SECTION 00 91 12

ADDENDUM NUMBER 4

PARTICULARS

1.01 DATE: MARCH 1, 2022
1.02 PROJECT: PIERPONT VET TECH
1.03 OWNER: WV HIGHER EDUCATION
1.04 ARCHITECT: PICKERING ASSOCIATES

TO: PROSPECTIVE BIDDERS:

2.01 THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND MODIFIES THE ORIGINAL PROCUREMENT DOCUMENTS DATED FEBRUARY 1, 2022, ADDENDUM NUMBER 1 DATED FEBRUARY 14, 2022, ADDENDUM NUMBER 2 DATED FEBRUARY 21, 2022 AND ADDENDUM NUMBER 3 DATED FEBRUARY 23, 2022, WITH AMENDMENTS AND ADDITIONS NOTED BELOW.

2.02 ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED IN THE BID FORM. FAILURE TO DO SO MAY DISQUALIFY THE BIDDER.

SPECIFICATIONS:

1. Form of Proposal: Replace with revised Form of Proposal attached to this Addendum – 5 pages.

2. Replace the following documents (which were partially illegible) with the revised documents, attached to this Addendum:
   a. Bid Bond
   b. Bid Bond Preparation Instructions
   c. State of WV Purchasing Affidavit
   d. Disclosure of Interested Parties to Contracts
   e. WV-72 Certified Drug-Free Workplace Report Coversheet

3. Section 01 50 00 – Temporary Facilities and Controls: Paragraph 1.11 Field Offices: Omit in its entirety, unless needed for contractor’s daily use. Project meetings will be held in the adjacent Caperton Center.

4. Section 07 72 00 – Roof Accessories: Add Section 07 72 00, attached to this Addendum.

5. Section 10 51 13 – Metal Lockers: Paragraph 2.02.A. Clarification: Lockers shall be 12 inches wide.


7. Section 23 09 24 – Digital Control System Points List: Add Section 23 09 24, attached to this Addendum.

8. Section 23 09 93 – Sequence of Operations for HVAC Controls: Replace in its entirety with revised Section 23 09 93, attached to this Addendum.

DRAWINGS:

1. See revisions shown bubbled on the following attached reissued 24 x 36 Drawings:
   a. Civil: C105 (Sanitary Service line tie-in information).
   b. Structural: S112 (Roof framing revision for roof hatch).

3. Civil Drawings and Specifications: General Clarification Note: Follow all Geotechnical recommendations for over-excavation, engineered fill replacement and all subgrade preparations, typical. Refer to Geotechnical Report in the Project Manual.

4. Drawing A112 – Roof Plan: Clarification: Provide crickets on upper slope of roof hatch to direct water around roof hatch to drains. Revise location of walkway pads to extend from roof hatch to rooftop unit (same quantity of walkway pads will be required that are shown on roof plan). See attached Drawing A111 for roof hatch location.

CONTRACTOR QUESTIONS:

Q1: The site plans show the new sanitary service for the addition but does not show where it ties into the local utility service line. Can this information be provided?

A1: See attached Drawing C105 for information regarding tie-in to existing sanitary service line.

END OF SECTION
SECTION 00300 – FORM OF PROPOSAL

BID TO THE OWNER: Community and Technical College System of West Virginia
1018 Kanawha Boulevard, East, Suite 700
Charleston, WV 25301

PROJECT: RFB 22194
Pierpont Community & Technical College: Vet Tech Relocation

Bidder’s Name: ____________________________________________________________

The undersigned, hereinafter called "Bidder," being familiar with and understanding the Bidding Documents, and also having examined the site and being familiar with all local conditions affecting the Project, hereby proposes to furnish all labor, material, equipment, supplies and transportation, and to perform all Work in accordance with the Bidding and Contract Documents within the time set forth below for the sum of:

BASE BID: $ ____________________________

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

The Bidder, if successful and awarded a Contract, agrees that all Work is to be Substantially Complete within the below listed consecutive calendar days following receipt of Owner’s written Notice to Proceed and agrees to achieve Final Completion within 30 consecutive calendar days thereafter.

CALENDAR DAYS: ______________________________________________________

(All amounts to be shown in both words and numbers)

ALTERNATES:
The following Alternates may be added to the Base Proposal if selected by Owner. All work shown on drawings and/or specified is in Base Bid, except for such work specifically called to be an Alternate. Refer to Section 01230 - Alternates. (NOTE: In event of a discrepancy, amount in words shall govern.)

Alternate No. 1: All work associated with the construction of Resource Room 034.

Add: $ ____________________________

(Amount to be shown in both words and numbers)

Additional Calendar Days (if any) ____________________________________________

(All amounts to be shown in both words and numbers)
Alternate No. 2: All work associated with the enclosure under the existing canopy to create Hall 013, Offices 014, 015 and 016.

Add: $ ____________________________

(Amount to be shown in both words and numbers)

Additional Calendar Days (if any) ____________________________

(All amounts to be shown in both words and numbers)

Alternate No. 3: All work associated with the construction of Wash Rm. 032, Dry/Groom 033, and associated interior work in Hall 003 and Mech. 006.

Add: $ ____________________________

(Amount to be shown in both words and numbers)

Additional Calendar Days (if any) ____________________________

(All amounts to be shown in both words and numbers)

Alternate No. 4: All work associated with the construction of the Monument Sign in the northwest corner planting bed.

Add: $ ____________________________

(Amount to be shown in both words and numbers)

Additional Calendar Days (if any) ____________________________

RESPECTFULLY SUBMITTED:

SIGNATURE: ____________________________ DATE: ______________

Signature in Ink

NAME: ____________________________ Corporate Seal if Applicable

Please Type or Print

TITLE: ____________________________

FORM OF PROPOSAL 00300 - 2
BIDDER S NAME: ____________________________________________________________

BIDDER S ADDRESS: ____________________________________________________________

__________________________________________________________________________

TELEPHONE: ____________________________________________________________

EMAIL: ____________________________________________________________

CONTRACTOR S LICENSE NO.: ________________________________________________

CONTRACTOR S LICENSE

West Virginia Code §21-11-2 requires that all persons desiring to perform contractual work in West Virginia must be duly licensed. The West Virginia Contractor s Licensing Board is empowered to issue the contractor s license. Application for a contractor s license may be made by contacting the West Virginia Department of Labor, 1900 Kanawha Boulevard, East, Charleston, West Virginia 25305. Telephone: (304) 558-7890. West Virginia Code §21-11 requires any prospective Bidder to include the contractor s license number on their Bid. Successful Bidder will be required to furnish a copy of their contractor s license prior to issuance of a Purchase Order/Contract.

AFFIDAVITS (on the following pages) – TO BE SUBMITTED WITH BID OR AS OTHERWISE PERSCRIBED BY LAW

- PURCHASING AFFIDAVIT: West Virginia code §5A-3-10A states that no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than $1,000 in the aggregate. The Bidder (vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Purchasing Affidavit provided in the Bidding Documents.

- DRUG-FREE WORKPLACE CONFORMANCE AFFIDAVIT: West Virginia Code §21-1D-5 requires each contractor that submits a bid for the work to submit an affidavit that the contractor has a written plan for a drug-free workplace policy prior to being awarded a contract. The contractor (bidder/vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Drug-Free Workplace Conformance Affidavit provided in the Bidding Documents.

CERTIFIED DRUG-FREE WORKPLACE REPORT

In accordance with West Virginia Code §21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. That report must include each of the items identified in the Required Report Content section of the Certified Drug-Free Workplace Report Coversheet.

DISCLOSURE OF INTERESTED PARTIES TO CONTRACTS

Pursuant to West Virginia Code §6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of $1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the
business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

The Disclosure Form is available at the following URL: http://www.ethics.wv.gov/Pages/forms.aspx

VENDOR REGISTRATION AND DISCLOSURE STATEMENT

The successful Bidder must be a registered vendor with the West Virginia Department of Administration, Purchasing Division, prior to receiving a contract/purchase order. Vendor registration information is available at the following URL: http://www.state.wv.us/admin/purchase/vrc/wv1.pdf

LIQUIDATED DAMAGES

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time following the date established for commencement of the Work in the notice to proceed and/or purchase order. As liquidated damages, and not as a penalty, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum of $500.00 per day until Substantial Completion is achieved.

Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. All delays and any claim for extension of Contract Time must be properly documented in accordance with the General Conditions of the Contract for Construction, AIA Document A201-2017, and the State of West Virginia Supplementary Conditions to AIA Document A201-2017.

ADDENDA ACKNOWLEDGMENT

The undersigned hereby acknowledges receipt of the following Addenda and has taken the information contained therein into full consideration in the formulation of this Bid.

Addenda  No. 1 ______

No. 2 ______

No. 3 ______

No. 4 ______

No. 5 ______

Failure to acknowledge receipt of each Addendum may be cause for rejection of the Bid.

SIGNATURE: ___________________________________________ DATE: ___________________________

Signature in Ink

LIST OF PROPOSED SUBCONTRACTORS
(To Be Completed and Submitted with Bid)

List as designated below the proposed subcontractor for each major branch of work for this bid. Also, provide the subcontractor's license number as required by the West Virginia Contractors Licensing Act. If
the branch of work is to be completed solely by the Bidder/Contractor, so indicate. If the acceptance of an alternate bid changes a subcontractor, indicate by notation below. The Bidder/Contractor may be requested to change an unsatisfactory subcontractor. The Bidder/Contractor is responsible for selecting or changing subcontractors. The Owner and Architect/Engineer may indicate their concerns about any entity listed which they have reason to believe past experience indicates that poor performance may be expected. The Bidder/Contractor has full responsibility for satisfactory execution of all work in accordance with the Contract Documents. Any change of proposed subcontractors shall be at no additional cost to the Owner, as the Bidder/Contractor has full responsibility for execution of the work. Bidder/Contractor shall have up to two hours after the bid opening to make adjustments if necessary. Owner will suffer loss should Contractor change from those listed beyond the two-hour time stipulated. Please email adjustments/modifications to Chief Procurement Officer at rich.donovan@wvhepc.edu.

<table>
<thead>
<tr>
<th>Branch of Work/Material Category</th>
<th>Subcontractor/Supplier</th>
<th>Contractor License No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Steel Fabricator</td>
<td></td>
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<tr>
<td>3. Roof Membrane</td>
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<tr>
<td>4. Manufacturer</td>
<td></td>
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<tr>
<td>5. Roof Installer</td>
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<tr>
<td>6. Storefront Supplier</td>
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<td>7. Sprinkler Contr.</td>
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<tr>
<td>8. Plumbing Contr.</td>
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</tbody>
</table>

END OF FORM OF PROPOSAL
END OF SECTION 00300
BID BOND

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, ___________________________________________, ___________________________________________, as Principal, and ___________________________________________, ___________________________________________, a corporation organized and existing under the laws of the State of ___________________________________________, with its principal office in the City of ___________________________________________, as Surety, are held and firmly bound unto the State of West Virginia, as Obligee, in the penal sum of ___________________________________________ ($________________) for the payment of which, well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the Department of Administration a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for ___________________________________________.

NOW THEREFORE,

(a) If said bid shall be rejected, or
(b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in full force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

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

WITNESS, the following signatures and seals of Principal and Surety, executed and sealed by a proper officer of Principal and Surety, or by Principal individually if Principal is an individual, this ______ day of ______________________, 20____.

Principal Seal

________________________________________
(Name of Principal)

By ______________________________________
(Must be President, Vice President, or Duly Authorized Agent)

________________________________________
(Title)

Surety Seal

________________________________________
(Name of Surety)

________________________________________
(Attorney-in-Fact)

IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance, must affix its seal, and must attach a power of attorney with its seal affixed.
Bid Bond

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, of , 

as Principal, and of , a corporation organized and existing under the laws of the State of , with its principal office in the City of , as Surety, are held and firmly bound unto The State of West Virginia, as Obligee, in the penal sum of for the payment of which, well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the Department of Administration a certain bid or proposal, attached hereto and made a part hereof to enter into a contract in writing for

NOW THEREFORE

(a) If said bid shall be rejected, or
(b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the agreement created by the acceptance of said bid then this obligation shall be null and void, otherwise this obligation shall remain in full force and effect. It is expressly understood and agreed that the liability of the Surety for 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 said Surety and its bond shall be in no way impaired or affected by any extension of time within which the Obligee may accept such bid: and said Surety does hereby waive notice of any such extension.

WITNESS, the following signatures and seals of Principal and Surety, executed and sealed by a proper officer of Principal and Surety, or by Principal individually if Principal is an individual, the day of , .

Principal Seal

(Name of Principal)

By (Name of Attorney-in-Fact)

Surety Seal

(Name of Surety)

ATTORNEY-IN-FACT

IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance, must affix its seal, and must attach a power of attorney with its seal affixed.

REV. 6/2013
STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers’ compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

“Debt” means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers’ compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

“Employer default” means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers’ compensation coverage, or failure to fully meet its obligations as a workers’ compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

“Related party” means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: ____________________________________________

Authorized Signature: ____________________________ Date: __________________

State of ____________________________

County of ____________________________, to-wit:

Taken, subscribed, and sworn to before me this ___ day of ____________________________, 20__.

My Commission expires ____________________________, 20__.

AFFIX SEAL HERE

NOTARY PUBLIC ____________________________

Purchasing Affidavit (Revised 01/19/2018)
Disclosure of Interested Parties to Contracts

Pursuant to W. Va. Code § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of $1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or "Interested parties" means:

(1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
(2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
(3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of W. Va. Code § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.
West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts
(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: __________________________ Address: __________________________

Name of Authorized Agent: __________________________ Address: __________________________

Contract Number: __________________________ Contract Description: __________________________

Governmental agency awarding contract: __________________________

☐ Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract
   ☐ Check here if none, otherwise list entity/individual names below.

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)
   ☐ Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)
   ☐ Check here if none, otherwise list entity/individual names below.

Signature: __________________________ Date Signed: __________________________

Notary Verification

State of __________________________, County of __________________________:

I, __________________________, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this ___________________ day of ___________________, 20__.

______________________________ Notary Public's Signature

To be completed by State Agency:
Date Received by State Agency: __________________________
Date submitted to Ethics Commission: __________________________
Governmental agency submitting Disclosure: __________________________

Revised June 8, 2018
CERTIFIED DRUG-FREE WORKPLACE REPORT COVERSHEET

In accordance with West Virginia Code § 21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. That report must include each of the items identified below in the Required Report Content section.

Instructions: Vendor should complete this coversheet, attach it to the required report, and submit it to the appropriate location as follows: For contracts more than $25,000, the report should be mailed to the West Virginia Purchasing Division at 2019 Washington Street East, Charleston, WV 25305. For contracts of $25,000 or less, the vendor should mail the report to the public authority issuing the contract.

Contract Identification:

Contract Number: __________________________________________

Contract Purpose: __________________________________________

Agency Requesting Work: ___________________________________

Required Report Content: The attached report must include each of the items listed below. The vendor should check each box as an indication that the required information has been included in the attached report.

☐ Information indicating the education and training service to the requirements of West Virginia Code § 21-1D-5 was provided;

☐ Name of the laboratory certified by the United States Department of Health and Human Services or its successor that performs the drug tests;

☐ Average number of employees in connection with the construction on the public improvement;

☐ Drug test results for the following categories including the number of positive tests and the number of negative tests: (A) Pre-employment and new hires; (B) Reasonable suspicion; (C) Post-accident; and (D) Random.

Vendor Contact Information:

Vendor Name: ___________________________ Vendor Telephone: ___________________________

Vendor Address: ___________________________ Vendor Fax: ___________________________

Vendor E-Mail: ___________________________

________________________________________
SECTION 07 72 00
ROOF ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Roof hatches.

1.02 REFERENCE STANDARDS

1.03 SUBMITTALS
A. Product Data: Manufacturer's data sheets on each product to be used.
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
B. Warranty Documentation:
   1. Submit manufacturer warranty.
   2. Ensure that forms have been completed in Owner's name and registered with manufacturer.
   3. Submit documentation that roof accessories are acceptable to roofing manufacturer, and do not limit the roofing warranty.

1.04 DELIVERY, STORAGE, AND HANDLING
A. Store products in manufacturer's unopened packaging until ready for installation.
B. Store products under cover and elevated above grade.

1.05 WARRANTY
A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 ROOF HATCHES AND VENTS
A. Roof Hatch Manufacturers:
B. Roof Hatches: Factory-assembled aluminum frame and cover, complete with operating and release hardware.
   1. Style: Provide flat metal covers unless otherwise indicated.
   2. Mounting Substrate: Provide frames and curbs suitable for mounting on corrugated metal roof deck with insulation.
3. Thermally Broken Hatches: Added insulation to frame and cover; available in each manufacturer's standard, single leaf sizes; special sizes available upon request.

C. Frames and Curbs: One-piece curb and frame with integral cap flashing to receive roof flashings; extended bottom flange to suit mounting.
   1. Material: Mill finished aluminum, 11 gauge, 0.0907 inch thick.
   2. Insulation: Manufacturer's standard; 1 inch rigid glass fiber, located on outside face of curb.
   3. Curb Height: 12 inches from finished surface of roof, minimum.

D. Metal Covers: Flush, insulated, hollow metal construction.
   1. Capable of supporting 40 psf live load.
   2. Material: Mill finished aluminum; outer cover 11 gauge, 0.0907 inch thick, liner 0.04 inch thick.
   3. Insulation: Manufacturer's standard 1 inch rigid glass fiber.

E. Safety Railing System: Roof hatch manufacturer's standard accessory safety rail system mounted directly to curb.
   2. Self-Closing Gate: Comply with 29 CFR 1910.29 for safe egress and fall protection through hatch opening.
   4. Gate: Same material as railing; automatic closing with latch.
   5. Finish: Manufacturer's standard, factory applied finish. Safety yellow.
   7. Fasteners: Stainless steel, Type 316.
   8. Manufacturers: Same as roof hatch.

F. Roof Hatch Hardware: Type 316 stainless steel, unless otherwise indicated or required by manufacturer.
   1. Lifting Mechanisms: Compression or torsion spring operator with shock absorbers that automatically opens upon release of latch; capable of lifting covers despite 10 psf load.
   2. Hinges: Heavy duty pintle type.
   3. Hold open arm with vinyl-coated handle for manual release.

2.02 NON-PENETRATING ROOFTOP SUPPORTS/ASSEMBLIES

A. Non-Penetrating Rooftop Support/Assemblies: Manufacturer-engineered and factory-fabricated, with pedestal bases that rest on top of roofing membrane, and not requiring any attachment to roof structure and not penetrating roofing assembly.
   1. Design Loadings and Configurations: As required by applicable codes.
   2. Support Spacing and Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
   3. Steel Components: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
   4. Hardware, Bolts, Nuts, and Washers: Stainless steel, or carbon steel hot-dip galvanized after fabrication in accordance with ASTM A153/A153M.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
3.02 PREPARATION
   A. Clean surfaces thoroughly prior to installation.
   B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable
      results for applicable substrate under project conditions.

3.03 INSTALLATION
   A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system
      weather-tight integrity.

3.04 CLEANING
   A. Clean installed work to like-new condition.

3.05 PROTECTION
   A. Protect installed products until completion of project.
   B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION  07 72 00
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SECTION 23 09 24
DIGITAL CONTROL SYSTEM POINTS LIST

PART 1 GENERAL

1.01 The following list shall be the minimum points required of the digital control system. It is not the intent to show all required points. If or when additional points are required to accomplish the sequences of control specified, these points shall also be provided. The point types are identified as follows:
1. DI - Contact Input (NO or NC)
2. DO - Contact Output (NO or NC)
3. AI - Analog Input
4. AO - Analog Output
5. PI - Pulsed Input

1.02 AIR HANDLING UNIT POINTS LIST:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
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<tr>
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<tr>
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<td>Return Air Humidity</td>
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*One sensor for unoccupied control, additional space sensor as shown on drawings. When DDC zone control is specified all zone thermostats shall be DDC inputs.

1.03 MINIMUM POINTS LIST FOR VAV WILL BE AS FOLLOWS:

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1.04 GENERAL OR GLOBAL POINTS:

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PART 2 PRODUCTS - NOT APPLICABLE
PART 3 EXECUTION - NOT APPLICABLE

3.01 INSTALLATION

END OF SECTION 23 09 24
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SECTION 23 09 93
SEQUENCE OF OPERATIONS FOR HVAC CONTROLS

PART 1 GENERAL

1.01 All equipment (valves, dampers, actuators, controllers, etc.) required to perform the functions specified shall be provided under this ATC contract unless noted herein or elsewhere in these contract documents. Electric motor driven equipment (pumps, chillers, compressors, cooling towers, etc.) shall be provided with minimum on (run) and minimum off timers to prevent short cycling of the equipment (coordinate with equipment manufacturer's). All DDC system control points shall have a default value in case of sensor failure or logic error. All controlled devices shall fail safe on loss of control. All setpoints and parameters shall be fully adjustable from the end user / owner interface.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 UNIT HEATERS
   A. Thermostat to cycle unit heater fans upon a demand for heating. Furnish all wiring between thermostats and fan motor.

3.02 VARIABLE VOLUME BOXES WITH REHEAT ELECTRIC
   A. Each box shall have a electric modulating damper operator (furnished with the box) and an electric reheat coil furnished under this ATC contract. Cooling shall be controlled by modulating the volume damper, heating shall be controlled by energizing the reheat after the air volume has been throttled to a minimum.

3.03 DDC-VAV BOXES
   A. The VAV box manufacturer shall provide the box with air flow taps for connection to the air flow sensor provided under this ATC work. All other control components shall be furnished by the ATC. ATC shall send to the box manufacturer the DDC controller and damper actuator for factory mounting (if the HVAC Contractor is using Trane VAV boxes the damper motor is integral with the box, coordinate accordingly).
   B. VAV Shutoff Control - When the room temperature is below setpoint the box damper shall be at cooling minimum. As room temperature rises above cooling setpoint the control shall modulate the damper open to satisfy the setpoint. Box controls shall reverse action during warm-up.
   C. VAV Reheat Control - When the room temperature is below setpoint the box damper shall be at heating minimum and the heating coil shall energize. As temperature rises to heating setpoint the valve modulates toward the closed position. If the room temperature rises above the heating setpoint the valve shall close. When room temperature rises above cooling setpoint the damper shall modulate from cooling minimum to maximum to maintain the cooling setpoint.
   D. An override pushbutton shall be provided at each sensor thermostat to override the unoccupied schedule for a fixed (programmable) time. The DDC system shall track, log and report on the amount of time each box was overridden as well as VAV box discharge air temperature.

3.04 VARIABLE VOLUME SHUTOFF BOXES
   A. Each box is furnished with a modulating damper operator and shall be controlled from a local thermostat, to vary the CFM from full CFM to shutoff.

3.05 VARIABLE VOLUME BOXES
   A. A complete control package is provided by the VAV box manufacturer. Installation of the thermostat, control wiring and low voltage power supplies are included in this ATC contract. Obtain control diagrams from the box manufacturer and incorporate it into the ATC shop drawings.
3.06 GENERAL EXHAUST FANS
   A. Each exhaust fan (and its respective automatic damper) where indicated on the Electric
      Drawing Starter Schedule shall be a separate status point of the digital control system.

3.07 MONITORING AND ALARMS
   The following points shall be monitored and alarmed at the monitoring console and as
   otherwise specified hereinafter:
   A. Point Descriptions:
      1. Current Sensing Relays - Provide for all air handling unit supply and return/exhaust fans;
         all general exhaust fans.
      2. High/Low Temperature Alarms on all DDC temperature sensors with off-normal
         messages.
      3. Fire Alarm System Inputs - Fire alarm shall be input into the digital control system for
         information and smoke control mode. Wiring from the digital control system inputs to the
         Fire Alarm System outputs shall be by this Contractor. Coordinate connection points with
         the Electrical Contractor.
   B. When interfacing with equipment providing remote analog inputs or receiving analog outputs to
      the DDC system or when monitoring requires the installation of external relays at the equipment
      being monitored, coordinate all requirements such as range, signal condition, grounding, wiring
      and input impedance with the supplier of the equipment being monitored.

3.08 AIR HANDLING UNIT NO. (RTU-1)
   A. Air Handling System Start/Stop - Night Setback - The air handling unit (associated supply,
      return and exhaust fans) shall be able to be scheduled for occupied/unoccupied 7-day and
      holiday operation. During the occupied mode, the temperature controls shall function as
      specified, during unoccupied mode the air handling unit controls shall function as specified
      except the outside air dampers shall remain closed. The controls shall cycle the unit to
      maintain a reduced space temperature of 60 degrees F.
      Initial Schedule - Unit shall operate Monday thru Friday 7:00 am to 5:00 pm, Saturday 7:00 am
      to 12:00 noon. Unit shall be off after scheduled hours, Sunday and all legal
      holidays. Coordinate exact schedule with Owner.
   B. Cooling Setup Control and Cool Down - During the unoccupied time, the space temperature
      rises above 82 degrees F. the unit shall cycle on to cool the space down to 79 degrees F and
      then turn off. Outside air shall be used for cooling first unless the economizer is locked out. An
      optimal start program shall start the unit in advance of occupied time to ensure proper space
      temperatures at occupancy time. During set up or cool down operation if the economizer is
      inactive the associated relief and exhaust fans shall remain off and the outside air dampers
      shall remain closed.
   C. Minimum Outside Air - This paragraph defines the operation of outside air, vent air and return
      air dampers (economizer dampers) to provide minimum outside air for ventilation. The phrase
      "Minimum" in the sequences of operation shall invoke this paragraph. Simple outside air
      damper sections (all damper blades operating in unison) shall open to a fixed position as
      determined by air balance to provide the specified minimum ventilation. Return air dampers
      shall remain full open and vent air dampers shall remain completely closed. Compound outside
      air damper section (separate operable damper blades or sections ) shall have the minimum
      damper open fully, the maximum outside air damper and vent air damper shall be completely
      closed, and the return air damper shall be fully open. Outside air minimum shall be adjusted based on building pressure. Outdoor air shall be
      modulated to maintain positive building pressure of 0.05 inches w.g. (adjustable). See also
      Static pressure control below.
   D. Morning Warm-Up and Initial Start - Air handling system shall enter a morning warm-up mode
      in advance of the occupied time via an optimal start sequence, the outside air dampers shall
      remain completely closed and the return dampers shall remain fully open and exhaust fans
shall remain off in this mode. During morning warm-up the VAV shut-off boxes shall open. This mode shall continue until the return temperature rises above 68 degrees F., at which time the economizer dampers shall be positioned to minimum and the respective exhaust fans shall start. Economizer damper control shall be delayed two minutes during start-up to prevent cabinet heat from false loading the system.

E. Safeties: The following safeties shall be provided to stop the air handling unit fan(s) and position the control devices to their "fail safe" position, i.e., outside and relief dampers closed, return dampers open, heating valves open and humidifier valves closed. Safeties shall be wired into the fan starter circuit such that the safety shall function whether the start selector switch is in the hand on or automatic position.

1. Low Temperature Limit Cutout "Freezestats" - Shall be provided on all air handling units and installed on the leaving air face of the first coil in the air stream (unless otherwise noted) and shall stop the air handling unit fan(s) if a temperature below 38 degrees F. is detected.

2. Smoke Detectors (installed on all return and exhaust units equal or above 2,000 cfm) - Smoke detectors shall be provided under this HVAC contract installed in the air handling unit return air, and/or the exhaust fan inlet air.

3. Supply Duct High Static Pressure Cutout - Provide a manually reset type duct static pressure switch, set at the maximum working pressure of the ductwork, to stop the fan system (supply, return, exhaust) on a rise in duct static above setpoint.

4. Return Duct High Negative Pressure Cutout - Provide a manual reset type duct static pressure switch, set at the maximum negative working pressure of the ductwork, to stop the fan system (supply, return, exhaust) on a fall in duct static below setpoint.

F. Outside Air: Discharge Air Reset - The Air Handling Unit controls shall provide discharge air temperature control based on the following outside air reset schedule: 0 degrees F. outside air, 62 degrees F. discharge air; 55 degrees F. outside air, 55 degrees F. discharge air. All control setpoints to be fully adjustable to meet job conditions.

G. Enthalpy Economizer Control - Outside air temperature and humidity, and return air temperature and humidity shall be measured, and the enthalpy of each determined. If the enthalpy of the outside air is less than the enthalpy of the return air the economizer shall be enabled. When the outside air enthalpy is higher than the return air enthalpy and mechanical cooling is available the economizer shall be disabled.

Economizer cycle - When the unit operates in the occupied mode, the minimum outside air shall be provided, the return air dampers shall open full and relief air dampers shall remain closed. This condition is the normal position and shall be maintained during the occupied mode except during the "economizer" cycle. During the "economizer" cycle, the amount of outside air and relief air shall be increased as required to maintain the unit discharge air temperature setpoint. Provide a mixed air sensor and low limit control set at 50 degrees F. to prevent over-opening of the fresh air dampers. All control setpoints to be full adjustable to meet job conditions.

H. Static Pressure Control - When the air handling system is operating in the economizer mode the relief air damper shall be under control of a space static pressure sensor (reference to outdoors). The control shall be proportional plus integral and shall modulate the damper to maintain a 0.05 inch w.g. positive static pressure in the space.

I. Electric Heating Coil - On a fall in discharge air temperature below setpoint the steps of electric heat shall be energized in sequence to satisfy the setpoint. Refer to drawings for number of steps. Provide a time delay between steps. Cooling shall be off before the electric heat is energized. During morning warm-up the setpoint shall be raised to 95 degrees F. (adjustable).

J. DX Cooling Coil - When the economizer is active and outside air dampers are full open to outside air and the discharge air temperature rises above setpoint, the solenoid valves and compressor stepping shall be energized in sequence to satisfy the setpoint. Provide on and off time delays between steps. When the minimum step of DX cooling is energized and the discharge air temperature falls below 55 degrees F. and the economizer is active, the economizer dampers shall modulate slowly back toward minimum position until discharge air
temperature rises above 55 degrees F. Provide air flow switch wired in series with cooling control to keep cooling off unless the fan is operating.

K. Fan Volume Control - The variable speed drives on the supply shall be modulated by a static pressure sensor located two-thirds distance from the supply fan and a proportional plus integral control shall provide a common control signal to the system to provide a static pressure of 1.0" w.g. (adjustable) at that point.

END OF SECTION 23 09 93
1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO CONSTRUCTION AND DEMOLITION, TYP. DRAWINGS S001 AND S002 SHALL BE REFERENCED FOR GENERAL NOTES.

2. WALLS, FLOOR, AND ROOF FRAMING SHALL BE IN ALIGNMENT WHERE AT ALL POSSIBLE. WHERE DIFFERING SPACINGS OCCUR, SPACING ORIGINS SHALL BE SUCH THAT A MAXIMUM SPACING OF 9" IS MAINTAINED.

3. PARTITION WALL TOP TERMINATION/SUPPORT/BRACING DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. PARTITION WALLS SHALL BE STIFFENED. WALLS SHALL BE EXTENDED TO STRUCTURE ABOVE (DECK, JOISTS, TRUSSES, ETC.) AND TERMINATED WITH VERTICAL-DEFLECTION-ACCOMMODATING CONNECTION, PIN-CONNECTION BRACED WITH VERTICAL KICKERS, BRACED AT CORNERS WITH HORIZONTAL KICKERS, OR BLOCKING AS REQUIRED, AND ATTACH PER MANUFACTURER SPECIFICATIONS. COORDINATE WITH STRUCTURAL CONSTRUCTION.

4. WALL STUDS

5. INSULATION, REINFORCING, FLASHING, ETC. MAY NOT BE SHOWN ON ALL SECTIONS OR DETAILS. HARDWARE, FASTENERS, CLIP ANGLES, ETC. MAY ALSO NOT ALL BE SHOWN ON THE SECTIONS AND DETAILS.

6. ALL CONNECTION DETAILS SHOWN ON THE DRAWINGS SHALL BE REVIEWED FOR MANUFACTURER RECOMMENDATIONS. VERIFY IN FIELD.

7. LIGHT GAUGE JOIST BRIDGING, SEE GENERAL NOTES FOR SPACING REQUIREMENTS AND TYPICAL DETAILS FOR MORE INFORMATION. PROVIDE BRIDGING AT EACH BAY IN ACCORDANCE WITH AISI AND MANUFACTURER SPECIFICATIONS. SEE BRIDGING SPACING FOR ADDITIONAL INSTRUCTIONS.

8. OPENING FOR MECHANICAL DUCT PENETRATION, VERIFY LOCATION, ELEVATIONS AND DIMENSIONS WITH MECHANICAL DRAWINGS. PROVIDE (1) ANGLE PER 4" WIDTH OF OPENING PER DETAIL 9/S501, TYP.

9. OPENING FOR LIGHT GAUGE WALL STUD, SIZE OF OPENING(S) TO BE PATCHED BACK, SIZE OF OPENING(S) TO BE PATCHED BACK. PROVIDE (1) ANGLE PER 4" WIDTH OF OPENING.

10. OPENING FOR CEILING AND ROOFING PER ARCHITECTURAL.
1. PROVIDE AND INSTALL 30 AMP, 3P, 240 VOLT DISCONNECT.
2. PROVIDE AND INSTALL 60 AMP, 3P, 240 VOLT DISCONNECT.
CODED NOTES

1. ELECTRICAL CONTRACTOR SHALL Rough-in BOXES AND CONDUIT FOR SECURITY CONTRACTOR TO INSTALL DEVICES. COORDINATE LOCATIONS WITH SECURITY CONTRACTOR. MONITOR LOCATION FOR SECURITY CONTRACTOR. CABLES SHALL BE CONNECTED TO MONITOR LOCATION FOR SECURITY CONTRACTORS.

2. PROVIDE DATA CONNECTION TO CAMERA IN SURGERY. CAMERA SHALL BE CONNECTED TO TV IN TREATMENT ROOM, CLASSROOM AND GROOMING AREA.

3. CONNECT FACP TO REMOTE ANNUNCIATOR PANEL LOCATED AT MAIN ENTRANCE.

4. ELECTRICAL CONTRACTOR SHALL Rough-in BOX FOR MAGNETIC LOCK-OPEN DEVICE FOR FIRE DOOR. CONNECTIONS TO BE MADE BY FIRE ALARM SYSTEM INSTALLER.

5. PROVIDE 1 INCH CONDUITS TO IN-FLOOR DATA BOXES. SUPPLY TWO DATA BOXES PER 1 INCH CONDUIT TO MAINTAIN CONDUIT FILL REQUIREMENTS.
**Project:** Pierpont Community & Technical College  
**Designed By:** JSS  
**Drawn By:** CSH  
**Checked By:** JSS  
**Scale:** NTSE501  
**Plot Date:** 2/28/22  
**Revision:** 1

**Project:** Pierpont Vet Tech Relocation  
**Address:** 501 W Main St. Clarksburg, WV  
**Phone:** (304) 464−5305  
**Fax:** (304) 464−4428

**Drawing Description**

1 ELECTRICAL ONE LINE DIAGRAM

2 ELECTRICAL SERVICE ENTRANCE

3 ELECTRICAL CONDUIT DUCT BANK DETAIL

**Notes:**

A. ELECTRICAL CONTRACTOR SHALL REFER TO ELECTRICAL UTILITY COMPANY'S INSTALLATION OF OUTDOOR METERING CABINET WITH CURRENT TRANSFORMER (CT) DETAILS FOR MORE INFORMATION ON CABINET MATERIAL AND INSTALLATION SPECIFICATIONS.

B. ELECTRICAL CONTRACTOR SHALL PROVIDE BONDING, GROUNDING AND WORK SPACE PER NATIONAL ELECTRICAL CODE.

C. ARRANGE CT BUS PHASES AS A-B-C TOP TO BOTTOM AS INDICATED.

D. ELECTRICAL CONTRACTOR SHALL PROVIDE 5/8 INCH BY 8 FOOT ROD WITH A #6 COPPER GROUND CONDUCTOR BONDED TO METER SOCKET.

E. CONDUITS SHALL NOT ENTER THE TOP OF THE CT METER CABINET.

F. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL ELECTRICAL SERVICE ENTRANCE EQUIPMENT NOT PROVIDED FROM THE ELECTRICAL UTILITY COMPANY.

**Architects/Engineers/Surveyors**

1 ISSUED FOR ADDENDUM CSH 2/28/22

**Drawing Number:** E501

**Drawing Description:**

1. ELECTRICAL ONE LINE DIAGRAM
2. ELECTRICAL SERVICE ENTRANCE
3. ELECTRICAL CONDUIT DUCT BANK DETAIL

**Scale:** NTSE501
### LIGHTING FIXTURE SCHEDULE

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### ELECTRICAL EQUIPMENT LIST & CONDUIT AND CABLE SCHEDULE

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NOTES:
1. EQUIPMENT SHOWN IS BASIS OF DESIGN. EC TO COORDINATE WITH OWNER AND EQUIPMENT PROVIDER FOR CIRCUIT LOADING AND INSTALLATION REQUIREMENTS.
2. GENERATOR BATTERY CHARGER AND BLOCK HEATER ARE BASIS OF DESIGN. COORDINATE WITH GENERATOR REQUIREMENTS.
3. FLC = FULL LOAD CURRENT
   MOCP = MAXIMUM OVERCURRENT PROTECTION DEVICE
   EGC = EQUIPMENT GROUNDING CONDUCTOR
   VFD = VARIABLE FREQUENCY DRIVE CONTROL
   FVNR = FULL VOLTAGE NON-REVERSING STARTER, WITH OVERLOADS, CONTROL TRANSFORMER, START/STOP PUSHBUTTONS AND AUXILIARY CONTACT
   P = PARALLEL FEED