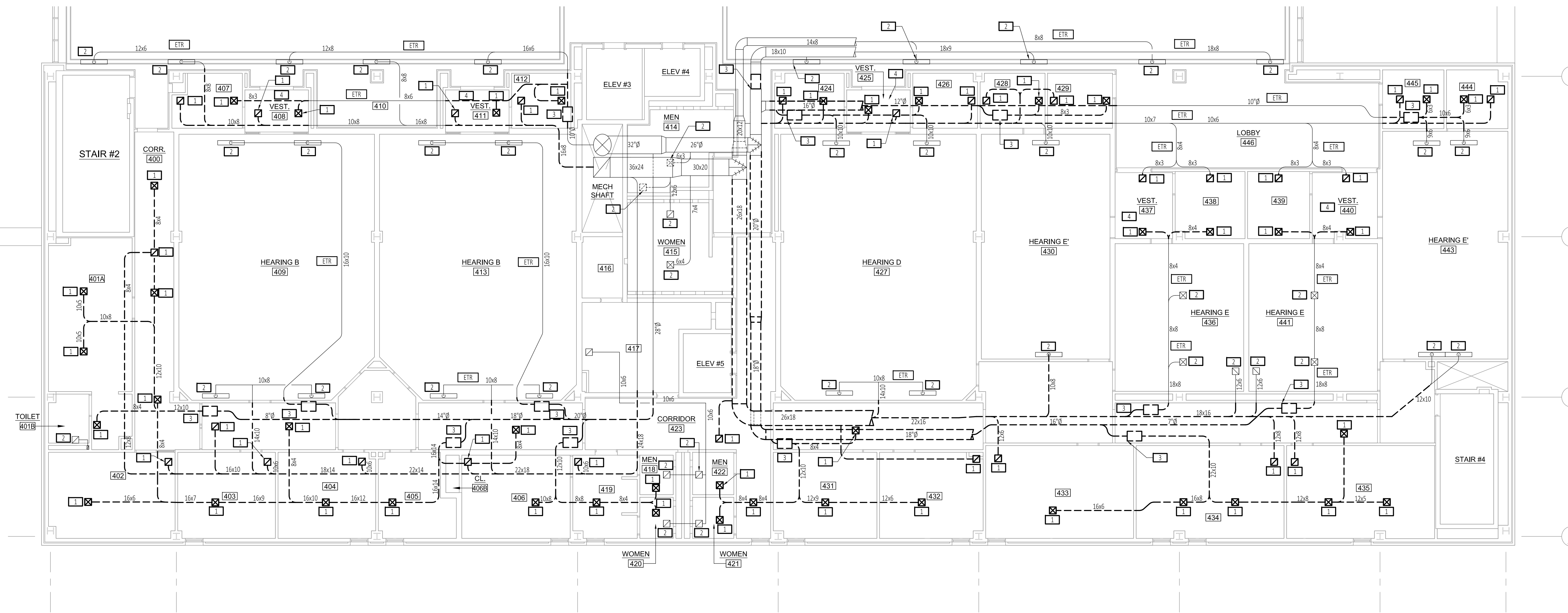
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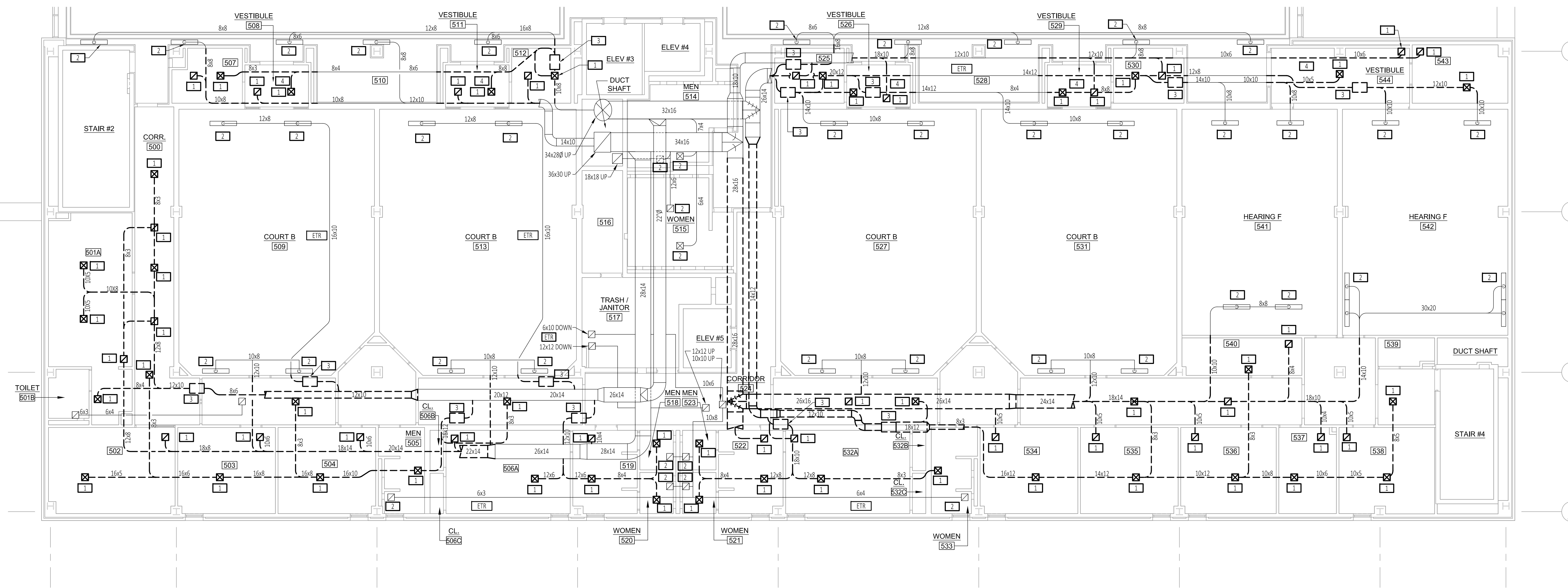
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HVAC LEGEND

Project No: 20160022
Drawn By: KES
Checked By: KLI
Scale: AS NOTED
Date: 08.02.16

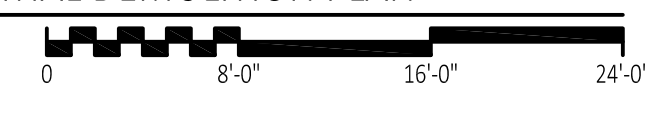
Drawing No:
M-0
CEC # 20160022



1 FOURTH FLOOR PARTIAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



2 FIFTH FLOOR PARTIAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



- SHEET KEYED NOTES**
- ALL LINE WORK SHOWN LIGHT IS EXISTING TO REMAIN.
ALL LINE WORK SHOWN DARK AND DASHED IS TO BE REMOVED AND DISCARDED.
- ETR EXISTING TO REMAIN
 - 1 REMOVE EXISTING REGISTER, GRILLE, OR DIFFUSER. REMOVE ASSOCIATED DUCTWORK BACK TO POINT INDICATED, AIR BALANCING DEVICES, HANGERS, SUPPORTS, INSULATION AND ALL OTHER APPURTENANCES COMPLETELY.
 - 2 EXISTING REGISTER, GRILLE OR DIFFUSER TO REMAIN. ASSOCIATED DUCTWORK TO REMAIN TO POINT INDICATED. CONTRACTOR SHALL CLEAN EXISTING DUCTWORK AND GRILLS.
 - 3 EXISTING TERMINAL BOX TO BE REMOVED COMPLETELY. REMOVE ALL ASSOCIATED CONTROL DEVICES AND WIRING. REMOVE ASSOCIATED HANGERS AND SUPPORTS. REMOVE ASSOCIATED PIPING BACK TO FLOOR PENETRATION AND CAP WATER TIGHT. REMOVE ASSOCIATED CONTROLS AND PNEUMATIC TUBING BACK TO MAIN AT FLOOR AND CAP AIR TIGHT.
 - 4 EXISTING CEILING TO BE REPLACED WITH ACOUSTICAL CEILING. COORDINATE WITH GENERAL CONTRACTOR.



Project:
MECHANICAL SYSTEM
UPGRADES (4TH & 5TH FLOORS)
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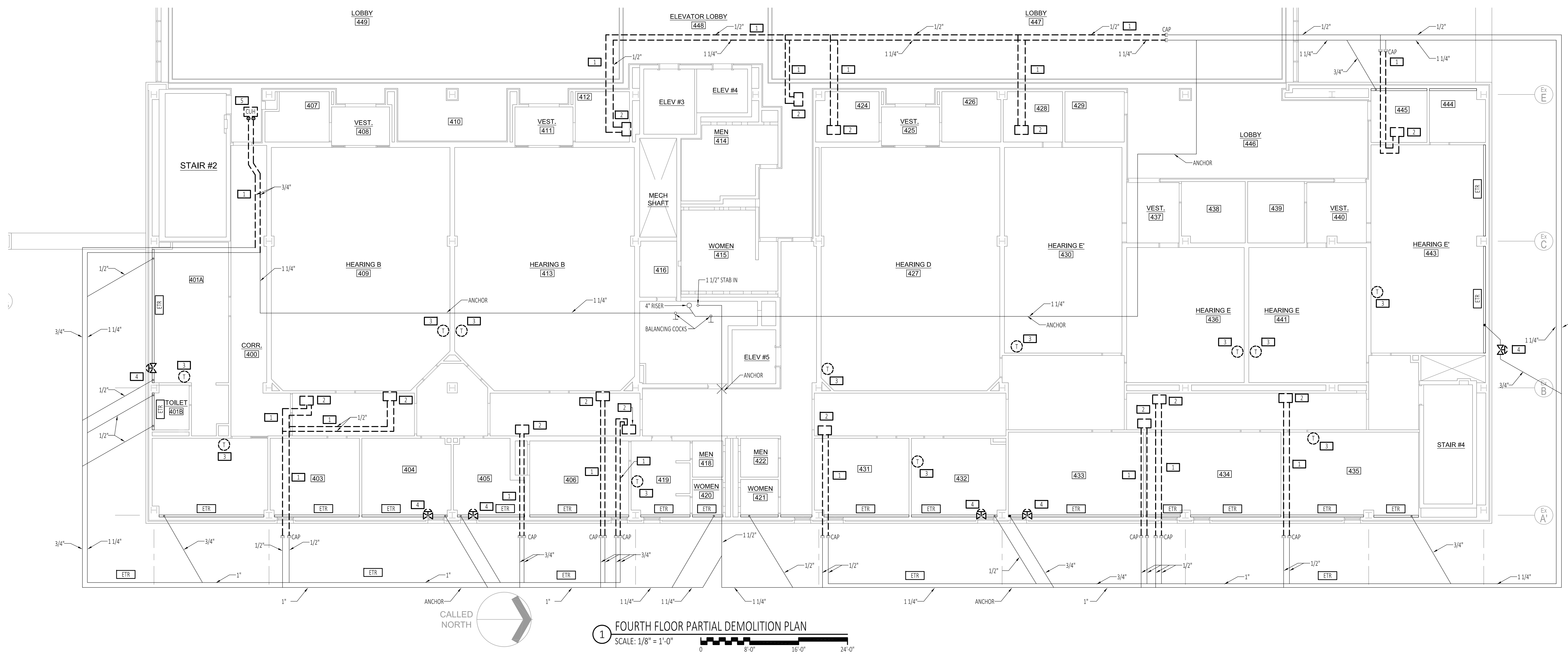
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Sheet Title:
FOURTH & FIFTH
FLOOR PARTIAL
PLAN-
DEMOLITION

Project No: 20160022
Drawn By: KES
Checked By: KLI
Scale: AS NOTED
Date: 08.02.16

Drawing No:
MD-1
CEC # 20160022



DEMOLITION KEY NOTES

(THIS DRAWING ONLY)

- * ALL LINework SHOWN DARK AND DASHED TO BE REMOVED
- * ALL LINework SHOWN LIGHT TO REMAIN AS INSTALLED

ETR	EXISTING TO REMAIN
1	REMOVE AND DISCARD EXISTING PIPING, VALVES, HANGERS, INSULATION AND ALL RELATED APPURTENANCES TO POINT INDICATED.
2	REMOVE AND DISCARD EXISTING PNEUMATIC VAV BOXES AND ASSOCIATED APPURTENANCES COMPLETELY. REMOVE DUCT, PIPE, PNEUMATIC CONTROL CONNECTIONS AS REQUIRED.
3	REMOVE AND DISCARD EXISTING PNEUMATIC THERMOSTATS AND REMOVED ALL CAP PNEUMATIC TUBING BACK TO MAIN AT FLOOR AND CAP AIRTIGHT.
4	REMOVE AND DISCARD EXISTING PNEUMATIC CONTROL VALVE AND REFACE W/ NEW. REMOVE ALL PNEUMATIC TUBING BACK TO MAIN AT FLOOR AND CAP AIRTIGHT. REFER TO DETAIL 4 ON DRAWING M-3 FOR NEW WORK.
5	REMOVE AND DISCARD EXISTING CABINET UNIT HEATER AND ASSOCIATED APPURTENANCES COMPLETELY ASSOCIATED PIPING AND CONTROLS. ELECTRICAL DISCONNECT MEANS SHALL BE REMOVED. EXISTING POWER CIRCUIT AND WIRING SHALL REMAIN FOR RE-USE. REFER TO NEW CONSTRUCTION PLAN FOR ADDITIONAL INFORMATION.

GREEN ENVIRONMENT CORP.
CONSULTING ENGINEERS, INC.

HVAC-ELECTRICAL
PLUMBING
FIRE PROTECTION

50 OFFICE PARKWAY
EAST PROVIDENCE, RI 02914
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Project:
**MECHANICAL SYSTEM
UPGRADES (4TH & 5TH FLOORS)**
J. JOSEPH GARRAHY
JUDICIAL COMPLEX
ONE DORRANCE PLAZA
PROVIDENCE, RI 02903

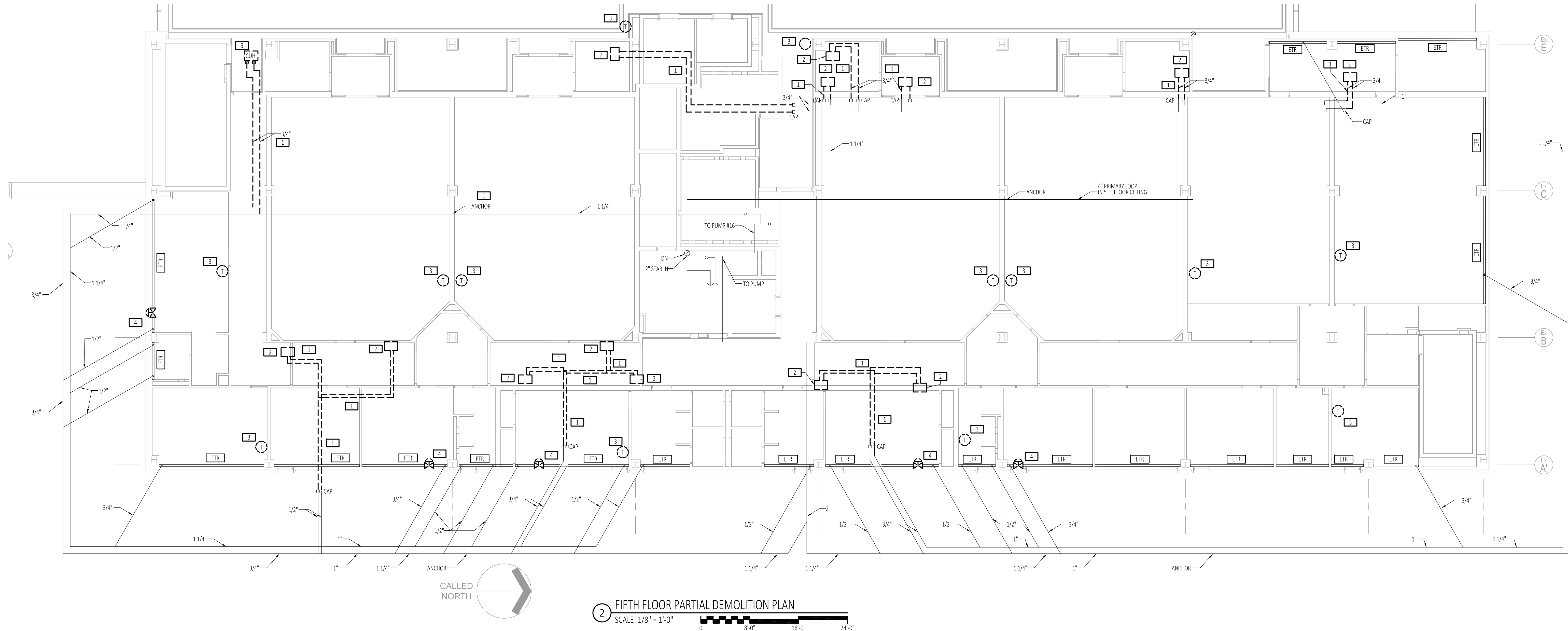
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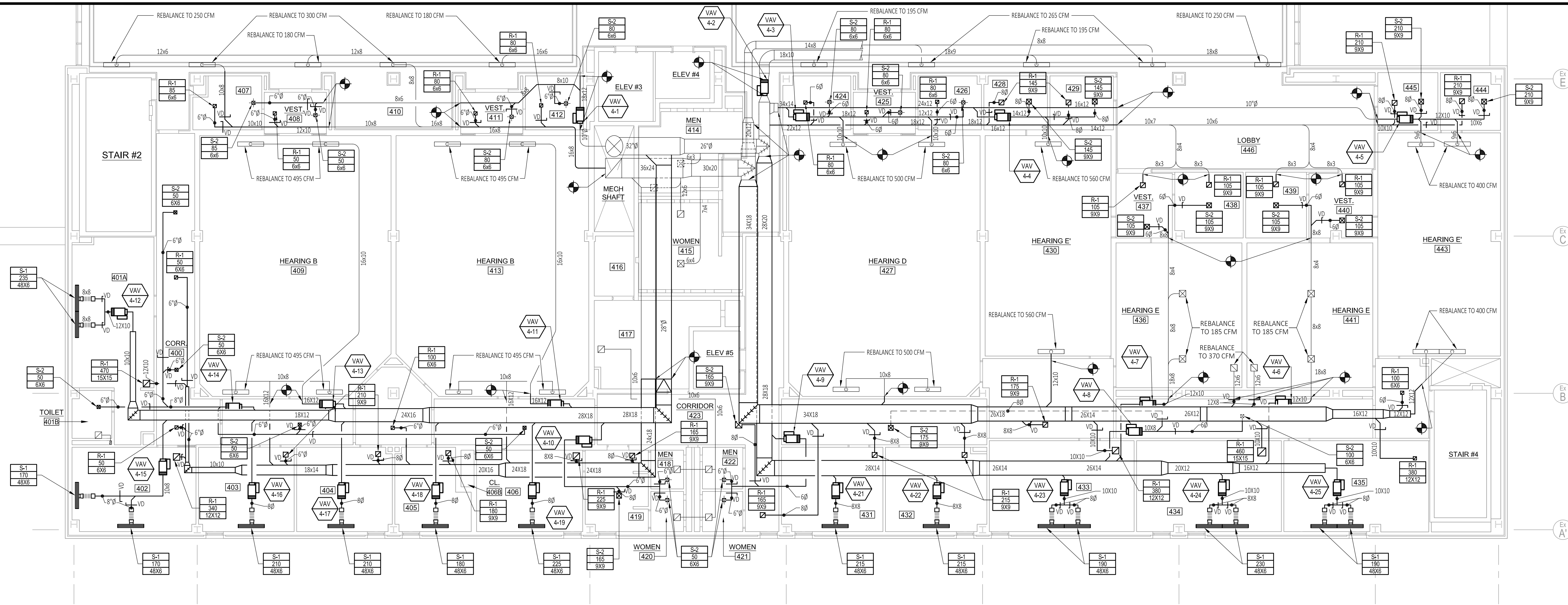
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Sheet Title:
**FOURTH & FIFTH
FLOOR PARTIAL
PLAN-
DEMOLITION**

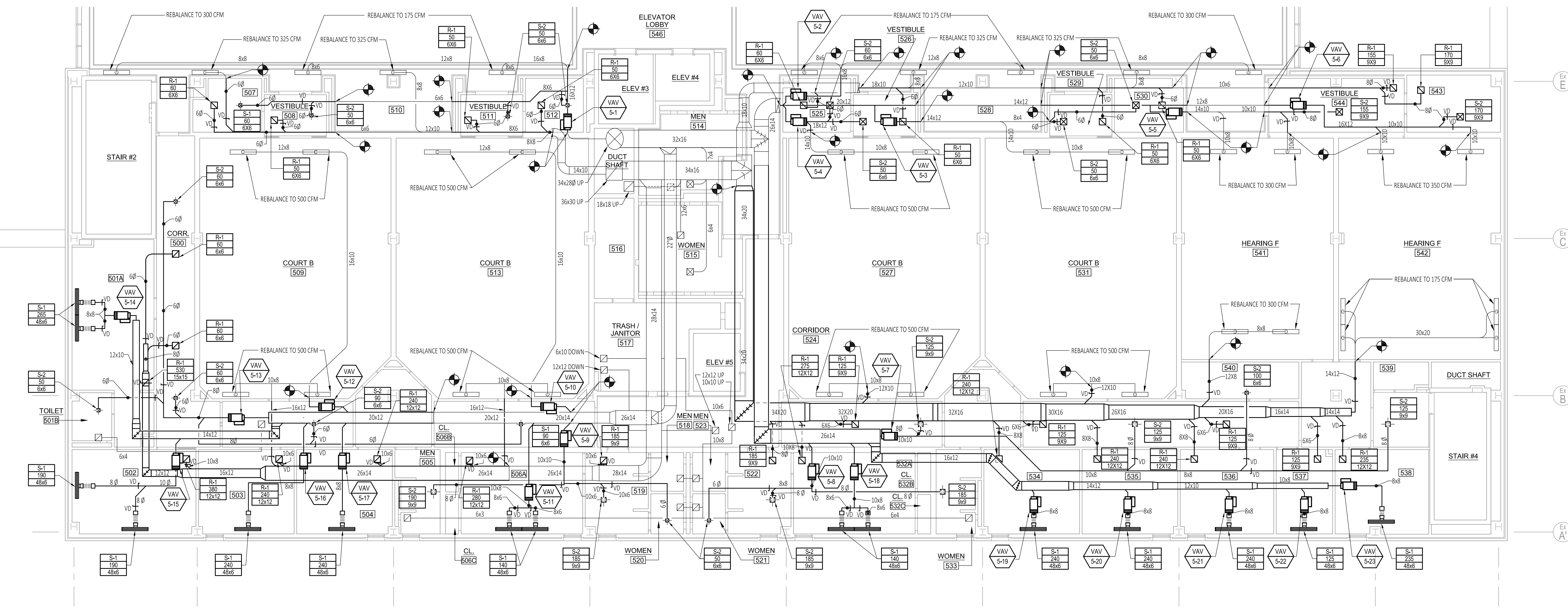
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Drawing No:
MD-2
CEC # 20160022





① FOURTH FLOOR PARTIAL DUCTWORK PLAN
SCALE: 1/8" = 1'-0"



② FIFTH FLOOR PARTIAL DUCTWORK PLAN
SCALE: 1/8" = 1'-0"



MECHANICAL SYSTEM
UPGRADES (4TH & 5TH FLOORS)
J. JOSEPH GARRAHY
JUDICIAL COMPLEX
ONE DORRANCE PLAZA
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Sheet Title:
FOURTH & FIFTH
FLOOR PARTIAL
DUCTWORK
PLAN

Project No: 20160022
Drawn By: KES
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Scale: AS NOTED
Date: 08.02.16

Drawing No:

M-1
CEC # 20160022

SHEET NOTES

1. PROVIDE NEW ELECTRICAL JUNCTION BOX FOR CONTROLS. RUN CONTROL WIRING FOR NEW VAV BOXES TO NEW JUNCTION BOX. PROVIDE NEW (2#12 & (1) #12 GROUND, IN 3/4" CONDUIT, FROM EXISTING PANEL LK. TERMINATE NEW WIRING TO EXISTING 1 POLE 20 AMP CIRCUIT BREAKER.
2. PROVIDE NEW (2#10 & (1) #10 GROUND, IN 3/4" CONDUIT, FROM EXISTING PANEL RK, TO SERVE NEW PUMP 4-2. WIRE VIA NEW VARIABLE FREQUENCY DRIVE. TERMINATE NEW WIRING TO EXISTING 1 POLE 30 AMP CIRCUIT BREAKER.
3. PROVIDE NEW (2#10 & (1) #10 GROUND, IN 3/4" CONDUIT, FROM EXISTING PANEL RK, TO SERVE NEW PUMP 5-2. WIRE VIA NEW VARIABLE FREQUENCY DRIVE. TERMINATE NEW WIRING TO NEW 1 POLE 30 AMP CIRCUIT BREAKER.
4. RECONNECT EXISTING MAINTAINED CABINET UNIT HEATER CIRCUIT TO NEW CUH-4-2. EXTEND WIRING TO MATCH EXISTING AS REQUIRED. WIRE VIA A NEW SINGLE POLE MOTOR RATED SWITCH WITH OVERLOAD HEATER (MANUAL MOTOR STARTER).
5. RECONNECT EXISTING MAINTAINED CABINET UNIT HEATER CIRCUIT TO NEW CUH-5-2. EXTEND WIRING TO MATCH EXISTING AS REQUIRED. WIRE VIA A NEW SINGLE POLE MOTOR RATED SWITCH WITH OVERLOAD HEATER (MANUAL MOTOR STARTER).
6. PROVIDE MOTOR LEAD FROM VFD TO NEW PUMP VIA 2#10, 1#10G, 3/4" C.
7. PUMPS SHALL BE PROVIDED WITH VARIABLE FREQUENCY DRIVE. REFER TO VFD SCHEDULE FOR MORE INFORMATION.
8. PROVIDE NEW 20A/1P CIRCUIT BREAKERS IN EXISTING SPACER TO MATCH EXISTING BRAND, TYPE, & A/C RATING.
9. HORSEPOWER RATED TOGGLE SWITCH WITH THERMAL OVERLOAD; SIZE PER PUMP MFG. REQUIREMENTS.



MECHANICAL SYSTEM
UPGRADES (4TH & 5TH FLOORS)
J. JOSEPH GARRAHY
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FOURTH & FIFTH FLOOR PARTIAL PIPING PLAN

Project No.:

20160022

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KLI

Scale:

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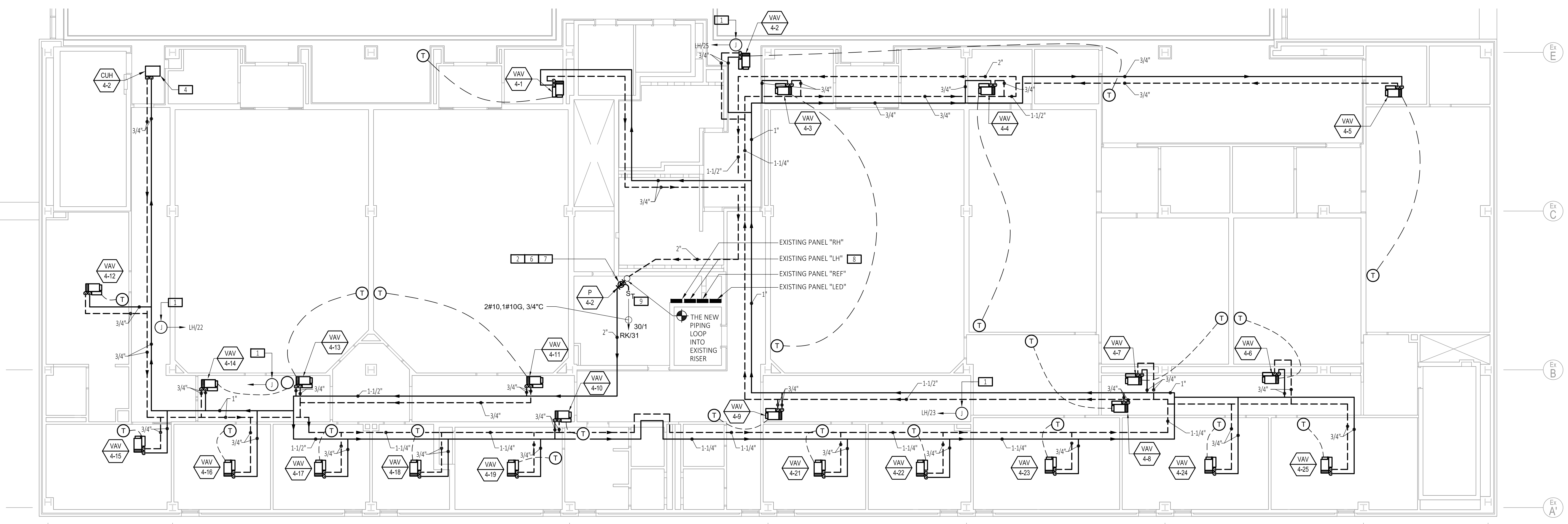
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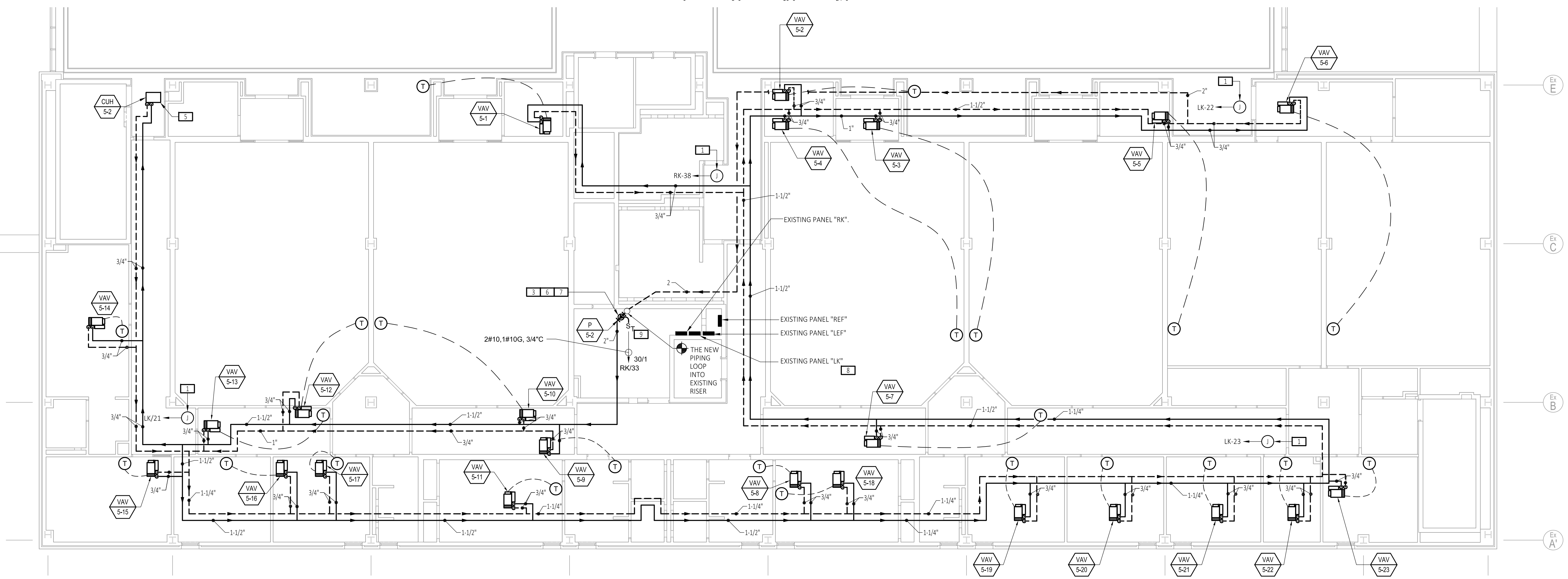
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ME-2

CEC # 20160022



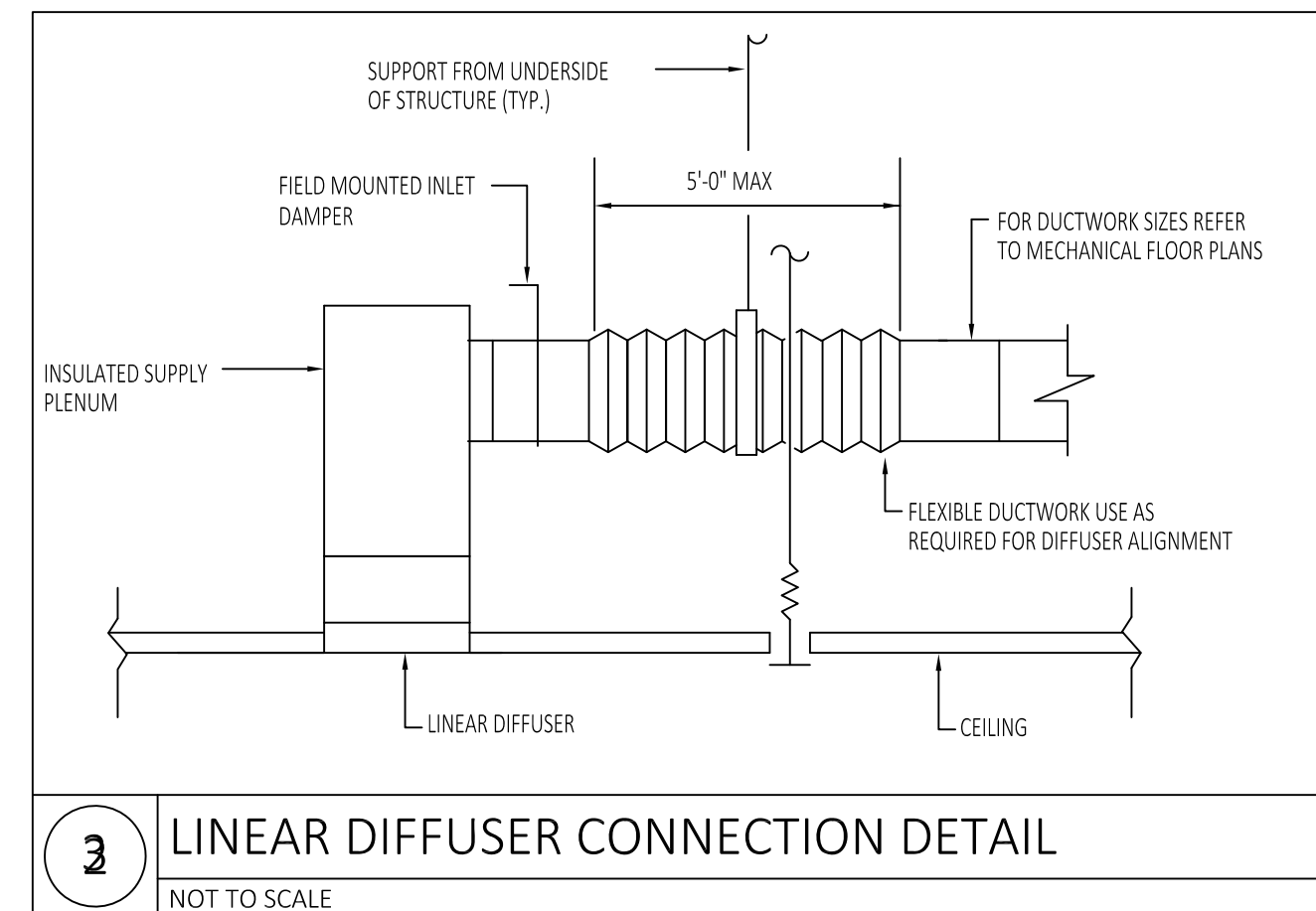
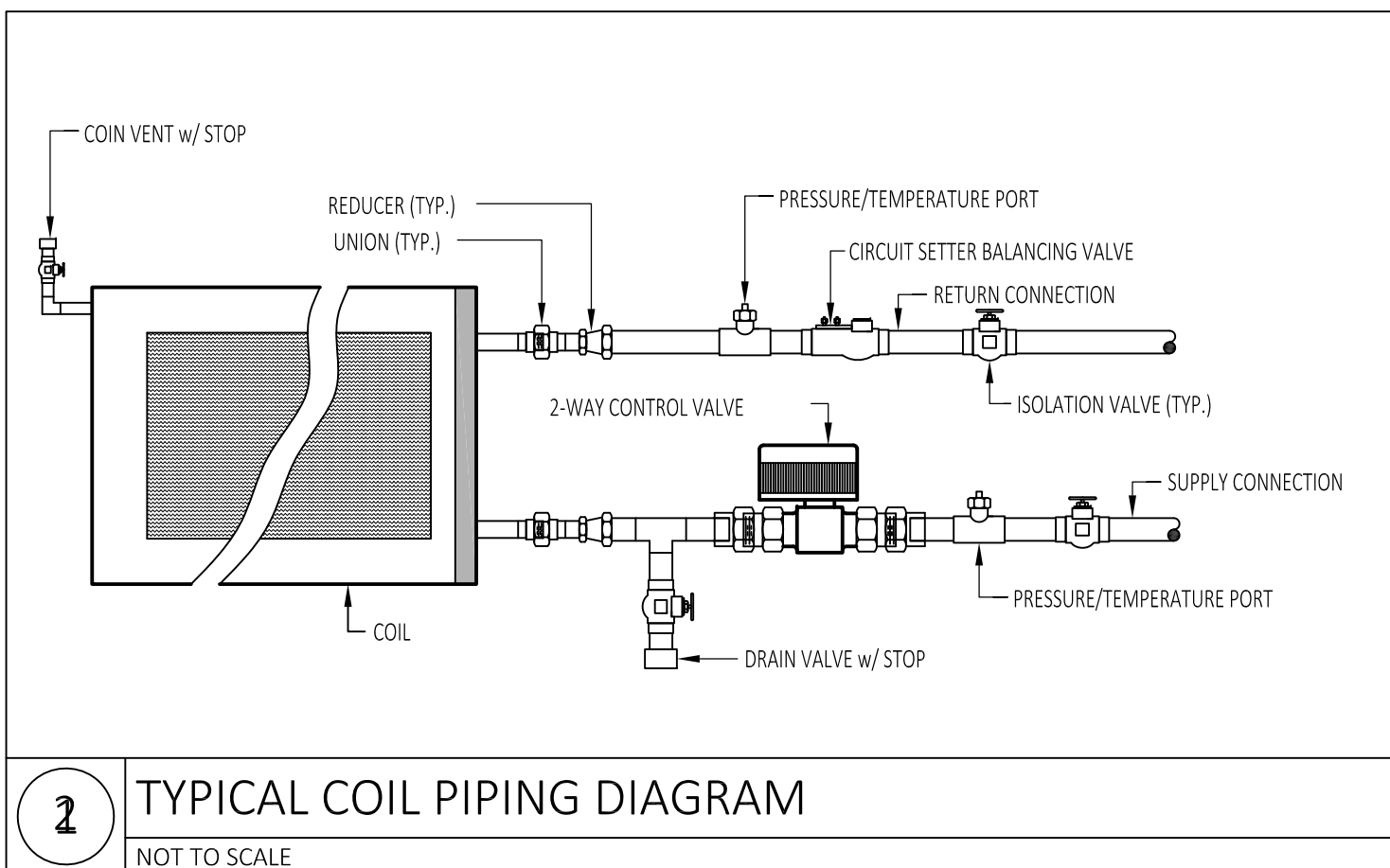
1 FOURTH FLOOR PARTIAL PIPING PLAN
SCALE: 1/8" = 1'-0"



2 FIFTH FLOOR PARTIAL PIPING PLAN
SCALE: 1/8" = 1'-0"

VAV TERMINAL UNIT SCHEDULE

TAG NO.	LOCATION	SYSTEM SERVED	MAX CFM	MIN CFM	REHEAT CFM	SIZE	MAX APD (IN WG)	NC LEVEL	HEATING COIL						ELECTRICAL DATA			MANUFACTURER MODEL NUMBER	REMARKS		
									MBH	GPM	EWT (°F)	LWT (°F)	WPD (°F)	EAT (°F)	LAT (°F)	ROWS	V			PH	HZ
VAV-4-1	CORRIDOR	AHU-8	905	270	435	12	0.20	10	19.7	2.34	140	123	0.34	55	95	2	24	1	60	METALAIRES TH-512 HW2 85 100B	-
VAV-4-2	ROOM 414	AHU-8	655	195	330	10	0.19	14	14.2	1.70	140	123	0.28	55	95	2	24	1	60	METALAIRES TH-510 HW2 85 100B	-
VAV-4-3	ROOM 424	AHU-8	1240	370	620	16	0.13	17	26.9	1.93	140	112	0.31	55	95	2	24	1	60	METALAIRES TH-516 HW2 85 100B	-
VAV-4-4	ROOM 428	AHU-8	850	255	425	12	0.18	10	18.4	2.04	140	122	0.26	55	95	2	24	1	60	METALAIRES TH-512 HW2 85 100B	-
VAV-4-5	ROOM 445	AHU-8	1220	365	610	16	0.13	17	26.5	1.88	140	112	0.30	55	95	2	24	1	60	METALAIRES TH-516 HW2 85 100B	-
VAV-4-6	CORRIDOR	AHU-8	580	170	290	10	0.16	13	12.6	1.27	140	120	0.16	55	95	2	24	1	60	METALAIRES TH-510 HW2 85 100B	-
VAV-4-7	CORRIDOR	AHU-8	580	170	290	10	0.16	13	12.6	1.27	140	120	0.16	55	95	2	24	1	60	METALAIRES TH-510 HW2 85 100B	-
VAV-4-8	CORRIDOR	AHU-8	275	80	140	6	0.14	14	6.0	0.65	140	122	0.06	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-9	CORRIDOR	AHU-8	265	80	135	6	0.13	13	5.8	0.62	140	121	0.05	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-10	CORRIDOR	AHU-8	265	80	135	6	0.13	13	5.8	0.62	140	121	0.05	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-11	CORRIDOR	AHU-8	990	295	495	14	0.12	13	21.5	1.61	140	113	0.20	55	95	2	24	1	60	METALAIRES TH-514 HW2 85 100B	-
VAV-4-12	ROOM 401A	AHU-8	470	140	235	8	0.21	13	10.2	1.27	140	124	0.28	55	95	2	24	1	60	METALAIRES TH-508 HW2 85 100B	-
VAV-4-13	CORRIDOR	AHU-8	990	295	495	14	0.12	13	21.5	1.61	140	113	0.20	55	95	2	24	1	60	METALAIRES TH-514 HW2 85 100B	-
VAV-4-14	CORRIDOR	AHU-8	250	75	125	6	0.12	12	5.4	0.56	140	120	0.04	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-15	ROOM 402	AHU-8	340	100	170	6	0.20	18	7.4	1.02	140	125	0.13	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-16	ROOM 403	AHU-8	210	60	105	6	0.09	9	4.8	0.50	140	121	0.03	55	97	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-17	ROOM 404	AHU-8	210	60	105	6	0.09	9	4.8	0.50	140	121	0.03	55	97	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-18	ROOM 405	AHU-8	180	50	90	6	0.07	7	4.4	0.50	140	122	0.03	55	101	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-19	ROOM 406	AHU-8	225	65	115	6	0.10	10	6.0	0.50	140	120	0.03	55	96	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-20	NOT USED																		-		
VAV-4-21	ROOM 431	AHU-8	215	65	110	6	0.09	9	4.9	0.50	140	120	0.03	55	97	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-22	ROOM 432	AHU-8	215	65	110	6	0.09	9	4.9	0.50	140	120	0.03	55	97	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-23	ROOM 433	AHU-8	380	110	190	6	0.24	19	8.2	1.33	140	127	0.22	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-4-24	ROOM 434	AHU-8	460	135	230	8	0.20	13	10.0	1.21	140	123	0.25	55	95	2	24	1	60	METALAIRES TH-508 HW2 85 100B	-
VAV-4-25	ROOM 435	AHU-8	380	110	190	6	0.24	19	8.2	1.33	140	127	0.22	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-1	ROOM 512	AHU-8	860	255	430	12	0.18	10	18.7	2.09	140	122	0.27	55	95	2	24	1	60	METALAIRES TH-512 HW2 85 100B	-
VAV-5-2	ROOM 525	AHU-8	650	195	325	10	0.19	13	14.1	1.67	140	123	0.27	55	95	2	24	1	60	METALAIRES TH-510 HW2 85 100B	-
VAV-5-3	ROOM 525	AHU-8	1110	330	555	14	0.15	13	24.1	2.03	140	116	0.31	55	95	2	24	1	60	METALAIRES TH-514 HW2 85 100B	-
VAV-5-4	VESTIBULE 526	AHU-8	110	30	55	4	0.01	3	2.5	0.50	140	130	0.13	55	96	1	24	1	60	METALAIRES TH-504 HW2 85 100B	-
VAV-5-5	ROOM 530	AHU-8	755	225	380	12	0.15	9	16.4	1.56	140	119	0.15	55	95	2	24	1	60	METALAIRES TH-512 HW2 85 100B	-
VAV-5-6	VESTIBULE 544	AHU-8	870	260	435	12	0.18	10	18.9	2.14	140	122	0.29	55	95	2	24	1	60	METALAIRES TH-512 HW2 85 100B	-
VAV-5-7	CORRIDOR	AHU-8	475	140	240	8	0.21	13	10.3	1.31	140	124	0.29	55	95	2	24	1	60	METALAIRES TH-508 HW2 85 100B	-
VAV-5-8	ROOM 532A	AHU-8	420	125	210	8	0.17	12	9.1	0.95	140	121	0.16	55	95	2	24	1	60	METALAIRES TH-508 HW2 85 100B	-
VAV-5-9	CORRIDOR	AHU-8	425	125	215	8	0.18	12	9.2	1.03	140	122	0.18	55	95	2	24	1	60	METALAIRES TH-508 HW2 85 100B	-
VAV-5-10	CORRIDOR	AHU-8	1000	300	500	14	0.12	13	21.7	1.64	140	113	0.21	55	95	2	24	1	60	METALAIRES TH-514 HW2 85 100B	-
VAV-5-11	ROOM 506A	AHU-8	280	80	140	6	0.14	14	6.1	0.67	140	122	0.06	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-12	CORRIDOR	AHU-8	1000	300	500	14	0.12	13	21.7	1.64	140	113	0.21	55	95	2	24	1	60	METALAIRES TH-514 HW2 85 100B	-
VAV-5-13	CORRIDOR	AHU-8	350	105	175	6	0.21	18	7.6	1.09	140	126	0.15	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-14	ROOM 501A	AHU-8	530	155	265	10	0.14	13	11.5	1.08	140	119	0.11	55	95	2	24	1	60	METALAIRES TH-510 HW2 85 100B	-
VAV-5-15	ROOM 502	AHU-8	380	110	190	6	0.24	19	8.2	1.33	140	127	0.22	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-16	ROOM 504	AHU-8	240	70	120	6	0.11	11	5.2	0.52	140	120	0.04	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-17	ROOM 504	AHU-8	240	70	120	6	0.11	11	5.2	0.53	140	120	0.04	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-18	ROOM 532A	AHU-8	280	80	140	6	0.14	14	6.1	0.67	140	122	0.06	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-19	ROOM 534	AHU-8	240	70	120	6	0.11	11	5.2	0.52	140	120	0.04	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-20	ROOM 535	AHU-8	240	70	120	6	0.11	11	5.2	0.52	140	120	0.04	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-21	ROOM 536	AHU-8	240	70	120	6	0.11	11	5.2	0.52	140	120	0.04	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-
VAV-5-22	ROOM 537	AHU-8	125	35	65	4	0.02	3	2.7	0.63	140	131	0.20	55	95	1	24	1	60	METALAIRES TH-504 HW2 85 100B	-
VAV-5-23	ROOM 538	AHU-8	235	70	118	6	0.11	11	5.1	0.51	140	120	0.03	55	95	2	24	1	60	METALAIRES TH-506 HW2 85 100B	-



DIFFUSER / REGISTER / GRILLE SCHEDULE

MARK	TYPE & MODEL	THROW/DEFLECTION	ACCESSORIES	MOUNTING SURFACE	SYMBOL
S-1	PRICE - SDA 100 3-1/2" SLOTS, 48" LONG W/INSULATED PLENUM BOX	LINEAR	-	DROP CEILING	
S-2	PRICE - SPD CEILING PLAQUE DIFFUSER STEEL (24x24)	0° DOUBLE DEFLECTION	OPPOSED BLADE DAMPER	DROP CEILING	

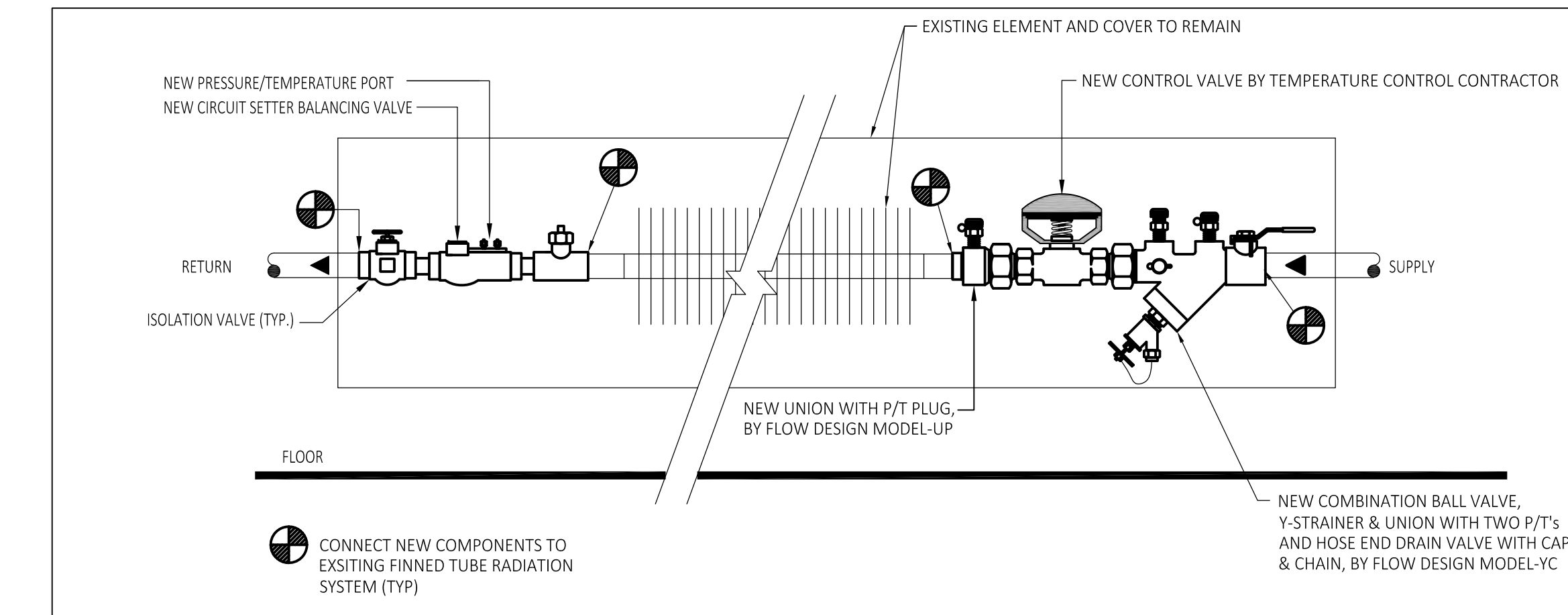
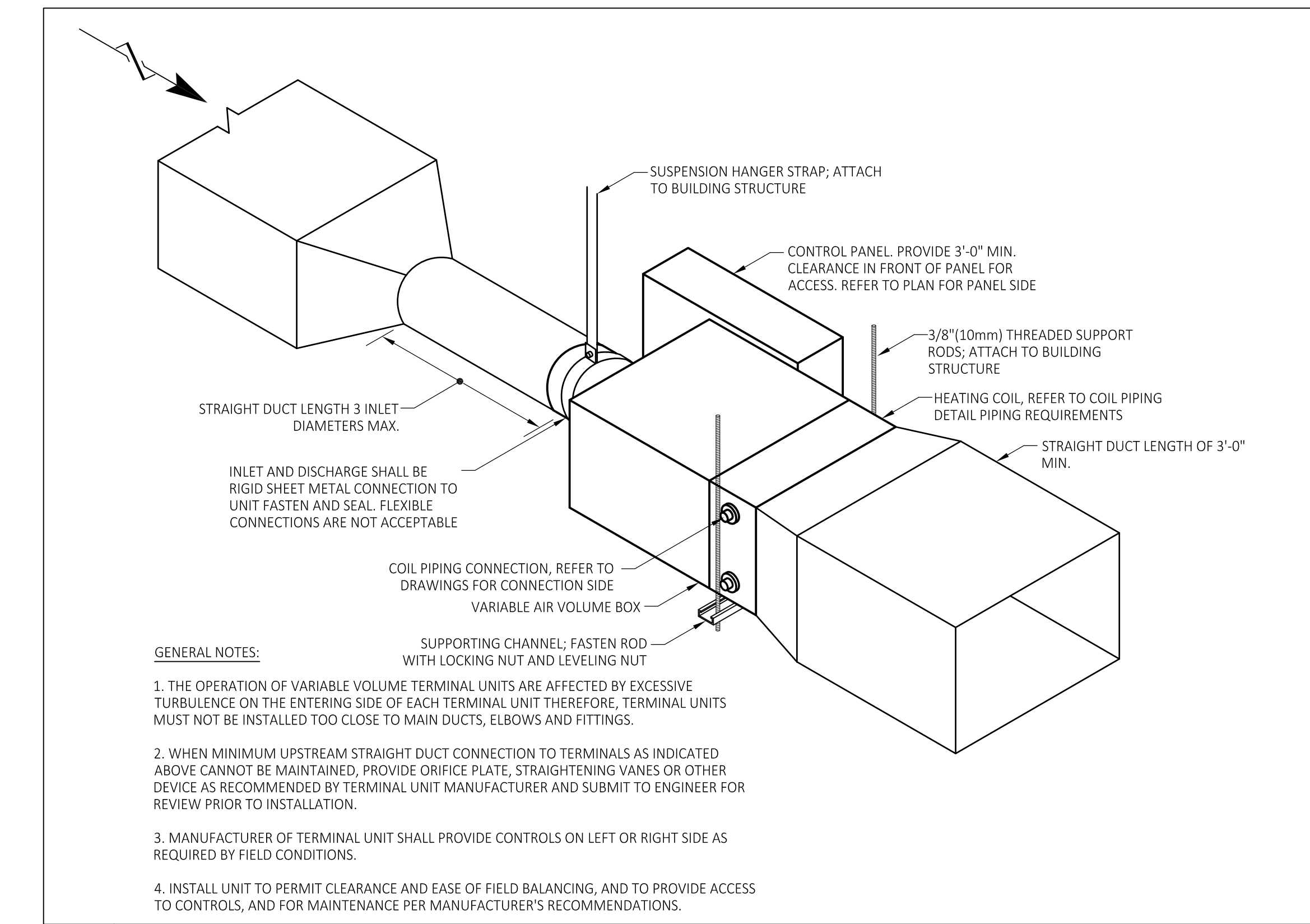
CABINET UNIT HEATER SCHEDULE

TAG NO.	AREA SERVED	TYPE	CFM	E.S.P.	MBH	GPM	WPD (°F)	EWT (°F)	LWT (°F)	WATTS	V	PH	HZ	MANUFACTURER MODEL NUMBER	REMARKS
4-2	4TH FLOOR	RECESSED CABINET	509	0.2	25.0	2.5	7.26	140	120	110	115	1	60	TRANE FF606	-
5-2	5TH FLOOR	RECESSED CABINET	509	0.2	25.0	2.5	7.26	140	120	110	115	1	60	TRANE FF606	-

PUMP SCHEDULE

TAG NO.	LOCATION	SYSTEM SERVED	TYPE	GPM	HEAD (FT.)	RPM	ELECTRICAL DATA				MANUFACTURER MODEL NUMBER	REMARKS
							MOTOR HP	V	PH	HZ		
4-2	FOURTH FLOOR	AHU-8	CIRCULATING	25	40	1750	1.0	115	1	60	ARMSTRONG MODEL H65-1HP	1,2
5-2	FIFTH FLOOR	AHU-8	CIRCULATING	25	40	1750	1.0	115	1	60	ARMSTRONG MODEL H65-1HP	1,2

PROVIDE:
1. THERMAL MOTOR STARTER DISCONNECT SWITCH
2. FACTORY WIRED VARIABLE FREQUENCY DRIVE



CREATIVE ENVIRONMENTAL

CONSULTING ENGINEERS, LLP

HVAC-ELECTRICAL-PLUMBING-FIRE PROTECTION

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Project:
MECHANICAL SYSTEM UPGRADES (4TH & 5TH FLOORS) J. JOSEPH GARRAHY JUDICIAL COMPLEX ONE DORRANCE PLAZA PROVIDENCE, RI 02903

Status:
ISSUED FOR PERMIT

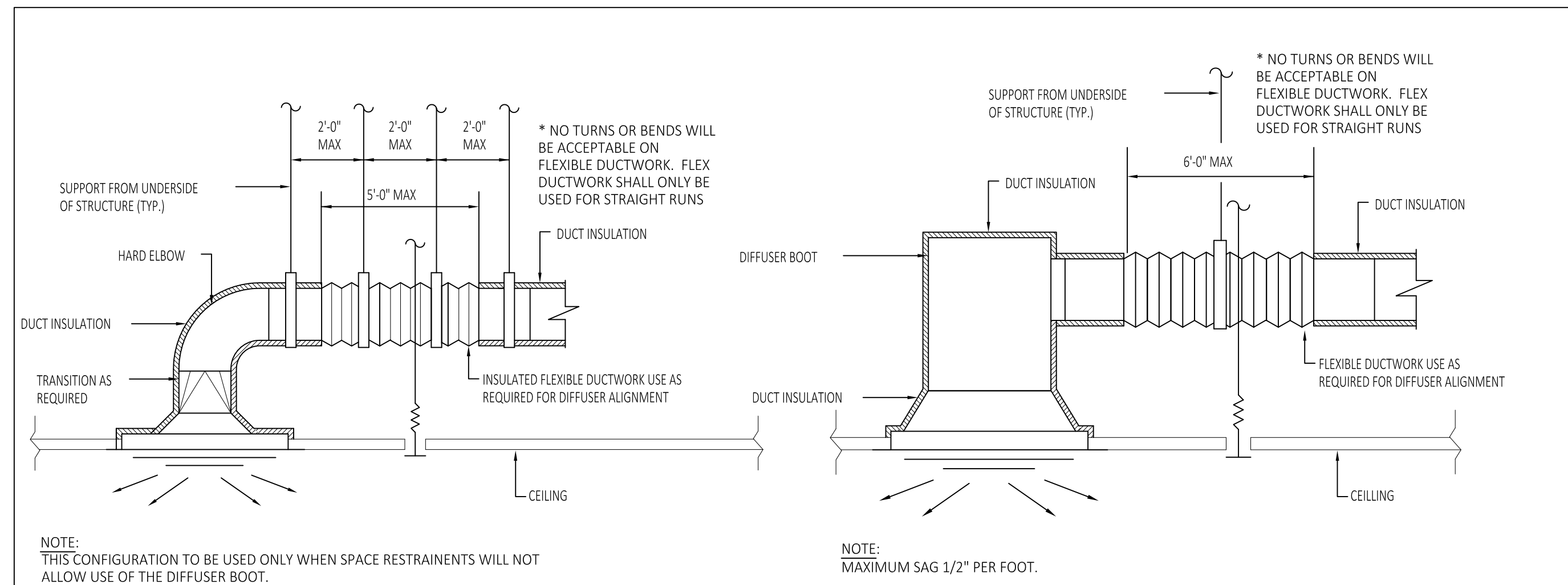
Date	Revision/Issue

Sheet Title:
HVAC SCHEDULES AND DETAILS

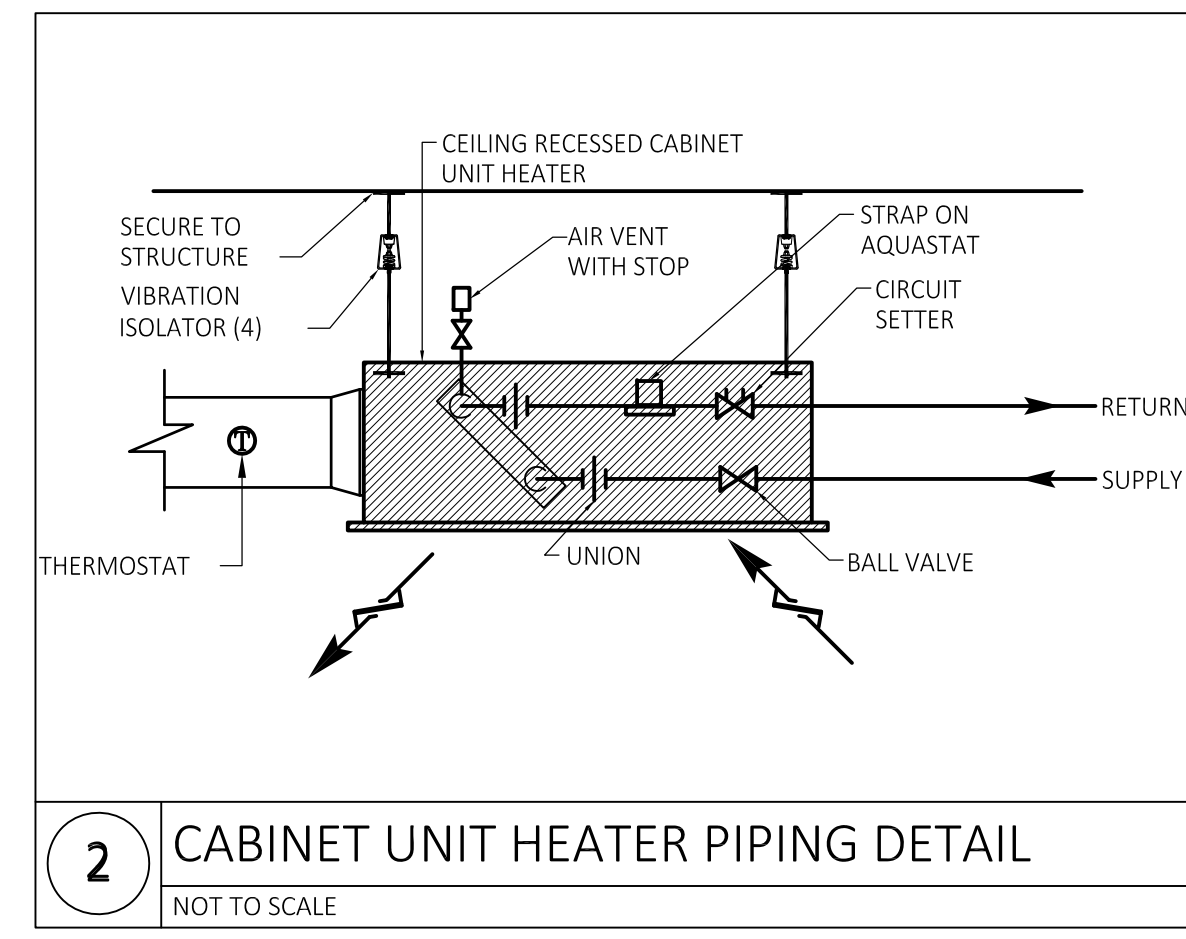
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 Drawn By: KES
 Checked By: KLI
 Scale: AS NOTED
 Date: 08.02.16

Drawing No:
M-3

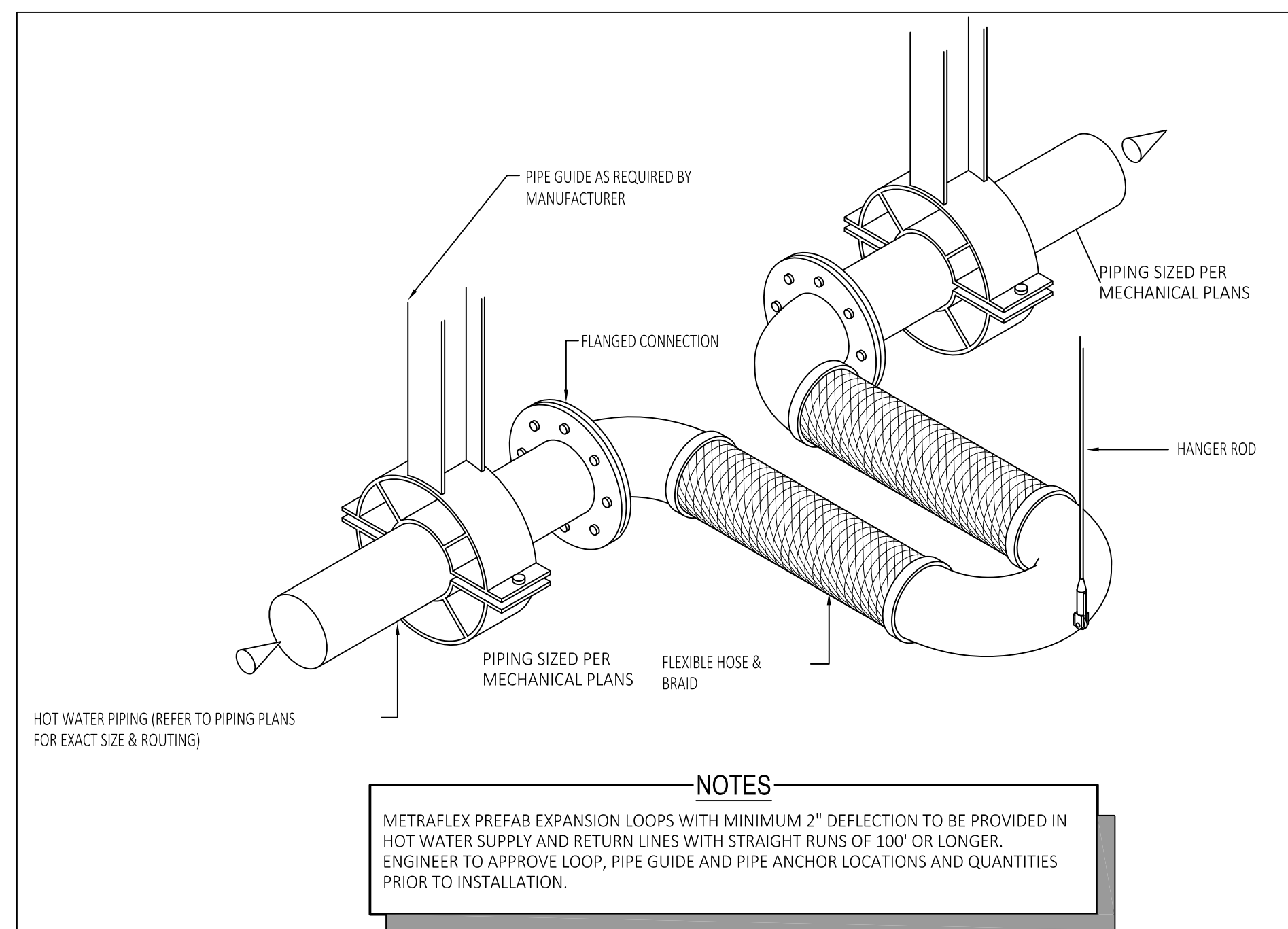
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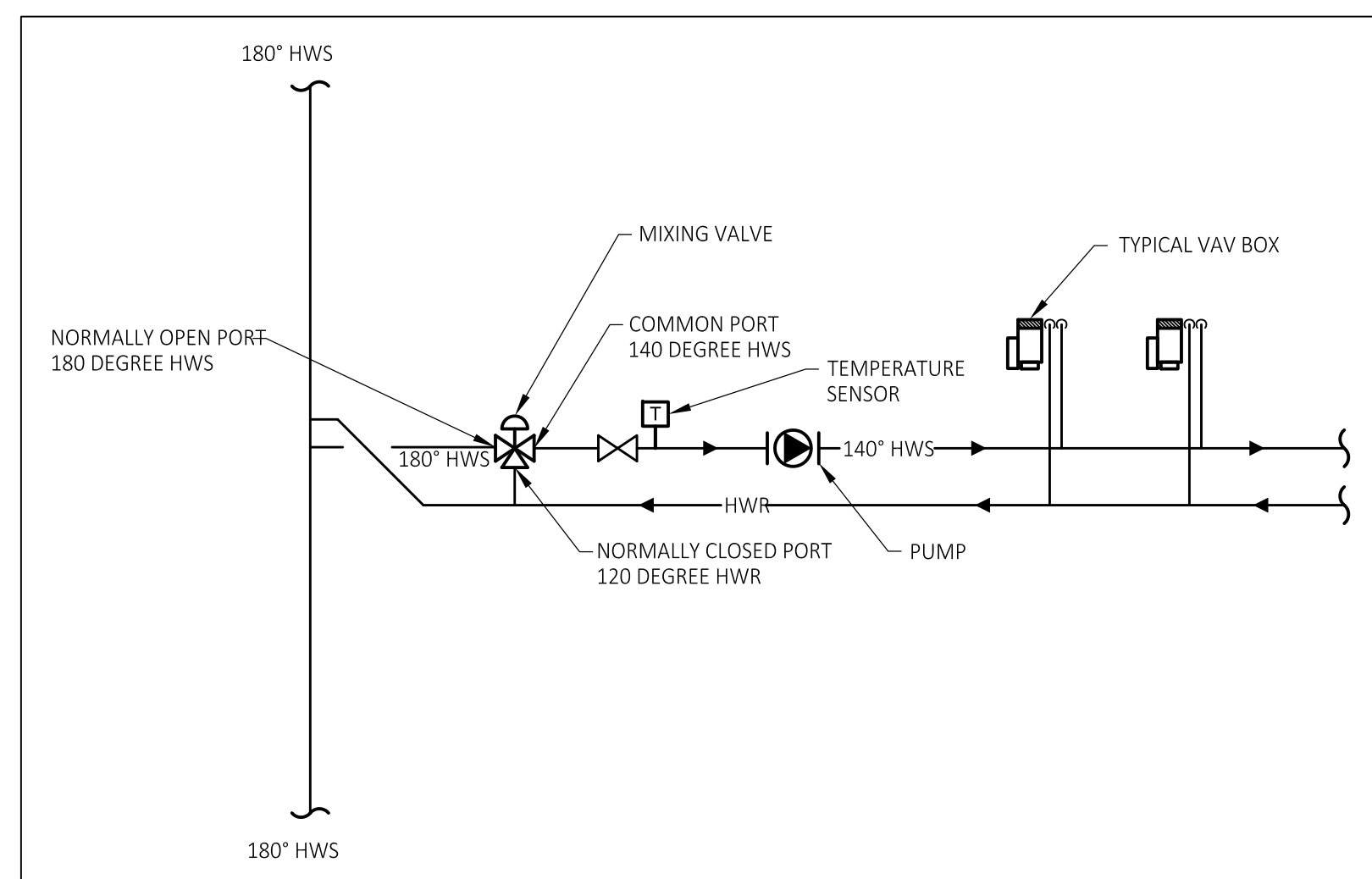
1 DIFFUSER/REGISTER/GRILLE DUCT CONNECTION DETAILS
NOT TO SCALE



2 CABINET UNIT HEATER PIPING DETAIL
NOT TO SCALE



3 EXPANSION LOOP DETAIL
NOT TO SCALE



4 3-WAY MIXING VALVE PIPING DETAIL
NOT TO SCALE



Project:
MECHANICAL SYSTEM
UPGRADES (4TH & 5TH FLOORS)
J. JOSEPH GARRAHY
JUDICIAL COMPLEX
ONE DORRANCE PLAZA
PROVIDENCE, RI 02903

Status:
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Revision/Issue	Date	
	No.	

Sheet Title:
HVAC DETAILS

Project No: 20160022
Drawn By: KES
Checked By: KLI
Scale: AS NOTED
Date: 08.02.16

Drawing No:
M-4

CEC # 20160022

HEATING, VENTILATING, AND AIR CONDITIONING SPECIFICATIONS

PART 1 - GENERAL PROVISIONS FOR MECHANICAL WORK:

- 1.01 GENERAL REQUIREMENTS: A. SCOPE OF WORK SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TRANSPORTATION, HOISTING, RIGGING, INSURANCE, ETC., TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND HEREIN SPECIFIED FOR A COMPLETE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL CODES AND ORDINANCES HAVING JURISDICTION, AS INTERPRETED BY THE ARCHITECT/ENGINEER. B. APPLY AND PAY FOR ALL NECESSARY INSPECTION FEES, LICENSES AND PERMITS REQUIRED BY THE PROPER AUTHORITIES HAVING JURISDICTION. C. NO EXITS SHALL BE CLOSED WITHOUT THE WRITTEN PERMISSION OF THE OWNER AND LOCAL AUTHORITIES HAVING JURISDICTION. D. ANY UTILITY OUTAGES OR SYSTEM SHUTDOWNS FOR CONSTRUCTION SHALL BE SCHEDULED WITH THE OWNER PRIOR TO COMMENCING OF WORK. E. SUBMIT SHOP DRAWINGS OF ALL HVAC EQUIPMENT AND RECORD DRAWINGS FOR ALL WORK PROVIDED UNDER THIS CONTRACT TO THE OWNER FOR HIS USE PRIOR TO ORDERING, FABRICATING OR INSTALLING SAME. F. ALL MATERIALS SHALL BE NEW. ALL EQUIPMENT SHALL BEAR THE U.L. LABEL. G. RECORD DRAWINGS: THE CONTRACTOR SHALL KEEP DAILY UPDATED ACCURATE RECORDS OF ALL DEVIATIONS IN WORK AS ACTUALLY INSTALLED FROM WORK INDICATED ON THE CONTRACT DRAWINGS. THE RECORD DRAWINGS SHALL BE KEPT AT THE JOB SITE, AVAILABLE TO THE OWNER AT ALL TIMES AND LABELED AS "PROJECT RECORD INFORMATION - JOB SET". WHEN WORK IS COMPLETED UNDER THIS CONTRACTOR SHALL PROVIDE TO THE OWNER ONE COMPLETE SET OF MARKED-UP ORIGINAL PRINTS, UPDATED CAD DRAWINGS AND A CD WITH CAD FILES. H. THE BUILDING WILL BE OCCUPIED DURING ALL OF THE CONSTRUCTION PROCESS. THE CONSTRUCTION SCHEDULE SHALL BE DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING IS OCCUPIED AND THAT IT CAN NEITHER BE CLOSED NOR CAN THE OWNER'S OPERATIONS BE STOPPED. 1.02 GUARANTEES: A. ALL WORK, MATERIALS AND EQUIPMENT SHALL BE GUARANTEED AGAINST DEFECTS RESULTING FROM THE USE OF INFERIOR MATERIALS, EQUIPMENT, OR WORKMANSHIP FOR ONE YEAR FROM THE DATE OF FINAL COMPLETION OF THE CONTRACT, OR FROM FULL ACCEPTANCE BY THE OWNER, WHICHEVER IS EARLIER. ALL DEFECTIVE MATERIAL, OR WORKMANSHIP AS WELL AS DAMAGES TO THE WORK OF ALL TRADES RESULTING FROM SAME SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. B. THE GUARANTEE PERIOD SHALL BE FOR ONE (1) YEAR FROM THE DATE OF ACCEPTANCE, WHICH SHALL BE THE DATE OF FINAL PAYMENT OR THE DATE OF FORMAL NOTICE OF ACCEPTANCE, WHICHEVER IS EARLIER. C. CERTIFICATION SHALL BE SUBMITTED BY THE CONTRACTOR ATTESTING TO THE FACT THAT SPECIFIED PERFORMANCE CRITERIA ARE MET BY ALL EQUIPMENT. D. IF, WITHIN ANY GUARANTEE PERIOD, REPAIRS OR CHANGES TO GUARANTEED WORK ARE REQUIRED AS A RESULT OF THE USE OF DEFECTIVE MATERIALS OR EQUIPMENT, INFERIOR WORKMANSHIP OR WORK THAT IS NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT, AND UPON RECEIPT OF NOTICE FROM THE OWNER, THE FOLLOWING SHALL BE DONE WITHOUT EXPENSE TO THE OWNER: 1. REPAIR ALL DAMAGE TO THE BUILDING OR SITE/EQUIPMENT OR CONTENTS THEREOF WHICH IS THE RESULT OF THE USE OF DEFECTIVE MATERIALS OR EQUIPMENT OR INFERIOR WORKMANSHIP, OR OF WORK NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT. 2. MAKE GOOD ANY WORK OR MATERIALS, OR THE EQUIPMENT AND CONTENTS OF SAID BUILDING OR SITE DISTURBED IN FULFILLING ANY SUCH GUARANTEE. 3. IN FULFILLING THE REQUIREMENTS OF THE CONTRACT OR OF ANY GUARANTEE EMBRACED IN OR REQUIRED THEREBY, ANY WORK OR ANY GUARANTEE UNDER ANOTHER CONTRACT IS DISTURBED, RESTORE SUCH DISTURBED WORK TO ORIGINAL CONDITION AND GUARANTEE SUCH RESTORED WORK TO THE SAME EXTENT AS IT WAS GUARANTEED UNDER SUCH OTHER CONTRACT. 4. IF UPON FAILURE TO PROCEED PROMPTLY AFTER NOTICE TO COMPLY WITH THE TERMS OF THE GUARANTEE, THE OWNER MAY HAVE THE DEFECTS CORRECTED AND CONTRACTOR AND HIS SURETY SHALL BE LIABLE FOR ALL EXPENSES INCURRED. 1.03 CONTRACTORS RESPONSIBILITIES: A. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY INJURIES TO PEOPLE, EQUIPMENT OR DAMAGE DONE TO BUILDING PREMISES OR ADJOINING AREAS OR TO OTHER WORK RESULTING FROM EXECUTION ON HIS PART OF WORK, IN ANY MANNER WHATSOEVER. B. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PROTECTION OF HIS WORK, MATERIALS, PEOPLE OR EMPLOYEES FROM INJURY OR LOSS DUE BY OTHERS AND SHALL MAKE GOOD SUCH INJURY AT HIS OWN EXPENSE. C. DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. D. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE SAFETY OF CONTRACTOR EMPLOYEES, MATERIALS OR EQUIPMENT. 1.04 COORDINATION AND INTERPRETATION OF DRAWINGS: A. THIS CONTRACTOR, PRIOR TO SUBMITTING BID SHALL VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND TO INSPECT THAT ALL PROVISIONS HAVE BEEN MADE FOR ALL ASPECTS OF THIS PROJECT. B. IF DISCREPANCIES EXIST BETWEEN DRAWINGS AND/OR SITE CONDITIONS, THE HVAC CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER PRIOR TO SIGNING OF CONTRACT. REQUESTS FOR COMPENSATION FOR EXTRA WORK, WHICH WOULD HAVE BEEN EVIDENT BY COMPLIANCE WITH THE PREVIOUS STATEMENT, WILL NOT BE CONSIDERED. MECHANICAL EQUIPMENT AND SUCH OTHER APPARATUS WHICH MAY REQUIRE MAINTENANCE OR INSPECTION FROM TIME TO TIME SHALL BE MADE EASILY ACCESSIBLE. ALTHOUGH THE EQUIPMENT MAY BE SHOWN ON THE DRAWINGS IN CERTAIN LOCATIONS, THE CONSTRUCTION MAY DISCLOSE THAT SUCH LOCATIONS DO NOT MAKE ITS POSITION READILY ACCESSIBLE. IN SUCH CASES, THE OWNER OR HIS REPRESENTATIVE SHALL BE NOTIFIED BEFORE ADVANCING THE CONSTRUCTION TO A STAGE WHERE A CHANGE WILL REFLECT ADDITIONAL EXPENSE. NO COMPENSATION WILL BE CONSIDERED FOR WORK INSTALLED WHICH IS NOT IN COMPLIANCE WITH THE DRAWINGS, SPECIFICATION LOCAL CODES, AND MANUFACTURER'S REQUIRED CLEARANCES FOR ACCESS AND SERVICING OF EQUIPMENT. C. IT SHALL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR TO STUDY ALL DRAWINGS AND DETAILS SO THAT THE INSTALLATION OF ALL NEW WORK CAN BE FULLY COORDINATED. COORDINATE WITH ALL TRADES TO AVOID INTERFERENCE OF EQUIPMENT, EXISTING AND NEW, OF ALL TRADES. COORDINATION DRAWINGS ARE THE RESPONSIBILITY OF THIS CONTRACTOR. D. HVAC WORK IS INDICATED DIAGRAMMATICALLY. EXACT LOCATION OF ALL COMPONENTS ARE TO BE DETERMINED IN THE FIELD AND BY THE ACTUAL BUILDING CONDITIONS. EQUIPMENT, DUCTS OR PIPES INTERFERING WITH OTHER INSTALLATIONS SHALL BE RELOCATED AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER. E. HVAC CONTRACTOR SHALL COORDINATE ALL WALL, CEILING, FLOOR, ROOF, AND BEAM PENETRATIONS WITH ARCHITECT, STRUCTURAL ENGINEER, OWNER, AND EXISTING CONDITIONS PRIOR TO INSTALLATION. 1.05 DEMOLITION: A. ALL DEMOLITION OF INACTIVE HVAC SYSTEMS WITHIN THE CONTRACT LIMITS SHALL BE BY THE GENERAL CONTRACTOR. EACH BIDDER FOR WORK UNDER THIS SECTION OF THE SPECIFICATION SHALL INCLUDE IN THEIR BID ALL COSTS INVOLVED IN DISCONNECTING ALL PIPING, DUCTWORK, AND UNUSED CONTROL WIRING SERVING EXISTING HVAC EQUIPMENT THAT IS TO BE REMOVED. COORDINATE ALL SHUTDOWN OF EXISTING SYSTEMS AS REQUIRED, WITH THE OWNER, THROUGH THE GENERAL CONTRACTOR. B. CONTRACTOR SHALL VISIT THE SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK OF THIS SECTION. DEMOLITION WORK WILL REQUIRE CAREFUL SITE EXAMINATION PRIOR TO BIDDING. C. PRIOR TO COMMENCING DEMOLITION, CONTRACTOR SHALL IDENTIFY WITH OWNER ANY EQUIPMENT TO BE RETURNED TO THE OWNER AFTER DEMOLITION. ALL OTHER DEBRIS SHALL BE DISPOSED OF BY THIS CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. D. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION AND REMOVAL OF THE EXISTING MECHANICAL EQUIPMENT: DUCTWORK, PIPING, VALVES, ETC. IN DESIGNATED AREAS. CUT & CAP PIPING AND DUCTWORK BACK TO MAINS. E. THIS CONTRACTOR SHALL PROTECT WORK AGAINST INJURY OR DAMAGE, AND CAREFULLY STORE MATERIAL AND EQUIPMENT TO BE RELOCATED. OPEN ENDS OF WORK SHALL BE CLOSED WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT INJURY OR OBSTRUCTING MATERIALS.

- 1.06 EQUIPMENT: A. PRODUCTS REQUIRED BY CONSTRUCTION BUT NOT SPECIFICALLY DESCRIBED HEREIN SHALL BE AS SELECTED BY THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE ENGINEER. B. PROVIDE ALL MATERIALS, LABOR, AND ACCESSORIES FOR A COMPLETE AND OPERABLE SYSTEMS AND AS REQUIRED BY THE EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. C. PROVIDE VOLUME DAMPERS OR ACCEPTABLE AIR BALANCING DEVICES AT EACH BRANCH FROM MAIN DUCT RUN OUT AND EACH NECK TO AN INDIVIDUAL DIFFUSER, REGISTER OR GRILLE IN SUPPLY, RETURN AND EXHAUST DUCTS IRRESPECTIVE OF WHETHER DAMPERS IS INDICATED ON PLANS. D. PROVIDE ALL HANGERS AND SUPPORTS AS REQUIRED TO SUPPORT ALL NEW PIPING, DUCTWORK AND EQUIPMENT. E. ALL EXPOSED EQUIPMENT (REGISTERS, UNIT HEATERS, ETC.) SHALL HAVE COLORS SELECTED BY THE OWNER, UNLESS NOTED OTHERWISE. F. MOTORS: ALL MOTORS SHALL BE RATED AT 85% POWER FACTOR AT FULL RATED LOAD. MOTORS LESS THAN 85% POWER FACTOR SHALL BE CORRECTED TO 90% POWER FACTOR AT THE FACTORY. ALL MOTORS SHALL BE RATED PREMIUM EFFICIENCY. MOTORS USED WITH VARIABLE FREQUENCY DRIVES SHALL BE RATED FOR INVERTER DUTY. G. STARTERS: STARTERS SHALL BE CUTLER HAMMER OR EQUAL, WITH PUSH BUTTONS, HOA SWITCHES, AUXILIARY CONTACTS, ETC. FURNISH STARTERS FOR MOTORS 3 HP AND OVER AND AS REQUIRED BY SEQUENCE OF OPERATION. STARTERS FOR MOTORS 200 V/3 PHASE AND OVER, USE PRODUCTS WITH BUILT-IN, 120 VOLT CONTROL CIRCUIT TRANSFORMER. THIS CONTRACTOR SHALL SUPPLY ALL STARTERS UNLESS SPECIFICALLY SHOWN OR SPECIFIED ELSEWHERE. ELECTRICAL CONTRACTOR SHALL INSTALL STARTERS. H. DISCONNECTS PROVIDED BY THIS CONTRACTOR WILL BE INSTALLED BY ELECTRICAL CONTRACTOR, WITH THE EXCEPTION OF FACTORY MOUNTED DISCONNECTS. 1.07 EXECUTION: A. ALL ROUGH CUTTING, CORE DRILLING AND PATCHING REQUIRED FOR INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. ALL FINISH PATCHING RELATIVE TO THIS CONTRACTOR'S WORK SHALL BE THE RESPONSIBILITY OF OTHER TRADES IN ACCORDANCE WITH OTHER SECTIONS OF THIS SPECIFICATION. COORDINATE ALL WORK FOR A COMPLETE AND FINISHED INSTALLATION. B. INSTALL ALL MATERIALS, ACCESSORIES AND EQUIPMENT ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR A COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS MANUFACTURERS INSTRUCTIONS. C. INSTALLATION OF THE HVAC SYSTEM SHALL PERMIT ACCESSIBILITY FOR SERVICE AND/OR REPLACEMENT OF NEW AND EXISTING EQUIPMENT. D. ALL MISCELLANEOUS STRUCTURAL SUPPORTS REQUIRED FOR HVAC EQUIPMENT INSTALLATION SHALL BE PROVIDED BY MECHANICAL CONTRACTOR. E. WHERE DUCTWORK PENETRATES ANY SMOKE AND/OR FIRE RATED PARTITIONS PROVIDE UL LISTED DYNAMIC FIRE AND/OR SMOKE DAMPERS PER NFPA GUIDELINES. INSTALL PER MANUFACTURERS INSTRUCTIONS INCLUDING AN APPROVED ACCESS PANEL. F. ALL CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED IN SUCH A WAY THAT LIGHTS, PIPING, AND DUCTWORK DO NOT BLOCK ACCESS TO UNITS AND RELATED ACCESSORIES. G. EXACT LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS TO BE DETERMINED BY ARCHITECTURAL REFLECTED CEILING PLAN. ENGINEER'S SHALL APPROVE FINAL LOCATION IF LOCATION OF CEILING DIFFUSERS SHOWN ON THE MECHANICAL PLANS ARE DIFFERENT THAN THE REFLECTED CEILING PLANS BY MORE THAN ONE CEILING TILE. H. EXACT ELEVATION FOR SIDE WALL DIFFUSERS, REGISTERS AND GRILLES SHALL BE APPROVED BY THE OWNER BEFORE INSTALLATION. I. INSTALL ROOM THERMOSTATS 54" (MAXIMUM) ABOVE FINISHED FLOOR OR AS OTHERWISE DIRECTED BY THE OWNER. J. CONTRACTOR TO DRAIN, FLUSH, FILL AND BALANCE ALL SYSTEMS AS REQUIRED TO COMPLETE THE WORK. 1.08 EQUIPMENT, VALVE, AND PIPE IDENTIFICATION: A. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS ARE LIMITED TO SETON, BRADY OR BRIMAR WHOM HAVE A MINIMUM OF 5 YEARS EXPERIENCE IN THE MANUFACTURING OF MECHANICAL IDENTIFICATION PRODUCTS. B. PLASTIC PIPE MARKERS 1. SNAP-ON TYPE: PROVIDE MANUFACTURER'S STANDARD PRE-PRINTED, SEMI-RIGID SNAP-ON, COLOR-CODED PIPE MARKERS, COMPLYING WITH ANSI A13.1. 2. FOR EXTERNAL DIAMETERS LESS THAN 6" (INCLUDING INSULATION IF ANY), PROVIDE FULL-BAND PIPE MARKERS, EXTENDING 360 DEGREES AROUND PIPE AT EACH LOCATION, FASTENED BY SNAP-ON APPLICATION OF PRE-TENSIONED SEMI-RIGID PLASTIC PIPE MARKER. 3. THE FOLLOWING DESCRIPTION AND COLORS SHALL BE USED FOR PIPING IDENTIFICATION WITH FLOW ARROWS UNLESS NOTED OTHERWISE: - LEGEND SERVICE COLOR HW/S HEATING HOT WATER SUPPLY YELLOW HW/R HEATING HOT WATER RETURN YELLOW LW/R LOW WATER TEMPERATURE SUPPLY YELLOW LW/T LOW WATER TEMPERATURE RETURN YELLOW COLOR BANDING SHALL MEET LATEST EDITION OF ANSI AND OSHA REQUIREMENTS. C. WHERE AIR OR HYDRONIC SYSTEMS HAVE BEEN BALANCED, THE CONTRACTOR SHALL PERMANENTLY MARK, ON THE DEVICE, THE CORRECT BALANCING SETTING OF EACH VALVE, DAMPER, OR SIMILAR DEVICE. D. VALVE INDEXING AND VALVE CHART: 1. USE BLACK LAMINATED PHENOLIC TAGS 2" IN DIAMETER WITH INCISED LETTERS 3/8" HIGH. 2. USE BRASS 5" HOOPS AND/OR BRASS CHAIN TO ATTACH TO VALVE. 3. USE PRINTING 1/8" HIGH FOR CHARTS. 4. PLACE CHARTS IN METAL FRAME WITH NON-GLARE GLASS. 5. INCORPORATE THE BUILDINGS OLD VALVE CHART WITH A NEW VALVE CHART TO MAKE ONE COMPLETE VALVE CHART. E. EQUIPMENT IDENTIFICATION: 1. USE BLACK LAMINATED PHENOLIC NAMEPLATES 6" LONG X 3" HIGH WITH WHITE INCISED LETTERING 3/16" HIGH. ATTACH TO EQUIPMENT WITH STAINLESS STEEL OR BRASS SCREWS, OR RIVETS. 2.01 DUCTWORK: A. ALL DUCTWORK SHALL BE OF TOP GRADE GALVANIZED STEEL, CONSTRUCTED AND SUPPORTED AS PER S.M.A.C.N.A. LOW PRESSURE STANDARDS. SQUARE THROAT, ROUNDED HEE ELBOWS ARE NOT ACCEPTABLE. ALL JOINTS, SEAMS, AND FITTINGS SHALL BE AIR AND WATER TIGHT USING SOLDER JOINTS, COMPOUND OR SILICONE AND SHALL BE FORMED TO PROVIDE A MINIMUM RESISTANCE TO THE AIR FLOW. B. ALL RECTANGULAR DUCTS TO BE INSULATED SHALL BE paneled FOR STIFFENING, ALL OTHER DUCTWORK SHALL BE CROSS BROKEN TO PREVENT VIBRATION. C. ALL DUCTWORK CONSTRUCTION SHALL BE OF FABRICATED SHEET METAL (NO DUCT BOARD OR FLEXIBLE DUCT WILL BE ACCEPTABLE.) AND BE BUILT IN ACCORDANCE WITH "SMACNA STANDARDS AND PUBLICATION TITLED "HVAC DUCT CONSTRUCTION STANDARDS". D. DUCTWORK DIMENSIONS INDICATED ON DRAWINGS ARE NET INSIDE DIMENSIONS REQUIRED FOR AIRFLOW. INCREASE DUCTWORK TO ALLOW FOR INTERNAL INSULATION THICKNESS. E. FLEXIBLE CONNECTION: ATTACH AT INLET AND OUTLET OF FANS SO THAT METAL IS CONTACTED BY 6" MINIMUM AND SO THAT JOINT WILL NOT BE A STRESS POINT. FLEXIBLE CONNECTION AT ALL MOTORIZED EQUIPMENT AND AT BUILDING EXPANSION JOINTS. USE NEPRENE HEAVY DUTY TYPE 6.0 INCH CLEAR DUCT TO DUCT. G. ALL EXISTING & NEW DUCTWORK SEAMS AND JOINTS SHALL BE SEALED WITH MASTIC BEFORE INSULATION IS INSTALLED. INSPECTION OF THIS SHALL BE PROVIDED BY OWNER BEFORE INSULATION IS INSTALLED. H. FLEX DUCT CAN BE USED FROM THE DIFFUSER ADAPTER BACK TO THE RIGID SHEET METAL. I. LOW PRESSURE INSULATED FLEXIBLE DUCT SHALL BE A MAXIMUM OF SIX (6) FEET LONG AND SHALL BE SIZED AS FOLLOWS: CFM FLEX DUCT DIAMETER 0-110 6" 111-250 8" 251-420 10" J. QUADRANT DAMPERS OR BLASTGATES SHALL BE PROVIDED WITH A LOCKING DEVICE TO PERMANENTLY SET AIR VOLUME. K. DUCT SUPPORTS SHALL BE SPACED NOT MORE THAN 8'-0" O.C. AND SHALL BE STEEL STRAP HANGERS, (PERFORATED STRAP NOT PERMITTED) FOR DUCTS UP TO 30" WIDE; ANGLE HANGERS FOR DUCTS OVER 30" WIDE. STRAP HANGERS SHALL BE 2" X 16 GAUGE MINOR W/ROUNDER ON BOTH SIDES OF DUCT AND TURNING UNDER 2", FASTENED TO SIDES AND BOTTOM WITH SHEET METAL SCREWS. L. ACCESS DOORS: WHEREVER MECHANISMS REQUIRING ACCESS FOR OPERATION ARE CONCEALED IN STRUCTURE AND WHEREVER ALSO INDICATED ON THE DRAWINGS OR WHERE SO DIRECTED, CONTRACTOR SHALL SUPPLY ACCESS DOORS OF SIZES NECESSARY TO PROVIDE READY ACCESS TO CONCEALED ITEMS. USE PYRO/GARO ACCESS DOORS, OR APPROVED EQUAL. ACCESS DOORS SHALL MATCH RATING TO WHICH IT IS INSTALLED. DOORS SHALL BE ONE INCH INSULATED HINGE CAM MODELS. USE PYRO/GARO ACCESS DOORS, OR APPROVED EQUAL. ACCESS DOORS SHALL MATCH RATING TO WHICH IT IS INSTALLED. DOORS SHALL BE ONE INCH INSULATED HINGE CAM MODELS. 2.02 DUCT INSULATION: A. ALL INSULATION SHALL CONFORM WITH ALL FIRE HAZARD RATINGS AS DETERMINED BY NFPA 255. "METHOD OF TEST OF SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS"; ASTM E84 OR UL 723. IN GENERAL, THE FIRE HAZARD RATING SHALL NOT EXCEED A FLAME SPREAD RATING OF 25 OR SMOKE DEVELOPED RATING OF 50. B. SUPPLY, RETURN AND OUTSIDE AIR INTAKE DUCTWORK SHALL BE INSULATED WITH 2" MIN R-8 THICK FIBERGLASS DUCT INSULATION AS MANUFACTURED BY OWENS CORNING OR JOHNS MANVILLE. INSULATION SHALL HAVE A FOIL-FACED VAPOUR BARRIER. 1. EXTERIOR OF DUCT IN CONCEALED SPACES: WRAP TIGHTLY, BUTT CIRCUMFERENTIAL JOINTS AND OVERLAP LONGITUDINAL JOINTS A MINIMUM OF TWO INCHES. ADHERE TO DUCT WITH FOUR-INCH STRIPS OF INSULATION BONDING ADHESIVE 8" OC. DUCTWORK OVER 24" WIDE: SECURE WITH MECHANICAL FASTENERS NOT MORE THAN 18" OC. CIRCUMFERENTIAL JOINTS: SECURE THE TWO-INCH INCH DUCT OF THE FACING WITH 9/16" FLARE DOOR STAPLES 6" OC AND TAPE WITH MINIMUM OF THREE-INCH-WIDE, FOL REINFORCED KRAFT TAPE TAPE P/W PENETRATIONS AND PUNCTURES. IN EXPOSED APPLICATIONS, IN COVER JOINTS WITH THREE-INCH-WIDE, FOL REINFORCED KRAFT TAPE. C. AT DAMPER AND DUCT ACCESS DOOR LOCATIONS, CUT INSULATION BACK TO EXPOSE DAMPER ADJUSTER AND ACCESS DOOR. TAPE SEAL INSULATION TO DUCT. PROVIDE AN INSULATION "DOOR" TO COVER THE ACCESS POINT AND MARK THE "DOOR" WITH HIGHLY VISIBLE MARKER OR TAPE. 2.03 DAMPERS: A. ALL DAMPERS SHALL BE AT LEAST ONE GAUGE HEAVIER THAN DUCT IN WHICH INSTALLED, REINFORCED AS NECESSARY AND EQUIPPED WITH QUADRANT AND LOCKING DEVICE. B. MANUAL DAMPERS SHALL BE YOUNG REGULATOR OPPOSED BLADE TYPE WITH FACTORY INSTALLED LOCKING HANDLE QUADRANTS EXTENDED 2". 2.04 VOLUME DAMPER: A. PROVIDE YOUNG REGULATOR MANUAL ADJUSTABLE RECTANGULAR OPPOSED BLADE DAMPERS FOR DUCT HEIGHTS LESS THAN 12" WITH FACTORY INSTALLED LOCKING HANDLE QUADRANTS EXTENDED 2" FOR ALL DAMPERS INSTALLED IN EXTERNALLY INSULATED DUCT. ON EACH SUPPLY, RETURN AND GENERAL EXHAUST DUCT TAKE-OFF & AT EACH TAKE-OFF TO REGISTER, GRILLE OR DIFFUSER. B. DAMPERS ARE MANUFACTURED APPROXIMATELY 5/16" SMALLER IN WIDTH AND 1/8" SMALLER IN HEIGHT THAN SIZE OF DUCT IN WHICH THEY ARE INSTALLED, E.G., NOMINAL DAMPER SIZE IS 24" X 10"; ACTUAL SIZE IS APPROXIMATELY 23-11/16" X 9-7/8". C. DAMPER FRAME SHALL BE CONSTRUCTED OF #6063 EXTRUDED ALUMINUM REINFORCED CHANNEL WITH MINIMUM THICKNESS OF .050". OPPOSED DAMPER BLADES SHALL BE #6063 EXTRUDED ALUMINUM WITH MINIMUM THICKNESS OF .050" AND SHALL INCLUDE REINFORCING RIBS. EACH BLADE SHALL BE SUPPORTED IN THE DAMPER FRAME BY INDIVIDUAL TEFLON AXLE BEARINGS, AND SHALL BE DRIVEN BY STAINLESS STEEL CONNECTING SLIDE LINKAGE CONTROLLED BY 3/8" SQUARE STEEL CONTROL SHAFT. D. DAMPERS 12" AND LARGER IN HEIGHT SHALL BE OPPOSED MULTI-BLADE EQUAL TO GREENHECK, NALOR, OR VENT PRODUCTS. E. DAMPER BLADES SHALL BE TWO GAUGES HEAVIER THAN ADJOINING DUCTWORK, AND SHALL BE RIVETED TO SUPPORTING RODS: HEM OVER EDGES PARALLEL TO RODS. F. BRACKETS SHALL BE GALVANIZED METAL, SECURED TO DUCTWORK WITH SHEET METAL SCREW WITH LOCKING QUADRANT ARMS (SEE UNIFORM ACCESS SECTION FOR ADDITIONAL REQUIREMENTS). PROVIDE 2" HANDLE EXTENSION FOR ALL DAMPERS ON EXTERNALLY INSULATED DUCTWORK. G. WHERE DAMPERS ARE INACCESSIBLE PROVIDE REMOTE VOLUME DAMPER BY YOUNG REGULATOR MODEL BOWDEN CABLE WITH CONTROL KIT MODEL 270-275, WITH YOUNG #30A-CC-2 VOLUME DAMPER. INSTALL DAMPER OPERATOR INSIDE DUCTWORK NEXT TO GRILLE FOR EASY ACCESSIBILITY. THE 3/8" ROD BETWEEN REGULATOR AND DAMPER SHALL BE PROVIDED BY THIS CONTRACTOR. 2.05 REGISTERS, GRILLES & DIFFUSERS: A. APPROVE ALUMINUM CONTRACTION DIFFUSERS, REGISTERS AND GRILLES WITH SIZES AS NOTED ON THE DRAWINGS AND HEREIN SPECIFIED. REGISTERS AND GRILLES SHALL BE AS MANUFACTURED BY PRICE, METALAIR, TUTTLE & BAILEY, OR NALOR. B. DISTRIBUTION DEVICES SHALL BE FACTORY PRIMED AND FINISH PAINTED BY THE MANUFACTURER IN COLOR AS APPROVED BY THE ARCHITECT, DURING SHOP DRAWINGS. C. COORDINATE GRILLES WITH CEILING AND WALL CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LENGTHS AND FOR FRAMING AND MITERING ARRANGEMENTS THAT MAY DIFFER FROM THOSE SHOWN ON HVAC DRAWINGS. D. INSTALL IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTALLATION INSTRUCTIONS.

- 2.06 PIPING: A. HEATING: 1. PIPING 2-1/2" AND SMALLER SHALL BE SCHEDULE 40 BLACK STEEL WITH SCREWED FITTING OR PIPE - HARD COPPER SEAMLESS TUBE AS MANUFACTURED BY ANACONDA, REVERSE, OR CHASE. LOW WROUGHT COPPER FITTINGS, SOLDERED WITH LEAD-FREE SOLDER. UNIONS OR FLANGES SHALL BE INSTALLED AT ALL CONNECTIONS TO ALL EQUIPMENT. 2. PIPING 3" AND LARGER SHALL BE SCHEDULE 40 BLACK STEEL WITH WELDED FITTINGS AND 150 LB. FLANGES. 3. PIPING EXPANSION: PROVIDE MEANS FOR THE MECHANICAL EXPANSION OF THE PIPING IN THE FORM OF EXPANSION LOOPS LOCATED AS REQUIRED. USE TRIFLEX PRODUCT. B. CONDENSATE: 1. PVC PIPE: ASTM D1785, SCHEDULE 40 2. FITTINGS: ASTM D2466 OR D2467, PVC. 3. JOINTS: ASTM D2855, SOLVENT WELD. 4. FITCH ALL PIPING 1/4" - 1'-0". C. UNIONS: USE DIELECTRIC UNIONS, FLANGES OR WATERWAYS TO CONNECT DISSIMILAR METAL PARTS. D. PIPE SLEEVES: THROUGH OUTSIDE MASONRY WALLS AND BELOW GRADE MASONRY BEFORE INSULATION IS INSTALLED. SCHEDULE 40 DUCTILE IRON CALLED WATER TIGHT, THROUGH MASONRY FLOORS OR INTERIOR MASONRY WALLS AND FIRE RATED ASSEMBLIES, USE SCHEDULE 40 GALVANIZED STEEL PIPE. THROUGH INTERIOR NON-FIRE RATED STUD PARTITIONS, USE 22-GAUGE GALVANIZED SHEET METAL. E. ESCUTCHEONS: ESCUTCHEONS FOR PIPES PASSING THROUGH OUTSIDE WALLS SHALL BE SOLID CAST BRASS, FLAT TYPE, SECURED TO PIPE WITH A SET SCREW. ESCUTCHEONS FOR PIPES PASSING THROUGH FLOORS SHALL BE SPLIT HINGED, CAST BRASS TYPE DESIGNED TO FIT PIPE ON ONE END AND COVER SLEEVE PROTECTION THROUGH FLOOR ON OTHER END. ESCUTCHEONS FOR PIPES PASSING THROUGH INTERIOR WALLS, PARTITIONS AND CEILING SHALL BE SPLIT-HINGED, CAST BRASS, CHROMIUM PLATED TYPE. RITTER PATTERN, CASTING CO.#3A, BEATON & CORBIN AND/OR CALDWELL PRODUCTS WILL BE ACCEPTABLE. 2.07 PIPE HANGERS AND SUPPORTS: A. COPPER TUBING SHALL BE SUPPORTED WITH SPLIT RING HANGERS, COPPERIZED WITH SUPPORTING ROD. B. PVC PIPE SHALL BE SUPPORTED NO MORE THAN 4'-0" ON CENTER. C. USE INSULATION PROTECTION SADDLES OR SHIELDS FOR ALL INSULATED COLD PIPING AND WHERE HANGERS IS OUTSIDE THE INSULATION. SECURE ALL SADDLES AND SHIELDS TO THE INSULATION TO PREVENT SAGGAGE OR SHIFTING THAT MAY CAUSE THE SHIELD TO FALL TO THE GROUND. SADDLES SHALL BE SPOT WELDED TO HANGERS. D. PIPE HANGERS AND SUPPORTS: 1. CLEVIS TYPE HANGERS, GRINNELL, FIG. 260, SHALL BE USED EXCEPT AS OTHERWISE NOTED IN SECTION 10500. INSULATION ISOLATION AND SEISMIC RESTRAINT. SUPPORT PIPES FOUR INCHES AND OVER WITH GRINNELL, FIGURE 181 OR 171 ADJ., PIPE ROLL WITH PIPE COVERING PROTECTION SADDLE. 2. PERFORATED BAND IRON, WIRE, CHAIN OR OTHER PIPING SHALL NOT BE USED AS SUPPORTS NOR SHALL HANGER RODS PIERCE DUCTWORK. 3. VERTICAL PIPING SUPPORTS SHALL BE PROVIDED WHERE REQUIRED, EQUAL TO GRINNELL STEEL EXTENSION PIPE CLAMPS, FIGURE 261, OR SOMERVILLE MANUFACTURE. 4. USE COPPERIZED EQUIPMENT ON COPPER PIPE AND PVC COATED FOR PVC PIPE. 5. ON PIPING CONVEYING FLUID OR GASSES AT TEMPERATURES BELOW 60 DEG F, SUPPORT SHALL BE OUTSIDE THE PIPE INSULATION. USE INSULATION PROTECTION SADDLES FOR EACH SUPPORT; SIZE SHALL BE AS PER MANUFACTURERS RECOMMENDATION FOR EACH SIZE AND SERVICE OF PIPE. 2.08 PIPING INSULATION: A. FIBERGLASS PIPE INSULATION SHALL BE BY OWENS CORNING TYPE SSL-II OR APPROVED EQUAL BY JOHNS MANVILLE OR CERTAINT. INSULATION SHALL HAVE FACTORY APPLIED ALL-SERVICE JACKET (ASJ) AND TWO-COMPONENT ADHESIVE CLOSURE SYSTEM, RATED FOR A MAXIMUM SERVICE TEMPERATURE OF 800°F. FOR LARGE PIPE SIZES WHERE SSL IS NOT AVAILABLE, THE SINGLE ADHESIVE SSL CLOSURE MAY BE SUBSTITUTED. CIRCUMFERENTIAL JOINTS SHALL BE SEALED BY BUTT STRIPS HAVING A TWO-COMPONENT SEALING SYSTEM. 1. PIPING 1-1/2" AND SMALLER SHALL HAVE A MINIMUM INSULATION THICKNESS OF 1-1/2". 2. PIPING LARGER THAN 1-1/2" SHALL HAVE A MINIMUM INSULATION THICKNESS OF 2". 3. INSULATION THICKNESS IS BASED ON A "K" VALUE NOT EXCEEDING 0.27 BTU PER INCH-H/ SQ.FT.-F. B. FITTINGS AND VALVES SHALL BE INSULATED WITH PRE-FORMED FIBERGLASS FITTINGS. THICKNESS SHALL BE EQUAL TO ADJUTING PIPE INSULATION. FINISH SHALL BE WITH PRE-FORMED PVC FITTING COVERS. C. FLANGES, COUPLINGS AND VALVE BONNETS SHALL BE COVERED WITH AN OVERSIZED PIPE INSULATION SECTION SIZED TO PROVIDE THE SAME INSULATION THICKNESS AS ON THE MAIN PIPE SECTION. AN OVERSIZED INSULATION SECTION SHALL BE USED TO FORM A COLLAR BETWEEN THE TWO INSULATION SECTIONS WITH LOW-DENSITY BLANKET INSULATION BEING USED TO FILL GAPS. JACKETING SHALL MATCH THAT USED ON STRAIGHT PIPE SECTIONS. WHERE FITTINGS ARE TO BE LEFT EXPOSED, INSULATION ENDS SHOULD BE REVEALED AWAY FROM BOLTS FOR EASY ACCESS. 2.09 VALVES AND SPECIALTIES: A. PROVIDE WHERE SHOWN ON THE DRAWINGS AND AT ALL HIGH POINTS IN THE PIPING AND AT ALL AIR HANDLING UNIT COILS, A SPRICOT AUTOMATIC AIR VENT WITH SHUT-OFF. FURNISH TO THE GENERAL CONTRACTOR ACCESS PANELS AS MANUFACTURED BY MILCOR FOR EACH CONCEALED AIR VENT. B. PROVIDE WHERE SHOWN ON THE DRAWINGS AT ALL HEATING COILS, A #417 AUTOMATIC COIN VENT WITH SEAT AND SHUT-OFF, MANUFACTURED BY TACO. FURNISH TO THE GENERAL CONTRACTOR ACCESS PANELS AS MANUFACTURED BY MILCOR FOR EACH CONCEALED COIN VENT. C. PROVIDE ALL REQUIRED VALVES FOR THE EQUIPMENT AS SHOWN ON THE PLANS AND AS REQUIRED FOR PROPER OPERATION OF THE EQUIPMENT. PROVIDE THROTTLING VALVES WHERE REGULATION OF FLOW IS NECESSARY OR DESIRABLE. CHECK VALVES WHERE REVERSE FLOW IS LIABE UNDER ANY CONDITIONS AND SHUT-OFF VALVES ON ALL LINES CONNECTING TO ANY PIECE OF EQUIPMENT, INCLUDING HEATING AND VENTILATING UNITS, COILS, UNIT HEATERS AND FIB TUBE RADIATION. ALL VALVES SHALL BE 125-LB. STANDARD CONSTRUCTION. VALVES SHALL BE BRONZE OR BRASS. VALVES 3" AND LARGER SHALL BE FLANGED ENDS. ALL VALVES SHALL HAVE THE NAME OR TRADE MARK OF THE MANUFACTURER AND GUARANTEED WORKING PRESSURE CAST ON THE BODY OF THE VALVE. ALL EQUIPMENT SHALL HAVE ISOLATION VALVES. ALL VALVES SHALL HAVE EXTENSIONS SUFFICIENT TO CLEAR INSTALLATION. D. PROVIDE ALL VALVES OF THE SAME MANUFACTURER (JENKINS, FAIRBANKS, CRANE OR LUMENKHEIMER) OF TOP LINE, FIRST QUALITY. E. CHECK VALVES SHALL BE OF THE HORIZONTAL SWING TYPE WITH HINGED CHECK, GROUND SEAT AND APPROVED TYPE DISCS. F. GLOBE AND ANGLING VALVES USED FOR THROTTLING SERVICES SHALL BE OF THE PLUG TYPE WITH RENEWABLE SEATS AND DISCS. SEATS AND DISCS FOR PLUG TYPE VALVES SHALL BE OF APPROVED TYPE METAL ALLOY. G. PROVIDE BALANCING VALVES, AS INDICATED ON THE DRAWINGS, EQUAL TO TACO CIRCUIT SETTER SHUT-OFF AND BALANCE VALVE. FURNISH ACCESS PANELS FOR ALL CONCEALED BALANCING VALVES AND FLOW METERS EXCEPT WHERE READILY ACCESSIBLE THROUGH REMOVABLE CEILING TILES. BALANCING VALVES OVER 2" SHALL BE FLANGED, 2" AND UNDER SHALL BE SCREWED. 2.10 THREE WAY VALVE: a. THE THREE WAY MIXING VALVE SHALL MODULATE TO MAINTAIN 140° SUPPLY TEMPERATURE.

- 2.14 VARIABLE VOLUME TERMINAL BOX (VAV) A. PROVIDE VAV UNITS MANUFACTURED BY PRICE, TITUS, OR METALAIR WITH HEATING HOT WATER COIL. PERFORMANCE & ACCESSORIES TO BE AS SCHEDULED ON PLANS. B. THE CHANGEOVER/BYPASS VAV SYSTEM SHALL PROVIDE TEMPERATURE CONTROL OF MULTIPLE COMFORT ZONES THROUGH THE USE OF AN EXISTING CONSTANT VOLUME SINGLE-ZONE HVAC UNIT. VARIABLE AIR VOLUME CONTROL SHALL BE PROVIDED FOR EACH ZONE TO MAINTAIN ZONE TEMPERATURE WITHIN THE HEATING/COOLING SET POINTS. THE SYSTEM SHALL MONITOR THE TEMPERATURE AND SET POINTS OF THE ZONE AND AUTOMATICALLY CHANGE THE HEAT/COOL MODE OF THE HVAC UNIT TO SATISFY ZONE REQUIREMENTS. THE SYSTEM SHALL MAINTAIN AIRFLOW THROUGH HVAC UNIT BY BYPASSING AIR FROM THE SUPPLY TO THE RETURN DUCT. BYPASS AIR IS MODULATED BASED UPON SYSTEM MONITORING OF SUPPLY DUCT PRESSURE. C. UNITS SHALL BE COMPLETELY FACTORY-ASSEMBLED, MANUFACTURED OF ROLLED AND SEAM WELDED 18 GAUGE GALVANIZED STEEL WITH INTEGRAL HOT WATER COIL. DISCHARGE END SHALL BE CRIMPED TO FIT STANDARD ROUND DUCTWORK. DAMPER BLADES SHALL BE CONSTRUCTED OF 22 GAUGE GALVANIZED STEEL. D. ELECTRIC DAMPER ACTUATOR: 24 VAC WITH END SWITCHES TO ELIMINATE ACTUATOR MOTOR STALL CONDITIONS. E. VARIABLE AIR VOLUME TERMINAL UNIT CONTROLLER: ALL TERMINAL UNIT CONTROLLER SET POINTS AND OPERATING PARAMETERS SHALL BE STORED IN NON-VOLATILE ELECTRONIC MEMORY. BATTERY BACK UP IS NOT ACCEPTABLE. THE TERMINAL UNIT CONTROLLER SHALL BE FIELD OR FACTORY CONFIGURABLE TO FUNCTION AS AN AUTO-CHANGEOVER DEVICE. F. PROVIDE WITH AN INDEPENDENT ZONE SENSOR FOR EACH DAMPER WITH ADJUSTABLE SETPOINT & COMMUNICATIONS JACK. PART 3 - EXECUTION 3.01 AUTOMATIC TEMPERATURE CONTROLS A. ALL NEW DDG CONTROL COMPONENTS SHALL BE SIEMENS APOEGE ADDED INTO THE EXISTING FRONT END ALREADY IN PLACE, LOCATED AT LIGHT COURTHOUSE. B. IF IT IS THE INTENT OF THESE SPECIFICATIONS THAT THIS CONTRACTOR BE RESPONSIBLE FOR PROVIDING ALL DEVICES, TRANSFORMERS AND WIRING (REGARDLESS OF VOLTAGE) NECESSARY TO PROVIDE THE SEQUENCES AS SPECIFIED HEREIN. C. ALL ALARMS SHALL BE CONVEYED TO THE EXISTING FRONT END. D. ALL EQUIPMENT SHALL BE AUTOMATICALLY CONTROLLED. E. THERMOSTATS AND CONTROLLERS 1. SPACE THERMOSTATS: USE LOW VOLTAGE WITH USER ADJUSTABLE SET POINT, TEMPERATURE AND SET-POINT READOUTS, NIGHT SET BACK AND PUSH BUTTON OVERRIDE MANUFACTURED BY SIEMENS. 2. COORDINATE ALL THERMOSTAT, CONTROLLER TYPES AND LOCATION WITH OWNER PRIOR TO ORDERING OR INSTALLATION. 3. ALL THERMOSTATS SHALL BE CAPABLE OF OVERRIDE AND SETTING USER ADJUSTMENT RANGE (MAX / MIN) AT THE FRONT END. 4. TIE-IN NEW CONTROLS TO THE EXISTING CONTROL NETWORK. PROGRAM NEW WEEKLY AND HOLIDAY ROUTINE FOR NEW ZONE OPERATING HOURS. 5. THERMOSTATS LOCATED IN PUBLIC AREAS (IE. COURTCOURTS, LOBBIES, VESTIBULES, ETC.) SHALL HAVE TAMPERPROOF COVERS. COORDINATE WITH OWNER FOR EXACT LOCATIONS AND QUANTITY. 3.02 SEQUENCE OF OPERATIONS A. VARIABLE AIR VOLUME BOXES (VAV) 1. OCCUPIED COOLING: BOX SHALL MODULATE THE INLET CONTROL DAMPER TO DISCHARGE AIR QUANTITY TO SATISFY THE SENSOR SET-POINT. ON A RISE IN SPACE TEMPERATURE THE BOX AIR DAMPER SHALL OPEN TO ALLOW AN INCREASE IN SUPPLY AIR SUFFICIENT TO MAINTAIN SPACE TEMPERATURE SET-POINT. ON A DROP IN SPACE TEMPERATURE, THE AIR DAMPER SHALL CLOSE TO DECREASE SUPPLY AIR TO A QUANTITY SUFFICIENT TO MAINTAIN SPACE TEMPERATURE SET-POINT. 2. OCCUPIED HEATING (BOXES WITH HW HEAT): ON A DROP IN SPACE TEMPERATURE, BOX SHALL REDUCE SUPPLY AIRFLOW IN ORDER TO ATTEMPT TO MAINTAIN SPACE TEMPERATURE SET-POINT UNTL THE MINIMUM AIR VOLUME SET-POINT IS REACHED. ON A CONTINUED TEMPERATURE DROP, THE FIRST STAGE OF HEAT SHALL BE THE HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE SET-POINT UNTIL THE MINIMUM AIR VOLUME SET-POINT IS REACHED. ON A CONTINUED TEMPERATURE DROP, THE FIRST STAGE OF HEAT SHALL BE THE HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE SET-POINT UNTIL THE MINIMUM AIR VOLUME SET-POINT IS REACHED. ON A CONTINUED TEMPERATURE DROP, THE FIRST STAGE OF HEAT SHALL BE THE HOT WATER CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE SET-POINT UNTIL THE MINIMUM AIR VOLUME SET-POINT IS REACHED. ON A CONTINUED TEMPERATURE DROP, THE SECOND STAGE OF HEAT SHALL BE THE FINITE RADIATION, IF ANY SPACE THERMOSTAT WITHIN ZONE IS NOT SATISFIED WITHIN 30 SECONDS (ADJUSTABLE), THE BASEBOARD WITHIN ZONE SHALL OPEN. 3. UNOCCUPIED COOLING: UNITS SHALL BE 100% OPEN AND SHALL MODULATE CLOSED AS REQUIRED WHEN AIR HANDLING UNITS OPERATE TO MAINTAIN RESET COOLING TEMPERATURE SET-POINT. 4. UNOCCUPIED HEATING: THE AIR SYSTEM SHALL BE OFF AND THE PERIMETER BASEBOARD HEAT SHALL BE UTILIZED TO MAINTAIN 62° (ADJUSTABLE) ON A CALL FROM HEAT BY ANY THERMOSTAT AT LOW SELECT. 5. A DEAD-BAND OF 3°F (ADJUSTABLE) SHALL BE INCLUDED TO AVOID HUNTING BETWEEN UNIT HEATING/COOLING ACTIONS AT THE WALL THERMOSTAT OR SPACE SENSOR. 6. AN ALARM WILL BE GENERATED AT THE OPERATOR WORKSTATION IF ANY SPACE TEMPERATURE DROPS BELOW 55°F DURING THE UNOCCUPIED PERIOD, OR IS OUT OF RANGE WITH RESPECT TO SETPOINT FOR AN ADJUSTABLE TIME PERIOD DURING THE OCCUPIED PERIOD. 7. THE FOLLOWING POINTS SHALL BE MONITORED/CONTROLLED THRU THE BMS SYSTEM: SUPPLY AIR FLOW CFM, DAMPER POSITION, DISCHARGE AIR TEMPERATURE, HOT WATER VALVE POSITION, SPACE TEMPERATURE. B. THREE WAY VALVE & CIRCULATING PUMPS (P4-2 & P5-2) 1. CIRCULATING PUMPS (P4-2 & P5-2) a. PUMPS SHALL RUN CONTINUOUSLY DURING OCCUPIED MODE AND PUMPS SHALL BE OFF DURING UN-OCCUPIED MODE. b. A CURRENT SWITCH SHALL BE USED TO INDICATE PUMP STATUS. c. UPON DETECTION OF LOW CURRENT OR FLOW AN ALARM CONDITION SHALL BE GENERATED. d. WHEN NO VAV BOX IS CALLED FOR REHEAT, PUMP SHALL BE OFF. e. PUMP VFD SHALL VARY SPEED TO MAINTAIN CONSTANT DISCHARGE PRESSURE. WHEN PRESSURE SETPOINT IS SATISFIED, PUMP SHALL BEGIN TO RAMP DOWN. WHEN PUMP IS AT MINIMUM SPEED AND PRESSURE SETPOINT IS SATISFIED, PUMP SHALL SHUT OFF. 2. THREE WAY VALVE a. THE THREE WAY MIXING VALVE SHALL MODULATE TO MAINTAIN 140° SUPPLY TEMPERATURE.

- 3.03 FINNED TUBE CONTROL VALVE A. INTERLOCK NEW FINNED TUBE CONTROL VALVE TO THE DEDICATED WALL THERMOSTAT/SENSOR. B. UPON A CALL FOR HEAT, THE VALVE SHALL MODULATE OPEN, (SEE VAV SEQUENCE) C. ONCE SPACE TEMPERATURE IS SATISFIED, THE VALVE SHALL BE CLOSED. 3.04 BALANCING, ADJUSTING, TESTING, & CLEANING: A. ALL HVAC SYSTEMS SHALL BE BALANCED BY AN INDEPENDENT TESTING AND BALANCING AGENCY CERTIFIED BY AABC. ALL TESTING SHALL BE IN ACCORDANCE WITH AABC & NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION, FORM #BL206. SYSTEMS SHALL BE ADJUSTED TO FLOW AND AIR QUANTITIES DESIGNATED. A WRITTEN REPORT SHALL BE SUBMITTED FOR REVIEW. B. PROVIDE QUALIFIED PERSONNEL, EQUIPMENT, APPARATUS AND SERVICES FOR STARTUP TESTING AND BALANCING OF MECHANICAL SYSTEMS FOR QUANTITIES INDICATED ON DRAWINGS UPON COMPLETION OF INSTALLATION. BALANCE SYSTEMS IN ACCORDANCE WITH CODES, STANDARDS, REGULATIONS AND AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL USE RECENTLY CALIBRATED EQUIPMENT COMPATIBLE WITH INSTALLED EQUIPMENT AND SUBMIT BALANCING REPORT TO THE ENGINEER. C. HYDRONIC BALANCING: BALANCE SYSTEM TO GPM FLOWS INDICATED. TAG EACH BALANCING DEVICE WITH GPM OF FINAL BALANCE AND POSITION OF BALANCE POINT. D. AIR BALANCING: BALANCE SYSTEM TO CFM AIRFLOW INDICATED. TAG EACH BALANCING DEVICE WITH CFM OF FINAL BALANCE AND POSITION OF BALANCE POINT. E. ALL VAV BOXES SHALL BE INDEXED TO FULL OPEN (100%) DURING BALANCING. 3.05 PROJECT CLOSE-OUT: A. RESTORE EXISTING FACILITIES USED DURING CONSTRUCTION TO ORIGINAL CONDITION. CLEAN PORTIONS OF THE SITE AFFECTED BY WORK OF THIS CONTRACT. REMOVE WASTE AND SURPLUS MATERIALS FROM THE SITE. B. SUBMIT TWO COPIES OF OPERATION AND MAINTENANCE DATA BOUND IN THREE-RING BINDERS. INCLUDE WARRANTIES, SUBMITTALS, BALANCING REPORT, AND PRODUCT DOCUMENTS AND CERTIFICATES. THE MANUAL SHALL ALSO INCLUDE A SCHEDULE FOR EQUIPMENT MAINTENANCE. SCHEDULE SHALL PROVIDE A GENERAL OUTLINE FOR EQUIPMENT REQUIREMENT. EXAMPLE: FILTERS SHALL BE CHANGED EVERY 3 MONTHS, TEST DAMPERS ONCE A YEAR, MAINTAIN NEUTRALIZING KIT AT THE AIR HANDLERS. C. CONTRACTOR SHALL INSTRUCT OWNER IN USE OF SYSTEM. D. CONTRACTOR SHALL DEMONSTRATE ALL SEQUENCES OF CONTROL TO THE ENGINEER. THE TEMPERATURE CONTROL AND BALANCING SUB-CONTRACTORS SHALL ACCOMPANY THE ENGINEER DURING CHECK-OUT. QUALIFIED PERSONNEL SHALL BE EQUIPPED WITH TOOLS AND SPARE PARTS TO MAKE MINOR REPAIRS AND ADJUSTMENTS.

- 50 OFFICE PARKWAY EAST PROVIDENCE, RI 02914 P: 401-458-7733 F: 401-458-7620 WWW.GSD-ENGINEERING.COM PROJECT: MECHANICAL SYSTEM UPGRADES (4TH & 5TH FLOORS) J. JOSEPH GARRAHY JUDICIAL COMPLEX ONE DORRANCE PLAZA PROVIDENCE, RI 02903 Status: ISSUED FOR PERMIT Date: Revision: No. Sheet Title: HVAC SPECIFICATIONS Project No: 20160022 Drawn By: KES Checked By: KLI Scale: AS NOTED Date: 08.02.16 Drawing No: M-5 CEC # 20160022

Garrahy AHU # 8 VAV Project Information

Areas Served – Fourth & Fifth Floors Exposure - (Highway Side)

Start Date – 10/3/16

Finish Date – 12/23/16

Project Duration - 12 weeks

Project Hours – 4:30pm – 12:30am

Start Date - Phase 1 - October 3, 2016 (3 weeks)

- Courtrooms 4H – 4M & adjacent offices

Start Date – Phase 2 – October 24, 2016 (3 weeks)

- Courtrooms 4A, 4B & Mechanical Room

Start Date - Phase 3 – November 14, 2016 (3 weeks)

- Courtrooms 5H – 5L & adjacent offices

Start Date - Phase 4 – December 5, 2016 (3 weeks)

- Courtrooms 5A - 5B & Mechanical Room

Note: - All doors in the construction zone must be unlocked during the hours of construction as well as all personal effects will need to be removed from the spaces/offices during the active portion of the construction phase.

RHODE ISLAND
COURTS SPACE
ALLOCATION



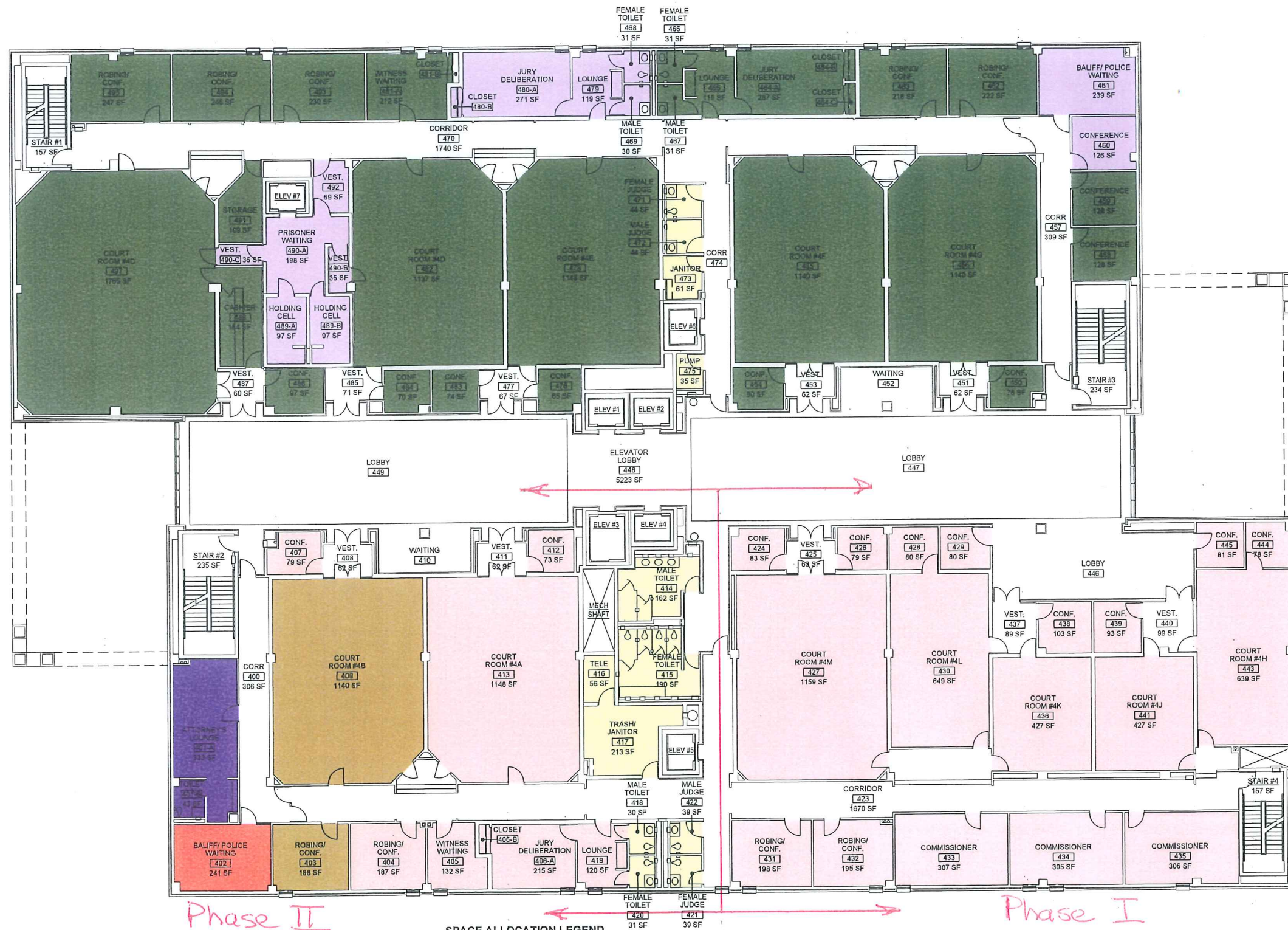
J. JOSEPH GARRAHY
JUDICIAL COMPLEX
ONE DORRANCE PLAZA, PROVIDENCE, RI

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Phase II

Phase I

SPACE ALLOCATION LEGEND

- | | | | | |
|--|--|---|---|--|
| DARK BLUE
PROVIDENCE POLICE
376 SF | BLUE
SUPREME COURT | RED
ATTORNEY GENERALS
241 SF | ORANGE
PAROLE & PROBATION | YELLOW
UTILITY SPACES
544 SF |
| DARK GREY
CAPITOL POLICE | TEAL
FAMILY COURT | LIGHT PINK
WORKMENS' COMP
1,243 SF | TAN
ADULT PROBATION | NO HATCH
PUBLIC SPACES
10,735 SF |
| LIGHT GREY
STATE POLICE | BRIGHT PINK
SUPERIOR COURT | LIGHT GREEN
PUBLIC DEFENDER | LIGHT BLUE
JUVENILE PROBATION | LIGHT BROWN
SHARED SPACES
1,325 SF |
| LIGHT PURPLE
SHERIFFS DEPARTMENT
1,345 SF | GREEN
DISTRICT COURT
1,166 SF | BRIGHT GREEN
LEGAL SERVICES | PURPLE
BLIND SERVICES | |

TOTAL FLOOR NET SF
= 31,284 NSF

FOURTH FLOOR PLAN

1/8" = 1'-0"
0 4' 8' 16'

Date:	SEPTEMBER 28, 2013
Drawn by:	BM Proj. Mgr.: SKA
Revisions:	
No.:	Date Description

GARRAHY
PROVIDENCE, RI
FOURTH FLOOR PLAN

G1.03

RHODE ISLAND
COURTS SPACE
ALLOCATION



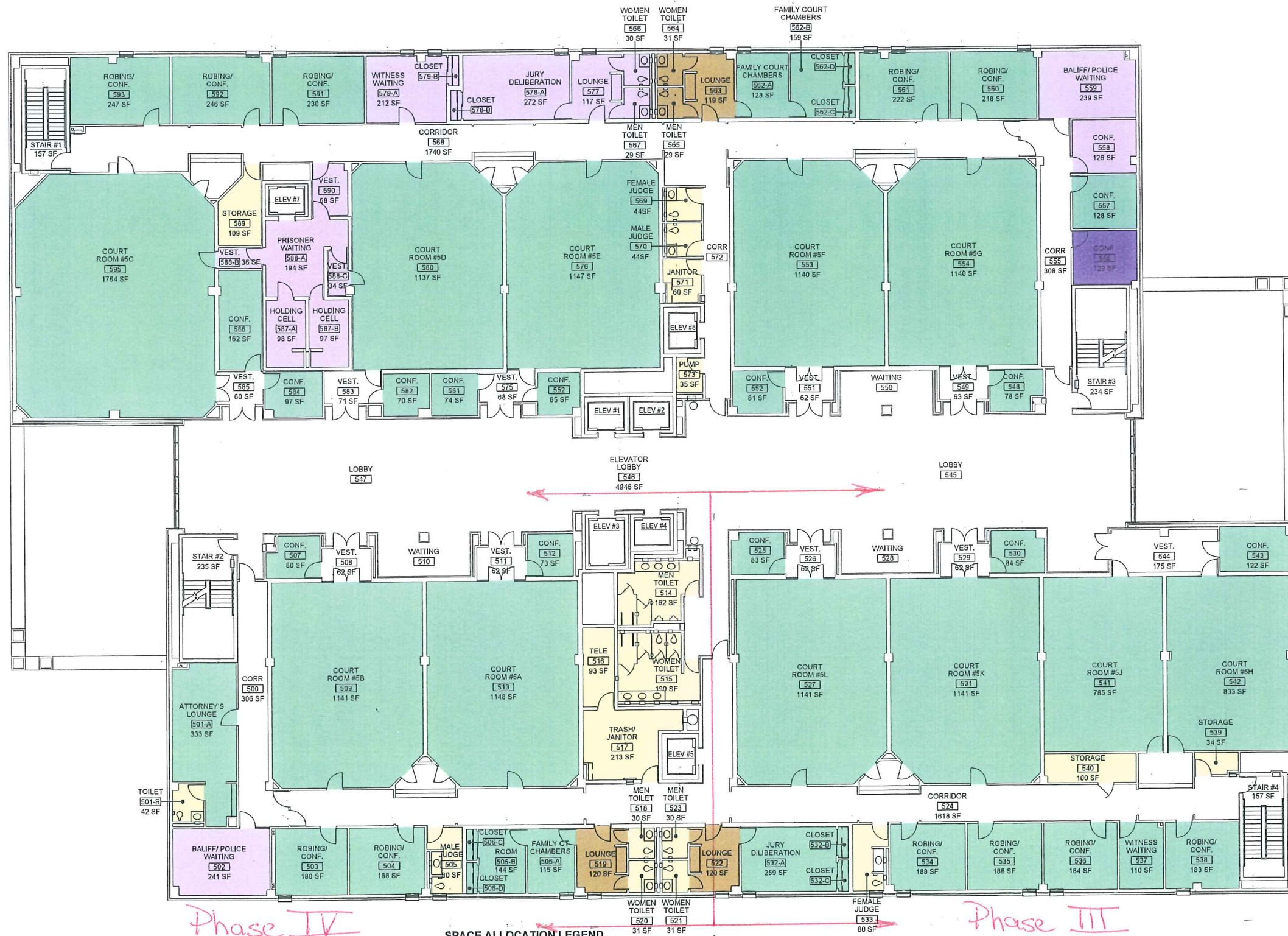
J. JOSEPH GARRAHY
JUDICIAL COMPLEX
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Phase IV

Phase III

SPACE ALLOCATION LEGEND

- | | | | | |
|---|-----------------------------------|--------------------------------|----------------------------------|--|
| DARK BLUE
PROVIDENCE POLICE
124 SF | BLUE
SUPREME COURT | RED
ATTORNEY GENERALS | ORANGE
PAROLE & PROBATION | YELLOW
UTILITY SPACES
1,355 SF |
| DARK GREY
CAPITOL POLICE | TEAL
FAMILY COURT
11,236 SF | LIGHT PINK
WOMEN'S COMP | TAN
ADULT PROBATION | NO HATCH
PUBLIC SPACES
10,445 SF |
| LIGHT GREY
STATE POLICE | BRIGHT PINK
SUPERIOR COURT | LIGHT GREEN
PUBLIC DEFENDER | LIGHT BLUE
JUVENILE PROBATION | LIGHT BROWN
SHARED SPACES
419 SF |
| LIGHT PURPLE
SHERIFFS DEPARTMENT
1,793 SF | GREEN
DISTRICT COURT | BRIGHT GREEN
LEGAL SERVICES | PURPLE
BLIND SERVICES | |

TOTAL FLOOR NET SF
= 31,383 NSF

FIFTH FLOOR PLAN

1/8" = 1'-0"
0 4' 8' 16'

GARRAHY
PROVIDENCE, RI
FIFTH FLOOR PLAN

G1.04

Appendix C

RHODE ISLAND JUDICIARY GENERAL TERMS AND CONDITIONS OF PURCHASE

Preamble

The Judicial Purchasing Office may, from time to time, make amendments to the General Terms and Conditions when the Judicial Purchasing Agent determines that such amendments are in the best interest of the Judiciary. Amendments shall be made available for public inspection at the Office of the Secretary of State but shall not require formal public notice and hearing. Copies of the Terms and Conditions shall be provided to any individual or firm requesting to become a registered bidder. Applicants shall be required, as part of the application process, to certify that they have read the General Terms and Conditions and understand that they apply to all judicial purchases.

JUDICIAL PURCHASING OFFICE GENERAL CONDITIONS OF PURCHASE

All Judicial purchase orders, contracts, solicitations, delivery orders and service requests shall incorporate and be subject to the provisions of Rhode Island General Laws 8-15-4 and the judicial purchasing rules and regulations adopted pursuant thereto, all other applicable provisions of the Rhode Island General Laws, specific requirements described in the Request or Contract, and the following General Conditions of Purchase:

1. GENERAL

All purchase orders, contracts, solicitations, delivery orders, and service requests are for specified goods and services, in accordance with express terms and conditions of purchase, as defined herein. For the purposes of this document, the terms "bidder" and "contractor" refer to any individual, firm, corporation, or other entity presenting a proposal indicating a desire to enter into contracts with the Judiciary, or with whom a contract is executed by the Judicial Purchasing Agent, and the term "contractor" shall have the same meaning as "Vendor".

2. ENTIRE AGREEMENT

The Judiciary's Purchase Order, or other Judiciary contract endorsed by the Judicial Purchasing Office, shall constitute the entire and exclusive agreement between the Judiciary and any contractor receiving an award. In the event any conflict between the bidder's standard terms of sale, these conditions or more specific provisions contained in the solicitation shall govern.

All communication between the Judiciary and any contractor pertaining to any award or contract shall be accomplished in writing.

a. Each proposal will be received with the understanding that the acceptance, in writing, by contract or Purchase Order by the Judicial Purchasing Agent of the offer to do work or to furnish any or all the materials, equipment, supplies or services described therein shall constitute a contract between the bidder and the Judiciary. This shall bind the bidder on his part to furnish and deliver at the prices and in accordance with the conditions of said accepted proposal and detailed specifications and the Judiciary on its part to order from such contractor (except in case of emergency) and to pay for at the agreed prices, all materials, equipment, supplies or services specified and delivered. A contract shall be deemed executory only to the extent of funds available for payment of the amounts shown on Purchase Orders issued by the Judiciary to the contractors.

b. No alterations or variations of the terms of the contract shall be valid or binding upon the Judiciary unless submitted in writing and accepted by the Judicial Purchasing Agent. All orders and changes thereof must emanate from the Judicial Purchasing Office: no oral agreement or arrangement made by a contractor with an agency or employee will be considered to be binding on the Judicial Purchasing Agent, and may be disregarded.

c. Contracts will remain in force for the contract period specified or until all articles or services ordered before date of termination shall have been satisfactorily delivered or rendered and accepted and thereafter until all terms and conditions have been met, unless:

1. terminated prior to expiration date by satisfactory delivery against orders of entire quantities, or
2. extended upon written authorization of the Judicial Purchasing Agent and accepted by the contractor, to permit ordering of the unordered balances or additional quantities at the contract price and in accordance with the contract terms, or
3. canceled by the Judiciary in accordance with other provisions stated herein.

d. It is mutually understood and agreed that the contractor shall not assign, transfer, convey, sublet or otherwise dispose of this contract or his right, title or interest therein, or his power to execute such contract, to any

other person, company or corporation, without the previous consent, in writing, of the Judicial Purchasing Agent.

- e. If, subsequent to the submission of an offer or issuance of a purchase order or execution of a contract, the bidder or contractor shall merge with or be acquired by another entity, the contract may be terminated, except as a corporate resolution prepared by the contractor and the new entity ratifying acceptance of the original bid or contract terms, condition, and pricing is submitted to the Judicial Purchasing Office, and expressly accepted.
- f. The contractor or bidder further warrants by submission of an offer or acceptance of a purchase order or other contract that he has no knowledge at the time of such action of any outstanding and delinquent or otherwise unsettled debt owed by him to the Judiciary, and agrees that later discovery by the Judicial Purchasing Agent that this warranty was given in spite of such knowledge, except where the matter is pending in hearing or from any appeal therefrom, shall form reasonable grounds for termination of the contract.

3. SUBCONTRACTS

No subcontracts or collateral agreements shall be permitted, except with the Judiciary's express written consent. Upon request, contractors must submit to the Judicial Purchasing Office a list of all subcontractors to be employed in the performance of any Purchase Order or other contract arising from this Request.

4. RELATIONSHIP OF PARTIES

The contractor or bidder warrants, by submission of an offer or acceptance of a purchase order or other contract, that he is not an employee, agent, or servant of the Judiciary, and that he is fully qualified and capable in all material regards to provide the specified goods and services. Nothing herein shall be construed as creating any contractual relationship or obligation between the Judiciary and any sub-bidder, subcontractor, supplier, or employee of the contractor or offeror.

5. COSTS OF PREPARATION

All costs associated with the preparation, development, or submission of bids or other offers will be borne by the offeror. The Judiciary will not reimburse any offeror for such costs.

6. SPECIFIED QUANTITY REQUIREMENT

Except where expressly specified to the contrary, all solicitations and contracts are predicated on a specified quantity of goods or services, or for a specified level of funding.

- a. The Judiciary reserves the right to modify the quantity, scope of service, date of delivery or completion, or funding of any contract, with no penalty or charge, by written notice to the contractor, except where alternate terms have been expressly made a part of the contract.
- b. The Judiciary shall not accept quantities in excess of the specified quantity except where the item is normally sold by weight (where sold by weight, the Judiciary will not accept quantities greater than ten per cent [10%] of the specified quantity), or where the Request or Contract provides for awards for other than exact quantities.
- c. Purchase Orders or other contracts may be increased in quantity or extended in term without subsequent solicit with the mutual consent of the contractor and the Judiciary, where determined by the Judicial Purchasing Agent to be in the Judiciary's best interest.

7. TERM AND RENEWAL

Where offers have been requested or contracts awarded for terms exceeding periods of twelve (12) months, it is mutually understood and agreed that the Judiciary's commitment is limited to a base term not to exceed twelve (12) months, subject to renewal annually at the Judiciary's sole option for successive terms as otherwise described, except where expressly specified to the contrary. Purchase orders appearing to commit to obligations of funding or terms of performance may be executed for administrative convenience, but are otherwise subject to this provision, and in such cases the Judiciary's renewal shall be deemed to be automatic, conditional on the continued availability of appropriated funds for the purpose, except as written notice of the Judiciary's intent not to renew is served.

8. DELIVERY/COMPLETION

Delivery must be made as ordered and/or projects completed in accordance with the proposal. If delivery qualifications do not appear on the bidder's proposal, it will be interpreted to mean that goods are in stock and that shipment will be made within seven (7) calendar days. If the project completion date is not specified in the proposal, the date shall be determined by the Judicial Purchasing Agent. The decision of the Judicial Purchasing Agent, as to reasonable compliance with

the delivery terms, and date of completion shall be final. Burden of proof of delay in receipt of order shall rest with the contractor. No delivery charges shall be added to invoices except when authorized on the Purchase Order.

9. FOREIGN CORPORATIONS

In accordance with Title 7 Chapter 1.1 (“Business Corporations”) of the General Laws of Rhode Island, no foreign corporation shall have the right to transact business in this state until it shall have procured a certificate of authority so to do from the Secretary of State.

10. PRICING

All pricing offered or extended to the Judiciary is considered to be firm and fixed unless expressly provided for to the contrary. All prices shall be quoted F.O.B. Destination with freight costs included in the unit cost to be paid by the Judiciary, except, where the Request or Contract permits, offers reflecting F.O.B. Shipping Point will be considered, and freight costs may then be prepaid and added to the invoice.

11. COLLUSION

Bidder or contractor warrants that he has not, directly or indirectly, entered into any agree participated in any collusion or otherwise taken any action in restraint of full competitive bidding. In special circumstances, an executed affidavit will be required as a part of the bid.

12. PROHIBITION AGAINST CONTINGENT FEES AND GRATUITIES

Bidder or contractor warrants that he has not paid, and agrees not to pay, any bonus, commission, fee, or gratuity to any employee or official of the Judiciary for the purpose of obtaining any contract or award issued by the Judiciary. Bidder or contractor further warrants that no commission or other payment has been or will be received from or paid to any third party contingent on the award of any contract by the Judiciary, except as shall have been expressly communicated to the Judicial Purchasing Agent in writing prior to acceptance of the contract or award in question. Subsequent discovery by the Judiciary of non-compliance with these provisions shall constitute sufficient cause for immediate termination of all outstanding contracts and suspension or debarment of the bidder(s) or contractor(s) involved.

13. AWARDS

Awards will be made with reasonable promptness and by written notice to the successful bidder (only); bids are considered to be irrevocable for a period of sixty (60) days following the bid opening unless expressly provided for to the contrary in the Request, and may not be withdrawn during this period without the express permission of the Judicial Purchasing Agent.

- a. Awards shall be made to the bidder(s) whose offer(s) constitutes the lowest responsive price offer (or lowest responsive price offer on an evaluated basis) for the item(s) in question or for the Request as a whole, at the option of the Judiciary. The Judiciary reserves the right to determine those offers which are responsive to the Request, or which otherwise serve its best interests.
- b. The Judiciary reserves the right, before making award, to initiate investigations as to whether or not the materials, equipment, supplies, qualifications or facilities offered by the bidder meet the requirements set forth in the proposal and specification, and are ample and sufficient to insure the proper performance of the contract in the event of award. If upon such examination it is found that the conditions of the proposal are not complied with or that articles or equipment proposed to be furnished do not meet the requirements called for, or that the qualifications or facilities are not satisfactory, the Judiciary may reject such a bid. It is distinctly understood, however, that nothing in the foregoing shall mean or imply that it is obligatory upon the Judiciary to make any examinations before awarding a contract; and it is further understood that if such examination is made, it in no way relieves the contractor from fulfilling all requirements and conditions of the contract.
- c. Qualified or conditional offers which impose limitations of the bidder's liability or modify the requirements of the bid, offers for alternate specifications, or which are made subject to different terms and conditions than those specified by the Judiciary may, at the option of the Judiciary, be
 1. rejected as being non-responsive, or
 2. set aside in favor of the Judiciary's terms and conditions (with the consent of the bidder), or
 3. accepted, where the Judicial Purchasing Agent determines that such acceptance best serves the interests of the Judiciary.

Acceptance or rejection of alternate or counter-offers by the Judiciary shall not constitute a precedent which shall be considered to be binding on successive solicitations or procurements.

- d. Bids submitted in pencil, or which do not bear an original signature, in ink, by an owner or authorized agent thereof, will not be accepted.
- e. Bids must be extended in the unit of measure specified in the Request. In the event of any discrepancy between unit prices and their extensions, the unit price will govern.
- f. The Judicial Purchasing Agent reserves the right to determine the responsibility of any bidder for a particular procurement.
- g. The Judicial Purchasing Agent reserves the right to reject any and all bids in whole or in part, to waive technical defects, irregularities, and omissions, and to give consideration to past performance of the offerors where, in his judgment the best interests of the Judiciary will be served by so doing.
- h. The Judicial Purchasing Agent reserves the right to make awards by items, group of items or on the total low bid for all the items specified as indicated in the detailed specification, unless the bidder specifically indicates otherwise in his bid.
- i. Preference may be given to bids on products raised or manufactured in the State of Rhode Island, other things being equal.
- j. The impact of discounted payment terms shall not be considered in evaluating responses to any Request.
- k. The Judicial Purchasing Agent reserves the right to act in the Judiciary's best interests regarding awards caused by clerical errors by the Judicial Purchasing Office.

14. SUSPENSION AND DEBARMENT

The Judicial Purchasing Agent may suspend or debar any Vendor or potential bidder, for good cause shown:

- a. A debarment or suspension against a part of a corporate entity constitutes debarment or suspension of all of its divisions and all other organizational elements, except where the action has been specifically limited in scope and application, and may include all known corporate affiliates of a contractor, when such offense or act occurred in connection with the affiliate's performance of duties for or on behalf of the contractor, or with the knowledge, approval, or acquiescence of the contractor or one or more of its principals or directors (or where the contractor otherwise participated in, knew of, or had reason to know of the acts).
- b. The fraudulent, criminal or other serious improper conduct of any officer, director, shareholder, partner, employee, or any other individual associated with a contractor may be imputed to the contractor when the conduct occurred in connection with the individual's performance of duties for or on behalf of the contractor, or with the contractor's knowledge, approval or acquiescence. The contractor's acceptance of benefits derived from the conduct shall be evidence of such knowledge, approval, or acquiescence.
- c. A Vendor or contractor who knowingly engages as a subcontractor for a contract awarded by the Judiciary to a Vendor or contractor then under a ruling of suspension or debarment by the Judiciary shall be subject to disallowance of cost, annulment or termination of award, issuance of a stop work order, or debarment or suspension, as may be judged to be appropriate by the Judicial Purchasing Agent.

15. PUBLIC RECORDS

Contractors and bidders are advised that certain documents, correspondence, and other submissions to the Judicial Purchasing Office may be voluntarily made public by the Judiciary absent specific notice that portions of such submittals may contain confidential or proprietary information, such that public access to those items should be withheld.

16. PRODUCT EVALUATION

In all specifications, the words "or equal" are understood after each article when manufacturer's name or catalog are referenced. If bidding on items other than those specified, the bidder must, in every instance, give the trade designation of the article, manufacturer's name and detailed specifications of the item the bidder proposes to furnish; otherwise, the bid will be construed as submitted on the identical commodity described in the detailed specifications. The Judicial Purchasing Agent reserves the right to determine whether or not the item submitted is the approved equal the detailed specifications.

- a. Any objections to specifications must be filed by a bidder, in writing, with the Judicial Purchasing Agent at least 96 hours before the time of bid opening to enable the Judicial Purchasing Office to properly investigate the objections.
- b. All standards are minimum standards except as otherwise provided for in the Request or Contract.
- c. Samples must be submitted to the Judicial Purchasing Office in accordance with the terms of the proposals and detailed specifications. Samples must be furnished free of charge and must be accompanied by descriptive memorandum invoices indicating whether or not the bidder desires their return and specifying the address to which they are to be returned (at the bidder's risk and expense), provided they have not been used

or made useless by tests; and absent instructions, the samples shall be considered to be abandoned. Award samples may be held for comparison with deliveries.

- d. All samples submitted are subject to test by any laboratory the Judicial Purchasing Agent may designate.

17. PRODUCT ACCEPTANCE

All merchandise offered or otherwise provided shall be new, of prime manufacture, and of first quality unless otherwise specified by the Judiciary. The Judiciary reserves the right to reject all nonconforming goods, and to cause their return for credit or replacement, at the Judiciary's option. Contract deliverables specified for procurements of services shall be construed to be work products, and subject to the provisions of this section.

- a. Failure by the Judiciary to discover latent defect(s) or concealed damage or non-conformance shall not foreclose the Judiciary's right to subsequently reject the goods in question.
- b. Formal or informal acceptance by the Judiciary of non-conforming goods shall not constitute a precedent for successive receipts or procurements.
- c. Where the contractor fails to promptly cure the defect or replace the goods, the Judiciary reserves the right to cancel the Purchase Order, contract with a different contractor, and to invoice the original contractor for any differential in price over the original contract price.
- d. When materials, equipment or supplies are rejected, the same must be removed by the contractor from the premises of the Judiciary within forty-eight (48) hours of notification. Rejected items left longer than two days will be regarded as abandoned and the Judiciary shall have the right to dispose of them as its own property.

18. PRODUCT WARRANTIES

All product or service warranties normally offered by the contractor or bidder shall accrue to the Judiciary's benefit, in addition to any special requirements which may be imposed by the Judiciary. Every unit delivered must be guaranteed against faulty material and workmanship for a period of one year unless otherwise specified, and the Judiciary may, in the event of failure, order its replacement, repair, or return for full credit, at its sole option.

19. PAYMENT

Unless otherwise provided for by the Request or Contract, payment shall not be made until delivery has been made, or services performed, in full, and accepted. Payment shall not be due prior to thirty (30) working days following the latest of completion, acceptance, or the rendering of a properly submitted invoice.

- a. Payment terms other than the foregoing may be rejected as being nonresponsive.
- b. No partial shipments, or partial completion will be accepted, unless provided for by the Request or Contract.
- c. Where a question of quality is involved, or failure to complete a project by the specified due date, payment in whole or part against which to charge back any adjustment required, shall be withheld at the direction of the Judicial Purchasing Agent. In the event a cash discount is stipulated, the withholding of payments, as herein described, will not deprive the Judiciary from taking such discount.
- d. Payments for used portion of inferior delivery or late delivery will be made by the Judiciary on an adjusted price basis.
- e. Payments on contracts under architectural or engineering supervision must be accompanied by a Certificate of Payment and Statement of Account signed by the architect or engineer and submitted to the Judicial Purchasing Office for approval.

20. THIRD PARTY PAYMENTS

The Judiciary recognizes no assigned or collateral rights to any purchase agreement except as may be expressly provided for in the bid or contract documents, and will not accede to any request for third party or joint payment(s), except as provided for in specific orders by a court of competent jurisdiction, or by express written permission of the Judicial Purchasing Agent. Where an offer is contingent upon such payment(s), the offeror is obligated to serve affirmative notice in his bid submission.

21. SET-OFF AGAINST PAYMENTS

Payments due the contractor may be subject to reduction equal to the amount of unpaid and delinquent state taxes (or other just debt owed to the State), except where notice of delinquency has not been served or while the matter is pending in hearing or from any appeal therefrom.

22. CLAIMS

Any claim against a contractor may be deducted by the Judiciary from any money due him in the same or other transactions. If no deduction is made in such fashion, the contractor shall pay the Judiciary the amount of such claim on

demand. Submission of a voucher and payment, thereof, by the Judiciary shall not preclude the Judicial Purchasing Agent from demanding a price adjustment in any case when the commodity delivered is later found to deviate from the specifications and proposal.

- a. The Judicial Purchasing Agent may assess dollar damages against a Vendor or contractor determined to be non-performing or otherwise in default of their contractual obligations equal to the cost of remedy incurred by the Judiciary, and make payment of such damages a condition for consideration for any subsequent award. Failure by the Vendor or contractor to pay such damages shall constitute just cause for disqualification and rejection, suspension, or debarment.

23. CERTIFICATION OF FUNDING

The Chief Purchasing Officer shall provide certification as to the availability of funds to support the procurement for the current fiscal year ending June 30th only. Where delivery or service requirements extend beyond the end of the current fiscal year, such extensions are subject to both the availability of appropriated funds and a determination of continued need.

24. UNUSED BALANCES

Unless otherwise specified, all unused Blanket Order quantities and/or unexpended funds shall be automatically canceled on the expiration of the specified term. Similarly, for orders encompassing more than one fiscal year, unexpended balances of funding allotted for an individual fiscal year may be liquidated at the close of that fiscal year, at the Judiciary's sole option.

25. MINORITY BUSINESS ENTERPRISES

Pursuant to the provisions of Title 37 Chapter 14.1 of the General Laws, the Judiciary reserves the right to apply additional consideration to offers, and to direct awards to bidders other than the responsive bid representing the lowest price where:

- a. the offer is fully responsive to the terms and conditions of the Request, and
- b. the price offer is determined to be within a competitive range (not to exceed 5% higher than the lowest responsive price offer) for the product or service, and
- c. the firm making the offer has been certified by the R.I. Department of Economic Development to be a small business concern meeting the criteria established to be considered a Minority Business Enterprise. Ten per cent [10%] of the dollar value of the work performed against contracts for construction exceeding \$5,000 shall be performed by Minority Business Enterprises where it has been determined that subcontract opportunities exist, and where certified Minority Business Enterprises are available. A contractor may count towards its MBE, DBE, or WBE goals 60% of its expenditures for materials and supplies required under a contract and obtained from an MBE, DBE, or WBE regular dealer, and 100% of such expenditures when obtained from an MBE, DBE, or WBE manufacturer. Awards of this type shall be subject to approval, by the Chief Purchasing Officer, of a Subcontracting Plan submitted by the bidder receiving the award.

26. PREVAILING WAGE REQUIREMENT

In accordance with Title 37 Chapter 13 of the General Laws of Rhode Island, 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 locality for each craft, mechanic, teamster, or type of workman needed to execute this work is a requirement for both contractors and subcontractors for all public works.

27. EQUAL OPPORTUNITY COMPLIANCE, HANDICAPPED ACCESS AND AFFIRMATIVE ACTION

Contractors of the Judiciary are required to demonstrate the same commitment to equal opportunity as prevails under federal contracts controlled by Federal Executive Orders 11246, 11625, 11375 and 11830, and Title 28 Chapter 5.1 of the General Laws of Rhode Island.

Affirmative action plans shall be submitted by the contractor for review by the State Equal Opportunity Office. A contractor's failure to abide by the rules, regulations, contract terms and compliance reporting provisions as established shall be grounds for forfeiture and penalties as shall be established, including but not limited to suspension.

28. DRUG-FREE WORKPLACE REQUIREMENT

Contractors who do business with the Judiciary and their employees shall abide by the State's drug-free workplace policy and the contractor shall so attest by signing a certificate of compliance.

29. TAXES

The Judiciary is exempt from payment of excise, transportation and sales tax imposed by the Federal or State Government. These taxes should not be included in the proposal price. Exemption Certificates will be furnished upon request.

30. INSURANCE

All construction contractors, independent tradesmen, or firms providing any type of maintenance, repair, or other type of service to be performed on judicial premises, buildings, or grounds are required to purchase and maintain coverage with a company or companies licensed to do business in the state as follows:

- a. Comprehensive General Liability Insurance
 - 1) Bodily Injury \$1,000,000 each occurrence/ \$1,000,000 annual aggregate
 - 2) Property Damage \$500,000 each occurrence /\$500,000 annual aggregateIndependent Contractors
Contractual - including construction hold harmless and other types of contracts or agreements in effect for insured operations
Completed Operations
Personal Injury (with employee exclusion deleted)
- b. Automobile Liability Insurance
Combined Single Limit \$1,000,000 each occurrence
Bodily Injury
Property Damage, and in addition non-owned and/or hired vehicles and equipment
- c. Workers' Compensation Insurance
Coverage B \$100,000

The Judicial Purchasing Agent reserves the right to consider and accept alternate forms and plans of insurance or to require additional or more extensive coverage for any individual requirement. Successful bidders shall provide certificates of coverage, reflecting the Rhode Island Judiciary as an additional insured, to the Judicial Purchasing Office, forty-eight (48) hours prior to the commencement of work, as a condition of award. Failure to comply with this provision shall result in rejection of the offeror's bid.

31. BID SURETY

When requested, a bidder must furnish a Bid Bond or Certified Check for 5% of his bid, or for the stated amount shown in the solicitation. Bid Bonds must be executed by a reliable Surety Company authorized to do business in the State of Rhode Island. Failure to provide Bid Surety with bid may be cause for rejection of bid. The Bid Surety of any three bidders in contention will be held until an award has been made according to the specifications of each proposal. All others will be returned by mail within 48 hours following the bid opening. Upon award of a contract, the remaining sureties will be returned by mail unless instructed to do otherwise.

32. PERFORMANCE AND LABOR AND PAYMENT BONDS

A performance bond and labor and payment bond of up to 100% of an award may be required by the Judicial Purchasing Agent. Bonds must meet the following requirements:

- a. Corporation: The Bond must be signed by an official of the corporation above his/her official title and the corporate seal must be affixed over his/her signature.
- b. Firm or Partnership: The Bond must be signed by all of the partners and must indicate that they are "Doing Business As (name of firm)."
- c. Individual: The Bond must be signed by the individual owning the business and indicate "Owner."
- d. The Surety Company executing the Bond must be licensed to do business in the State of Rhode Island or Bond must be countersigned by a company so licensed.
- e. The Bond must be signed by an official of the Surety Company and the corporate seal must be affixed over his signature.
- f. Signatures of two witnesses for both the principal and the Surety must appear on the Bond.
- g. A Power of Attorney for the official signing of the Bond for the Surety Company must be submitted with the Bond.

33. SUSPENSION, DEFAULT AND TERMINATION

- a. Suspension of a Contract by the Judiciary

The Judiciary reserves the right at any time and for any reason to suspend all or part of this contract, for a reasonable period, not to exceed sixty days, unless the parties agree to a longer period. The Judiciary shall provide the contractor with written notice of the suspension order signed by the Purchasing Agent or his or her designee, which shall set forth the date

upon which the suspension shall take effect, the date of its expiration, and all applicable instructions. Upon receipt of said order, the contractor shall immediately comply with the order and suspend all work under this contract as specified in the order. The contractor shall take all reasonable steps to mitigate costs and adverse impact to the work specified in the contract during the suspension period. Before the order expires, the Judiciary shall either:

1. cancel the suspension order;
2. extend the suspension order for a specified time period not to exceed thirty (30) days; or
3. terminate the contract as provided herein.

The contractor shall resume performance once a suspension order issued under this section is canceled or expires. If as a result of the suspension of performance, there is a financial or schedule impact upon the contract, an appropriate adjustment may be made by, or with the approval of, the Judicial Purchasing Agent. Any adjustment shall be set forth in writing. After a suspension order has been canceled or expires, the contractor shall provide any request for adjustment to the Judicial Purchasing Agent within thirty (30) days after resuming work performance.

- b. Termination of a Contract by the Judiciary
 1. Termination for Default or Nonperformance

If, for any reason, the contractor breaches the contract by failing to satisfactorily fulfill or perform any obligations, promises, terms, or conditions, and having been given reasonable notice of and opportunity to cure such default, fails to take satisfactory corrective action within the time specified by the Judiciary, the Judiciary may terminate the contract, in whole or in part, the termination of all outstanding contracts or sub-contracts held by the contractor, and the suspension or debarment of the contractor from future procurements by giving written notice to the contractor specifying the date for termination. The Judiciary shall endeavor to provide such notice at least seven (7) calendar days before the effective date of the termination.

A contractor who fails to commence within the time specified or complete an award made for repairs, alterations, construction, or any other service will be considered in default of contract. If contractor consistently fails to deliver quantities or otherwise perform as specified, the Judicial Purchasing Agent reserves the right to terminate the contract and contract for completion of the work with another contractor and seek recourse from the defaulting contractor or his surety. In the event of a termination for default or nonperformance, in whole or in part, the Judiciary may procure similar goods or services in a manner and upon terms it deems appropriate, and the contractor shall be liable for the excess costs incurred by the Judiciary as a result of the contractor's default. The contractor, or its surety, agrees to promptly reimburse the Judiciary for the excess costs, but shall have no claim to the difference should the replacement cost be less.

2. Termination Without Cause

The Judiciary may terminate the contract in whole or in part without cause at any time by giving written notice to the contractor of such termination at least thirty (30) days before the effective date of such termination. The notice shall specify the part(s) of the contract being terminated and the effective termination date.

Within thirty (30) days of the effective date of the termination of the contract the contractor shall compile and submit to the Judiciary an accounting of the work performed up to the date of termination. The Judiciary may consider the following claims in determining reasonable compensation owed to the contractor for work performed up to the date of termination:

- (a) contract prices for goods or services accepted under the contract;
- (b) costs incurred in preparing to perform and performing the terminated portion of the contract; or
- (c) any other reasonable costs incurred by the contractor as a result of the termination.

The total sum to be paid to the contractor shall not exceed the total contract price, less any payments previously made to the contractor, the proceeds from any sales of goods or manufacturing materials, and the contract price for work not terminated.

3. Contractor's Obligations in the Event of Termination

If the contract is terminated for any reason, or expires pursuant to its terms, the contractor shall transfer and deliver to the Judiciary in the manner and to the extent directed by the Judiciary:

- all finished or unfinished material prepared by the contractor; and

- all material, if any, provided to the contractor by the Judiciary.

For the purposes of the contract, “material” shall include, but is not limited to, goods, supplies, parts, tools, machinery, equipment, furniture, fixtures, information, data, reports, summaries, tables, maps, charts, photographs, studies, recommendations, files, audiotapes, videotapes, records, keys, security badges, and documents.

If the contract is terminated for cause, the contractor shall not be relieved of liability to the Judiciary for damages sustained because of any breach by the contractor. In such event, the Judiciary may retain any amounts which may be due and owing to the contractor until such time as the exact amount of damages due the Judiciary from the contractor has been determined by the Judicial Purchasing Agent. The Judiciary may also set off any damages so determined against the amounts retained.

Upon termination of the contract, the contractor shall stop performance on the date specified, terminate any outstanding orders and subcontracts applicable to the terminated portion of the contract, and shall incur no further commitments or obligations in connection with the terminated performance. The contractor shall settle all liabilities and claims arising out of the termination of subcontracts and order generating from the terminated performance. The Judiciary may direct the contractor to assign the contractor’s right, title and interest under terminated orders or subcontracts to the Judiciary or a third party.

Terminations of Purchase Order Contracts or Master Pricing Agreements shall require the signature of the Judicial Purchasing Agent or his designee. Notice of termination by either party shall be submitted in writing to the other party in accordance with the termination clause of the contract, or where no specific termination clause is included, written notice shall be provided no later than thirty (30) days before the expiration of the contract.

34. INDEMNITY

The contractor guarantees:

- To save the Judiciary, its agents and employees, harmless from any liability imposed upon the Judiciary arising from the negligence, either active or passive, of the contractor, as well as for the use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in the performance of the contract of which the contractor is not the patentee, assignee or licensee.
- To pay for all permits, licenses and fees and give all notices and comply with all laws, ordinances, rules and regulations of the city or town in which the installation is to be made and of the State of Rhode Island.
- That the equipment offered is standard new equipment, latest model of regular stock product with all parts regularly used with the type of equipment offered; also, that no attachment or part has been substituted or applied contrary to manufacturer's recommendations and standard practice.

35. CONTRACTOR'S OBLIGATIONS

In addition to the specific requirements of the contract, construction and building repair contractors bear the following standard responsibilities:

- To furnish adequate protection from damage for all work and to repair damages of any kind, for which he or his workmen are responsible, to the building or equipment, to his own work, or to the work of other contractors;
- The contractor, its subcontractor(s) and their employees and/or agents, shall protect and preserve property in the contractor or subcontractor’s possessions in which the Judiciary has an interest, and any and all materials provided to the contractor or subcontractor by the Judiciary;
- To clear and remove all debris and rubbish resulting from his work from time to time, as directed or required, a completion of the work leave the premises in a neat unobstructed condition, broom clean, and in satisfactory order and repair;
- To store equipment, supplies, and material at the site only upon approval by the Judiciary, and at his own risk;
- To perform all work so as to cause the least inconvenience to the Judiciary, and with proper consideration for the rights of other contractors and workmen;
- To acquaint themselves with conditions to be found at the site, and to assume responsibility for the appropriate dispatching of equipment and supervision of his employees during the conduct of the work;
- To ensure that his employees are instructed with respect to special regulations, policies, and procedures in effect for any judicial facility or site, and that they comply with such rules, including but not limited to security policies or practices and/or criminal background checks for any employees and/or subcontractors;

- h. The contractor shall ensure that its employees or agents are experienced and fully qualified to engage in the activities and services required under the contract;
- i. The contractor shall ensure that at all times while services are being performed under this contract at least one of its employees or agents on the premises has a good command of the English language and can effectively communicate with the Judiciary and its staff;
- j. The contractor and contractor's employees or agents shall comply with all applicable licensing and operating requirements required by federal or state law and shall meet accreditation and other generally accepted standards of quality in the applicable field of activity;
- k. The contractor shall secure and retain all employee-related insurance coverage for its employees and agents as required by law; and
- l. The contractor, subcontractor, and his or her employees and agents shall not disclose any confidential information of the Judiciary to a third party. Confidential information means:
 - (1) any information of a sensitive or proprietary nature, whether or not specially identified as confidential or proprietary; or
 - (2) any information about the Judiciary gained during the performance of a contract that is not already lawfully in the public domain.

36. FORCE MAJEURE

All orders shall be filled by the contractor with reasonable promptness, but the contractor shall not be held responsible for any losses resulting if the fulfillment of the terms of the contract shall be delayed or prevented by wars, acts of public enemies, strikes, fires, floods, acts of God, or for any other acts not within the control of the contractor and which by the exercise of reasonable diligence, the contractor is unable to prevent.