

TOWN OF CANTON



REQUEST FOR PROPOSALS DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM

November 25th, 2024

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LEGAL NOTICE

TOWN OF CANTON, CONNECTICUT

REQUEST FOR PROPOSALS (RFP)
UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH
SCHOOL AUDITORIUM

November 25th, 2024

The Town of Canton, through its Chief Administrative Officer (“CAO”), invites appropriately licensed and qualified Submitters to submit proposals for the UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM.

One (1) original and two (2) copies of sealed proposals for the above-named request along with a digitized version (on a thumb-drive) must be received in the Office of the Chief Administrative Officer, Canton Town Hall, 2nd Floor, 4 Market Street, Collinsville, CT 06022 by 2:00 PM local time on December 23rd, 2024, 2:00 pm. The Town of Canton will reject all proposals received after that date and time.

NOTE: All proposals will be publicly opened on December 23rd, 2024, at approximately 2:15 PM local time in the Conference Room of the Canton Department of Public Works, 50 River Road, Collinsville CT 06022.

The RFP package may be obtained at the Town's website, www.townofcantonct.org, under “Proposals & RFPs”, and on the CTDAS website.

The Town of Canton is an equal opportunity/affirmative action employer. Small business enterprises, woman owned businesses, and minority owned businesses are encouraged to participate.

Mark Penney
Chief Administrative Officer

STANDARD INSTRUCTIONS

1. INTRODUCTION/OVERVIEW

The Town of Canton is soliciting proposals for the above-named project. These Standard Instructions are a part of the RFP package for the DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM for the Town of Canton, Department of Public Works. If there are any conflicts between the instructions in these Standard Instructions and any other proposal document(s), these Standard Instructions shall prevail.

2. KEY EVENT DATES

Request for RFP Issued	Monday, November 25 th , 2024
Mandatory Pre- Proposal Site Visit	Monday, December 2nd, 2024, 10:00 AM
Public Proposal Opening	Monday, December 23rd, 2024, 2:00 PM
Project Award	Wednesday, January 8th, 2025 (tentatively)
Notice to Proceed	Wednesday, January 22nd, 2025 (tentatively)
Commencement of Work	Wednesday, June 11th, 2025 (tentatively)

3. OBTAINING RFP DOCUMENTS

Specifications and proposal documents may be obtained from the town web page at: www.townofcantonct.org (under "Proposals/RFP's").

4. PROPOSAL SUBMISSION INSTRUCTIONS

A. Following the mandatory site visit:

One (1) original, two (2) copies of sealed proposals, and (1) digitized version on a thumb-drive for the above-named RFP must be received in the Office of the Chief Administrative Officer, Canton Town Hall, 2nd Floor, 4 Market Street, Collinsville, CT 06022 by 2:00 PM local time on December 23rd, 2024. NOTE: all proposals will be publicly opened December 23rd, 2024, at 2:15 PM in the Conference Room of the Canton Department of Public Works, 50 River Road, Collinsville CT 06022. Proposals must be at the office of the Chief Administrative Officer prior to the time the first proposal is scheduled to be publicly opened. Postmarks are NOT an acceptable waiver of this policy. Corrections and/or modifications received after the scheduled date and

time for opening will NOT be accepted. Proposals may not be submitted by facsimile or email. Proposals submitted by firms who did not attend the mandatory site visit will be rejected.

- B. Ditto marks or words such as "SAME" on the proposal is considered writing and must not be used.
- C. All information must be submitted in ink or typewritten, **and** in a digitized version on a thumb-drive. Mistakes may be crossed out and corrections inserted. Corrections must be initialed by the person signing the proposal.
- D. Proposals are considered valid for sixty (60) days after proposal(s) are opened. Submitters may not withdraw, cancel, or modify their proposal for a period of sixty (60) days after proposal(s) are opened.
- E. Proposals must be signed by an authorized person representing the legal entity of the submitter.
- F. The inability to meet any specified requirement(s) must be stated in writing and attached to the proposal form or written on the proposal form.

5. QUESTIONS

Any questions regarding these documents or the specifications found herein must be directed to Mr. Glenn Cusano, Project Administrator **via email only** at gcusano@townofcantonct.org.

The Town shall post any addenda, to this Request for Proposal at least three (3) days prior to the receipt of proposals on its website, located at: www.townofcantonct.org (under "Proposals & RFP'S"). It shall be the responsibility of each submitter to determine whether addenda have been issued, and if so, to download copies directly from the Town's website.

6. PRESUMPTION OF SUBMITTER BEING FULLY INFORMED

At the time the first proposal is opened, each submitter is presumed to have read and be thoroughly familiar with all proposal and contract documents for this project. Failure or omission of the submitter to receive or examine any information concerning this proposal shall in no way relieve them from obligations with respect to their proposal.

7. SITE VISIT

Prospective submitters are required to attend the Mandatory Pre-Proposal Site Visit, as indicated in section 2 titled Key Event Dates, will be held on December 2nd, 2024, 10:00 AM, EST at Canton High School, 76 Simonds Ave., Canton, CT 06022 at which time questions concerning the project will be answered. Prospective submitters are expected to view the job site with the Town's project team. Failure to attend disqualifies prospective submitters and does not relieve submitters of obligations under this proposal.

8. TAX EXEMPTIONS

The Town of Canton is exempt from Federal Excise Taxes and Connecticut Sales and Use Taxes. Submitters shall avail themselves of these exemptions.

9. INSURANCE

The business entity awarded this proposal must provide a current Certificate of Insurance to the Chief Administrative Officer PRIOR to commencement of work with the following General Liability & Automobile Coverage requirements:

- a. Commercial General Liability:
 - Each Occurrence: \$1,000,000
 - Personal/Advertising Injury Per Occurrence: \$1,000,000
 - General Aggregate: \$2,000,000
 - Product/Completed Operations Aggregate \$2,000,000
 - Damage to Rented Premises \$ 100,000
- b. Automobile Liability:
 - Each Accident: \$1,000,000
 - Hired/Non-owned Auto Liability \$1,000,000
- c. Worker's Compensation, as required by Connecticut State statutes.
- d. The "Town of Canton" is to appear as an additional insured on the contractor's general liability and automobile liability Certificates of Insurance.
- e. All insurance is to be provided by a company authorized to issue such insurance in the State of Connecticut with a Best rating of no less than A: VII.
- f. It is desired by the Town that no insurance be canceled or modified without thirty (30) days written notice by registered U.S. Mail to: Chief Administrative Officer, Town of Canton, 4 Market Street, P. O. Box 168, Collinsville, CT 06022-0168.
- g. The limits of insurance may either be met as stated above, or in combination with an umbrella or excess liability policy.

10. AWARDING THE PROPOSAL

The Town of Canton reserves the right to accept any proposal or any part of proposals, to reject any, all, or any part of proposals, to waive any formalities or informalities in the proposal process, and to award the proposal deemed to be in the best interests of the Town. The Town of Canton will enter into a written agreement with the selected vendor. The "Notice to Proceed" in section 2 titled Key Event Dates is anticipated to be awarded along with a "Commencement of Work" as determined by the Town. The lowest priced proposal is NOT the sole determining factor when awarding this proposal and the Town reserves the right to negotiate with the submitter that is preliminarily selected.

11. SUBSTITUTION FOR NAME BRANDS

Should brand name items appear in this Request for Proposal, the submitter must attach specifications for any substitutions they consider “or equal” and explain how the substitution compares with the named brand’s specification. Information about substitutions must be included with the proposal package. The decision as to whether the substitution is acceptable rests solely with the Town of Canton.

12. SUBMITTALS

Submittals required for this project shall include manufacturer’s data sheets for project components & equipment.

13. PROPOSAL/BID BOND

Proposal security payable to the Town of Canton in the form of a certified check or proposal bond is required for five percent (5%) of the amount proposal, issued by an acceptable surety on AIA document A311 or comparable legal bond form, and must accompany each proposal

14. PERFORMANCE BOND

A Performance Bond is required for this project.

15. AGREEMENT DOCUMENTS

The Agreement Documents are defined as:

- The Standard Instructions to Submitters
- The Agreement as executed
- The General Specifications
- Any Addenda, if Issued

16. LOCAL SUBMITTER PREFERENCE

Pursuant to Town policy entitled “Local Submitter Preference” any submitter with a bona fide principal place of business within the Town of Canton (“Town Based Resident Submitter”) shall be awarded the proposal if the Town Based Resident Submitter submits a qualified proposal which is not more than 10% greater than the lowest responsible proposal and agrees to except the proposal amount of the lowest responsible submitter. To be considered a Town Based Resident Submitter the entity submitting must complete a Local Preference Affidavit and submit proof of principal place of business. A copy of the affidavit along with the Local Submitter Preference is attached hereto.

17. PREVAILING WAGE RATES

The Contractor shall certify in writing and under oath to the Labor Commissioner the pay scale to be used by the Contractor and any Subcontractors. The provisions of this section shall not apply where the total cost of all work to be performed by ALL Contractors and Subcontractors in connection with new construction of any public works project is less than ONE MILLION dollars or where the total cost of all work to be performed by ALL Contractors and Subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is less than ONE HUNDRED thousand dollars. The Contractor shall fully comply with all provisions of Connecticut General Statutes (CGS) 31-53 and shall be subject to such sanctions mandated for violations of said Public Act.

The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare and, as defined in CGS 31-53 shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the Town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare if and shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day.

The contractor shall not be paid in accordance with the payment provisions of these Contract Proposal Documents unless the contractor is in full compliance with the mandates of CGS 31-53.

Submitters are further advised that if the initial consideration due and payable pursuant to the Contract exceeds the mandatory limits at which prevailing wages rates are required, then the contractor and any subcontractors shall pay the appropriate prevailing wages retroactive to the date of commencement of work on the project. The contractor shall not receive any additional compensation from the Owner because of an occurrence of the aforementioned event.

Prevailing Wage Building Rates for the Town of Canton (effective July 1, 2024) are attached at the end of this document and can also be viewed at:
https://www.ctdol.state.ct.us/wgwkstnd/BuildingRates_7-1-2024_0.pdf pages 119-123

18. REJECTION

The right is reserved to reject any and all, or any part thereof, of all proposals or proposal when such action is deemed in the best interest of the Town.

19. COMPLETION DATE

The complete design, installation, functioning and certificate of completion by the Building Official to UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM shall be completed 180 days after Notice to Proceed.

20. SMALL AND MINORITY OWNED BUSINESS REQUIREMENTS & SMALL AND MINORITY OWNED BUSINESS SET-ASIDE LAWS IN CONNECTICUT

The contractor who is selected to perform this project must comply with Connecticut General Statutes, 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5. An affirmative Action Plan must be filed with and approved by the Commission on Human Rights and Opportunities prior to commencement of construction.

State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of Connecticut General Statutes 4a-60g as amended. (25% of the work with DAS certified Small and Minority owned businesses and 40% of that work with DAS certified Minority, Women and/or disabled owned businesses.) The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

For municipal public works contracts and quasi-public agency projects, the contractor must file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at:

http://www.ct.gov/opm/cwp/view.asp?a.2982&q=3909288topmNav_GOD=1806

Contractor/submitter's responsibility regarding inclusion of small and minority owned businesses in the work under this contract

Pursuant to Conn. Gen. Stat. § 4a-60 et seq., this project (if using \$50,000 or more of State funds) is subject to State set-aside and contract compliance requirements, which are administered by the Connecticut Commission on Human Rights and Opportunities ("CHRO"). Conn. Gen. Stat. § 4a-60g sets, for the contractor, a minimum goal of setting aside 25% of the state's financial assistance for Connecticut-based Small Business Enterprises and 6.25% of the state's financial assistance for Connecticut-based Minority Business Enterprises. The Municipality must comply with the applicable CHRO requirements for this contract; requirements include, but are not limited to, adding specific CHRO language in the bid documents/solicitations/advertisements, as well as in the executed contract. Information can be found on the CHRO's website. Questions regarding these requirements are to be directed to Alvin.Bingham@ct.gov; 860-541-4709), supervisor of the CHRO's Contract Compliance Unit.

END OF STANDARD INSTRUCTIONS TO SUBMITTERS

SCOPE OF SERVICES / PRODUCT AND / OR SERVICE SPECIFICATIONS

The Canton High/Middle School Auditorium serves as a space for concerts, assemblies, school activities and town meetings. The room is approximately 6408sqft and has a maximum occupancy of 550 persons. The auditorium was constructed with the original building in 1970. In the fall and spring this room can exceed the recommended temperature standards for school buildings. The room has a HV AHU which serves as heat and ventilation only. The mechanical room may not have a large enough pathway to support new sections to the existing AHU. CES has recommended in their evaluation that a RTU with the ability to cool, heat, and supply the recommended fresh air to the space is the best option. Please refer to their evaluation for guidance in preparing your bid.

This project will be at the Town of Canton High School located at 76 Simonds Ave. Canton, CT 06022. It will involve the design & installation for an update to the existing HVAC and addition of an air conditioning system, in the Auditorium. Installation work must be coordinated with the occupant's as not to interfere with their normal business routine with installation anticipated to start late Spring 2025. If this date cannot be met, then a new start date will be arranged. To accommodate this project, hours of work will be available Monday thru Friday from 7:00 AM to 5:00 PM and possible Saturdays. Later weekday work hours may be negotiable. The work area must be always kept cleaned and free of hazards.

The Town of Canton requires proposals to design & install a new HVAC System for the Canton High School Auditorium. Pricing and value will be taken into consideration. The Town will review all proposals and make a contract award to the submitter who best meets the selection criteria listed herein.

Submitters are being asked to evaluate the current physical characteristics and conditions of the Canton High School Auditorium. However, no roof reinforcements are indicated per a prior investigation by a structural engineer. Miscellaneous bracing at new roof penetrations below curb may be required and should be submitted to the owner for review. The square footage of the auditorium is 6,400 s.f. and the maximum occupancy is 550 persons.

Contractor's qualifications must include licensure for HVAC mechanical & electrical work, and a minimum of five (5) years of experience with similar designs & installations.

GENERAL

1. The agreement between the Owner and the Design/Builder, including General and Supplementary Conditions, apply to the work specified herein.
2. Contractor must supply all necessary equipment, tools and manpower to install new units including controls and any electrical wiring necessary. Contractor will supply all material and labor required to install new curb for the units.

3. New units will be compatible with BACnet protocol. The contractor will be responsible for installation, software and all controls modules to connect the new units to a BMS existing in the building along with startup and controls commissioning.
4. **Contractor is expected to be familiar with the following to inform the Work required for the project: CES Canton High School Auditorium HVAC Assessment, December 15, 2023, prepared by Consulting Engineering Services Inc., attached at end of RFP document. Design & equipment is to be based on Option One (1) of the CES report, but actual system sizing is to be determined based on load calculations to be performed by the designer/contractor.**
5. Provide the complete design and construction of the system as requested. Work shall include all design, materials, and labor as required for the construction, balancing, and testing of the system. All materials and equipment shall be new unless specified otherwise. All work shall follow all applicable state and local codes and shall be performed in accordance with good industry practice and standards.
The work shall include, but not be limited to the following:
 - a. Refrigerant and cooling coil condensate piping, including valves and accessories.
 - b. Ductwork including fittings and accessories.
 - c. Exhaust fans.
 - d. Energy recovery ventilators (ERV's).
 - e. Supply and return air diffusers and registers.
 - f. Insulation for piping and ductwork.
 - g. Automatic temperature controls including wiring.
 - h. All cutting and patching associated with the new work.
 - i. All anchors, sleeves, and supports as required for the new work.
 - j. CO2 based reset of outside airflow.
 - k. Any replaced HVAC equipment shall be removed from the site by the contractor and disposed of according to state & local regulations.
 - l. Cleaning, testing, balancing, and startup of the specified system.
 - m. Engineering & Mechanical drawings for the new system as required for building permits.
 - n. Building permits as required for the worked specified herein.
 - o. Obtain utility rebates for high efficiency equipment.
 - p. Coordinate with related work provided under separate contract to the Owner.
 - q. Shop drawings and as-built drawings.
 - r. Guarantees.
 - s. Operating and Service Manuals.
 - t. Operating instructions to the Owner.

6. Scope of Work – Design/Administrative

- a. Complete design drawings suitable for the construction of the work as specified herein. The drawings shall be signed and sealed by a professional engineer, licensed in the State of Connecticut. The design drawings shall be approved by the Owner prior to construction.
- b. Sizing calculations for all equipment including heating and load calculations.
- c. Shop drawings (five copies required and electronically in .pdf format) for the approval of all equipment being furnished prior to the release for manufacturing. Submittals shall include outline drawings of the equipment (including plan and elevation views, dimensions, weights, and clearances), catalogue cut sheets and descriptive material, performance data, shipping date (calendar days following receipt of order), statement of warranty, and installation operation and maintenance manuals and as further specified herein. Provide shop drawings for the ductwork and piping layouts.
- d. The Contractor shall give all necessary notices, obtain all permits; and pay all government and state sales taxes and fees where applicable, and other costs, including utility connections or extensions in connection with the work, file all necessary drawings, prepare all documents and obtain all necessary approvals of all governmental and state departments having jurisdiction, obtain all required certificates of inspection for his work, and deliver a copy to the owner and engineer before submitting a request for acceptance and final payment for the work.
- e. Complete reports of all tests specified herein.
- f. As-built drawings: maintain during construction and submit as-built drawings of the new work. The design drawings shall be used for this purpose, with all revisions made during construction indicated.

7. Scope of Work – Construction

- a. **For design & construction scope guidance, please refer to CES Canton High School Auditorium HVAC Assessment, December 15, 2023, prepared by Consulting Engineering Services Inc., attached to this RFP document.**
8. Quality Assurance, codes, and standards: all work shall be in accordance with all state and local codes as well as national testing standards as applicable including the State of Connecticut Building Code and including the 2021 International Mechanical and Energy Code.

9. Guarantee all equipment in writing to be free of defective work, materials, or parts for a period of one year after acceptance of work by the Owner (except where specified otherwise herein). Repair, revise, or replace defects, failures, or inoperativeness at no Cost to the Owner.
10. Shipping: equipment shall be purchased F.O.B. manufacturer's location with freight included. Equipment shall be packaged for shipment for shipment by common carrier in accordance with industry standards. Delivery shall be made to the contractor, rigging contractor, or job site, as approved by the Owner.
11. Substitutions: use only materials listed in this specification. Where the term "or equal" is used, obtain approval from the Owner before the substitution is made.
12. Refer to the HVAC Assessment dated December 15, 2023, prepared by Consulting Engineering Services Inc. for existing equipment and materials that shall remain the property of the owner.
13. Startup: a final functional test of all systems shall be performed to verify their operation and demonstrate to the owner the performance, operating, and maintenance procedures for the equipment.
14. Job Conditions: coordinate all work with the various trades and the Owner to insure timely and efficient completion of the work. The schedule of work shall be approved by the Owner.

PRODUCTS

1. Refrigerant piping shall be type 'L' hard drawn ACR copper tubing with wrought fittings and brazed or compression joints. Pipe sizing shall be per the equipment manufacturer's recommendations.
2. Cooling coil condensate piping shall be type 'L' hard drawn copper tubing with cast or wrought fittings. ALTERNATE: Schedule 40 PVC with solvent weld fittings.
3. Ductwork shall be constructed of galvanized steel sheets of lock forming quality. All ductwork material, construction, and installation shall be in accordance with the latest editions of the ASHRAE Guide and the SMACNA Standards in all respects. Flexible duct connections shall be UL Class 1, pre-insulated, with 1" fiberglass blanket and flame-retardant polyolefin vapor barrier.
4. Pipe and duct hangers and supports: all piping and ductwork shall be adequately supported. Structural members necessary or required to support, brace, or secure piping shall be furnished by this contractor.

5. Energy recovery ventilators (ERVs): complete with enclosure, heat exchanger, filters, supply and exhaust fans, and controls and suitable for 120-volt 1 phase service. Provide ECM motors, MERV 13 filters, two backdraft dampers, and wall caps (for outside and exhaust air).
6. Pipe and duct insulation: all insulation shall have composite (insulation, jacket, and adhesives) fire and smoke ratings, as tested per ASTM E84, NEPA 255 or UL 723, not exceeding flame spread 25 and smoke developed 50. Accessories, such as adhesives, mastics, cements etc., shall have the same component ratings. Insulation R-values and thickness shall comply with the 2015 IECC requirements.
 - a. Insulation for refrigerant piping and cooling coil condensate piping shall be foam rubber.
 - b. Insulation for supply and return ductwork shall be glass fiber blanket with reinforced foil kraft (FRK) vapor barrier facing. ALTERNATE: bubble foil insulation.

EXECUTION

1. General piping requirements:
 - a. All piping shall be installed in a neat manner and concealed in all finished areas. Drainage piping shall be laid out to maintain a minimum pitch of 1/4" per foot, unless otherwise shown. Pitch of lines shall be uniform and true with no sags, pockets or traps. Provide unions, cleanouts, isolation, drain, and vent valves throughout as required to facilitate future service. All piping shall be adequately supported. Piping shall be insulated as described below.
 - b. All piping systems installed under this contract shall be pressure tested to insure tightness. The contractor shall be responsible for furnishing all plugs, piping, valves, hoses and pumps necessary for the required tests. Piping shall be tested at 1.5 times working pressure, 15 PSIG minimum. All tests described herein shall be held for a minimum of two hours after all portions of the system have been filled and stable conditions have been achieved. Any visible leakage or appreciable pressure drop during the test will be cause for rejecting the test. Tests shall be repeated after repairs until satisfactory results are obtained.
2. General ductwork requirements:
 - a. All ductwork shall be installed straight and parallel to the line of the building and shall be substantially supported as recommended by SMACNA. Provide shop drawings for all ductwork layouts, materials, and ductwork. All duct runs shall be checked for clearances before installation of any ductwork. Duct locations and elevations must be coordinated with the work of other trades and existing

conditions. Shop drawings shall indicate that the coordination has been completed.

- b. Duct work shall be insulated as described below.
 - c. During construction, all duct openings shall be protected to prevent entry of dirt, dust, moisture, and foreign material. Openings shall be kept sealed with sheet plastic, secured to duct with tape. Upon completion of construction and before testing, the interior of all systems shall be vacuum cleaned to remove all construction dirt and dust.
3. General insulation requirements: All insulation shall be wrapped tightly around the pipe or duct and sealed to achieve a continuous vapor barrier. Pipe insulation shall be applied on clean, dry surfaces after inspection, tests, and release for insulation. Installation shall strictly follow insulation manufacturers' recommendations. Scope of insulation work shall be as follows:
 - a. Insulate all refrigerant piping.
 - b. Insulate all cooling coil condensate drain piping.
 - c. Insulate all supply and return air ductwork.
 4. Piping, conduit, and equipment supports: All piping, conduit, and equipment shall be adequately supported. Supports shall be in accordance with the 2018 State of CT Building code (2015 International Building Code Chapter 16 Section 1613 and following, Earthquake Loads); SMACNA Seismic Restraint Manual: Guidelines for Mechanical Systems; ASHRAE Guide to Seismic Restraint; and industry standards.
 5. Cutting and patching: Perform all cutting and patching as required to properly complete the work as specified herein. New holes through existing structures shall be neatly made, and their size and number kept to the minimum required to accommodate the new work. All penetrations shall be sealed. Damaged surfaces shall be patched and repaired to match the adjacent area.
 6. Shipping: Equipment shall be purchased F.O.B. manufacturers' location with freight included. Equipment shall be packaged for shipment by common carrier in accordance with industry standards. Delivery shall be made to the contractor, rigging contractor, or job site, as approved by the owner.
 7. Rigging: The new equipment is specified to be shipped fully assembled as complete units, although disassembly into smaller sections to facilitate rigging and installation will be permitted. Special care must be taken to adequately protect the existing building surfaces during all rigging and hauling operations. The methods and scheduling of all rigging and hauling operations proposed by the Contractor shall be approved by the Owner.

8. Tags and identification: Piping, valves, controls, and equipment installed under this Contract shall be tagged, labeled or stenciled.
9. The Contractor shall submit Operating and Service Manuals (five copies required and electronically in .pdf format). Each manual shall be complete with equipment shop drawings, as-built drawings, installation instructions, operating, and maintenance data. Manuals shall be submitted for approval prior to the start-up of equipment.
10. The Contractor shall furnish the services of a qualified engineer or technician to aid in the checkout, installation, and start-up of all systems specified herein. A final functional test of all systems shall be performed to certify their operation and to demonstrate to the Owner the performance and operating procedures for the systems will be adequate to cover space and use requirements.

END OF SCOPE OF SERVICES / PRODUCT AND / OR SERVICE SPECIFICATIONS

PROPOSAL FORM

DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM

PROPOSAL of _____ (hereinafter called "SUBMITTER"), a corporation or limited liability company, organized and existing under the laws of the State of _____, a partnership, or an individual doing business as:

_____*
*Insert the Corporation, Limited Liability Company, Partnership, or Individual name as applicable. Cross out non-applicable types.

SUMMARY BASE PROPOSAL AND AMOUNT:

The total BASE PROPOSAL price to furnish all labor, materials, and equipment and to perform all work described in the Request for Proposal for "DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM" is: \$ _____.

(Written words)

The SUBMITTER, in compliance with the Advertisement for PROPOSALS for the below designated project, states that it has thoroughly examined and understands the terms and provisions of the Agreement Documents. Based upon those examinations and that understanding, the SUBMITTER hereby proposes to perform all work, furnish all labor, materials, equipment, supplies and anything else required or necessary in order to complete the DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM in strict accordance with the agreement documents, within the time set forth hereinafter and for the prices stated above. Prices cover all expenses incurred in performing the work that is required by the contract documents of which this PROPOSAL is a part.

SUBMITTER hereby agrees to commence WORK under this agreement on the date to be specified in the NOTICE TO PROCEED.

This PROPOSAL is submitted in full compliance with the conditions outlined in the Agreement Documents. The SUBMITTER has responded to and filled in all required spaces in the RFP document and obtained the necessary Notary Public signature where so required.

This PROPOSAL Respectfully Submitted by:

IF A SOLELY OWNED COMPANY:

Company Name _____
Address _____
Town _____
By _____

(Authorized Signature)

Title _____ Date _____

IF A CORPORATION OR LIMITED LIABILITY COMPANY:

A company organized under the laws of _____, composed of officers as follows:

President

Secretary

Vice President

Treasurer

Countersigned

IF A PARTNERSHIP:

A partnership doing business under the firm name and style of _____,
composed of partners as follows:

Name & Title (if any)

Name & Title (if any)

Name & Title (if any)

Name & Title (if any)

This Bill must bear the written signature of the SUBMITTER. If the SUBMITTER is a partnership, the Proposal must be signed by a partner. If the SUBMITTER is a corporation or limited liability, the Proposal must be signed by a duly authorized officer of such corporation or limited liability company.

NON-COLLUSION AFFIDAVIT OF SUBMITTER/BIDDER

State of _____, County of _____, being first duly sworn, disposes and says that:

1. He is the owner, officer, representative or agent of: _____ the SUBMITTER that has submitted the attached PROPOSAL.
2. The attached PROPOSAL is genuine; it is not a collusive or sham PROPOSAL.
3. He is fully informed respecting the preparation, and contents of, and knowledgeable of all pertinent circumstances respecting the attached PROPOSAL.
4. Neither SUBMITTER nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other submitter, firm or person to submit a collusive or sham PROPOSAL in connection with the AGREEMENT for which the attached PROPOSAL has been submitted or to refrain from proposing in connection with any contract, or has in any manner, directly or indirectly, sought by agreement, collusion, communication or conference with any other submitter, firm or person to fix the price or prices in the attached PROPOSAL or of any other submitter, or to fix any overhead, profit or cost element of the PROPOSAL prices or the proposal price of any other submitter, or to secure through collusion, conspiracy, connivance or unlawful agreement any advantage against the Town of Canton or any other person interested in the proposed AGREEMENT.
5. The price(s) quoted in the attached PROPOSAL are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the SUBMITTER or any of its agents, representatives, owners, employees, or parties in interest, including this affiant; and
6. That no elected or appointed official or other officer or employee of the Town of Canton, who is directly or indirectly interested in this PROPOSAL, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.

(Signed) _____
(Name of Submitter)

Subscribed and sworn to before me this _____ day of _____, 2024

Title

My Commission expires _____, 20__

LOCAL PREFERENCE AFFIDAVIT

STATE OF _____)
) ss.
COUNTY OF _____)

Date _____

_____ (affiant), being first duly sworn, deposes and says:

- 1) That I am over the age of 18 and understand the obligations of an oath.
- 2) That I am the owner, partner, officer, representative, or agent of _____, the submitter/proposer that has submitted the attached proposal/proposal.
- 3) That submitter/proposer has a principal place of business located at _____, which is in the Town of Canton.
- 4) That the submitter/proposer is current on all taxes, both personnel and real estate and all fees, including, but not limited to sewer use fees.
- 5) That if submitter/proposer is not the owner of the real estate where such principal place of business is located, then submitter/proposer is submitting proof that such address is the bona fide principal place of business, such as a lease or personnel property tax bill.
- 6) That submitter/proposer has read the Local Submitter Preference Policy and being aware of its terms and conditions, swears that it is a qualified "Town Based Resident Submitter" as specified in the Policy.

(Signed) _____
Affiant

(Title) _____

On this ____ day of _____, 20__, before me personally appeared _____, who made oath that he/she has read the foregoing Local Preference Affidavit and that based on his/her own knowledge believe the same to be true.

Notary Public (My Comm. Expires)
Commissioner of the Superior Court

LOCAL SUBMITTER/BIDDER PREFERENCE POLICY

On any item, project or service which value exceeds \$7,500 or which is advertised through a competitive proposal process and in which there is a qualified Town Based Resident Submitter, the lowest responsible submitter shall be determined in the following order:

1. A Town Based Resident Submitter which has submitted a proposal not more than 10% higher than the lowest responsible proposal may be awarded the proposal provided such Town Based Resident Submitter agrees to accept the award of the proposal at the amount of the lowest responsible submitter.

2. If more than one Town Based Resident Submitter has submitted a proposal not more than 10% higher than the lowest responsible proposal, the lowest responsible submitter shall be the Town Based Resident Submitter which submitted the lowest proposal.

3. Otherwise, the award will go to the lowest responsible submitter who would qualify if there were no Town Based Resident Submitter.

Any local vendor meeting the requirements of a Town Based Resident Submitter, as defined below, responding to the solicitation shall be required to submit a signed Local Submitter Affidavit Form with the proposal submittal. Failure to submit an affidavit form, may at the option of the Town, result in disqualification as a local vendor and ineligibility for contract award.

The term "Town Based Resident Submitter" shall mean any business with a principal place of business located within the Town of Canton. A business shall not be considered to be a Town Based Resident Submitter unless evidence to establish that such business has a bona fide principal place of business in Canton is included with each proposal submitted by the business. Such evidence may include documentation of ownership, or a long-term lease of the real estate from which the principal place of business is operated or payment of property taxes on the personal property of the business to be used in the performance of the proposal.

The Local Submitter Preference process shall not apply under the following circumstances:

1) Professional services contracts which are awarded on subjective criteria in addition to cost.

2) Contracts using state, federal or other funds that have regulations disallowing such practice.

3) If the qualified Town Based Resident Submitter is not current in the payment of all local taxes.

4) Proposals made through regional organizations or state agencies such as state contracts, CRCOG or CIRMA, when the product or services offered have already been selected through a competitive process.

5) Proposals received through a reverse auction process.

PROPOSAL/BID BOND

KNOW ALL MEN BY THESE PRESENT, that we, the undersigned

_____ as Principal; and

_____ as Surety, are hereby held and firmly bound

unto the Town of Canton in the penal sum of _____ for the

payment of which, well and truly to be made, we hereby jointly and severally bind

ourselves, our heirs, executors, administrators, successors and assigns.

Signed this _____ day of _____ 2024.

The condition of the above obligation is such that whereas the Principal has submitted to the Town of Canton a certain Proposal, attached hereto, and hereby made a part hereof, to enter into a contract in writing, for the

**DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE
CANTON HIGH SCHOOL AUDITORIUM**

NOW, THEREFORE,

- (a) If said proposal shall be rejected, or, on the other hand,
- (b) If said proposal shall be accepted and the Principal shall execute and deliver a contract in the form of Contract attached thereto (properly completed in accordance with said Proposal) and shall furnish a bond for his faithful performance of said Contract and shall in all other respects perform the agreement created by the acceptance of said Proposal.

Then, this obligation shall be void; otherwise, the same shall remain in force and effect, it being expressly understood and agreed that the liability of the surety of any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of the said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the City may accept such Proposal; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the principal and the Surety have hereunto set their hands and seals and such of them are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal

By _____

(Seal)

Signed in Presence of:

Principal

By _____

(Seal)

Signed in Presence of:

AGREEMENT:
DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE
CANTON HIGH SCHOOL AUDITORIUM

This _____ Agreement (the "Agreement") is entered into the ____ day of _____, 2025 ("Effective Date") by and between the Town of Canton, a political subdivision of the State of Connecticut (the "Town") and _____ corporation located at _____, _____, _____ (the "Contractor").

WHEREAS, the Town has issued Request for Proposals (the "RFP") for the
DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE
CANTON HIGH SCHOOL AUDITORIUM
to be performed at CANTON HIGH SCHOOL AUDITORIUM in Canton, Connecticut (the
"Premises"); and

WHEREAS the services to be performed by the Contractor are set forth in the IFB (the
"Work"); and

WHEREAS Contractor submitted its Proposal to the Town on _____ for the Work in
accordance with the requirements and specifications of the IFB; and

WHEREAS, the Town has selected Contractor and the Town and the Contractor desire to
enter into a formal Agreement for the performance of the Work.

THEREFORE, in consideration of the recitals set forth above and the mutual promises by
the parties below, the parties agree as follows:

1. General. The Contractor agrees to perform the Work in accordance with the Contract Documents, as defined in Section 9 below. The Contract Documents represent the entire and integrated agreement between the Town and the Contractor and supersede all prior negotiations, representations or agreements, whether written or oral.
2. Duties. Contractor shall perform the Work described in the Contract Documents except for any work that is specifically prescribed in the Contract Documents to be the responsibility of another person. Contractor shall furnish all labor, equipment, trucks, materials, facilities, supplies, transport, and any other things necessary to carry out the terms of the Contract Documents.
3. Permits and Standards. Contractor shall, at its own expense, obtain all required permits and agreements from the Town, county, federal, state, or other governmental authority for performance of the Work in accordance with the standards prescribed by the federal Environmental Protection Agency, the Occupational Safety and Health Administration, NIOSH, the Department of Environmental Protection of the State of Connecticut and any other federal, state or local government laws and regulations. In the event of a conflict or overlap of any such laws or regulations, the most stringent provisions shall be applicable.

4. Compliance with Laws. Contractor shall comply with all federal, state, and local laws and regulations governing the Work whether or not such laws and regulations are fully and properly reflected in the RFP.

5. Term. The term of this Agreement shall commence on the Effective Date of this Agreement and be in effect until all work is performed per the IFB. Work to be performed at the prices stated in the Proposal Form. The Contractor shall not start the Work prior to having received a notification to proceed from the Town.

6. Payment. The Town will pay the Contractor the purchase price within thirty (30) days of completion and acceptance of the DESIGN/BUILD: UPDATE EXISTING HVAC & ADD AIR CONDITIONING TO THE CANTON HIGH SCHOOL AUDITORIUM. The Town's payment shall be in the form of a check made payable to the Contractor.

7. Insurance. The Contractor shall carry and keep in force during the term of this Agreement insurance as more specifically described in Section 9 of the Standard Instructions to Submitters, by a company or companies authorized to do business in Connecticut. The Company shall provide Certificates of Insurance specifying such coverage and naming the Town as additional insured prior to the start of the work.

8. Liability. The Contractor agrees to assume full responsibility and liability for damage or injury to persons or real or tangible personal property caused directly or indirectly by the negligent or tortuous actions or inactions of the Contractor, its agents, employees or subcontractors with respect to the Work. The Contractor further agrees to assume full responsibility and liability for, and indemnify the Town against, the Contractor's failure to comply with any applicable federal, state or local law or regulation in the performance of Contractor's duties pursuant to the Contract Documents.

9. Contract Documents. The Contract Documents include, without limitation, the following:

- (i) The Agreement.
- (ii) The IFB, including the Scope of Services / Product And / Or Service Specifications.
- (iii) Addenda issued prior to the execution of this Agreement, or modifications issued after the execution of this Agreement.
- (iv) The Vendor's Proposal Submission.

10. Hold Harmless. The Contractor agrees to indemnify and save harmless the Town of Canton, its agents and employees, from and against all loss or expense, (including costs and attorneys' fees), arising out of or resulting from the performance of the work by the Contractor by reason or liability imposed upon the Town of Canton, its agents and employees, for damages because of bodily injury, including death at any time resulting there from, sustained by any person or persons, (including employees of the Contractor), or on account of damage to property, including loss of use thereof, if such injuries or damages are caused by the negligence or breach of Contract Documents of the Contractor, its agents and employees or otherwise. The existence

of insurance shall in no way limit the scope of this indemnification. The indemnification provision shall be separate and distinct from issuance of a Certificate of Insurance.

11. No Assignment. The Contractor shall not subcontract, transfer or assign its obligations under the Contract Documents or any portion thereof without the prior written consent of the Town.

12. Termination. If the Contractor fails to perform this Agreement in accordance with its terms, the Town shall have the right, in addition to all other remedies it may have, to declare the Agreement in default and, therefore, terminated and to resubmit the Agreement for further proposal. In that event, the Contractor shall pay the Town, as liquidated damages, the amount of any excess of the new Agreement Price over the Agreement Price herein provided for, both pro-rated to the period of time covered by the unexpired term of the Agreement at the time of default, plus any legal or other costs incurred by the Town in terminating the Agreement and securing a new contractor.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day and year first written above.

By: _____
Mark Penney
Chief Administrative Officer, Town of Canton Connecticut

Witness: _____

Date: _____ 2025

By: _____
Contractor

Witness: _____

Date: _____ 2025



Canton High School Auditorium

Canton, CT

December 15 2023

Prepared by:
Consulting Engineering Services, Inc.
811 Middle Street
Middletown CT 06457
CES PN 2023601.00



HVAC ASSESSMENT

OVERVIEW

CES, Inc. visited the site on October 19, 2023 for an assessment of the conditions of the existing HVAC system serving the Auditorium. The existing air handling system provides heating and ventilation only. A new HVAC system is desired that includes cooling. The scope of this report includes assessment of the age and condition of existing systems through visual observation, and analysis and recommendations for new system options that include heating, cooling and ventilation. Items included in this report are limited to those that were accessible and visible during the time of our field observation.

DIVISION 23 – MECHANICAL SYSTEMS

EXISTING CONDITIONS

Overview

The air handling unit serving the Auditorium is located in Mechanical Room A201, labeled HV-3, consisting of a fan, mixing section, filter section and hot water heating coil. It is original to the building. The space is not currently provided with cooling.

The heating and ventilation unit originally had electric heat, but the electric heat was removed and a hot water heating coil was retrofitted at an unknown date. The hot water heating piping includes a three-way motorized control valve for temperature control. The heating hot water valve actuator appears relatively new and in good condition. The heating hot water piping and insulation appear relatively new and in good condition.

Based on original design drawings reviewed at the site, the original design characteristics of the H&V unit are as follows.

- Total supply airflow: 8700 cfm @ 0.75 In. SP.
- Outside air (% / airflow): 50% / 4,350 cfm
- Entering air temperature: 35.0 Deg. F
- Leaving air temperature: 83.0 Deg. F
- Heating coil capacity: 452 MBH
- Fan motor: 3 HP
- Electrical: 120 amps, 480V, 3-phase

Supply Air

Supply air discharges out the front of the unit, and is ducted through a CMU wall, into the ceiling plenum of the auditorium. The existing supply duct size is 72"x18", which is sized for approximately 1,200 feet per minute air velocity, or 0.065 In. WG per 100 feet of duct. The supply duct main splits in either direction to provide air to ceiling diffusers.

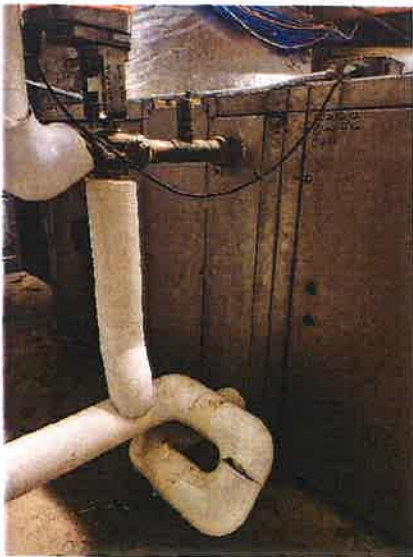
Return and Outside Air

A mixed air duct is routed from the return air opening of the H&V unit, through the CMU wall separating the mechanical room and Auditorium ceiling plenum. The duct splits at the CMU wall. The lower portion of the duct is open to the ceiling plenum, however, an existing damper is provided and is closed. Batt insulation was observed partially covering the return air opening, suggesting that it was abandoned. The upper portion of the duct rises to an outside air intake louver on the exterior wall of the building. A motorized damper was not visible.

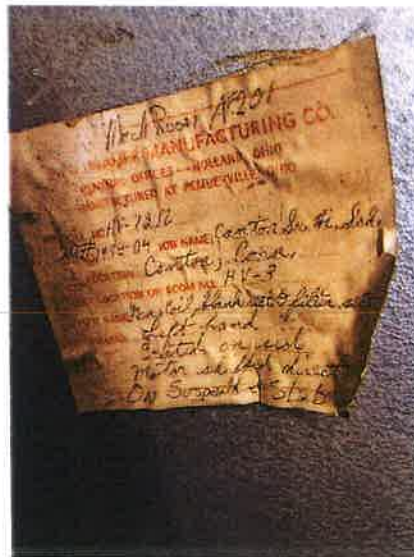
A damper was observed on the bottom of the mixed air duct in the mechanical room, open to the mechanical room. It appears that this was cut in after the original construction. A motorized actuator is provided to control the damper. It appears that this damper was added after the original construction as a substitute for the original return damper. The reason this modification was made is unclear.

Filters

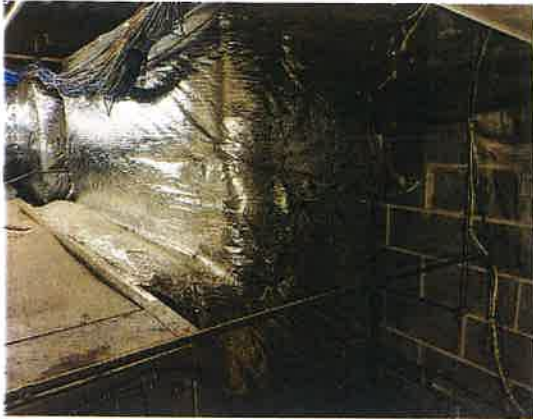
The unit appears to be provided with a filter rack that will accommodate two (2) 20"x20" filters and two (2) 20"x25" filters. The total filter surface area is 1,800 Sq. In., or 12.5 Sq. Ft. At 8,700 cfm airflow, the air velocity through the filter bank is 696 feet per minute.



Heating Hot Water Piping and Valve



Original H&V Unit Nameplate



Supply Air Duct and Smoke Detector



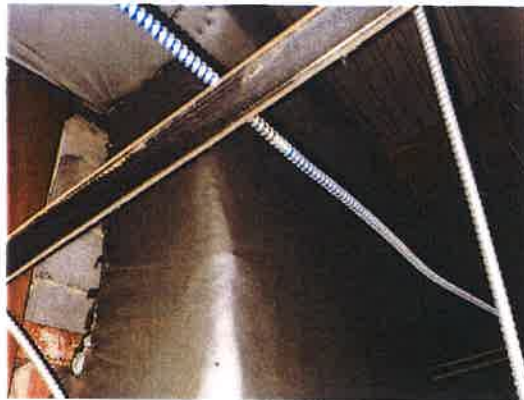
Mixed Air Duct



Supply Air Duct in Ceiling Plenum



Return Air Opening (Blocked Off)



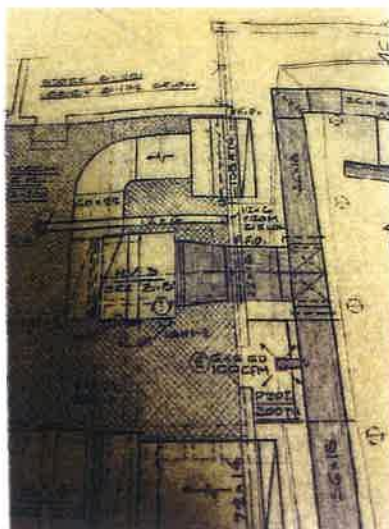
Outside Air Duct up to Louver



Return Air Damper in Mech. Room.



Supply Air Diffuser



Original Plans

ANALYSIS

Code Requirements

New systems will be subject to the requirements of the 2022 Connecticut State Building Code, which is based on 2021 International Codes with Amendments.

Since this project involves adding new cooling systems, the new systems will be required to comply with the 2021 International Mechanical Code and 2021 International Energy Conservation Code with state Amendments.

If the new cooling systems involve the alteration of the existing heating and/or ventilation system, those new systems will also be required to comply with the 2021 International Mechanical Code and 2021 International Energy Conservation Code with state Amendments.

Depending on the system type and operating hours, there are several code requirements that may require consideration, including requirements for economizer (C403.5), demand-controlled ventilation (C403.7.1), energy recovery (C403.7.4), and more stringent heating and cooling equipment efficiencies (IECC C403.3.2), controls (C403.4).

Space Requirements

Cooling coils require a relatively low air velocity to operate properly and avoid moisture carryover. The maximum recommended air velocity is approximately 500 feet per minute. The existing supply ductwork is sized for about 1,200 feet per minute. The existing H&V unit is sized for about 700 feet per minute. Retrofitting a new cooling coil inside the existing air handling unit is not possible due to its size. Retrofitting a new cooling coil into the existing ductwork would require duct transitions to accommodate the new cooling coil, which would be significantly larger than the existing ductwork. There does not

appear to be space to provide the necessary duct transitions to incorporate a duct-mounted cooling coil. Therefore, a new air handling unit sized to accommodate a cooling coil appears to be necessary.

Electrical Requirements

Since the existing H&V unit was originally sized for electric heat, existing power is available to add air conditioning.

Structural Requirements

Because of the added air conditioning functionality, the new equipment will be heavier than the existing equipment, the structures supporting the new equipment may need to be reinforced in order to support the additional weight of the new equipment.

The structural analysis for determining the need for reinforcing the structure is beyond the scope of this study, however, experience suggests that components of some of the structures will need to be reinforced, and any proposed systems and equipment should be reviewed by a registered Structural Engineer.

Loads

The equipment selections provided herein are preliminary such that the rough order of magnitude costs can be developed. More thorough load calculations should be done during the design phase, to verify that the equipment selected has sufficient cooling capacity. In the event that the equipment selected has either too much or too little capacity, such equipment should be downsized or upsized respectively accordingly.

RECOMMENDATIONS

Option 1 – Rooftop Air Handling Unit (Recommended)

Provide a new, packaged, rooftop air handling system mounted on a roof curb above the mechanical room. CES obtained a preliminary selection for a new unit, Trane Horizon series, Model OAND420A4, with the following features:

- Supply Fan: 8700 cfm, 10hp with VFD
- Exhaust Fan: 3hp with VFD
- Double wall foam insulated cabinet with hinged access doors.
- 25-ton packaged DX cooling system with digital scroll compressors and modulating hot gas reheat
- Heating hot water coil
- Energy wheel
- Enthalpy Economizer
- MERV-13 filters
- Stainless steel drain pan

- FLA: 75.6 amps, MCA: 79.6 amps, MFS: 90 amps
- Air flow monitoring stations.
- DDC/BACnet controls with economizer and demand control capabilities.
- Physical Characteristics: 260”L x 101”W x 93”T, 7888 lbs (not including curb)

Provide new supply and return ductwork from the bottom of the RTU and connect to the existing supply and return ductwork in the mechanical room. The existing outside air duct up to the louver should be removed and louver capped, as it would no longer be necessary. Provide new duct-mounted smoke detector at both supply and return duct, tied into existing fire alarm system. Provide condensate pipe with P-trap to spill to the roof.

This option would offer superior temperature control, humidity control and control features compared to the other options.

A structural analysis is required to confirm if structural reinforcement or dunnage would be necessary.

Option 2 – Semi-custom indoor air handling unit with DX split (not recommended)

Provide a new, semi-custom air handling system in the mechanical room to replace the existing H&V unit. CES obtained a preliminary selection for a new air handling unit, Trane UCCA series air handler and TTA series condensing unit, with the following features:

- Supply Fan: 8700 cfm, 7.5 hp with VFD
- Double wall foam insulated cabinet with hinged access doors.
- 25-ton split DX cooling system with evaporator coil in AHU.
- Heating hot water coil
- MERV-13 filters
- Stainless steel drain pan
- Electrical (AHU): 460/3/60, FLA: 11.2 amps, MCA: 13.97 amps, MFS: 20 amps
- Electrical (Condensing Unit) : 460/3/60, FLA: 48 amps, MOP: 60 amps
- DDC/BACnet controls with economizer demand control capabilities.
- Physical Characteristics (AHU): 74”L x 79”W x 48”T, 1157 lbs
- Physical Characteristics (Condensing Unit): 912 lbs

Connect to the existing supply and return ductwork in the mechanical room. Provide new duct-mounted smoke detector at both supply and return duct, tied into existing fire alarm system. Provide condensate pipe with P-trap connected to local drainage system with air gap fitting (location to be confirmed).

If the system is scheduled to operate over 20 hours per week, 2021 IECC section C403.5 requires an air-side economizer to be integrated into the cooling system. An air-side economizer modulates the outdoor air and return air dampers to provide up to 100% of the supply air quantity as outdoor air for cooling. Since the existing outside air duct, louver and damper are only sized to handle 50% of the unit’s total airflow capacity, the existing outside air duct, louver and damper would need to be demolished and new,

enlarged ductwork, louver and damper would need to be installed to allow full economizer capability. Additionally, a new gravity relief hood would be required to relief excess pressure during economizer mode. The gravity relief hood would be mounted on the roof of the auditorium on a roof curb and ducted to a ceiling grille in the auditorium ceiling, sized for about 4,500cfm.

If the system is scheduled to fully ventilate the space with outdoor air over 20 hours per week, 2021 IECC section C403.7.4.2 requires energy recovery. Energy recovery is not included in this option. Therefore, to utilize this option, the operating schedule should be confirmed to be less than 20 hours per week at full occupancy.

Locate new condensing unit on the roof above the mechanical room, mounted on new equipment rails flashed to the roof, or new steel dunnage.

There is high risk that there is not a large enough pathway for rigging new AHU sections into the existing mechanical room. Also, space in the mechanical room is limited, and existing space may not accommodate this new unit and allow for the necessary clearances. Further measurement and verification is required.

A structural analysis is required to confirm if structural reinforcement would be necessary.

Option 3 – Unitary indoor air handling unit with DX split (not recommended)

Provide a new, unitary air handling system in the mechanical room to replace the existing H&V unit. CES obtained a preliminary selection for a new air handling unit, Trane TWE series air handler and TTA series condensing unit, with the following features:

- Supply Fan: 8700 cfm, 7.5 hp with VFD
- Double wall foam insulated cabinet with hinged access doors.
- 25-ton split DX cooling system with evaporator coil in AHU.
- Heating hot water coil
- MERV-13 filters
- Stainless steel drain pan
- Electrical (AHU): 460/3/60, FLA: 10.0 amps, MCA: 12.0 amps, MOP: 20 amps
- Electrical (Condensing Unit): 460/3/60, FLA: 48 amps, MOP: 60 amps
- DDC/BACnet controls with economizer and demand control capabilities.
- Physical Characteristics (AHU): 71”L x 91”W x 31”T, 994 lbs
- Physical Characteristics (Condensing Unit): 912 lbs

Connect to the existing supply and return ductwork in the mechanical room. Provide new duct-mounted smoke detector at both supply and return duct, tied into existing fire alarm system. Provide condensate pipe with P-trap connected to local drainage system with air gap fitting (location to be confirmed).

If the system is schedule to operate over 20 hours per week, 2021 IECC section C403.5 requires an air-side economizer to be integrated into the cooling system. An air-side economizer modulates the outdoor air

and return air dampers to provide up to 100% of the supply air quantity as outdoor air for cooling. Since the existing outside air duct, louver and damper are only sized to handle 50% of the unit's total airflow capacity, the existing outside air duct, louver and damper would need to be demolished and new, enlarged ductwork, louver and damper would need to be installed to allow full economizer capability. Additionally, a new gravity relief hood would be required to relief excess pressure during economizer mode. The gravity relief hood would be mounted on the roof of the auditorium on a roof curb and ducted to a ceiling grille in the auditorium ceiling, sized for about 4,500cfm.

If the system is scheduled to fully ventilate the space with outdoor air over 20 hours per week, 2021 IECC section C403.7.4.2 requires energy recovery. Energy recovery is not included in this option. Therefore, to utilize this option, the operating schedule should be confirmed to be less than 20 hours per week at full occupancy.

Locate new condensing unit on the roof above the mechanical room, mounted on new equipment rails flashed to the roof, or new steel dunnage.

There is high risk that there is not a large enough pathway for rigging new AHU sections into the existing mechanical room. This unit is wider than the semi-custom unit, and does not come in multiple sections with shipping splits. Also, space in the mechanical room is limited, and existing space may not accommodate this new unit and allow for the necessary clearances. Further measurement and verification is required.

A structural analysis is required to confirm if structural reinforcement would be necessary.

DIVISION 26 – ELECTRICAL SYSTEMS

EXISTING CONDITIONS

There are existing electrical panels located in the mechanical room that currently feed the existing mechanical unit. The electrical panels are manufactured by Westinghouse and are original to the building and in fair condition. Additional electrical panels and transformers were added during the most recent renovation. This equipment is in good condition.

The original mechanical equipment utilized electric heat to provide heat to the Auditorium. This electric heat has been disconnected and replaced with hot water heating. The original electric heat was served by a 125A-3pole circuit breaker in one of the existing 480volt, 3-phase electrical panels. Since the electric heat is no longer used, there should be capacity in the existing panel to serve any of the proposed HVAC options above.

New wiring and circuit breakers would be required to provide power to the HVAC equipment.

Option 1 – Rooftop Air Handling Unit (Recommended)

Provide a new 90A-3pole circuit breaker in the existing panel to serve the new roof top unit.

Install 4#3, 1#6G, 1 ½"C from the new circuit breaker to the new roof top unit.

Provide a new 100A-3P, 600V, NEMA 3R, fusible disconnect switch with (3) 90A fuses at the new roof top unit.

Provide a new 120volt, GFCI, weatherproof service receptacle at the new roof top unit. Provide 2#12, 1#12G, ¾" C from the new receptacle to a 20A-1P circuit breaker in a 208Y/120V panel in the mechanical room below.

Option 2 – Semi-custom indoor air handling unit with DX split (not recommended)

Provide a new 60A-3pole circuit breaker in the existing panel to serve the new exterior condensing unit.

Install 4#6, 1#8G, 1 ¼" C from the new circuit breaker to the new exterior condensing unit.

Provide a new 60A-3P, 600V, NEMA 3R, fusible disconnect switch with (3) 60A fuses at the new roof top unit.

Provide a new 120volt, GFCI, weatherproof service receptacle at the new roof top unit. Provide 2#12, 1#12G, ¾" C from the new receptacle to a 20A-1P circuit breaker in a 208Y/120V panel in the mechanical room below.

Provide a new 20A-3pole circuit breaker in the existing panel to serve the new indoor air handling unit.

Install 4#12, 1#12G, ¾" C from the new circuit breaker to the new indoor air handling unit.

Provide a new 30A-3P, 600V, NEMA 1, fusible disconnect switch with (3) 20A fuses at the new indoor air handling unit.

Option 3 – Unitary indoor air handling unit with DX split (not recommended)

Provide a new 60A-3pole circuit breaker in the existing panel to serve the new exterior condensing unit.

Install 4#6, 1#8G, 1 1/4" C from the new circuit breaker to the new exterior condensing unit.

Provide a new 60A-3P, 600V, NEMA 3R, fusible disconnect switch with (3) 60A fuses at the new roof top unit.

Provide a new 120volt, GFCI, weatherproof service receptacle at the new roof top unit. Provide 2#12, 1#12G, ¾" C from the new receptacle to a 20A-1P circuit breaker in a 208Y/120V panel in the mechanical room below.

Provide a new 20A-3pole circuit breaker in the existing panel to serve the new indoor air handling unit.

Install 4#12, 1#12G, ¾" C from the new circuit breaker to the new indoor air handling unit.

Provide a new 30A-3P, 600V, NEMA 1, fusible disconnect switch with (3) 20A fuses at the new indoor air handling unit.

Provide a new 120volt, GFCI, weatherproof service receptacle at the new roof top unit. Provide 2#12, 1#12G, ¾" C from the new receptacle to a 20A-1P circuit breaker in a 208Y/120V panel in the mechanical room below.

APPENDIX

1. Option 1 - Rooftop Unit
2. Option 2 – Semi Custom Split System
3. Option 3 – Unitary Split System

OPTION 1 - ROOFTOP UNIT



Submittal

Trane U.S. Inc.

Prepared For:

Date: 11/29/2023

Customer P.O. Number:

Customer Project Number:

Sold To:

Job Number:

Job Name: Canton CS HS Auditorium

Trane is pleased to provide the enclosed submittal for your review and approval.

Product Summary

Qty	Model Description
1	Horizon™ (OAK/N Rev5) - Horizon™ - Outdoor Air Unit (K/N)

The attached information describes the equipment we propose to furnish for this project and is submitted for your approval.

OPTION 1 - ROOFTOP UNIT

Canton CS HS Auditorium

November 29, 2023

Product Data - Horizon™ - Outdoor Air Unit (K/N)

Size	Qty	Description	Model Number
N420	1	Horizon™ - Outdoor Air Unit (K/N)	OAND420A4-D1C404JT-J5G00AF6JL4B52C0B1A0

Tag(s): DOAS-1

Unit Voltage: 460-3-60

Airflow Configuration: Vertical Discharge/Vertical Return

Installation: Outdoor

Hot Water Coil: 3-Row

Evaporator Coil: DX 6 Row Interlaced

Hot Gas Reheat: Modulating

Compressor: Digital Scroll Both Circuits

Condenser: Air Cooled Variable Speed Head Pressure Low Ambient Control

Indoor Blower Motor: Direct Drive w/ Shaft Grounding Ring w/VFD

Heat Type: Hot Water

Fuel Type: Hot Water

Unit Controls: Trane UC600 - Discharge Air Control w/BACNET w/Display

Powered Exhaust: Direct Drive w/VFD & Barometric Relief Damper

ERV/HRV: ERV - Polymer Construction w/ Frost Protection W/ VFD

Energy Recovery & Conservation: ERC-5856C

Damper Options: Modulating OA/RA Damper for Economizer Control

Filters: MERV-13

Electrical Options: Non-Fused Disconnect Switch "Circuit Breaker" w/115v Outlet

Air Flow Monitoring: IFM Fan Piezo Ring/Tap

Accessories: Condenser Hailguard

Curb Selection: Aux Mod Knockdown Curb

Warranty: 1-Year Parts Only (manufacturer warranty)

Warranty: 5-Year Digital/Variable Speed Scroll Compressor

Supply Discharge Air Sensor (FLD)

2 inch Double Wall Construction

Stainless Steel Drip Pan

Blower HP - 10

Blower RPM - 2197

Supply Fan - CF200

Exhaust RPM - 1368

Exhaust HP - 3

Exhaust Fan - CF200

Unit Amps - FLA: 75.6 Amps

Min Circuit Ampacity - MCA: 79.6 Amps

Maximum Fuse Size - MFS: 90 Amps

OPTION 1 - ROOFTOP UNIT

Canton CS HS Auditorium

November 29, 2023

Tag: DOAS-1 **Comments:**

Unit Information

Model: Horizon™ (OAK/N Rev5)	Unit Length: 260 in	Weight Operating: 7888 lb*	<i>Note: Weight does not include CURB weight. See CURB submittal for actual</i>
Size: N420	Unit Width: 101 in		
Quantity: 1	Unit Height: 93 in	Refrigerant Charge	
Supply Airflow: 8,700 CFM	Elevation: 0 ft	Circuit 1: 70.38 lbs	
Outside Airflow: 4,350 CFM	Ambient Air DB: 95 F	Circuit 2: 30.31 lbs	
Minimum Airflow: 2,862 CFM			

Cooling Performance

Gross Total Capacity: 365.4 MBh	Evaporator Face Area: 22.9 sq ft
Gross Sensible Capacity: 241.4 MBh	Evaporator Rows / FPI: 6 / 12
Net Total Capacity: 346 MBh	Condenser Face Area: 49.9 sq ft
Net Sensible Capacity: 222 MBh	Condenser Rows / FPI: 3 / 12
Entering Air DB / WB (Coil): 76.6 / 65.1 F	Air Velocity: 379 fpm
Leaving Air DB / WB (Coil): 50.9 / 50.4 F	Coil Air PD: 0.36 in H2O
Leaving Air DB / WB (Reheat): 88.6 / 64.87 F	EER: 11.5
Leaving Air DB / WB (Unit): 91 / 65.7 F	Watts: 39563
Leaving DP: 49.8 F	MRE: 5.52 lb/kWh
MRC: 218.43 lb/h	

Heating Performance

Heat Type: Hot Water	Rows: 3	Entering Fluid Temp: 180 F	
Capacity: 465.5 MBh	FPI: 10	Leaving Fluid Temp: 160 F	
Entering Air DB: 62.9 F	Fluid Flow: 47.6 GPM	Fluid Type: Water	
Leaving Air DB: 112 F	Fluid PD: 4.2 ft. H2O	Percent Glycol: 0 %	
Air Velocity: 1092 fpm	Fluid Velocity: 49.7 ft/s		
Coil Air PD: 0.91 in H2O			

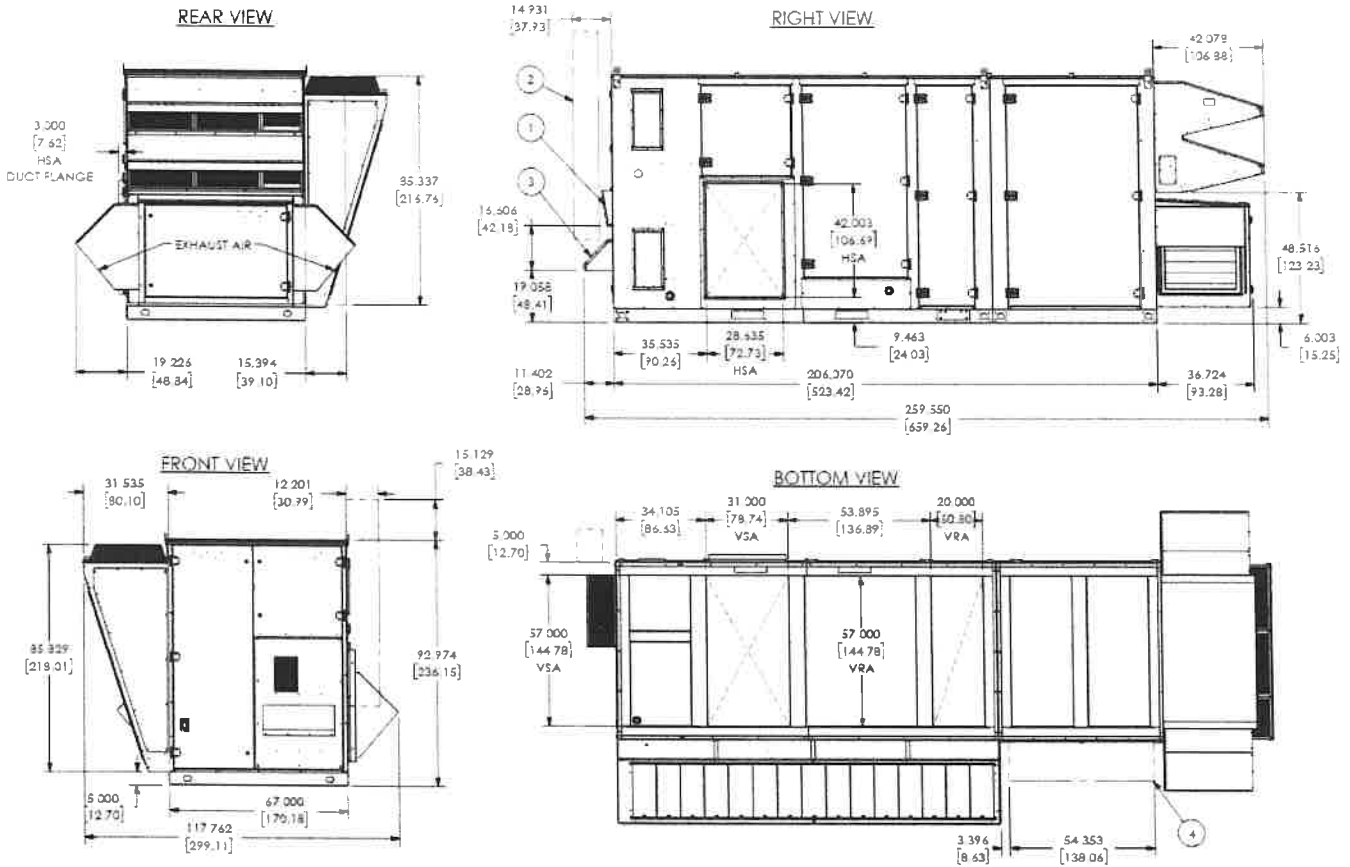
Energy Recovery Wheel **ERC-5856C** ** TAB Outside airflow through OA Intake to this value

Summer Conditions				Winter Conditions			
<u>Ventilation Supply</u>		<u>Outside</u>		<u>Ventilation Supply</u>		<u>Outside</u>	
Airflow: 4,350 CFM		Airflow: 4,675 CFM**		Airflow: 4,350 CFM		Airflow: 4,675 CFM**	
DB: 78.2 F		DB: 91.0 F		DB: 55.7 F		DB: 5.0 F	
WB: 66.1 F		WB: 73.0 F		WB: 44.5 F		WB: 4.0 F	
PD: 0.76 in H2O				PD: 0.76 in H2O			
<u>Return</u>		<u>Exhaust</u>		<u>Return</u>		<u>Exhaust</u>	
Airflow: 4,350 CFM		Airflow: 4,675 CFM		Airflow: 4,350 CFM		Airflow: 4,675 CFM	
DB: 75.0 F		DB: 87.5 F		DB: 70.0 F		DB: 18.6 F	
WB: 64.0 F		WB: 71.2 F		WB: 53.0 F		WB: 17.7 F	
ESP: 0.75 in H2O		ERV PD: 0.76 in H2O		ESP: 0.75 in H2O		ERV PD: 0.76 in H2O	
Total Capacity: 107.53 MBh				Total Capacity: 302.92 MBh			
Sensible Capacity: 57.89 MBh		Eff. 0.79		Sensible Capacity: 240.60 MBh		Eff. 0.79	
Latent Capacity: 49.64 MBh		Eff. 0.75		Latent Capacity: 62.32 MBh		Eff. 0.75	

OPTION 1 - ROOFTOP UNIT

Canton CS HS Auditorium
 OAN-5-DIM-DX-ASHP-AUX
 Qty: 1 Tag(s): DOAS-1

November 29, 2023



GENERAL NOTES:
 A. DUAL DIMENSIONS: IN
 B. UNIT SHOWN REPRESENTS MULTIPLE AIRFLOW CONFIGURATIONS

CONFIGURATION SPECIFIC NOTES:
 1. FLUE HOOD: INCLUDED WITH 300-500MBH GAS HEAT
 2. FLUE EXTENSION: INCLUDED WITH 600-1000MBH GAS HEAT
 3. COMBUSTION AIR INTAKE: INCLUDED WITH GAS HEAT
 4. ERV EXTENSION: ENERGY RECOVERY 68-74%
 5. EXHAUST AIR: ENERGY RECOVERY 68-74%

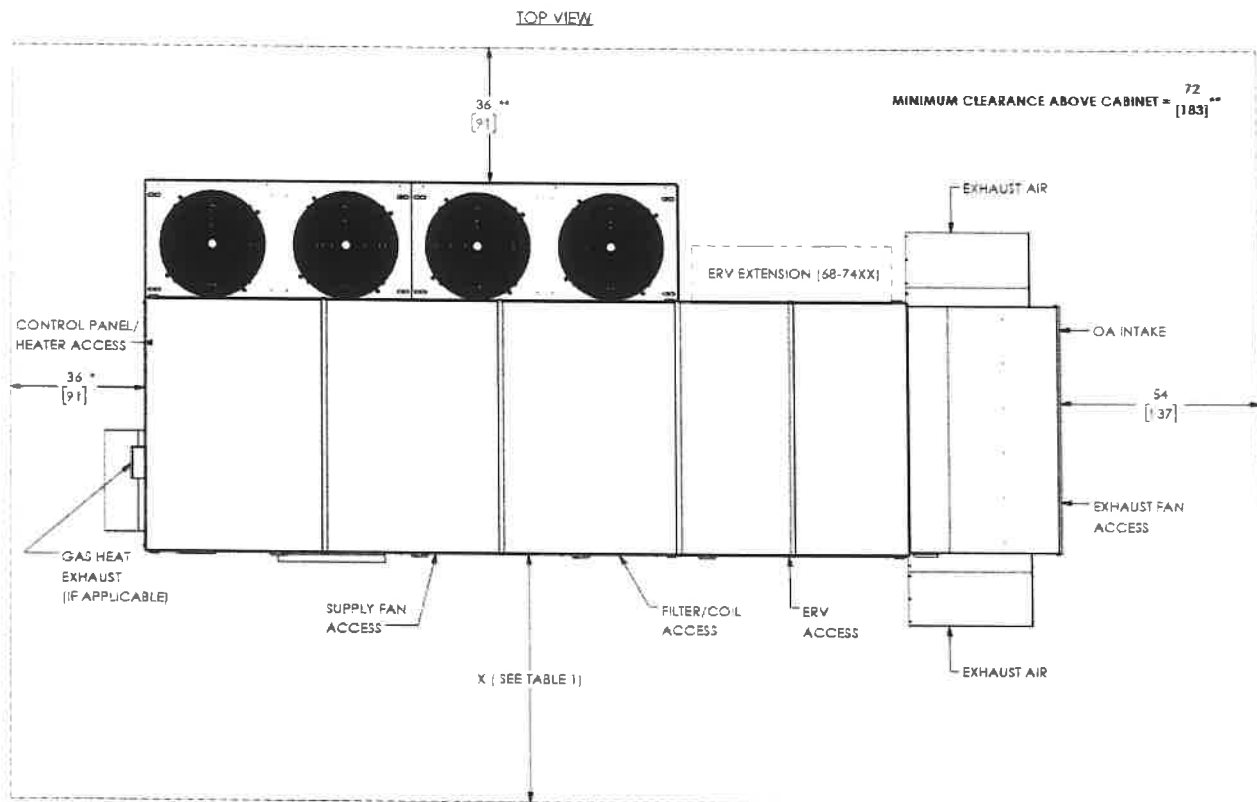
OPTION 1 - ROOFTOP UNIT

Canton CS HS Auditorium

November 29, 2023

OAN-5-CLE-DX-ASHP-AUX

Qty: 1 Tag(s): DOAS-1



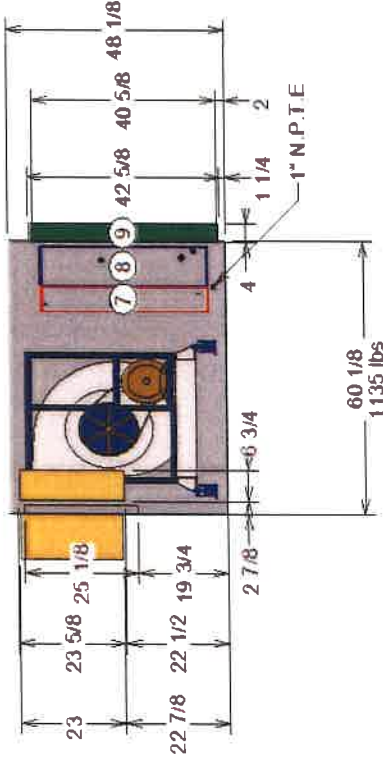
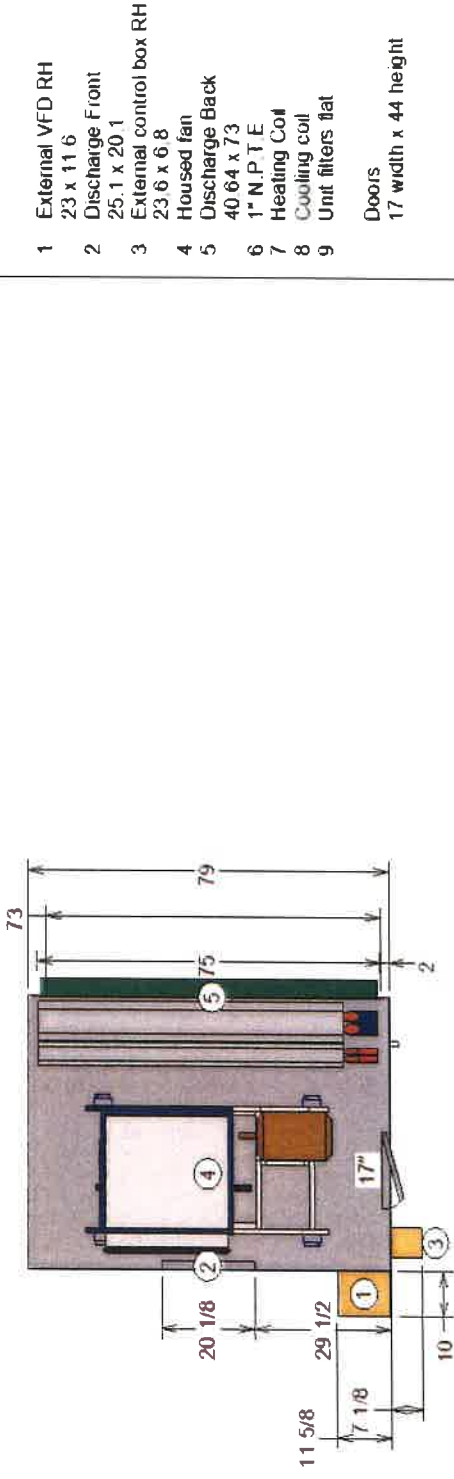
GENERAL NOTES:
 IN
 A. DUAL DIMENSIONS (CM)

DIMENSIONS DISPLAYED ARE REQUIRED FOR BASIC UNIT SERVICEABILITY UNLESS OTHERWISE NOTED

*MINIMUM REQUIRED CLEARANCE TO ENSURE UNIT PERFORMANCE FOR GAS HEAT OPTION
 **MINIMUM REQUIRED CLEARANCE TO ENSURE UNIT PERFORMANCE

REFER TO LOCAL BUILDING CODES TO ENSURE INSTALLATION MEETS ALL NECESSARY REQUIREMENTS

TABLE 1: SIDE CLEARANCE	
ERV SIZE	X (IN.)
58XX	67
68XX	74
74XX	80



- 1 External VFD RH
23 x 11 6
- 2 Discharge Front
25.1 x 20 1
- 3 External control box RH
23 6 x 6 8
- 4 Housed fan
40 64 x 73
- 5 Discharge Back
1" N.P.T.E
- 6 Heating Coil
- 7 Cooling coil
- 8 Unit filters flat
- 9 Doors
17 width x 44 height

OPTION 2 - SEMI-CUSTOM SPLIT SYSTEM

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS. RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES. NOT TO SCALE.



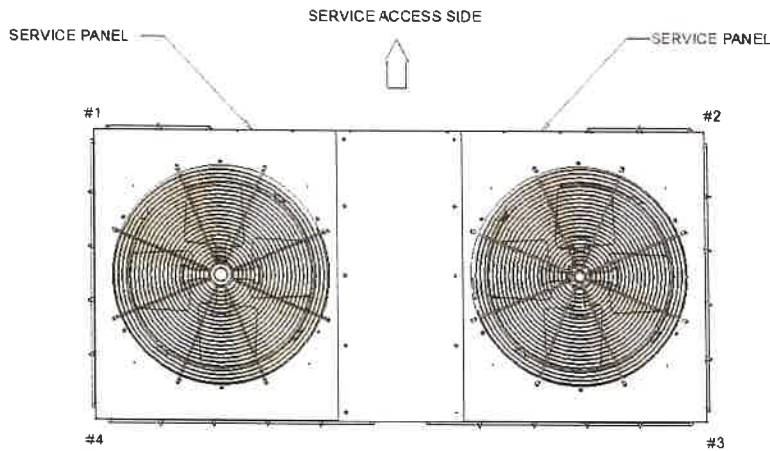
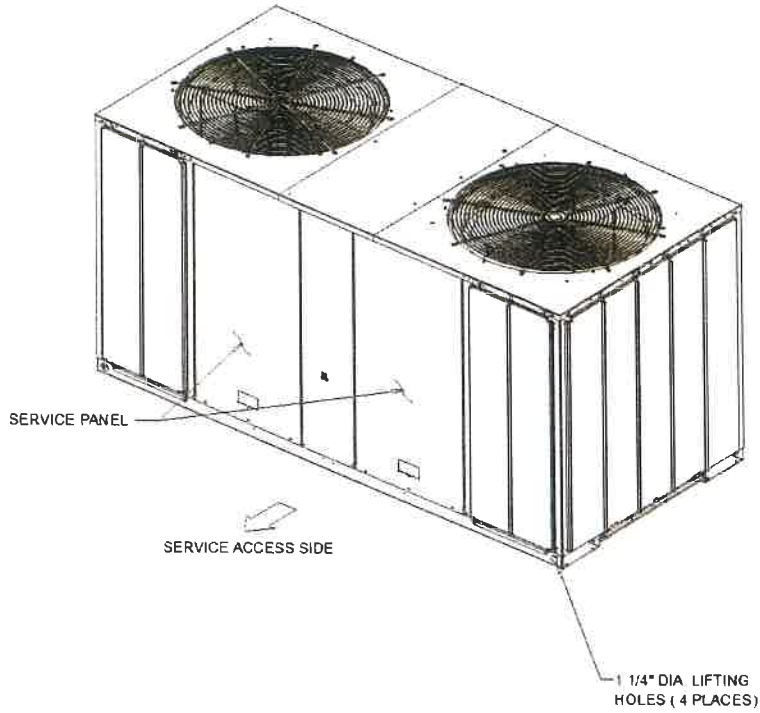
Unit size: 17	Unit Casing: 2in Double Wall Foam
Unit type: Indoor unit	Proposal Number
Pipe cub / curb / paint:	Tags: AHU-1
	Rigging/Installed Weight: 1135.4 lb / 1157.7 lb

Job Name: Canton HS Auditorium
 Design airflow: 8700 cfm
 Sales Office



Tag CU-1
 Quantity 1
 Customer
 Project
 Name Canton HS Auditorium

OPTION 2 - SEMI-CUSTOM SPLIT SYSTEM



WEIGHTS AND CORNER WEIGHTS

Shipping:	1013.0 lb
Net	912.0 lb
Corner 1	258.0 lb
Corner 2	260.0 lb
Corner 3	198.0 lb
Corner 4	198.0 lb

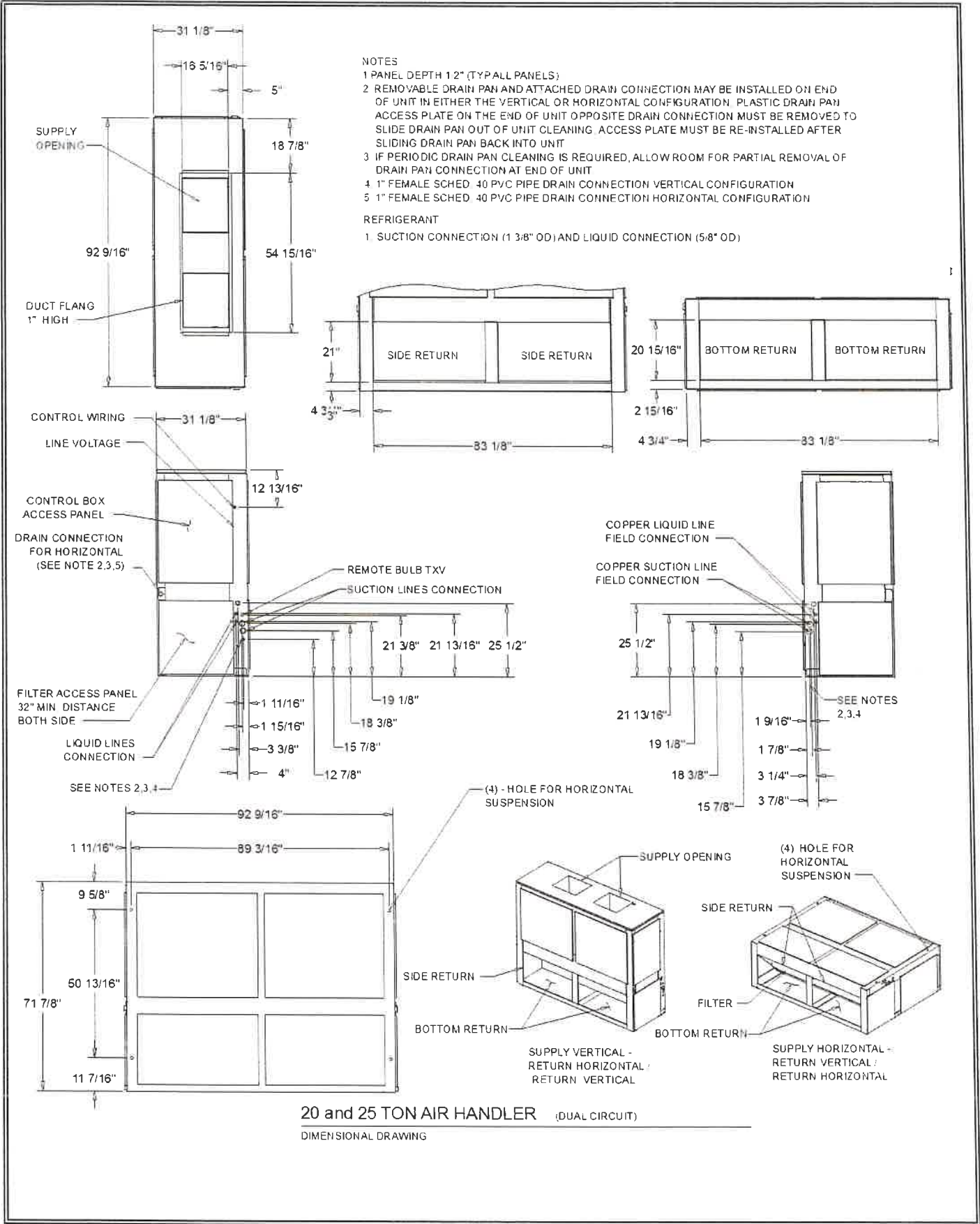
WEIGHTS AND LOAD POINT LOCATION FOR CONDENSOR

WEIGHT AND RIGGING



Tag: AHU-1
 Quantity: 1
 Customer:
 Project:
 Name: Canton HS Auditorium

OPTION 3 - UNITARY SPLIT SYSTEM

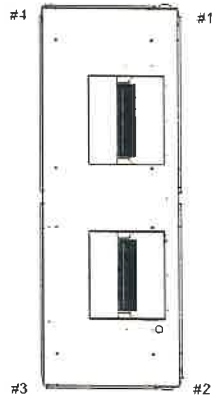


20 and 25 TON AIR HANDLER (DUAL CIRCUIT)
 DIMENSIONAL DRAWING



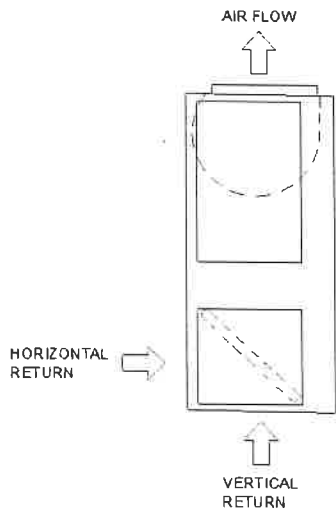
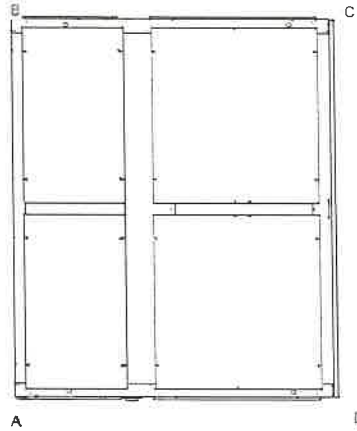
Tag: AHU-1
 Quantity: 1
 Customer:
 Project:
 Name: Canton HS Auditorium

OPTION 3 - UNITARY SPLIT SYSTEM

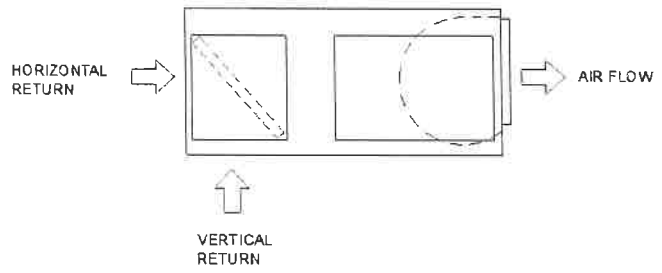


WEIGHTS AND CORNER WEIGHTS

Shipping:	1015.0 lb
Net	921.0 lb
VERTICAL	
Corner 1:	217.0 lb
Corner 2:	235.0 lb
Corner 3:	189.0 lb
Corner 4:	280.0 lb
HORIZONTAL	
Corner A:	278.0 lb
Corner B:	182.0 lb
Corner C:	233.0 lb
Corner D:	228.0 lb



VERTICAL APPLICATION



HORIZONTAL APPLICATION

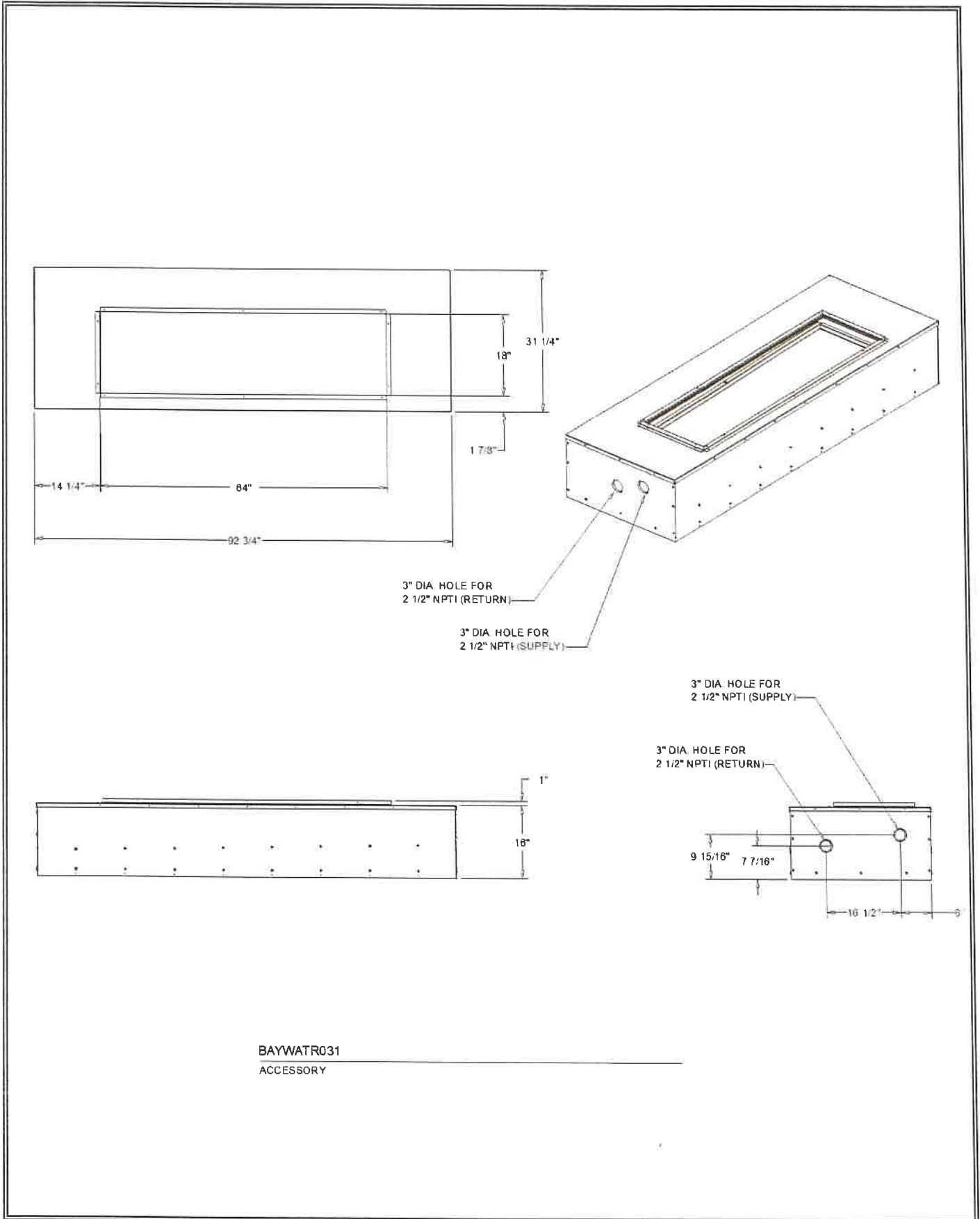
WEIGHTS AND LOAD POINT LOCATION FOR CONDENSOR

WEIGHT AND RIGGING



Tag: AHU-1
Quantity: 1
Customer:
Project:
Name: Canton HS Auditorium

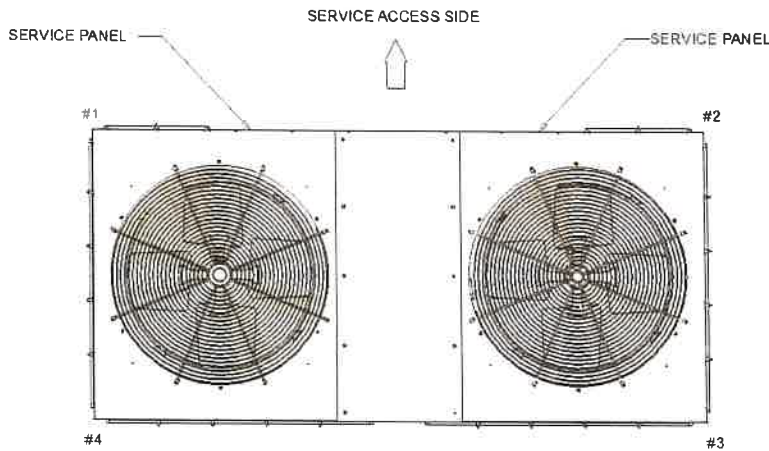
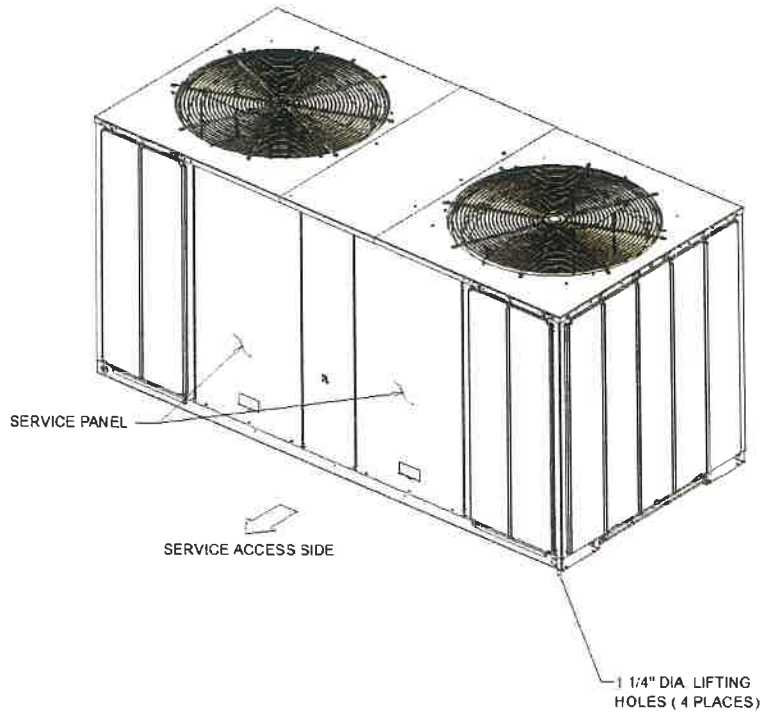
OPTION 3 - UNITARY SPLIT SYSTEM





Tag CU-1
 Quantity 1
 Customer
 Project
 Name Canton HS Auditorium

OPTION 3 - UNITARY SPLIT SYSTEM



WEIGHTS AND CORNER WEIGHTS

Shipping:	1013 0 lb
Net	912 0 lb
Corner 1	258 0 lb
Corner 2	260 0 lb
Corner 3	196 0 lb
Corner 4	196 0 lb

WEIGHTS AND LOAD POINT LOCATION FOR CONDENSOR

WEIGHT AND RIGGING



Mechanical, Electrical, Plumbing/
Fire Protection + Commissioning

ceseng.com

Project: Canton High School HVAC Replacement

Minimum Rates and Classifications
for Building Construction

ID#: 24-68583

Connecticut Department of Labor
Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number:

Project Town: Canton

State#:

FAP#:

Project: Canton High School HVAC Replacement

CLASSIFICATION	Hourly Rate	Benefits
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters. **See Laborers Group 7**		
1c) Asbestos Worker/Heat and Frost Insulator	47.06	33.30
2) Boilermaker	46.21	29.35
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	41.11	34.65 + a
3b) Tile Setter	38.81	32.20
3c) Tile and Stone Finishers	32.0	26.69
3d) Marble & Terrazzo Finishers	33.0	25.69
3e) Plasterer	44.52	29.63

-----LABORERS-----

As of: November 6, 2024

4) Group 1: General laborers, carpenter tenders, concrete specialists, wrecking laborers and fire watchers.	34.5	27.26
4) Group 1a: Acetylene Burners (Hours worked with a torch)	35.5	27.26
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofers/mixer/nozzleman (Person running mixer and spraying fireproof only).	34.75	27.26
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	35.0	27.26
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is \$26.80.	35.5	27.26
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	35.25	27.26
4e) Group 6: Blasters, nuclear and toxic waste removal.	37.5	27.26
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	37.5	27.26
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	35.0	27.26
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	34.5	27.26
4i) Group 10: Traffic Control Signalman	20.7	27.26
4j) Group 11: Toxic Waste Removers A or B With PPE	37.5	27.26

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5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	39.54	28.68
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5a) Millwrights	40.56	28.87
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6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	45.75	33.97+3% of gross wage
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7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	64.01	39.19+a+b
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----LINE CONSTRUCTION----

Groundman	26.5	6.5% + 9.00
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Linemen/Cable Splicer	48.19	6.5% + 22.00
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8) Glazier (Trade License required: FG-1,2)	41.63	25.80+ a
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9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	45.25	41.27 + a
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----OPERATORS----

Group 1: Crane Handling or Erecting Structural Steel or Stone; Hoisting Engineer (2 drums or over). (Trade License Required)	55.42	28.80 + a
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Group 1a: Front End Loader (7 cubic yards or over); Work Boat 26 ft. and Over	50.79	28.80 + a
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Group 2: Cranes (100 ton rate capacity and over); Bauer Drill/Caisson. (Trade License Required)	55.03	28.80 + a
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Group 2a: Cranes (under 100 ton rated capacity).	54.09	28.80 + a
Group 2b: Excavator over 2 cubic yards; Pile Driver (\$3.00 premium when operator controls hammer)	50.4	28.80 + a
Group 3: Excavator; Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Finegrade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	49.45	28.80 + a
Group 4: Trenching Machines; Lighter Derrick; CMI Machine or Similar; Koehring Loader (Skooper); Goldhofer.	48.97	28.80 + a
Group 5: Specialty Railroad Equipment; Asphalt Spreader, Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24 mandrel).	48.22	28.80 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	48.22	28.80 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	47.83	28.80 + a
Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under mandrel).	47.4	28.80 + a
Group 8: Mechanic; Grease Truck Operator; Hydroblaster; Barrier Mover; Power Stone Spreader; Welding; Work Boat Under 26 ft.; Transfer Machine; Rigger Foreman.	46.9	28.80 + a
Group 9: Front End Loader (under 3 cubic yards); Skid Steer Loader regardless of attachments; (Bobcat or Similar); Forklift, Power Chipper; Landscape Equipment (including Hydroseeder); Vacuum Excavation Truck and Hydrovac Excavation Truck (27 HG pressure or greater).	46.35	28.80 + a

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Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	43.77	28.80 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	43.77	28.80 + a
Group 12: Wellpoint Operator.	43.69	28.80 + a
Group 13: Compressor Battery Operator.	42.97	28.80 + a
Group 14: Elevator Operator; Tow Motor Operator (solid tire no rough terrain).	41.52	28.80 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	41.01	28.80 + a
Group 16: Maintenance Engineer.	40.19	28.80 + a
Group 17: Portable Asphalt Plant Operator; Portable Crusher Plant Operator; Portable Concrete Plant Operator; Portable Grout Plant Operator; Portable Water Filtration Plant Operator.	45.63	28.80 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (Minimum for any job requiring a CDL license); Rigger; Signalman.	42.57	28.80 + a
Surveyor: Chief of Party	45.87	28.80 + a
Surveyor: Assistant Chief of Party	42.3	28.80 + a
Surveyor: Instrument Man	40.7	28.80 + a
Surveyor: Rodman or Chainman	35.03	28.80 + a

-----PAINTERS (Including Drywall Finishing)-----

As of: November 6, 2024

10a) Brush and Roller	38.07	25.80
10b) Taping Only/Drywall Finishing	38.82	25.80
10c) Paperhanger and Red Label	38.57	25.80
10e) Blast and Spray	41.07	25.80
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	49.58	36.15
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
13) Roofer (composition)	42.5	21.68
14) Roofer (slate & tile)	43.0	21.68
15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	43.89	42.90
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	49.58	36.15
-----TRUCK DRIVERS-----		
17a) 2 Axle, Helpers	33.16	32.36 + a
17b) 3 Axle, 2 Axle Ready Mix	33.27	32.36 + a

As of: November 6, 2024

17c) 3 Axle Ready Mix	33.33	32.36 + a
17d) 4 Axle	33.39	32.36 + a
17e) 4 Axle Ready Mix	33.44	32.36 + a
17f) Heavy Duty Trailer (40 Tons and Over)	35.66	32.36 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	33.44	32.36 + a
17h) Heavy Duty Trailer up to 40 tons	34.39	32.36 + a
17i) Snorkle Truck	33.54	32.36 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	49.98	32.85 + a
19) Theatrical Stage Journeyman	25.76	7.34

Welders: Rate for craft to which welding is incidental.

Surveyors: Hazardous material removal: \$3.00 per hour premium.

*Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.

**Note: Hazardous waste premium \$3.00 per hour over classified rate

- Crane with 150 ft. boom (including jib) - \$1.50 extra
- Crane with 200 ft. boom (including jib) - \$2.50 extra
- Crane with 250 ft. boom (including jib) - \$5.00 extra
- Crane with 300 ft. boom (including jib) - \$7.00 extra
- Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyperson instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: November 6, 2024

As of: November 6, 2024