ADDENDUM NO. 4

RE: **NCDAC Craven Correctional Institution**
Air Conditioning Installation
SCO ID#: 23-26588-01A
NCDAC Central Engineering Job Order # 4210

DATE: March 12, 2024

FROM: McKim & Creed

To: Prospective Bidders

This Addendum issued prior to receipt of bids shall and does hereby become a part of the Contract Documents for the above Project. This Addendum must be acknowledged on the Form of Proposal.

All Prime contractors shall be responsible for ensuring that their Subcontractors are properly apprised of the contents of this Addendum.

All information contained in this Addendum shall supersede and shall take precedence over any conflicting information in the original Drawings and Specifications.

General

1. The mandatory pre-bid meeting was held for all interested bidders on February 27, 2024, at 10:00am at the Craven Correctional Institution, 600 Alligator Road, Vanceboro, NC 28586. The meeting minutes and the list of attendees are attached.

Drawings

1. Sheet SP001: Add the following to General Site Work Note 2: “The installation of the new condensing units and the associated roofing work for each dormitory can be performed as a separate construction phase. The roofing work does not have be performed at the same time as the interion wok in each dormitory.”
2. Sheet MD111: Revise demolition key note 1 to read as follows; "Remove existing electric motorized damper actuators. (Total of 3)”

3. Sheet MD111, MD112, MD121 and MD122: Add the following Sheet Note 7: “All existing security supply grilles (SSG) shall be demolished.”
4. Sheet MD112: Revise demolition key note 1 to read as follows; "Remove existing electric motorized damper actuators. (Total of 3)”
5. Sheet M111: Revise the last sentence in new work key note 2 to read as follows; "Provide new electric motorized damper actuators (total of 3) compatible with DDC system.”
6. Sheet M111, M112, M121 and M122: Add the following Sheet Note 7: “Provide new security supply grilles (SSG) with integral face-operated opposed blade damper. Sizes shall be as indicated on the sheet. Provide a 3” high duct takeoff boot between the new SSG and the existing supply duct. Connect to the existing duct and seal connection. All SSG’s shall be KEES Model SEG-4 with standard mounting option or approved equal.”
7. Sheet M111: In Sleeping Area C201, add “12 x 6 SSG, 95 CFM, Typical of 4”
8. Sheet M111, M112, M121 and M122: Add the following Sheet Note 8: “All existing supply, return and exhaust air ductwork shall be cleaned in accordance with specification section 23 01 30. The existing supply and return air ductwork shall be cleaned prior to starting up the new air handling unit.”
9. Sheet M111, M112, M121 and M122: Add the following Sheet Note 9: “All existing supply ductwork served by the new air handling unit shall be wrapped with 1” of fiberglass duct wrap with all service jacket and R value of 4.5. All existing supply ductwork exposed to view shall be covered with 8 oz. canvas jacket. Canvas jacket shall be sized for painting. All exposed supply ductwork shall be painted to match the color of the existing supply ductwork.”
10. Sheet M111 and M112: In Sleeping Areas C101, C201, C301, C401, C501, C601, C701, C801, D101, D201, D301, D401, D501, D601, D701, D801, all exposed supply ductwork shall be provided with protective metal ductwork in accordance with detail 3/M701. All protective metal enclosures shall be painted to match the color of the existing supply ductwork.
11. Sheet M112: Revise the last sentence in new work key note 2 to read as follows; "Provide new electric motorized damper actuators (total of 3) compatible with DDC system.”
12. Sheet M112: On detail 1 description, change “C” to “D”.
13. Sheet M112: In Sleeping Area D201, add “12 x 6 SSG, 95 CFM, Typical of 4”
14. Sheet M121 and M122: In key note 2 revise 2” to 1” of duct insulation.
15. Sheet M121 and M122: All the following to key note 3: “All protective metal enclosures shall be painted to match the color of the existing supply ductwork.”
16. Sheet MD401 and M401: Add the following general note: “All existing supply, return and exhaust air ductwork shall be cleaned in accordance with specification section 23 01 30. The existing supply and return air ductwork shall be cleaned prior to starting up the new air handling unit.”
17. Sheet MD401: Revise demolition key note 2 to read as follows: “Existing AHU Controller in existing control panel shall remain.”
18. Sheet M401: Revise key note 4 to read as follows: “Provide new expansion modules for the existing DDC controller as required for the new control points. See sheet

M501 for new and existing control devices that shall be connected to the existing DDC controller. See M501 for new sequences of operation."

19. Sheet M501: On detail 1, revise label on each DDC controller from "New Controller" to "Existing Controller with New Expansion Module".
20. Sheet M601: Add the following note to the condensing unit schedule: "Provide unit with modulating hot gas reheat and hail guards." Note shall be applicable to all units.
21. Sheet E121 and E122: Update note 3, "Existing conduit and lights shall be moved one foot away from duct to allow for duct work to occur. EC shall make circuit safe prior to work and reenergization."

Specifications

1. Section 23 01 30: Add the specification section 23 01 30 to the contract documents. See attached.
2. Section 23 09 00: In part 3.1.A.1, revise to read as follows: "Update graphics in Dormitories C and D (including connector Hallways) to a Tier 1 Graphical Interface Package."
3. Section 23 09 00: Clarification: The existing Niagara Supervisor computer is existing and shall host the updated graphics package. The JACE panel is existing with capacity. It does not need to be replaced.
4. Section 23 63 13: In part 2.1A, add Addison to the list of acceptable manufacturers.
5. Section 23 73 00: In part 2.1, add Addison to the list of acceptable manufacturers.

Roy Cooper, Governor

Todd Ishee, Secretary

Craven Air Conditioning Installation
Pre-Bid Meeting Minutes

Project: 600 Alligator Rd, NC 28586
State Project ID Number: SCO # 23-26588-01
NCDAC Central Engineering Job Order # 4424

Date: 2/27/2024 | Location: Craven CI, 600 Alligator Rd, Vanceboro, NC 28586| Time 10:00 am

1. **OWNER APPROVAL ANNOUNCEMENT OF PREFERRED BAND ALTERNATE (ADD ALT #1 BELOW)**

2. **INTRODUCTION & SIGN IN SHEET**

3. **PROJECT DESCRIPTION & SCOPE OF WORK**
   a. Base Bid: Installation of air conditioning in two (2) buildings each comprised of two (2) bed dormitories. Building C is comprised of dormitories Pamlico and Ocracoke while Building D is comprised of dormitories Hatteras and Core. In each dormitory, the work will include the installation of a constant volume air handling units with DX cooling coils and hot water heating coils, a new outdoor air cooled condensing unit, refrigerant piping, heating hot water piping, new ductwork and air distribution devices. Each existing dormitory will also be provided with a new direct digital control system for all new and existing equipment. Electrical work will consist of modifying existing panelboards to power new equipment.
   b. Phasing:
      i. Work in Dorms Pamlico, Ocracoke, Hatteras, and Core will be completed one at a time. However, the work on the roof of each dorm (placing new equipment rails and new condensing units) can be accomplished as a separate phase. Roof work does not have to be completed as part of the work performed in each dorm.
      ii. Beneficial Occupancy will be issued for each dormitory.
   c. Alternate(s):
      i. Add Alt #1 – Preferred Brand for HVAC Controls – Distech ECB Series
   d. Unit Price(s):
      i. None

4. **BID OPENING**
   a. Date: **3/19/2024**
   b. Time: Opening at **1:00 PM**
   c. Location: NCDAC Central Engineering, Room: EN 64, 2020 Yonkers Road, Raleigh, NC 27604
   d. Bid Delivery: Single Prime / Hand Delivery

5. **REQUIRED W/ BID SUBMITTALS**
   a. Form of Proposal
   b. Bid Bond (5%)
   c. Identification of Minority Business Participation (MBE Affidavit A or B)

6. **QUESTIONS DURING BID**
   a. Bidders can submit their questions in writing to Jesse Alonzo, jalonzo@mckimcreed.com

b. Question deadline is **3/8/2024, 1:00pm**

7. BID ADDENDUM

a. Last Addenda will be issued no later than **3/12/2024**
b. Acknowledge receipt on Form of Proposal

8. PROJECT SCHEDULE - (240) consecutive calendar days from Notice to Proceed Date.

9. PAYMENT

a. Up to 95% based on monthly estimates.
b. 100%, (Final Payment) upon completion and acceptance of all work, approval of closeout documentation)

10. LOGISTIC

a. Job Trailer/Office Space: DAC will provide meeting space, but operations space will be provided by contractor. If contractor requires a trailer, that must be coordinated and approved by Warden.
b. Laydown area: DAC will provide some space for temporary material storage but must be approved by Warden.
c. Existing Utility & Temporary Utility: Onsite utilities without reimbursement
d. Temporary Toilet Facilities: Onsite facilities inside the dormitory where work is ongoing can be used by the contractor.

11. SECURITY (01 11 00)

a. NCDAC Security requirement for contractors: Background checks are required.
b. COVID Requirements: There are no supplemental COVID requirements, but CDC guidelines should be followed for known infections.
c. Site specific Security requirement: Secure Jobsite Daily, Warden must approve tool storage plan inside the facility. (Note: contractor job box with lock can be stored on Dorm control center for tools).
d. Toolbox & hazardous tools: Daily Tool Inventory, do not leave tools unattended.
e. Ladder: Customer ladder is not available, bring a chain for your ladder for security with inmates
f. Work hours & break time: (M-F, 6:00 AM - 6:00 PM)
g. Cellphone Use: At discretion of the Warden
h. Inclement weather: TBD at Pre-Construction Meeting, Article 23 of General Conditions

12. PERFORMANCE AND PAYMENT BOND, INSURANCE REQUIREMENT

a. Performance and Payment Bond will be required for 100% of contract price.
b. Insurance: See Article 34 of General Conditions

13. COMMENTS/QUESTIONS

14. SITE WALK-THROUGH

JO 4290 Craven CI - Air Conditioning Installation | **SIGN-IN SHEET** | **2/27/2024 @ 10:00AM**

NO	NAME	FIRM General Contractor (Y/N)	Bidding General Contractor	E-MAIL	PHONE NO.
1	William Burriola	NCDAC Central Engineering		William.burriola@dac.nc.gov	(919) 324-1250
2					
3	Joshua Seymour	Eneco East	YES / NO	JSeymour@EnecoEast.com	252-412-8437
4	Jason Kepley	HM Klern	YES / NO	Estimating@hmklern.com	(336) 207-0733
5	Jared Abplanalp	Humphrey Mechanical	YES / NO	jareda@humphreymechanical.com	910-546-1877
6	Tony Morris	Allred Mechanical Services	YES / NO	tonym@allredmechanical.ca	252-885-6769
7	Nathan Ziegler	ECS	YES / NO	Nathan.Ziegler@ecscontrols.net	919 801 2341
8	Kenneth Almond	ECS	YES / NO	Kenneth.Almond@ecscontrols.net	919-525-6528
9	Steve Dixon	ECS	YES / NO	steve.dixon@ecscontrols.net	919-618-6669
10	Greg Dixon	Schneider Electric	YES / NO	greg.dixon@se.com	919-607-9458
11	David Millis	Warden	YES / ~~NO~~	David.Millis@dac.nc.gov	252-244-8010
12	Karen Ward	Sec to Warden	YES / NO	Karen.C.Ward@dac.nc.gov	252-244-8012
13	Steve R Deuisle	Maint Supervisor	YES / NO	Steve.Deuisle@dac.nc.gov	252-244-8360
14	Chris Auer	Assoc. Warden	YES / NO	christopher.auer@dac.nc.gov	252-244-8330

SECTION 23 01 30 - EXISTING HVAC AIR SYSTEM CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes cleaning existing HVAC air-distribution equipment, ducts, plenums, and system components.

B. Related Requirements:

1. Section 230593.00 "Testing, Adjusting, Balancing for HVAC" for system flow documentation before cleaning and balancing and following cleaning and restoration.
2. Section 233300.00 "Air Duct Accessories" for restoration of opened ducts and plenums with access doors.

1.3 DEFINITIONS

A. ACAC: American Council for Accredited Certification.

B. ASCS: Air systems cleaning specialist.

C. NADCA: National Air Duct Cleaners Association.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Cleaning agents
2. Antimicrobial surface treatments

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data:

1. For an ASCS.

B. Field Quality-Control Reports:

1. Project's existing conditions.
2. Evaluations and recommendations, including cleanliness verification.
3. Strategies and procedures plan.

1.6 CLOSEOUT SUBMITTALS

A. Post-Project report.

1.7 QUALITY ASSURANCE

A. Cleaning Conference: Conduct conference at Lumberton Correctional Institution

1. Review methods and procedures related to HVAC air-distribution system cleaning, including, but not limited to, review of the cleaning strategies and procedures plan.

PART 2 - PRODUCTS

2.1 HVAC CLEANING AGENTS

A. Description:

1. Anti-microbial for cleaning ductwork and plenum by wiping.
   a. Manufacturer – Contec, Bio-Cide, Nexreg

2. Anti-microbial/disinfectant solution that can be used as a fogging agent.
   a. Manufacturer – Quip Laboratories, Zitritide, Nixalite

3. Formulated for each specific contamination.

2.2 ANTIMICROBIAL SURFACE TREATMENT

A. Description: Specific product selected shall be as recommended by the IEP based on the specific antimicrobial needs of the specific Project conditions.

1. Formulated to kill and inhibit growth of microorganisms.
2. EPA-registered for use in HVAC systems and for the specific application in which it will be used.
3. Have no residual action after drying, with zero VOC off-gassing.
4. OSHA compliant.
5. Treatment shall dry clear to allow continued visual observation of the treated surface.

PART 3 - EXECUTION

3.1 PREPARATION

A. Inspect HVAC air-distribution equipment, ducts, plenums, and system components to determine appropriate methods, tools, and equipment required for performance of the Work.

B. Perform "Project Evaluation and Recommendation" according to NADCA ACR.

C. Cleaning Plan: Prepare a written plan for air-distribution system cleaning that includes strategies and step-by-step procedures. At a minimum, include the following:

1. Supervisor contact information.
2. Work schedule, including location, times, and impact on occupied areas.
3. Methods and materials planned for each HVAC component type.
4. Required support from other trades.
5. Equipment and material storage requirements.
6. Exhaust equipment setup locations.

D. Existing Conditions Report: Prepare a written report that documents existing conditions of the systems and equipment. Include documentation of existing conditions, including inspection results, photo images, laboratory results, and interpretations of the laboratory results by an IEP.

1. Prepare written report listing conditions detrimental to performance of the Work.

E. Proceed with work only after conditions detrimental to performance of the Work have been corrected.

F. Use the existing service openings, as required for proper cleaning, at various points of the HVAC system for physical and mechanical entry and for inspection.

G. Comply with NADCA ACR, "Guidelines for Constructing Service Openings in HVAC Systems" Section.

H. Mark the position of manual volume dampers and air-directional mechanical devices inside the system prior to cleaning.

3.2 CLEANING

A. Comply with NADCA ACR, including items identified as "recommended," "advised," and "suggested."

B. Perform electrical lockout and tagout according to Owner's standards or authorities having jurisdiction.

C. Remove non-adhered substances and deposits from within the HVAC system.

D. Complete cleaning in accordance with Owner-Contractor agreed-upon scope of work.

E. Systems and Components to Be Cleaned: All air-moving and -distribution equipment.

F. Collect debris removed during cleaning. Ensure that debris is not dispersed outside the HVAC system during the cleaning process.

G. Particulate Collection:

1. For particulate collection equipment, include adequate filtration to contain debris removed. Locate equipment downwind and away from all air intakes and other points of entry into the building.
2. HEPA filtration with 99.97 percent collection efficiency for particles sized 0.3 micrometer or larger shall be used where the particulate collection equipment is exhausting inside the building,

H. Control odors and mist vapors during the cleaning and restoration process.

I. Mark the position of manual volume dampers and air-directional mechanical devices inside the system prior to cleaning. Restore them to their marked position on completion of cleaning.

J. System components shall be cleaned so that all HVAC system components are visibly clean. On completion, all components must be returned to those settings recorded just prior to cleaning operations.

K. Clean all air-distribution devices, registers, grilles, and diffusers.

L. Clean non-adhered substance deposits according to NADCA ACR and the following:

1. Clean air-handling units, airstream surfaces, components, condensate collectors, and drains.
2. Ensure that a suitable operative drainage system is in place prior to beginning wash-down procedures.
3. Clean evaporator coils, reheat coils, and other airstream components.

M. Air-Distribution Systems:

1. Create service openings in the HVAC system as necessary to accommodate cleaning.
2. Mechanically clean air-distribution systems specified to remove all visible contaminants, so that the systems are capable of passing the HVAC System Cleanliness Tests (see NADCA ACR).

N. Debris removed from the HVAC system shall be disposed of according to applicable Federal, state, and local requirements.

O. Mechanical Cleaning Methodology:

1. Source-Removal Cleaning Methods: The HVAC system shall be cleaned using source-removal mechanical cleaning methods designed to extract contaminants from within the HVAC system and to safely remove these contaminants from the facility. No cleaning method, or combination of methods, shall be used that could potentially damage components of the HVAC system or negatively alter the integrity of the system.

a. Use continuously operating vacuum-collection devices to keep each section being cleaned under negative pressure.
b. Cleaning methods that require mechanical agitation devices to dislodge debris that is adhered to interior surfaces of HVAC system components shall be equipped to safely remove these devices. Cleaning methods shall not damage the integrity of HVAC system components or damage porous surface materials, such as duct and plenum liners.

2. Cleaning Mineral-Fiber Insulation Components:

a. Fibrous-glass thermal or acoustical insulation elements present in equipment or ductwork shall be thoroughly cleaned with HEPA vacuuming equipment while the HVAC system is under constant negative pressure and shall not be permitted to get wet according to NADCA ACR.
b. Cleaning methods used shall not cause damage to fibrous-glass components and will render the system capable of passing the HVAC System Cleanliness Tests (see NADCA ACR).
c. Fibrous materials that become wet shall be discarded and replaced.

P. Application of Antimicrobial Treatment:

1. Apply antimicrobial agents and coatings according to manufacturer's written recommendations and EPA registration listing after the removal of surface deposits and debris.
2. Apply antimicrobial treatments and coatings after the system is rendered clean.
3. Apply antimicrobial agents and coatings directly onto surfaces of interior ductwork.
4. Microbial remediation shall be performed by a qualified technician.

3.3 CLEANLINESS VERIFICATION

A. Verify cleanliness according to NADCA ACR, "Verification of HVAC System Cleanliness" Section.

1. Verification of cleanliness to include random area inspection by S&ME technician. S&ME technician will include swabs of AHU, supply and return ducts.

B. Verify HVAC system cleanliness after mechanical cleaning and before applying any treatment or introducing any treatment-related substance to the HVAC system, including biocidal agents and coatings.

C. Surface-Cleaning Verification: Perform visual inspection for cleanliness. If no contaminants are evident through visual inspection, the HVAC system shall be considered clean. If visible contaminants are evident through visual inspection, those portions of the system where contaminants are visible shall be re-cleaned and subjected to re-inspection for cleanliness.

D. Prepare a written cleanliness verification report. At a minimum, include the following:

1. Written documentation of the success of the cleaning.

2. Site inspection reports, initialed by supervisor, including notation on areas of inspection, as verified through visual inspection.
3. Surface comparison test results if required.
4. System areas found to be damaged.

E. Photographic Documentation:

1. Provide photographs of representative areas of clean ductwork and air handler units.

3.4 RESTORATION

A. Restore and repair HVAC air-distribution equipment, ducts, plenums, and components according to NADCA ACR, "Restoration and Repair of Mechanical Systems" Section.

B. Restore service openings capable of future reopening. Comply with requirements in Section 233100 Ductwork.

C. Replace damaged insulation according to Section 230713 "Duct Insulation."

D. Ensure that closures do not hinder or alter airflow.

E. New closure materials, including insulation, shall match opened materials and shall have removable closure panels fitted with gaskets and fasteners.

F. Restore manual volume dampers and air-directional mechanical devices inside the system to their marked position on completion of cleaning.

G. Measure air flows through air-distribution system.

H. Measure static-pressure differential across each coil.

3.5 PROJECT CLOSEOUT

A. Post-Project Report:

1. Post-cleaning laboratory results if any.
2. Post-cleaning photo images.
3. Post-cleaning verification summary.

B. Drawings:

1. Deviations of existing system from Owner's record drawings.
2. Location of service openings.

END OF SECTION 23 01 30