



Purchasing Division

Invitation for Bid

IFB-4257-16-DH

HVAC Upgrade Project for Sheriff's Office Rooftop Air Handler Replacement

Responses Due:

July 7, 2016 prior to 3:30pm

Accepting Electronic Responses Only

Responses Only Submitted Through the Rocky Mountain E-Purchasing System (RMEPS)

<https://www.rockymountainbidsystem.com/default.asp>

(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)

Purchasing Representative:

Duane Hoff Jr., Senior Buyer

duaneh@gjcity.org

970-244-1545

This document has been developed specifically to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction/Mesa County solicitations. All vendors are urged to thoroughly review this solicitation prior to responding. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

Invitation for Bids

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1. Instructions to Bidders

- 1.1. **Purpose:** The City of Grand Junction, on behalf of Mesa County, is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required the removal of an existing, and installation of a new, roof mounted air handler for the Mesa County Sheriff's Office building. All dimensions and scope of work should be verified by Contractors prior to submission of bids.
- 1.2. **Mandatory Site Visit/Briefing:** **Prospective bidders are required to attend a site visit/briefing on June 23, 2016 at 10:00am.** Meeting location shall be at the Mesa County Sheriff's Office Building located at 215 Rice Street, Grand Junction, CO. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).
- 1.3. **The Owner:** The Owner is the City of Grand Junction and/or Mesa County, Colorado and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.
- 1.4. **Submission:** **Each proposal shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (<https://www.rockymountainbidssystem.com/default.asp>).** *This site offers both "free" and "paying" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Plan accordingly.)* Please view our "Electronic Vendor Registration Guide" at <http://www.gjcity.org/BidOpenings.aspx> for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. **800-835-4603**)
- 1.5. **Printed Form for Price Bid:** All Price Bids must be made upon the Contractor's Bid Form attached, and should give the amounts both in words and in figures, and must be signed and acknowledged by the bidder.
- 1.6. **Exclusions:** No oral, telephonic, emailed, or facsimile bid will be considered
- 1.7. **Contract Documents:** The complete IFB and bidder's response compose the Contract Documents. Copies of these documents can be obtained from the City Purchasing website, <http://www.gjcity.org/BidOpenings.aspx>.
- 1.8. **Examination of Specifications:** Bidders shall thoroughly examine and be familiar with the project Statement of Work. The failure or omission of any Offeror to receive or examine any form, addendum, or other document shall in no way relieve any Offeror from any obligation with respect to his bid. The submission of a bid shall be taken as evidence of compliance with this section.

- 1.9. **Questions Regarding Statement of Work:** Any information relative to interpretation of Scope of Work or specifications shall be requested of the Purchasing Representative, in writing, in ample time prior to the response time.
- 1.10. **Addenda & Interpretations:** If it becomes necessary to revise any part of this solicitation, a written addendum will be posted electronically on the City's website at <http://www.gjcity.org/BidOpenings.aspx>. The Owner is not bound by any oral representations, clarifications, or changes made in the written specifications by Owner, unless such clarification or change is provided in written addendum form from the City Purchasing Representative.
- 1.11. **Taxes:** The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.
- 1.12. **Offers Binding 60 Days:** Unless otherwise specified, all formal offers submitted shall be binding for sixty (60) calendar days following opening date, unless the Bidder, upon request of the Purchasing Representative, agrees to an extension.
- 1.13. **Collusion Clause:** Each bidder by submitting a bid certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all bids shall be rejected if there is evidence or reason for believing that collusion exists among bidders. The Owner may, or may not, accept future bids for the same services or commodities from participants in such collusion.
- 1.14. **Public Disclosure Record:** If the bidder has knowledge of their employee(s) or sub-contractors having an immediate family relationship with a City/County employee or elected official, the bidder must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the City/County.

2. General Contract Conditions for Construction Projects

- 2.1. **The Contract:** This Invitation for Bid, submitted documents, and any negotiations, when properly accepted by the City/County, shall constitute a contract equally binding between the City/County and Contractor. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The contract may be amended or modified with Change Orders, Field Orders, or Addendums.
- 2.2. **The Work:** The term Work includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.
- 2.3. **Execution, Correlation, Intent, and Interpretations:** The Contract Documents shall be signed in not less than triplicate by the Owner (City/County) and Contractor. City/County will provide the contract. By executing the contract, the Contractor

represents that he/she has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the scope of work as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the City/County are, and shall remain, City/County property. They are not to be used on any other project, and with the exception of one contract set for each party to the contract, are to be returned to the owner on request at the completion of the work.

- 2.4. The Owner:** The Owner is the City of Grand Junction and/or Mesa County, Colorado and is referred to throughout the Contract Documents. The term Owner means the Owner or his authorized representative. The Owner shall, at all times, have access to the work wherever it is in preparation and progress. The Contractor shall provide facilities for such access. The Owner will make periodic visits to the site to familiarize himself generally with the progress and quality of work and to determine, in general, if the work is proceeding in accordance with the contract documents. Based on such observations and the Contractor's Application for Payment, the Owner will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in the contract. The Owner will have authority to reject work which does not conform to the Contract documents. Whenever, in his reasonable opinion, he considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, he will have authority to require the Contractor to stop the work or any portion, or to require special inspection or testing of the work, whether or not such work can be then be fabricated, installed, or completed. The Owner will not be responsible for the acts or omissions of the Contractor, and sub-Contractor, or any of their agents or employees, or any other persons performing any of the work.
- 2.5. Contractor:** The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.
- 2.6. Sub-Contractors:** A sub-contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.
- 2.7. Award of Sub-Contractors & Other Contracts for Portions of the Work:** As soon as practicable after bids are received and prior to the award of the contract, the

successful Contractor shall furnish to the Owner, in writing for acceptance, a list of the names of the sub-contractors or other persons or organizations proposed for such portions of the work as may be designated in the proposal requirements, or, if none is so designated, the names of the sub-contractors proposed for the principal portions of the work. Prior to the award of the contract, the Owner shall notify the successful Contractor in writing if, after due investigation, has reasonable objection to any person or organization on such list. If, prior to the award of the contract, the Owner has a reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the successful Contractor may, prior to the award, withdraw their proposal without forfeiture of proposal security. If the successful Contractor submits an acceptable substitute with an increase in the proposed price to cover the difference in cost occasioned by the substitution, the Owner may, at their discretion, accept the increased proposal or may disqualify the Contractor. If, after the award, the Owner refuses to accept any person or organization on such list, the Contractor shall submit an acceptable substitute and the contract sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued. However, no increase in the contract sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.

- 2.8. Supervision and Construction Procedures:** The Contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract.
- 2.9. Warranty:** The Contractor warrants to the Owner that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards may be considered defective. If required by Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If within ten (10) days after written notice to the Contractor requesting such repairs or replacement, the Contractor should neglect to make or undertake with due diligence to the same, the City may make such repairs or replacements. All indirect and direct costs of such correction or removal or replacement shall be at the Contractor's expense. The Contractor will also bear the expenses of making good all work of others destroyed or damaged by the correction, removal or replacement of his defective work.
- 2.10. Permits, Fees, & Notices:** The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Contractor performs any work knowing it to be contrary to such laws,

ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.

- 2.11. Responsibility for Those Performing the Work:** The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all sub-contractors, their agents and employees, and all other persons performing any of the work under a contract with the Contractor.
- 2.12. Use of the Site:** The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the site with any materials or equipment.
- 2.13. Cleanup:** The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of work he shall remove all his waste materials and rubbish from and about the project, as well as all his tools, construction equipment, machinery and surplus materials.
- 2.14. Insurance Requirements:** The selected Bidder agrees to procure and maintain, at its own cost, policy(s) of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the Bidder pursuant to this Section. Such insurance shall be in addition to any other insurance requirements imposed by this Contract or by law. The Bidder shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Section by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types. Bidder shall procure and maintain and, if applicable, shall cause any Subcontractor of the Bidder to procure and maintain insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Owner. All coverage shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the Bidder pursuant to this Section. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. Minimum coverage limits shall be as indicated below unless specified otherwise in the Special Conditions:

(a) Worker Compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Contract, and Employers' Liability insurance with minimum limits of:

One Million Dollars (\$1,000,000) each accident,
One Million Dollars (\$1,000,000) disease - policy limit, and
One Million Dollars (\$1,000,000) disease - each employee

(b) General Liability insurance with minimum combined single limits of:

One Million Dollars (\$1,000,000) each occurrence and
One Million Dollars (\$1,000,000) per job aggregate.

The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests provision.

(c) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than:

One Million Dollars (\$1,000,000) each occurrence and
One Million Dollars (\$1,000,000) aggregate

This policy shall provide coverage to protect the contractor against liability incurred as a result of the professional services performed as a result of responding to this Solicitation.

With respect to each of Bidder's owned, hired, or non-owned vehicles assigned to be used in performance of the Work. The policy shall contain a severability of interests provision. The policies required by paragraphs (b), and (c) above shall be endorsed to include the City and/or County, and the City's and/or County's officers and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the Owner, its officers, or its employees, or carried by or provided through any insurance pool of the Owner, shall be excess and not contributory insurance to that provided by Bidder. No additional insured endorsement to any required policy shall contain any exclusion for bodily injury or property damage arising from completed operations. The Bidder shall be solely responsible for any deductible losses under any policy required above.

2.15. Indemnification: The Contractor shall defend, indemnify and save harmless the Owner, and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Contractor, or of any Contractor's agent, employee, sub-contractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Contractor shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.

2.16. Miscellaneous Conditions: Material Availability: Contractors must accept responsibility for verification of material availability, production schedules, and other pertinent data prior to submission of bid. It is the responsibility of the bidder to notify the Owner immediately if materials specified are discontinued, replaced, or not available for an extended period of time. OSHA Standards: All bidders agree and warrant that services performed in response to this invitation shall conform to the standards declared by the US Department of Labor under the Occupational Safety and Health Act of 1970 (OSHA). In the event the services do not conform to OSHA

standards, the Owner may require the services to be redone at no additional expense to the Owner.

- 2.17. Time:** The Contract Time is the period of time allotted in the Contract Documents for completion of the work. The date of commencement of the work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the Contract or such other date as may be established therein, or as established as entered on the Bid Form. The Date of Substantial Completion of the work or designated portions thereof is the date certified by the Owner when construction is sufficiently complete, in accordance with the Contract Documents.
- 2.18. Progress & Completion:** The Contractor shall begin work on the date of commencement as defined in the Contract, and shall carry the work forward expeditiously with adequate forces and shall complete it within the contract time.
- 2.19. Payment & Completion:** The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents. Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when he finds the work acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents.
- 2.20. Quantities of Work and Unit Price:** Materials or quantities stated as unit price items in the Bid are supplied only to give an indication of the general scope of the Work. The City does not expressly or by implication agree that the actual amount of Work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit item of the Work without a change in the unit price. The City also reserves the right to make changes in the Work including the right to delete any bid item in its entirety or add additional bid items.
- 2.21. Bid Bond:** Each Bid shall as a guaranty of good faith on the part of the Bidder be accompanied by a Bid Guaranty consisting of: a certified or cashier's check drawn on an approved national bank or trust company in the state of Colorado, and made payable without condition to the City; or a **Bid Bond** written by an approved corporate surety in favor of the City. The amount of the Bid Guaranty shall not be less than 5% of the total Bid amount. Once a Bid is accepted and a Contract is awarded, the apparent successful bidder has ten calendar days to enter into a contract in the form prescribed and to furnish the bonds with a legally responsible and approved surety. Failure to do so will result in forfeiture of the Bid Guaranty to the City as Liquidated Damages.
- 2.22. Performance & Payment Bonds:** Contractor shall furnish a Performance and a Payment Bond, each in an amount at least equal to that specified for the contract amount as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These bonds shall remain in effect for the duration of the Warranty Period (as specified in the Special Conditions). Contractor shall also furnish other bonds that may be required by the Special

Conditions. All bonds shall be in the forms prescribed by the Contract Documents and be executed by such sureties as (1) are licensed to conduct business in the State of Colorado and (2) are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Accounts, U.S. Treasury Department. All bonds signed by an agent must be accompanied by a certified copy of the Authority Act. If the surety on any bond furnished by the Contractor is declared bankrupt, or becomes insolvent, or its rights to do business in Colorado are terminated, or it ceases to meet the requirements of clauses (1) and (2) of this section, Contractor shall within five (5) days thereafter substitute another bond and surety, both of which shall be acceptable to the City.

- 2.23. Retention:** The Owner will deduct money from the partial payments in amounts considered necessary to protect the interest of the Owner and will retain this money until after completion of the entire contract. The amount to be retained from partial payments will be five (5) percent of the value of the completed work, and not greater than five (5) percent of the amount of the Contract. When the retainage has reached five (5) percent of the amount of the Contract no further retainage will be made and this amount will be retained until such time as final payment is made.
- 2.24. Contingency/Force Account:** Contingency/Force Account work will be authorized by the Owner's Project Manager and is defined as minor expenses to cover miscellaneous or unforeseen expenses related to the project. The expenses are not included in the Drawings, Specifications, or Scope of Work and are necessary to accomplish the scope of this contract. Contingency/Force Account Authorization will be directed by the Owner through an approved form. Contingency/Force Account funds are the property of the Owner and any Contingency/Force Account funds, not required for project completion, shall remain the property of the Owner. Contractor is not entitled to any Contingency/Force Account funds, that are not authorized by Owner or Owner's Project Manager.
- 2.25. Protection of Persons & Property:** The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Contractor in the execution of the work, or in consequence of the non-execution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.
- 2.26. Changes in the Work:** The Owner, without invalidating the contract, may order changes in the work within the general scope of the contract consisting of additions,

deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by Change Order and shall be executed under the applicable conditions of the contract documents. A Change Order is a written order to the Contractor signed by the Owner issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. The contract sum and the contract time may be changed only by Change Order.

- 2.27. Claims for Additional Cost or Time:** If the Contractor wishes to make a claim for an increase in the contract sum or an extension in the contract time, he shall give the Owner written notice thereof within a reasonable time after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall precede in accordance with the regulations on safety. No such claim shall be valid unless so made. Any change in the contract sum or contract time resulting from such claim shall be authorized by Change Order.
- 2.28. Minor Changes in the Work:** The Owner shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.
- 2.29. Field Orders:** The Owner may issue written Field Orders which interpret the Contract Documents in accordance with the specifications, or which order minor changes in the work in accordance with the agreement, without change in the contract sum or time. The Contractor shall carry out such Field Orders promptly.
- 2.30. Uncovering & Correction of Work:** The Contractor shall promptly correct all work rejected by the Owner as defective or as failing to conform to the contract documents whether observed before or after substantial completion and whether or not fabricated installed or competed. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Owner's additional services thereby made necessary. If within one (1) year after the date of completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the contract documents, any of the work found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming work under the above paragraphs shall be removed from the site where necessary and the work shall be corrected to comply with the contract documents without cost to the Owner. The Contractor shall bear the cost of making good all work of separate Contractors destroyed or damaged by such removal or correction. If the Owner prefers to accept defective or non-conforming work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the payment or contract sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

- 2.30. Amendment:** No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.
- 2.31. Assignment:** The Contractor shall not sell, assign, transfer or convey any contract resulting from this IFB, in whole or in part, without the prior written approval from the Owner.
- 2.32. Compliance with Laws:** Bids must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements.
- 2.33. Confidentiality:** All information disclosed by the Owner to the Contractor for the purpose of the work to be done or information that comes to the attention of the Contractor during the course of performing such work is to be kept strictly confidential.
- 2.34. Conflict of Interest:** No public official and/or City/County employee shall have interest in any contract resulting from this IFB.
- 2.35. Contract Termination:** This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or, (4) for convenience terminated by either party with a written *Notice of Cancellation* stating therein the reasons for such cancellation and the effective date of cancellation.
- 2.36. Employment Discrimination:** During the performance of any services per agreement with the Owner, the Contractor, by submitting a Bid, agrees to the following conditions:
- 2.36.1.** The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap, or national origin except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Contractor. The Contractor agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- 2.36.2.** The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that such Contractor is an Equal Opportunity Employer.
- 2.36.3.** Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- 2.37. Immigration Reform and Control Act of 1986 and Immigration Compliance:** The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal

Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, *et.seq.* (House Bill 06-1343).

- 2.38. Ethics:** The Contractor shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.
- 2.39. Failure to Deliver:** In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.
- 2.40. Failure to Enforce:** Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.
- 2.41. Force Majeure:** The Contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Contractor, unless otherwise specified in the contract.
- 2.42. Independent Contractor:** The Contractor shall be legally considered an Independent Contractor and neither the Contractor nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Contractor, its servants, or agents. The Owner shall not withhold from the contract payments to the Contractor any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Contractor. Further, the Owner shall not provide to the Contractor any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.
- 2.43. Nonconforming Terms and Conditions:** A bid that includes terms and conditions that do not conform to the terms and conditions of this Invitation for Bid is subject to rejection as non-responsive. The Owner reserves the right to permit the Contractor to withdraw nonconforming terms and conditions from its bid prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.
- 2.44. Ownership:** All plans, prints, designs, concepts, etc., shall become the property of the Owner.
- 2.45. Oral Statements:** No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.

- 2.46. Patents/Copyrights:** The Contractor agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Contractor for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this IFB.
- 2.47. Remedies:** The Contractor and Owner agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.
- 2.48. Venue:** Any agreement as a result of responding to this IFB shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.
- 2.49. Expenses:** Expenses incurred in preparation, submission and presentation of this IFB are the responsibility of the company and cannot be charged to the Owner.
- 2.50. Sovereign Immunity:** The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.
- 2.51. Non-Appropriation of Funds:** The contractual obligation of the Owner under this contract is contingent upon the availability of appropriated funds from this fiscal year budget as approved by the City Council or Board of County Commissioners from this fiscal year only. State of Colorado Statutes prohibit obligation of public funds beyond the fiscal year for which the budget was approved. Anticipated expenditures/obligations beyond the end of the current Owner's fiscal year budget shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.
- 2.52. Cooperative Purchasing:** Purchases as a result of this solicitation are primarily for the City/County. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Bid. The quantities furnished in this bid document are for only the City/County. It does not include quantities for any other jurisdiction. The City or County will be responsible only for the award for its jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The City/County accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.
- 2.53. Keep Jobs in Colorado Act:** Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and

residency required by C.R.S. §8-17-101(2)(a). If Contractor claims it is entitled to a waiver pursuant to C.R.S. §8-17-101(1), Contractor shall state that there is insufficient Colorado labor to perform the work such that compliance with Article 17 would create an undue burden that would substantially prevent a project from proceeding to completion, and shall include evidence demonstrating the insufficiency and undue burden in its response.

Unless expressly granted a waiver by the Owner pursuant to C.R.S. §8-17-101(1), Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a).

2.53.1. "Public project" is defined as:

- (a) any construction, alteration, repair, demolition, or improvement of any land, building, structure, facility, road, highway, bridge, or other public improvement suitable for and intended for use in the promotion of the public health, welfare, or safety and any maintenance programs for the upkeep of such projects
- (b) for which appropriate or expenditure of moneys may be reasonably expected to be \$500,000.00 or more in the aggregate for any fiscal year
- (c) except any project that receives federal moneys.

3. Statement of Work

3.1. General: The City of Grand Junction, on behalf of Mesa County, is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required the removal of an existing, and installation of a new, roof mounted air handler for the Mesa County Sheriff's Office building. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

3.2. Special Conditions & Provisions:

3.2.1 Pricing: Pricing shall be all inclusive to include but not be limited to: all labor, equipment, supplies, materials, freight (F.O.B. Destination – Freight Pre-paid and Allowed to each site), travel, mobilization costs, fuel, set-up and take down costs, and full-time inspection costs, and all other costs related to the successful completion of the project.

The Owner shall not pay nor be liable for any other additional costs including but not limited to: taxes, shipping charges, insurance, interest, penalties, termination payments, attorney fees, liquidated damages, etc.

3.2.2 Contractor must meet all federal, state, and local rules, regulations, and requirements for providing such services.

3.2.3 Licenses and Permits: Contractor is responsible for obtaining all necessary licenses and permits required for Construction, at Contractors expense. See Section 2.10

3.2.4 Contractor Staging Area: Awarded Contractor shall coordinate with Owner for proposed project staging area (if required).

3.2.5 Freight/Shipping: All freight/shipping shall be F.O.B. Destination – Freight Pre-Paid and Allowed to each of the project sites.

3.2.6 Equipment/Product/Materials Quantities: Contractor shall be responsible for determining all measurements for correctness, and all quantities of equipment/products/materials required for successful project completion.

3.2.7 Working Schedule: Primarily weekends and/or after hours, but can be seven days per week, with proper coordinated scheduling with Owner's Project Manager, 7:00am-10:00pm.

3.2.8 Project Schedule: 14 calendar days from receipt of required materials and Notice to Proceed. Materials ordering lead time shall not count against the 14 calendar days project schedule.

3.2.7 Award: The City reserves the right to split awards as necessary, and if it is deemed in the best interest of the City.

3.2.8 Contract: A binding contract shall consist of: (1) the IFB and any amendments thereto, (2) the bidder's response (bid) to the IFB, (3) clarification of the bid, if any, and (4) the City's Purchasing Department's acceptance of the bid by "Notice of Award" or by "Purchase Order". All Exhibits and Attachments included in the IFB shall be incorporated into the contract by reference.

A. The contract expresses the complete agreement of the parties and, performance shall be governed solely by the specifications and requirements contained therein.

B. Any change to the contract, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the bidder and the City Purchasing Division or by a modified Purchase Order prior to the effective date of such modification. The bidder expressly and explicitly understands and agrees that no other method and/or no other document, including acts and oral communications by or from any person, shall be used or construed as an amendment or modification to the contract.

3.2.9 Mandatory Site Visit/Briefing: Prospective bidders are required to attend a site visit/briefing on June 23, 2016 at 10:00am. Meeting location shall be at the Mesa County Sheriff's Office Building located at 215 Rice Street, Grand Junction,

CO. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB)

3.2.10 Background Checks Required: All Contractor employees and sub-contractors shall be required to obtain background checks through the Mesa County Sheriff's Office for work on this project.

3.3. Scope of Work: See attached Scope of Work, Specifications, and Drawing. Equipment shall be Brand Name Only to that specified in these solicitation documents.

3.4. IFB Tentative Time Schedule:

Invitation For Bids available	June 15, 2016
Site Visit/Briefing	June 23, 2016
Inquiry deadline, no questions after this date	June 29, 2016
Addendum Posted	June 30, 2016
Submittal deadline for proposals	July 7, 2016
Board of Commissioners Approval	July 25, 2016
Contract execution (unless Council approval required)	July 25, 2016
Bonding & Insurance Cert due	July 12, 2016
Work begins no later than	September 6, 2016
Final Completion	14 Calendar Days from Notice to Proceed

3.5. Questions Regarding Scope of Services:

Duane Hoff Jr., Senior Buyer
City of Grand Junction
duaneh@gjcity.org

4. Contractor's Bid Form

Bid Date: _____

Project: IFB-4257-16-DH "HVAC Upgrade Project for Sheriff's Office Rooftop Air Handler Replacement"

Bidding Company: _____

Name of Authorized Agent: _____

Email _____

Telephone _____ **Address** _____

City _____ **State** _____ **Zip** _____

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: _____.

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

PRICE BID SCHEDULE: IFB-4257-16-DH HVAC Upgrade Project for Sheriff's Office Rooftop Air Handler Replacement

Item No.	Description	Total Price
1	All labor, equipment, and materials for the removal of an existing, and installation of a new, roof mounted air handler for the Mesa County Sheriff's Office building, as per the solicitation documents.	

Total Bid Price Written:

- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt #98-903544.
- Direct purchases by Mesa County are tax exempt from Colorado Sales or Use Tax. Tax exempt #98-04241.
- The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- Prompt payment discount of _____percent of the net dollar amount will be offered to the Owner if the invoice is paid within _____ days after the receipt of the invoice.
- The undersigned certifies and agrees that this bid is submitted in accordance with all applicable Federal, State, County, and City laws.

By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: _____

Authorized Signature: _____

Title: _____



Bighorn Consulting Engineers

569 S. Westgate Drive, Suite #1,
Grand Junction, CO 81505
Phone 970-241-8709
Fax 970-41-9514

Mesa County Facilities HVAC Upgrade Project Statement of Work Sheriff's Office Rooftop Air Handler Replacement

April 20, 2016

Scope of Work:

1. This project will involve the removal of an existing and installation of a new roof mounted air handler at the Sheriff's Office building at 215 Rice Street, Grand Junction, CO. The unit is failing and is in need of replacement. The unit was installed in 1991.
2. The existing air handler is tagged as RTU-1(photo #1) and is manufactured by Mammoth, serial number #22426-01-01, design number #BEHFR-CW735-W696-78-VAV.
3. See attached design drawings, M1-1 and M5-6, for location of unit and configuration.
4. Replace the existing unit with a Mammoth (Venmar CES) unit, model #A-1-31e-WX-HW-CW-X-P. See attached specifications #ZG735-04 from Venmar.
5. General description of work:
 - a. Disconnect electrical service to unit.
 - b. Disconnect and remove Trane temperature controls. This may include sensors, valves, actuators, etc. Store control components for re-use to the extent possible. Coordinate this effort with Trane.
 - c. Disconnect heating and chilled water piping and prepare for new unit.
 - d. Remove existing air handler and dispose of properly.
 - e. Install new unit.
 - f. Re-connect chilled and heating water piping.
 - g. Install and commission Trane controls. The existing sequence of operation is to be used on the new air handler.
 - h. Re-connect electrical power.
 - i. Provide factory start-up of unit. Provide extra set of filters to owner.
 - j. Provide Testing and Balancing of unit. At a minimum provide T&B for total airflow; heating flow rate; chilled water flow rate; fan speed; fan power.
 - k. Turn unit over to owner. Provide owner training on new equipment with owner designated personnel.
6. Contractor to obtain all necessary permits as required from the local building department.



Bighorn Consulting Engineers

569 S. Westgate Drive, Suite #1,
Grand Junction, CO 81505
Phone 970-241-8709
Fax 970-41-9514

7. Provide project schedule to owner for review and approval including lead times on equipment. Coordinate all schedule dates with the owner including anticipated equipment and system downtimes. Contractor to provide construction schedule with Bid Process. Schedule must anticipate construction during September 2016 and show all lead time for permitting, equipment arrival, anticipated construction down time, programming and training. Owner is requesting that construction be performed over a weekend when staff levels are at their minimum.
8. See attached specification section 230500 for additional project requirements.
9. Contractor to provide a minimum of 3 references with Bid Process of similar work with contact names and numbers.

Photos:



Photo #1. RTU-1.

PART 1 - GENERAL**1.1 SUMMARY**

- A. Section Includes:
1. Submittals and substitutions
 2. Identification for HVAC Piping and Equipment.
 3. Sleeves.
 4. Mechanical sleeve seals.
 5. Formed steel channel.
 6. Motor Starters and Wiring/Coordination

1.2 SUBMITTALS

- A. Shop Drawings: Submit for piping and equipment identification list of wording, symbols, letter size, and color coding for pipe identification and valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
- B. Product Data for Pipe and Equipment Identification: Submit for mechanical identification manufacturers catalog literature for each product required.
- C. Product Data: Submit for mechanical approval the manufacturers catalog literature for each product required. Submit information showing capacities, dimensions and installation and operating procedures. Submittal information shall be bound in clearly identified 3-ring binders that are indexed and tabbed for the project. Number of submittals shall be as required in the General Conditions or a minimum of five (5) copies.
- D. Maintenance Data and Operating Instructions: Submit for approval three (3) copies of operation and maintenance manuals for the owners use. Manuals shall include manufacturer's installation and operation procedures for each piece of equipment. Manuals shall also include a copy of the Testing and Balancing report. Provide a listing of recommended replacement parts for keeping in stock supply, including sources of supply, for equipment. Include in the listing belts for equipment: Belt manufacturer, model number, size and style, and distinguished whether of multiple belt sets. Contractor shall provide scheduled training to the owner for all equipment provided and installed.

1.3 SUBSTITUTIONS

- A. Substitutions: Substitution of specified equipment will be allowed through a prior approval process initiated by the contractor. Contractor shall submit intended substitution at least **five** days prior to bid for approval from Engineer. Submittal shall include capacities, dimensions and operating instructions for each piece of equipment. Substitution shall occur at no cost to the owner. Contractor is responsible for coordination of approved substitution and shall incur all costs associated with the substitution including structural modifications, space layout and redesign costs.

1.4 EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS

- A. Examine carefully the site and conditions of the site. Provide all necessary equipment and labor to install a complete working system within the site conditions.
- B. Examine the drawings and specifications and 5 days prior to bidding report any errors, omissions, inconsistencies, and conflicts to the engineer to be remedied in an addendum to the project prior to bid time.
- C. Drawings are diagrammatic and catalog numbers given are for reference only. The contractor shall be responsible for verifying the capacity of the equipment meets the drawing requirements and shall not dimension from the mechanical, plumbing, or piping drawings.

- D. The latest adopted versions of the International Building codes shall be used as required. This will also include the latest adopted versions of the Mechanical, Plumbing and Energy Conservation Codes. All methods and materials required by these codes shall be required by these specifications unless indicated otherwise. Other applicable local codes and ordinances shall be as required and it shall be the contractor's responsibility to be knowledgeable of these requirements.
- E. Where installation procedures or any part thereof are required to be in accordance with the recommendations of the manufacturer of the material being installed, printed copies of these recommendations shall be furnished to the Engineer prior to installation. Installation of the item will not be allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

PART 2 PRODUCTS

2.1 IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

- A. Plastic Nameplates: Laminated three-layer plastic with engraved black letters on light background color.
- B. Plastic Tags: Laminated three-layer plastic with engraved black letters on light background color, minimum 1-1/2 inches diameter.
- C. Plastic Pipe Markers: Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener. Color and Lettering: Conform to ASME A13.1.
- D. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings. Color and Lettering: Conform to ASME A13.1.
- E. Plastic Underground Pipe Markers: Bright colored continuously printed plastic ribbon tape, minimum 6 inches wide by 4 mil thick, manufactured for direct burial service.

2.2 SLEEVES

- A. Sleeves for Pipes Through Non-fire Rated Floors: 18 gage thick galvanized steel.
- B. Sleeves for Pipes Through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Steel pipe or 18 gage thick galvanized steel.
- C. Sleeves for Round Ductwork: Galvanized steel.
- D. Sleeves for Rectangular Ductwork: Galvanized steel or wood.
- E. Sealant: Acrylic

2.3 MECHANICAL SLEEVE SEALS

- A. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

2.4 FORMED STEEL CHANNEL

- A. Product Description: Galvanized 12 gage thick steel. With holes 1-1/2 inches on center.

2.5 MOTORS, STARTERS, WIRING

- A. Furnish and set in place motors, controls and wiring necessary to operate mechanical equipment in accordance with the following schedule. Starters shall have Hand-Off-Auto, two N.O. contacts and two

SECTION 23 05 00
COMMON WORK RESULTS FOR HVAC

N.C. contacts. 480 volt starters shall have a 120 volt control transformer sized for the auxiliary equipment provided. Enclosures shall be NEMA 1 unless otherwise indicated. Fuses for the disconnect switches shall be provided under the electrical division.

RESPONSIBLE DIVISION

ITEM	FURNISHED	SET	POWER-WIRED	CONTROL WIRED
Equipment	23	23	26	–
Mag Motor Starters	23	26	26	23
Disconnect Switches	26(1)	26(1)	26	–
Switches, Manual and Multi-speed	23	26	26	–
Controls, Relays, Transformers	23	23	26	23
T'Stats and Time Switches	23	23	26	23
Line Voltage T'Stats	23	23	26	26
T.C. Control Panels	23	23	26	23
Motor and Solenoid Valves Damper Motors	23	23(2)	–	23(2)
Push Buttons and Pilot Lights	23	23(2)	–	23(2)
HVAC Controls	23	23	26	23
Exhaust Fan Switches	23	26	26	23(2)
Fire Protection Controls	26	26	26	26
Fire and Smoke Detectors	26(3)	26(3)	26	26(3)

(1) Under Division 23 if furnished factory-wired as part of equipment or if furnished with combination starters.

(2) If item is for line voltage, set in place and connect under Division 26. Where factory mounted on equipment or attached to piping or ducts and using line voltage furnish and set under Division 23, connect under Division 26.

(3) For units factory mounted in or on mechanical equipment or ducts, fan stop connections shall be under Division 23, all other connections under Division 26.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify openings are ready to receive sleeves.

3.2 INSTALLATION - PIPING AND EQUIPMENT IDENTIFICATION

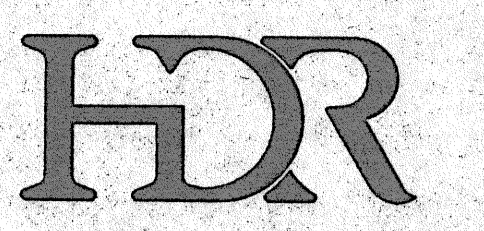
- A. Install plastic nameplates with adhesive.
- B. Install plastic tags with corrosion resistant metal chain.

3.3 INSTALLATION - SLEEVES

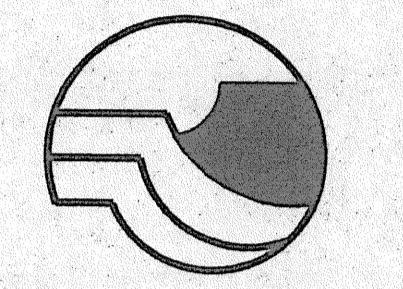
- A. Exterior watertight entries: Seal with mechanical sleeve seals.
- B. Set sleeves in position in forms. Provide reinforcing around sleeves.
- C. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- D. Extend sleeves through floors 1 inch above finished floor level. Caulk sleeves.
- E. Where piping or ductwork penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent work with stuffing insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
- F. Install chrome plated steel escutcheons at finished surfaces.

END OF SECTION 23 05 00

MESH01.DGN
 MSBORDER.DGN
 MESAF01B.DGN
 MESAGR1D.DGN
 MESAF001.DGN



Henningson, Durham
 & Richardson, Inc.



MESA COUNTY
 JUSTICE
 CENTER
 GRAND JUNCTION,
 COLORADO

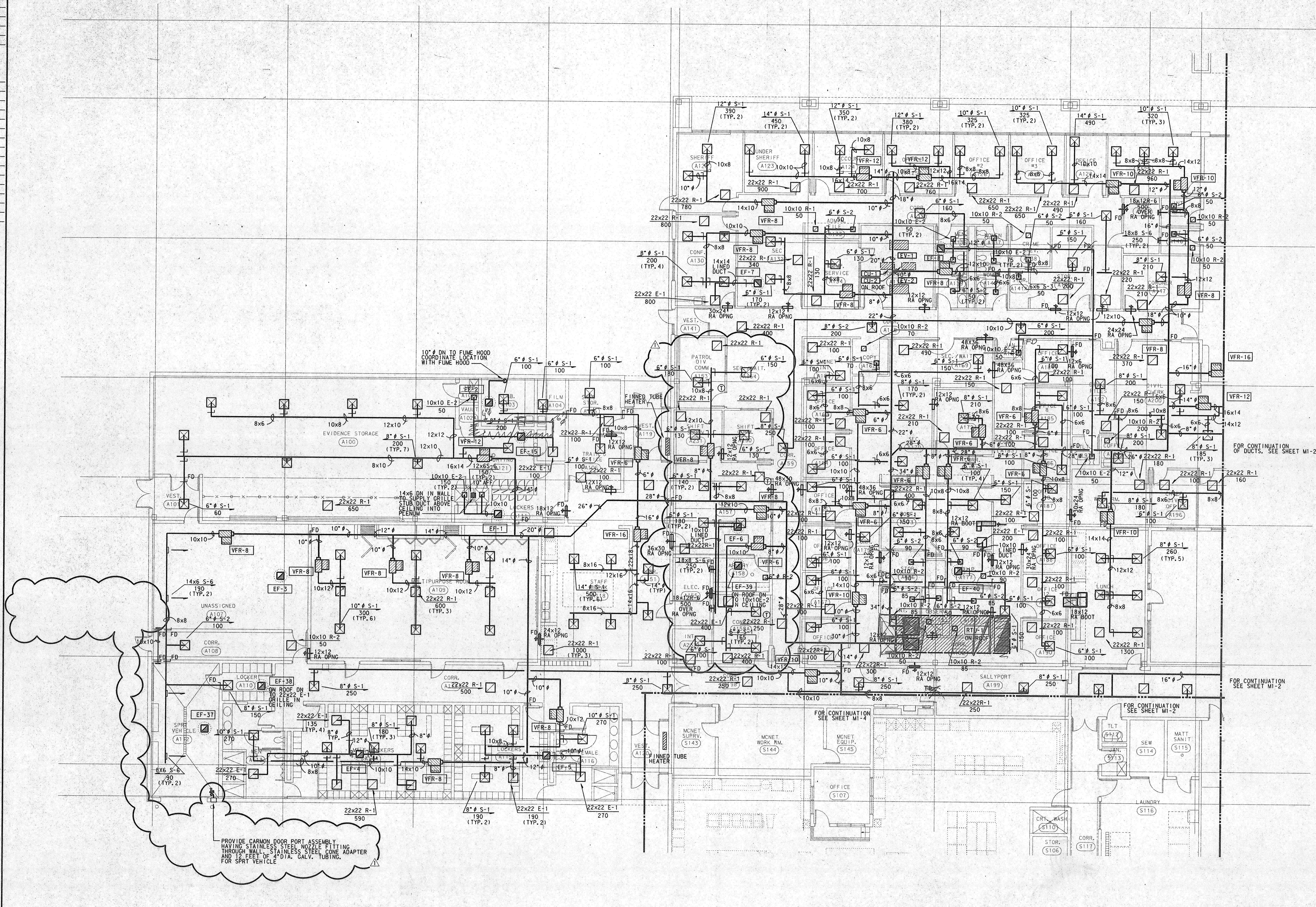
AREA 1 -
 FIRST FLOOR
 PLAN
 - HVAC

Project Number	06963-001-032
Date	October 4, 1990
Project Manager	BOYLE
Design	BORTNICK
Structural	PRUSHA
Mechanical	GILL
Electrical	HYMAN
Site	ELLWOOD
Drawn By	SUERT

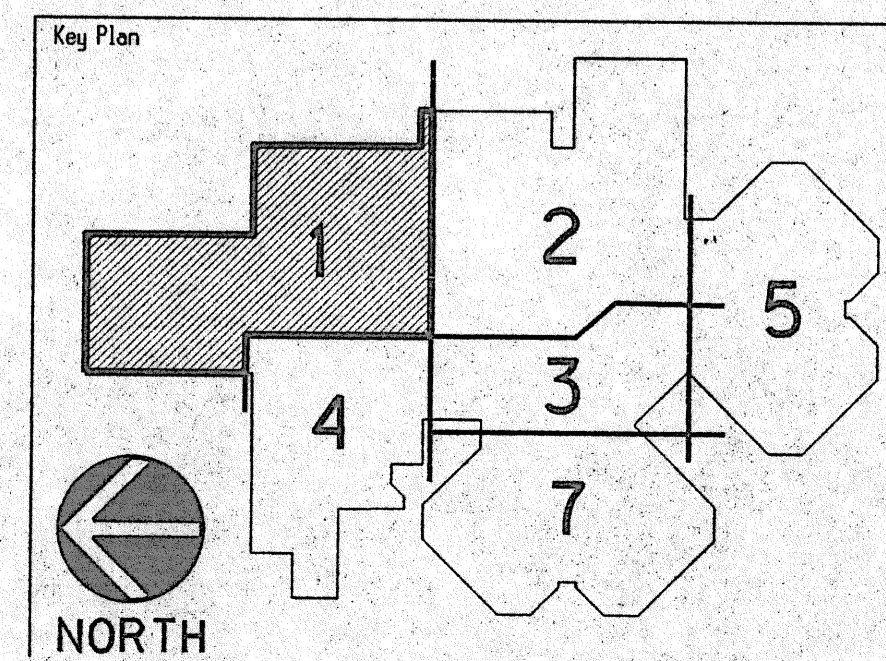
SCALE: 1/8" = 1'-0"
 ISSUED FOR
 BID PACKAGE 3
 REVISED FOR
 SHERIFF'S CHANGES
 CPT # 15
 JULY 29, 1991

FOR
 CONSTRUCTION

Sheet Number
 M1-1



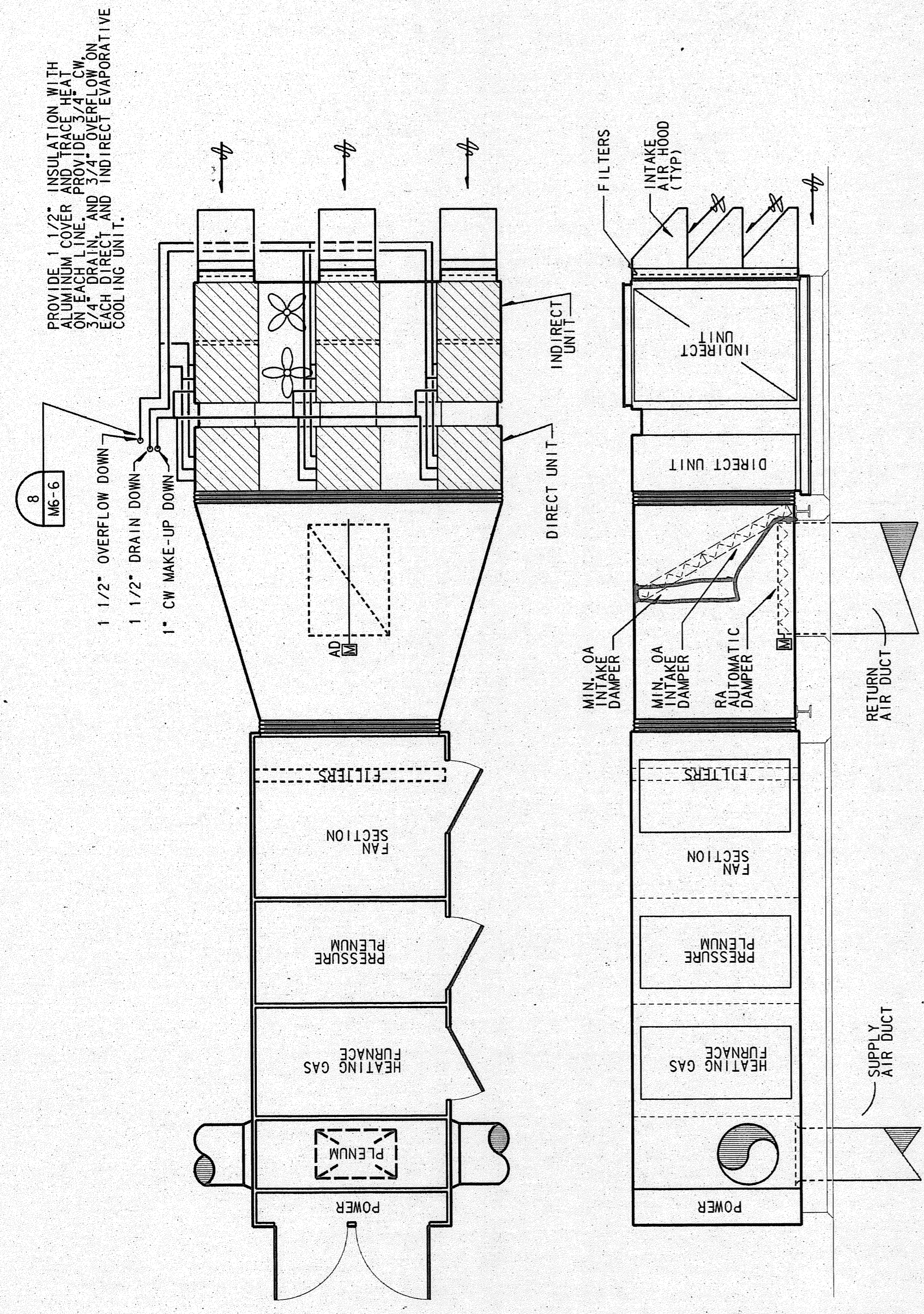
FIRST FLOOR PLAN AREA 1
 SCALE 1/8"=1'-0" MI-1



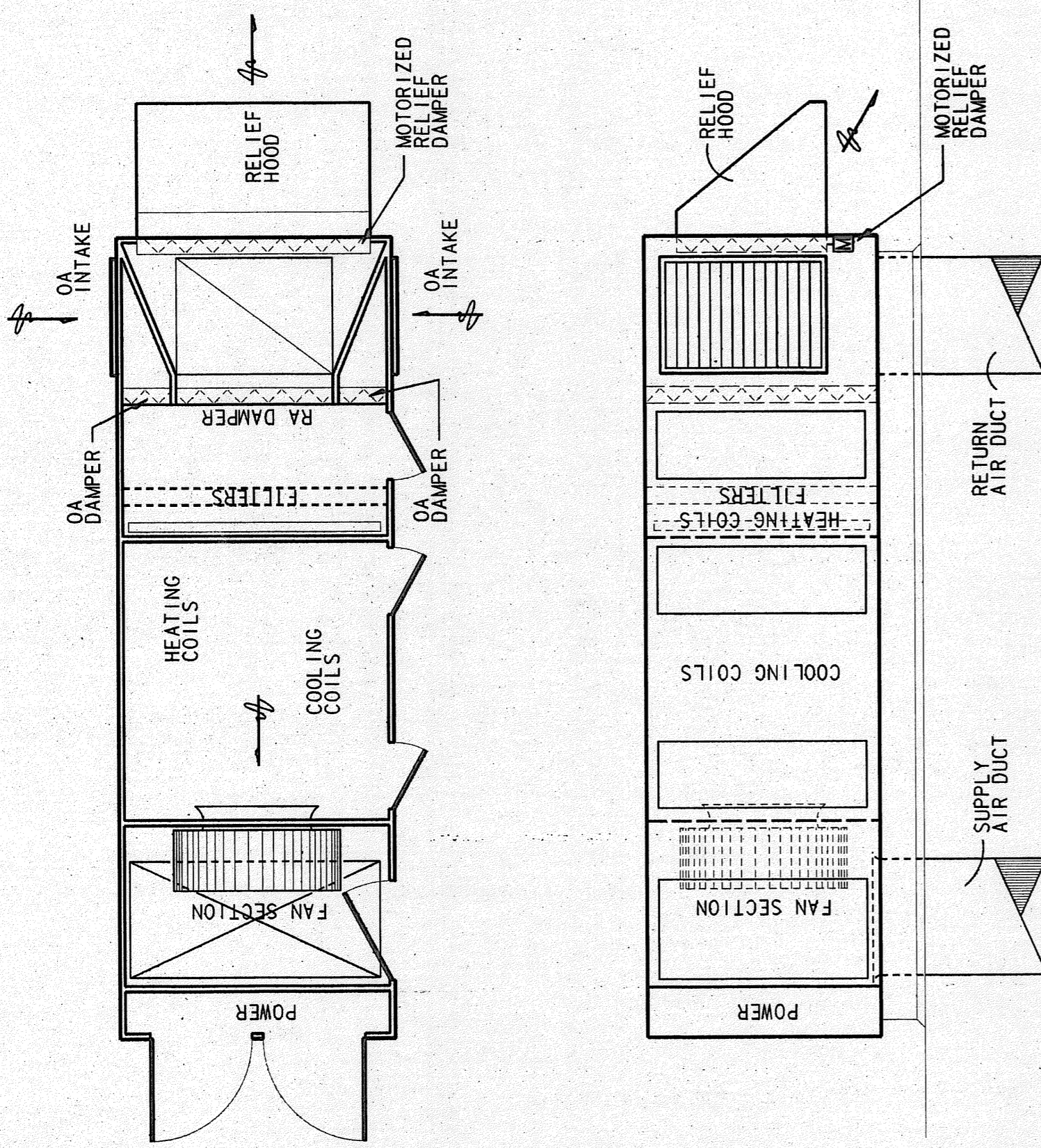
Project Number	06963-001-032
Date	OCTOBER 26, 1990
Project Manager	BOYLE
Design	BORTINICK
Structural	PRUSHA
Mechanical	GILL
Electrical	HYMAN
Site	ELLWOOD
Drawn By	SCRANTON
Scale	SCALE: AS NOTED

ISSUED FOR BID PACKAGE 3

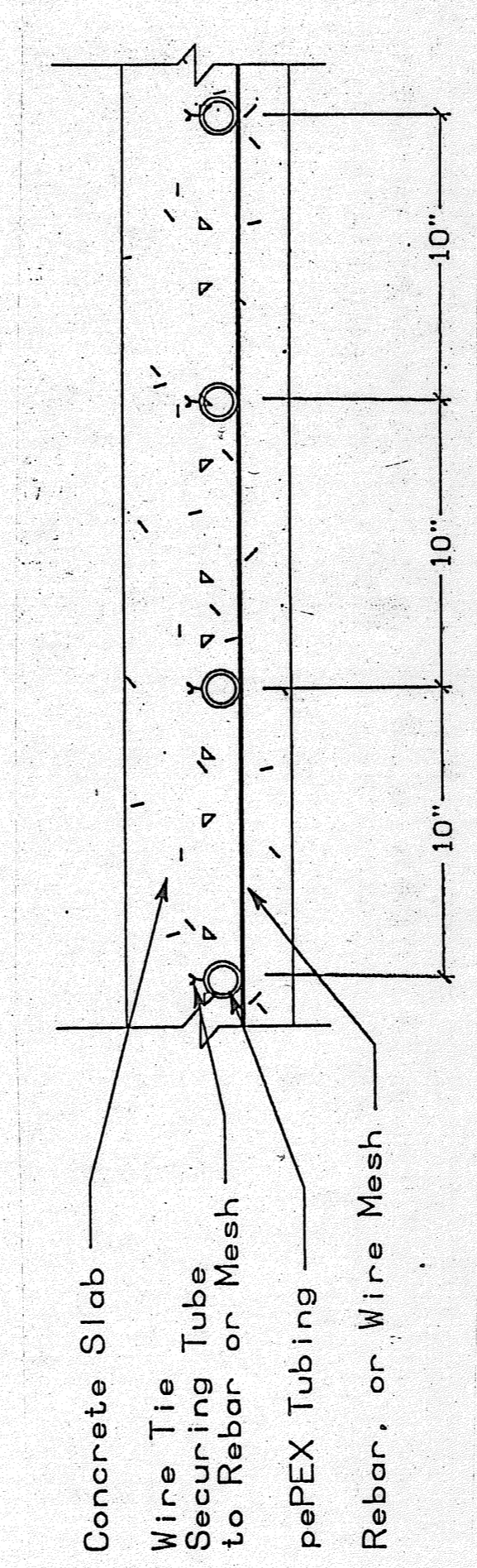
FOR CONSTRUCTION



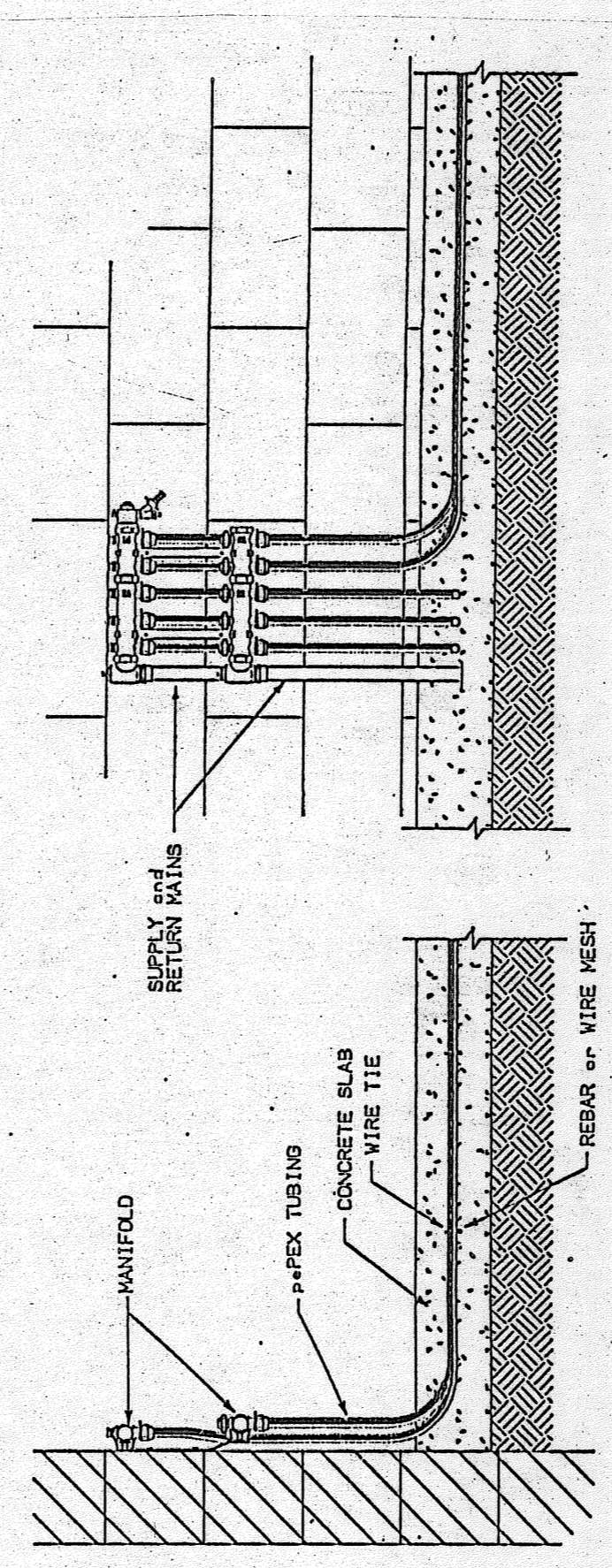
UNIT SHALL BE PROVIDED WITH A MINIMUM OA INTAKE AT THE TOP AND A MAXIMUM OA INTAKE



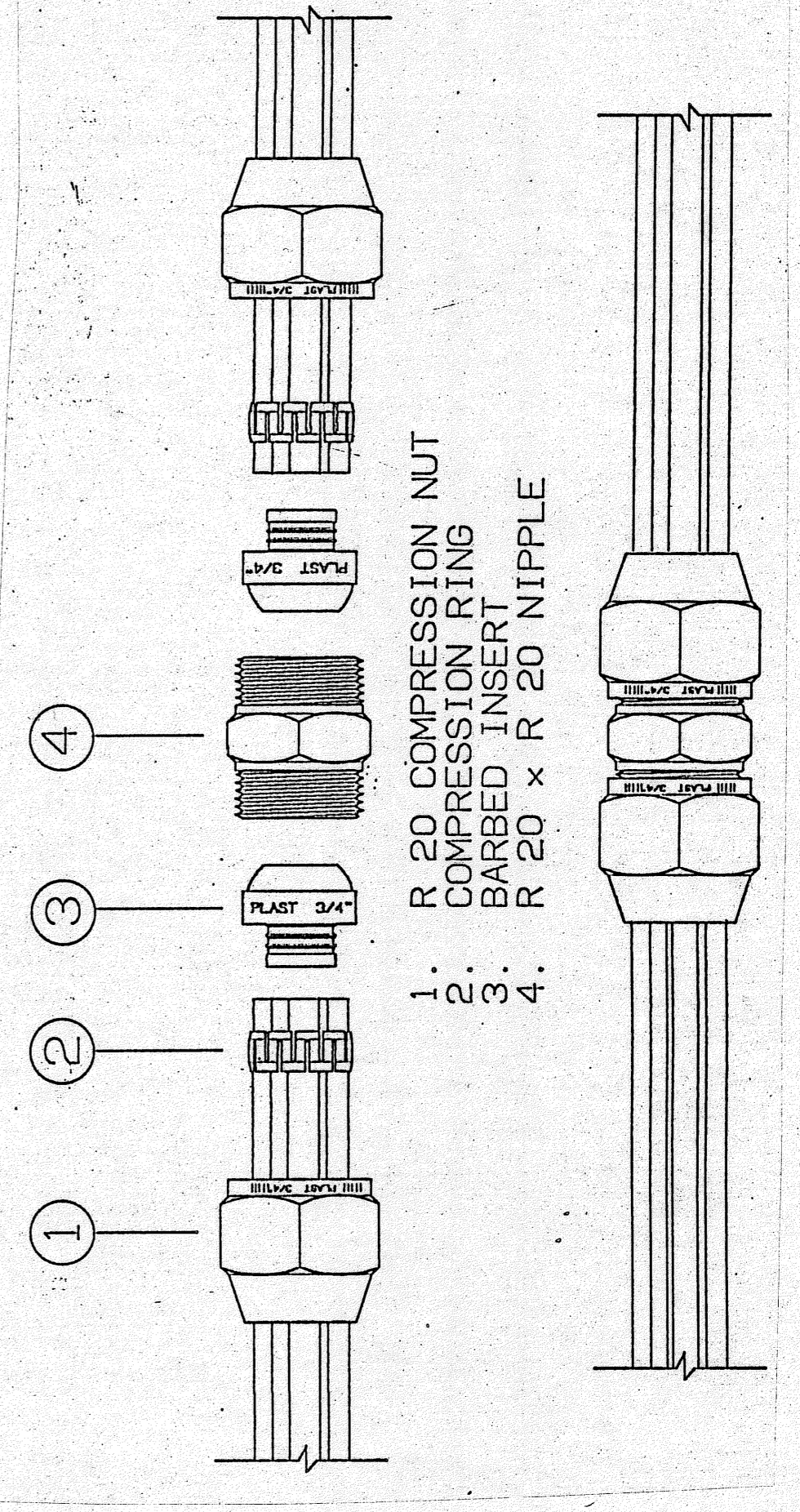
RTU-1 (RTU-2 SIMILAR)
SCALE: 1/4"=1'-0"



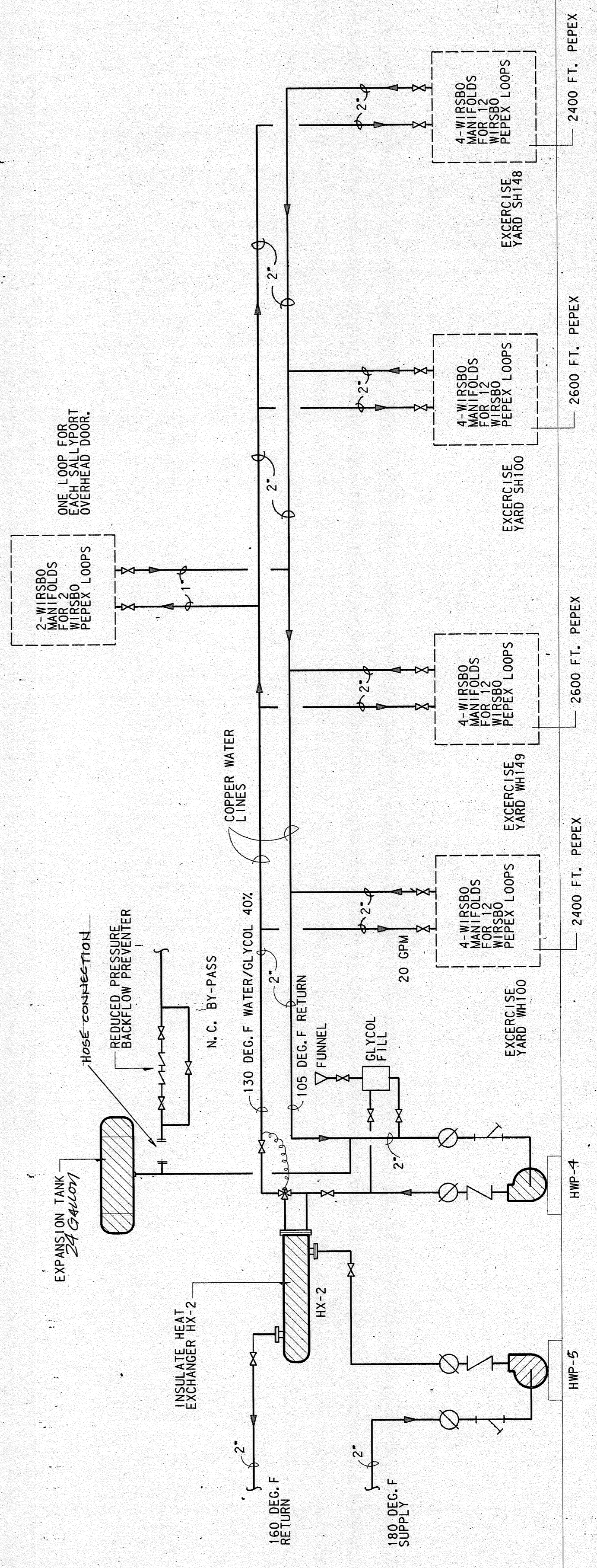
TUBING CROSS SECTION
NO SCALE



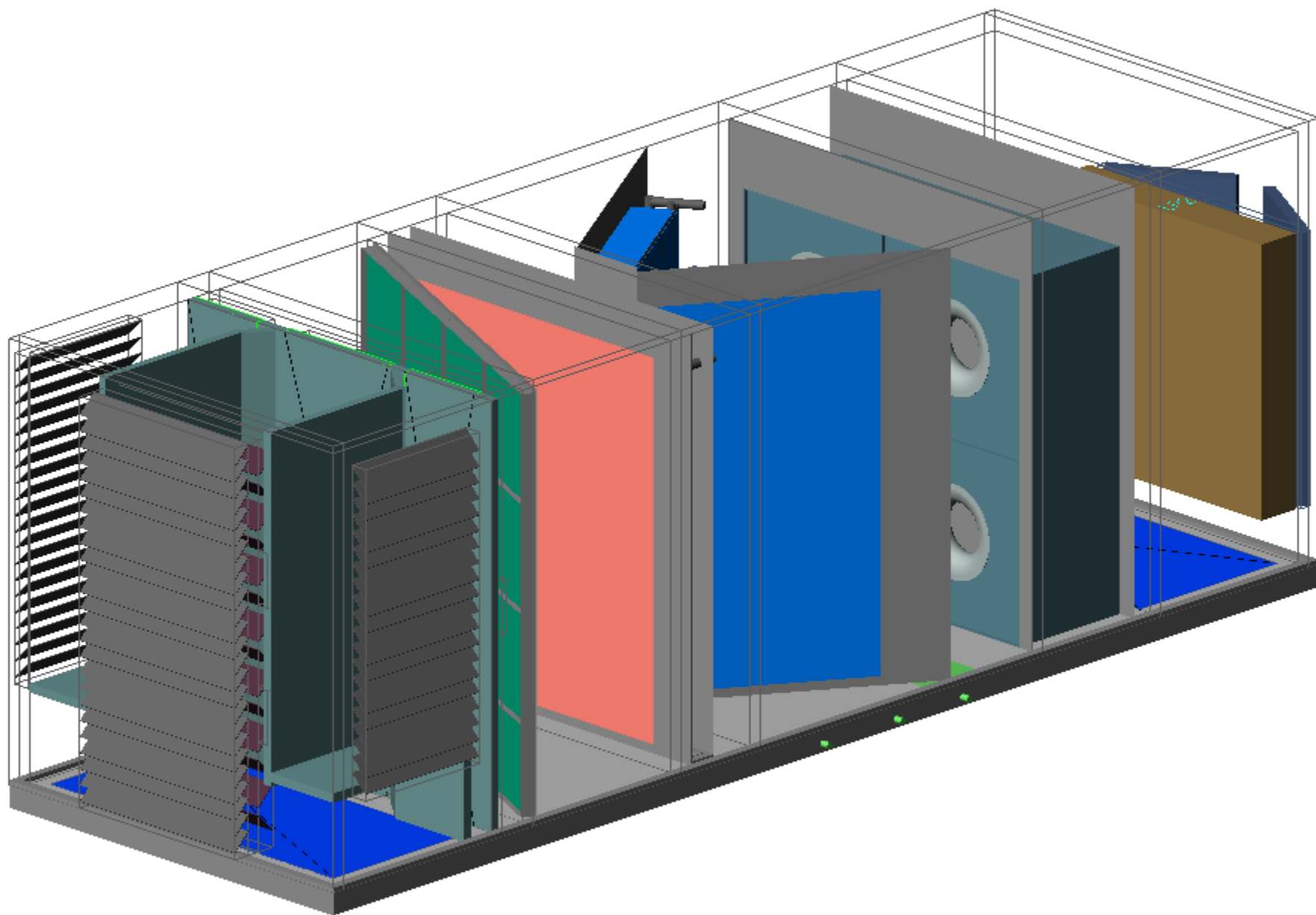
TYPICAL MANIFOLD ELEVATION
NO SCALE



5/8" REPAIR COUPLING DETAIL W/PIPE
NO SCALE

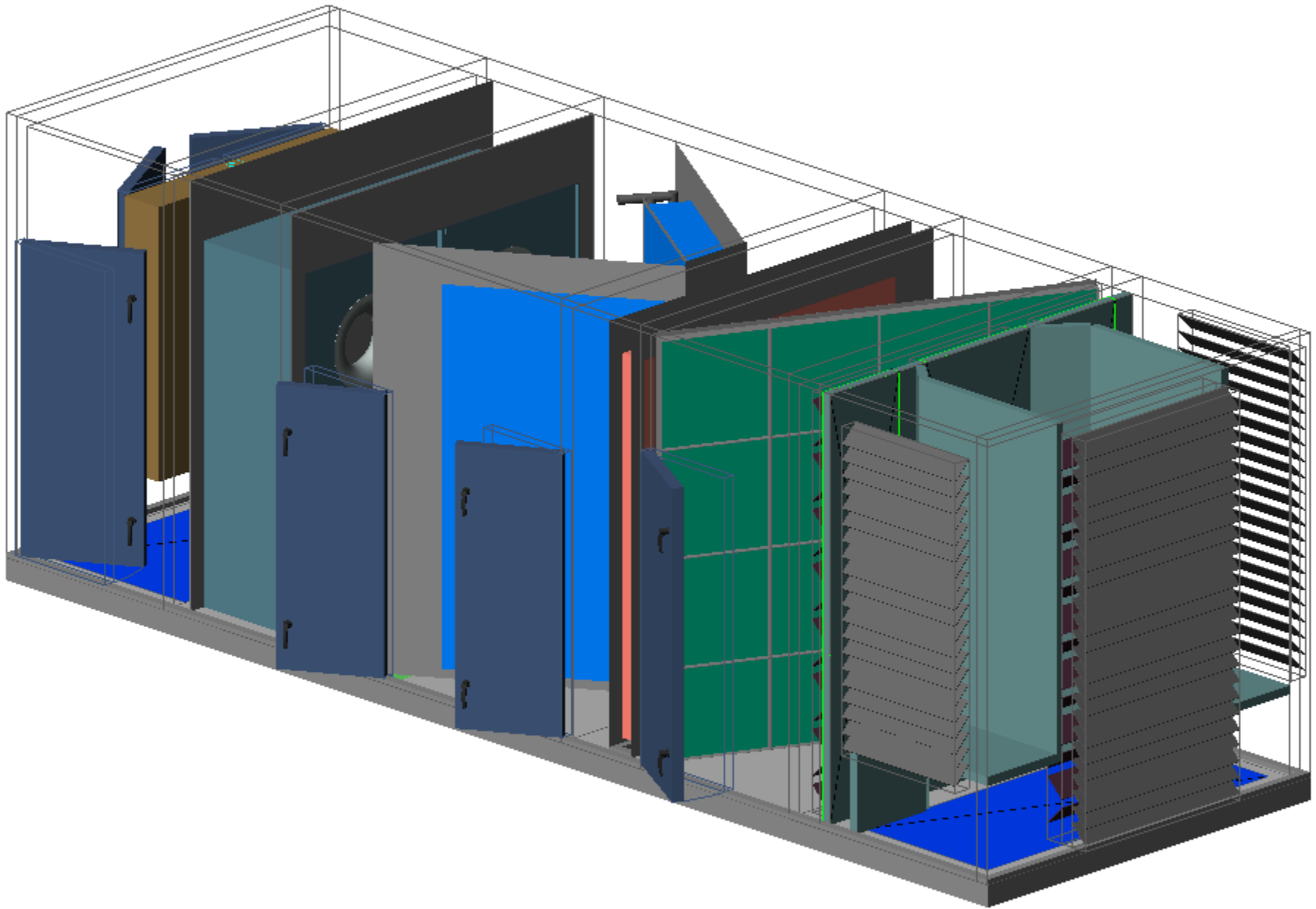


SNOW MELTING SYSTEM SCHEMATIC (ALT. NO. 7)
NO SCALE



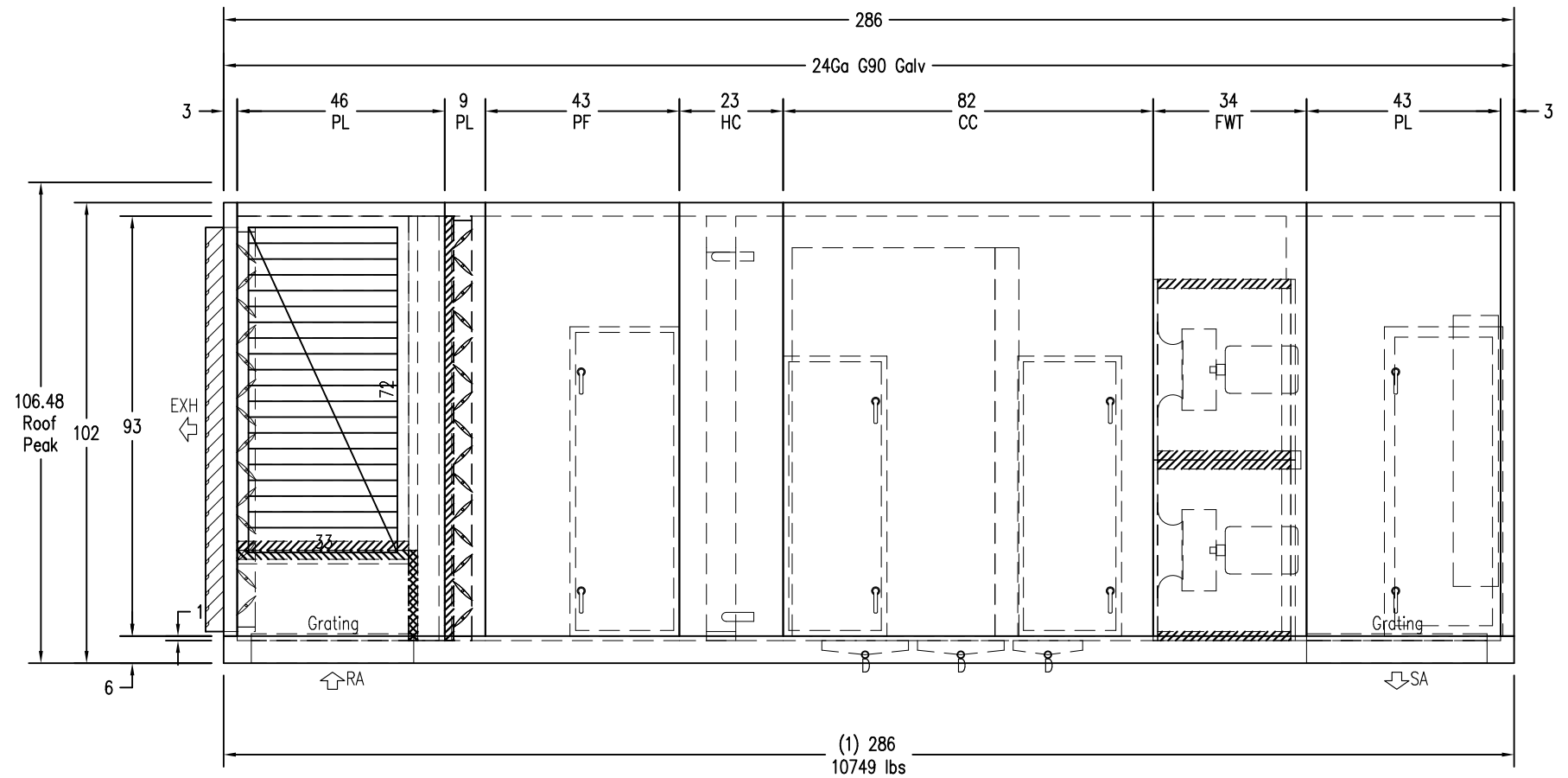
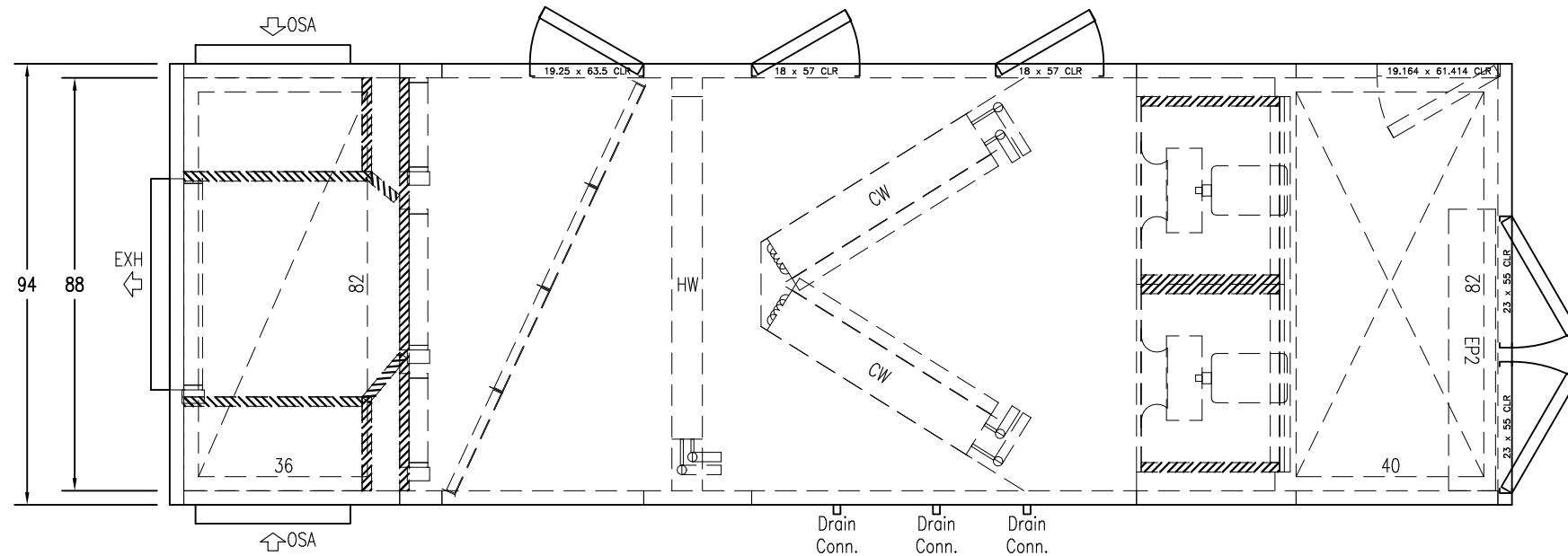
GJ Sheriff Offices
RTU-1

This document is confidential, copyrighted and property of Venmar CES.



GJ Sheriff Offices
RTU-1

This document is confidential, copyrighted and property of Venmar CES.



All dimensions shown in inches, Operating weights shown in pounds. Overall unit dimensions do not include lifting lugs, electrical panels, pipe connections, door handles, etc.
 ITF - EnergyPack Construction 30,600 ACFM



200 rue Carter, St. Leonard d'Aston, QC J0C 1M0, Canada
 (819) 399-2175 Toll Free (866) 483-6627 venmarces.com

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GJ Sheriff Offices

Unit Tag RTU-1	Unit Type Outdoor	Dsg Qty 1
Rep Firm CFM Company: Denver Denver, CO, USA	Weight 10,749	Box Qty 1
Rep Contact Justin Smith, 303-607-4457	Model No A-1-31e-XX-X-X-P	
NASDA Ver 6.2.11	Factory SAE JD	Quote No ZG735-04
Job No -01	Date m/d/y 4/6/2016	Rev

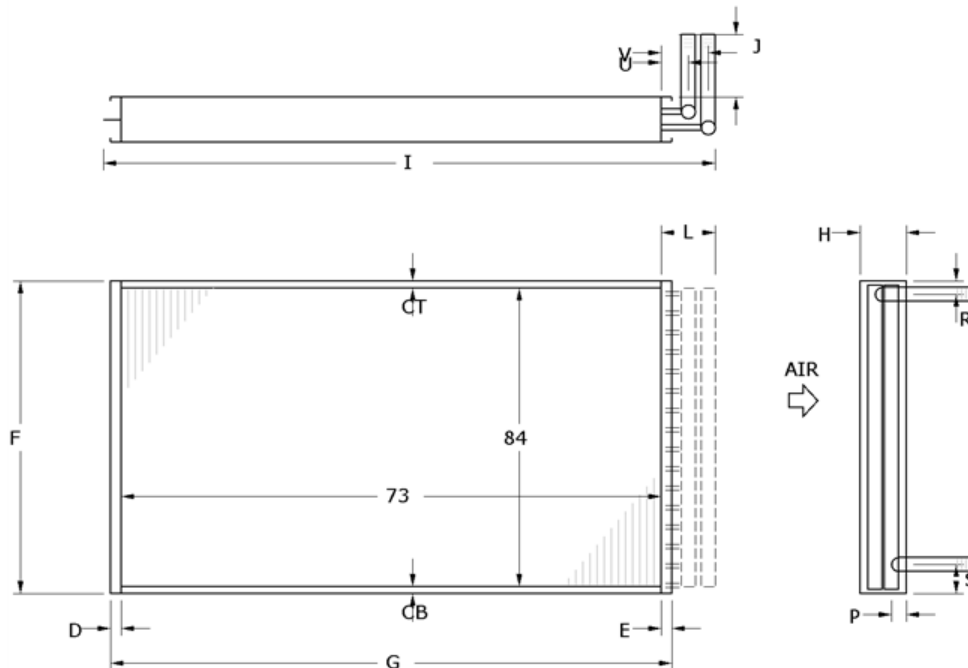
Project Name: GJ Sheriff Offices

Quote #: ZG735-04

Unit Tag: RTU-1

Coil Layout			
Coil Hand	Right	Rack Style	None
Configuration	Single	Rack Finish	N/A
Connection Orientation	Interior 90° Downstream	Blankoff Material	18Ga G90 Galv
Connection Material	Red Brass	Blankoff Finish	None
Connection Type	MPT		

Construction					
Quantity	1	Stand Height	1 in	Casing	16Ga G90 Galv
Serpentine	0.5	<i>Tube Detail - Primary Surface</i>		Coating	None
Fin Height	84.000 in	Material	Copper	<i>Fin Detail - Secondary Surface</i>	
Fin Length	73.000 in	O.D. x Wall	0.625 x 0.020 in	Material	Aluminum
Rows	1	Spacing	1.500 x 1.299 in	Thickness	0.008 in
Fins per Inch	9	Internal	Smooth	Configuration	Corrugated, Waffle with Straight Edge
Face Area	42.58 ft ²	Return Bends	N/A		
<i>Connections</i>		<i>Quantity</i>	<i>Type</i>	<i>Material</i>	<i>Pipe Size</i>
Supply	1	MPT	Red Brass	2.0 in	
Return	1	MPT	Red Brass	2.0 in	

Single Bank, Right Hand, 1 per unit
5WC - 2 - 84 x 73 x 1 - 9 AL


Dimensional Data (in)													
CT	CB	D	E	F	G	H	I	J	L	R	S	U	V
1.00	1.00	1.50	1.50	86.00	76.00	6.50	83.13	4.00	7.63	1.94	4.25	3.81	6.56

Project Name: GJ Sheriff Offices

Quote #: ZG735-04

Unit Tag: RTU-1

Condition 1			
<i>Entering</i>		<i>Leaving</i>	
Actual Airflow	30,600 ACFM		
Standard Airflow	26,356 SCFM	Sensible Capacity	728.1 MBH
Elevation	4,843 ft	Actual Face Velocity	718.59 ft/min
Entering Air DB	55.0 °F	Leaving Air DB	80.5 °F
Fluid Type / %	Propylene / 15.0 %	APD	0.15 in.H2O
Fluid Entering Temp	180.0 °F	Leaving Fluid Temp	150.9 °F
Fluid Flow Rate	51.3 GPM	Fluid Velocity	2.03 ft/s
FoulingFactor	0.0000	Fluid Pressure Drop	2.69 ft.H2O

Notes / Features

1. Manufacturer: Ventrol, 9100, rue du Parcours, Montreal QC H1J 2Z1 Canada
2. 1" top and bottom coil flanges provided on coil casing.
3. Vents and drains provided on supply and return connections, unless otherwise noted.
4. Red Brass coil connections provided.
5. SCFM is corrected for Elevation and EDB.
6. Fluid volume of the coil is: 7.5 Gal
7. Coil is NOT certified by AHRI
8. Hot water velocity is below recommended minimum of 2.5 fps

Project Name: GJ Sheriff Offices

Quote #: ZG735-04

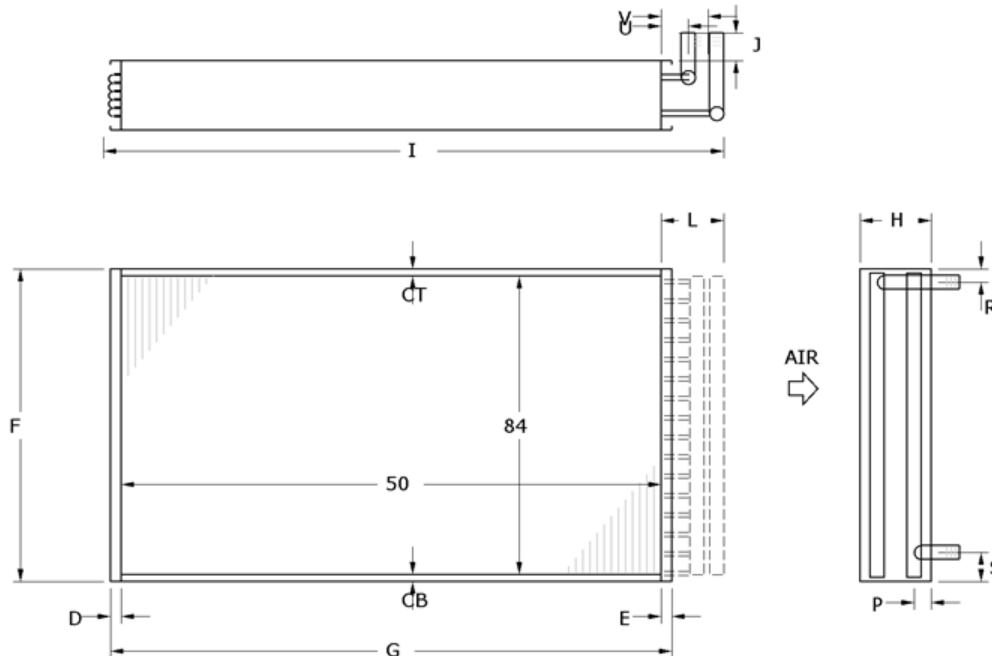
Unit Tag: RTU-1

Coil Layout

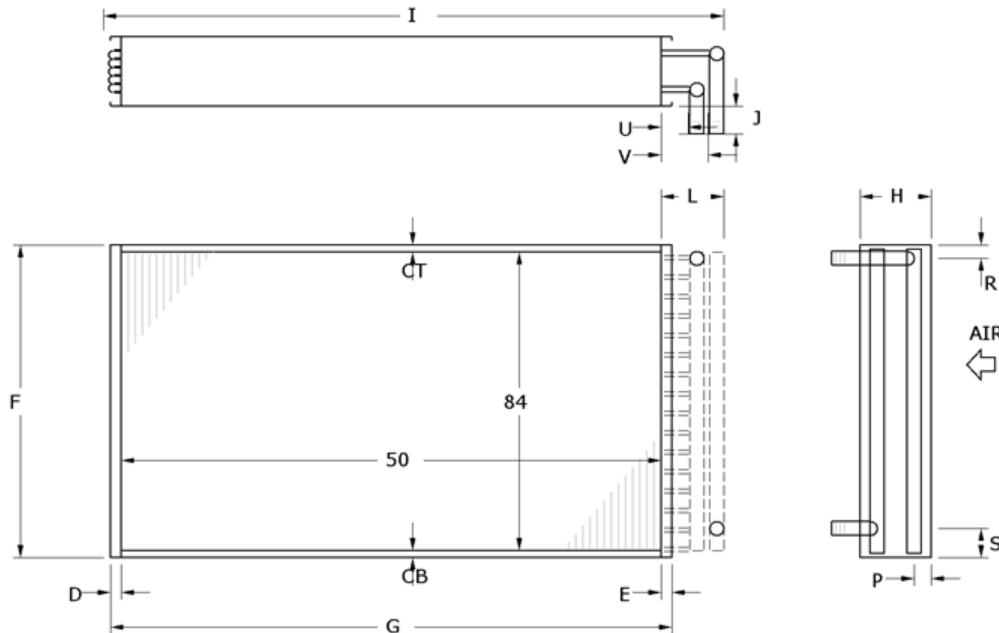
Coil Hand	Right and Left	Rack Style	None
Configuration	Vee Plan	Rack Finish	N/A
Connection Orientation	Interior 90° Downstream	Blankoff Material	18Ga G90 Galv
Connection Material	Red Brass	Blankoff Finish	None
Connection Type	MPT		

Construction

Quantity	2	Stand Height	1 in	Casing	16Ga G90 Galv
Serpentine	0.75	<i>Tube Detail - Primary Surface</i>		Coating	None
Fin Height	84.000 in	Material	Copper	<i>Fin Detail - Secondary Surface</i>	
Fin Length	50.000 in	O.D. x Wall	0.625 x 0.020 in	Material	Aluminum
Rows	6	Spacing	1.500 x 1.299 in	Thickness	0.008 in
Fins per Inch	11	Internal	Smooth	Configuration	Corrugated, Waffle with Straight Edge
Face Area	58.33 ft ²	Return Bends	N/A		
<i>Connections</i>		<i>Quantity</i>	<i>Type</i>	<i>Material</i>	<i>Pipe Size</i>
Supply	1	MPT	Red Brass	2.0 in	
Return	1	MPT	Red Brass	2.0 in	

Dual Vee Plan Bank 1, Right Hand Qty: 1
5WC - 8 - 84 x 50 x 6 - 11 AL

Dimensional Data (in)

CT	CB	D	E	F	G	H	I	J	L	R	S	U	V
1.00	1.00	1.50	1.50	86.00	53.00	10.00	61.31	4.00	8.81	1.94	4.25	3.81	6.56

Dual Vee Plan Bank 2, Left Hand Qty: 1
5WC - 8 - 84 x 50 x 6 - 11 AL

Dimensional Data (in)

CT	CB	D	E	F	G	H	I	J	L	R	S	U	V
1.00	1.00	1.50	1.50	86.00	53.00	10.00	61.31	4.00	8.81	1.94	4.25	3.81	6.56

Condition 1

<i>Entering</i>		<i>Leaving</i>	
Actual Airflow	30,600 ACFM	Total Capacity	668.7 MBH
Standard Airflow	24,735 SCFM	Sensible Capacity	668.7 MBH
Elevation	4,843 ft	Actual Face Velocity	524.57 ft/min
Entering Air DB	80.0 °F	Leaving Air DB	55.4 °F
Entering Air WB	62.0 °F	Leaving Air WB	53.6 °F
Fluid Type / %	Propylene / 15.0 %	APD	0.71 in.H2O
Fluid Entering Temp	45.0 °F	Leaving Fluid Temp	56.3 °F
Fluid Flow Rate	121.4 GPM	Fluid Velocity	1.60 ft/s
FoulingFactor	0.0000	Fluid Pressure Drop	4.56 ft.H2O

Notes / Features

1. Manufacturer: Ventrol, 9100, rue du Parcours, Montreal QC H1J 2Z1 Canada
2. 1" top and bottom coil flanges provided on coil casing.
3. Vents and drains provided on supply and return connections, unless otherwise noted.
4. Red Brass coil connections provided.
5. SCFM is corrected for Elevation and EDB.
6. Coil performance and air pressure drop may be impacted by coil placement that is not perpendicular to airflow.
7. Fluid volume of the coil is: 48.5 Gal
8. Coil is NOT certified by AHRI
9. Chilled water velocity is below recommended minimum of 2.5 fps

Project Name: GJ Sheriff Offices

Quote #: ZG735-04

Unit Tag: RTU-1

Condition 1

Unassigned		
Tunnel	Description	Pressure Drop (in.H2O)
AirTunnel 1	EXH Opening - Louver & Damper (Exhaust Air)	0.73
AirTunnel 1	Copy of OSA Opening - Louver (Outside Air)	0.57
AirTunnel 1	SA Opening (Supply Air)	0.28
Total Pressure:		1.58

Supply		
Tunnel	Description	Pressure Drop (in.H2O)
AirTunnel 1	OSA Opening - Louver (Outside Air)	0.57
AirTunnel 1	RA Opening (Return Air)	0.09
AirTunnel 1	Filter 1, Pre-Filter (Average Pressure Drop)	0.61
AirTunnel 1	Hot Water Coil 1	0.15
AirTunnel 1	Chilled Water Coil 1	0.71
AirTunnel 1	ESP	4.45
Total Pressure:		6.58

Project Name: GJ Sheriff Offices

Quote #: ZG735-04

Unit Tag: RTU-1

Configuration / Quantity						
Function	Supply Fan	Cell Size	Height	Width	Depth	Overall Depths
Quantity	4		40.00 in	40.00 in	31.00 in	33.25 in
Array	2 Rows x 2 Cols	Elev. / Temp.		4,843 ft / 70.0 °F		
Construction	Panelized	Mtr. & Wheel Weight		242 lb	Redundant	0
Inlet Cone Location	Upstream Removable	Fan Cell Weight		242 lb	Empty	0
Stand Height	N/A	Ship Loose Fan (Wheel, Motor and Mounting Base)				0

Options			
Coplanar Insulation	Premium Faced Duct Liner	Discharge Guard	NO
Extended Coplanar	NO	Cell Finish	None
Back Draft Dampers	NO	Insulation Retainer	NO
Inlet Air Straight.	NO - Curved Cone	Inlet Attenuation	None

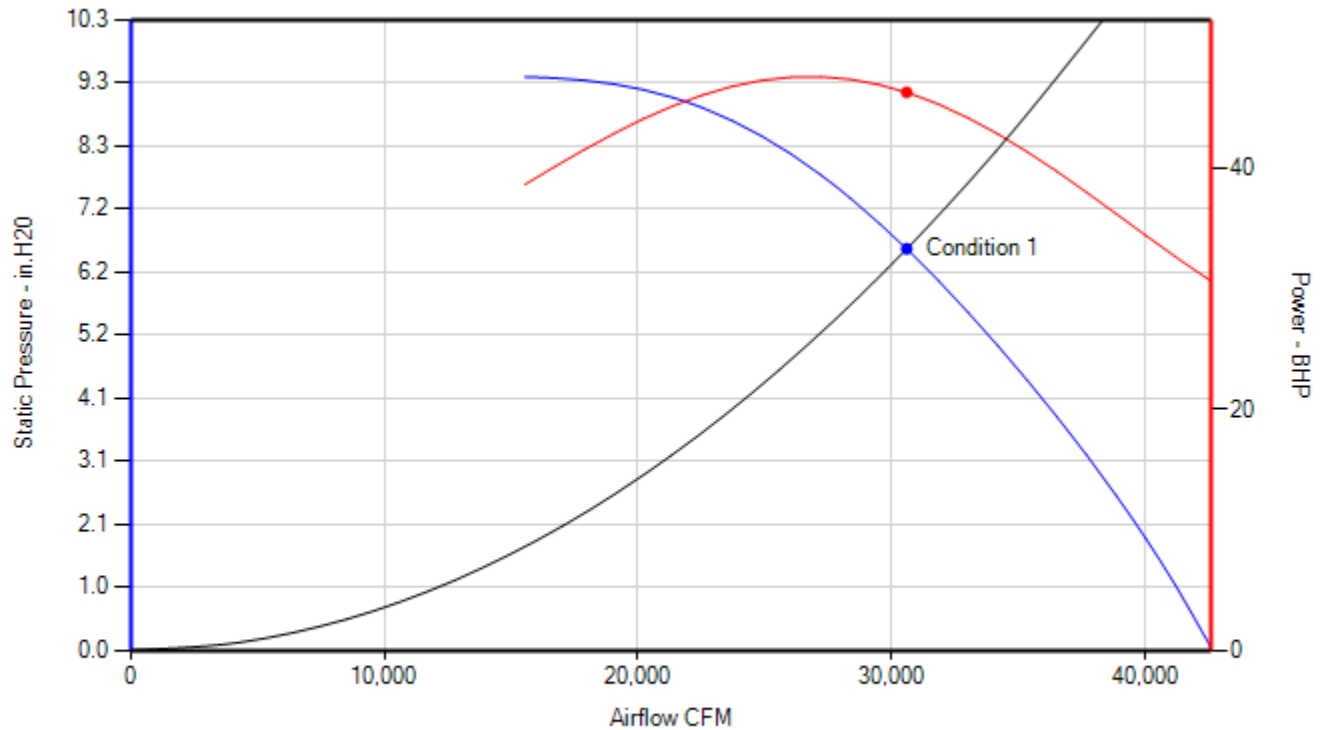
Fan Wheel			
Diameter	18.000 in	Max RPM	3862
Width	100 %	Wheel Finish	None
Balancing Planes	1		

Motor			
Manufacturer	Baldor	Model	07M267W723G6
HP Each / Total	12 / 48	Efficiency	91.5
Poles / RPM	2-Pole / 3,490	Service Factor	1.15
Frame / Casing	215T / TEAO	Shaft Grounding	Yes
Volts / Phase / Hz	460/3/60	FLA Ea	13.1 Amps
Type / Winding	N/A	Total FLA	52.4 Amps

Variable Frequency Drive			
Furnished by	Factory	Voltage	460/3/60
Quantity	1	Amps	59.0 Amps
Manufacturer	ABB	Input Line Reactor	NO
Model No	ACH550-UH-059A-4	VFD Communication	None
Horse Power	40		

Control System			
Redundant VFD	NO	Flow Monitoring	None
Bypass Circuit	None	Fans to Monitor	None
Drive	Standard	Display	None
Optimization Control	NO	Communication	None
Control Method	By Others		

Notes / Features
<ol style="list-style-type: none"> To view patents and other pending U.S. or Canadian applications visit www.nortekair.com/patents. Cell velocity is greater than 750 fpm. Cone constant = 1914, cone APD = 13.37 in.H2O at 7650 CFM per fan. The estimated VFD input watts are based on the motor and VFD efficiency at the selected load and RPM.



Power Rating BHP does not include transmission losses.
 Performance ratings include the effects of the Coplanar Silencer.

Operating Conditions												
Operating Condition	Annual Usage	CFM	SP (in.H2O)	Cell Quantities			RPM	Hz	Fanwheel BHP		Vel (ft/min)	Watts
				On	Off	Failed			Each	Total		
Condition 1	100 %	30,600	6.58	4	0	0	3,412	58.65	11.58	46.32	850.0	38,763

Bare Fan Sound Power with Coplanar Silencer (dB re: 10E-12 watts)											
Operating Condition		63	125	250	500	1K	2K	4K	8K	LwA	Lw
		Condition 1	Inlet	101	101	98	99	93	90	90	85
Outlet	91		88	95	91	87	85	84	79	94	99