



McKIM & CREED

ADDENDUM NO. 2

**RE: NCDAC Lumberton Correctional Institution
Air Conditioning Installation
SCO ID#: 22-25591-01A
NCDAC Central Engineering Job Order # 4354**

DATE: July 12, 2023

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. Clarification: The second pre-bid meeting was held on July 5th at 10:00 am. The meeting minutes and the list of attendees are attached.

Drawings

1. Sheet M601: On the Air Inlets/Outlets schedule revise the basis of design to “KEES Model SEG-4”. Revise description to “Security Grille”. Security grilles shall be standard construction with standard mounting option. Provide all security grilles with a face operated opposed blade damper.
2. Sheet M701: On detail 3 revise the gauge of the sheetmetal enclosure around the new ductwork from 14 GA to 18 GA.

Specifications

1. Clarification: Only the State Bid bond form is acceptable. The Form of Bid Bond is included in the project manual. Other bid bond forms AIA, etc. are not acceptable. Please make sure to only use the Form of Bid Bond included in the project manual when you submit with your proposal.
2. Section 23 73 00 Modular Air Handling Units: In section 2.9 A Dampers add the following: “B. Damper on the return air duct connection of the mixing box shall be a rated smoke damper. Dampers shall meet the requirements of NFPA 80, 90A, 92A, 92B, and 101 and shall be Class I Leakage Rated Dampers for use in smoke control systems in accordance with the latest version of UL555S. As part of the UL qualification, smoke dampers shall have demonstrated a capacity to open and close under HVAC system operating conditions, with pressures up to 4 inches w.g. in the closed position and 2,000 fpm air velocity in the open position. In addition to the leakage ratings already specified herein, the dampers and their actuators shall be qualified under UL555S to an elevated temperature of 250°F, depending upon the actuator. Appropriate electric actuators shall be installed by the damper manufacturer at the time of damper fabrication. Damper and actuator shall be supplied as a single entity which meets all applicable UL555S qualifications for both dampers and actuators. Each damper shall be rated for leakage and airflow in either direction through the damper. Damper and actuator assembly shall be factory cycled to ensure operation.
3. Section 26 05 33 Raceway and Boxes for Electrical Systems: Revised section 3.2 A. See attached.



Roy Cooper, Governor

Todd Ishee, Secretary

Lumberton Air Conditioning Installation Pre-Bid Meeting Minutes

Project: 75 Legend Road, Lumberton, NC 28358
State Project ID Number: SCO # 22-25591-01A
NCDAC Central Engineering Job Order # 4354

Date: 7/5/2023 | Location: Lumberton CI, 75 Legend Road, Lumberton, NC 28358 | Time 10:00 am

- 1. OWNER APPROVAL ANNOUNCEMENT OF PREFERRED BRAND ALTERNATE (ADD ALT #1 BELOW)**
- 2. INTRODUCTION & SIGN IN SHEET**
- 3. PROJECT DESCRIPTION & SCOPE OF WORK**
 - a. Base Bid: Installation of air conditioning in six (6) 104 bed dormitories. In each dormitory, the work will include the installation of four (4) constant volume air handling units with DX cooling coils and hot water heating coils, four new outdoor air cooled condensing units, 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. Upgrades to electrical switchboard and electrical site distribution.
 - b. Phasing:
 - i. Work in Dormitories A, B, C, D, E and F will be performed one at a time.
 - ii. Beneficial Occupancy will be issued for each dormitory
 - iii. Electrical upgrades to switchboard must be coordinated with the Warden/Staff
 - 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: **7/19/2023**
 - 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 Mitch Brown, mbrown@mckimcreed.com
 - b. Question deadline is **7/11/2023, 1:00pm**
- 7. BID ADDENDUM**
 - a. Last Addenda will be issued no later than **7/12/2023**

- b. Acknowledge receipt on Form of Proposal

8. PROJECT SCHEDULE - (450) 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. (Note: Front Parking Lot-Big Oak tree)
- c. Existing Utility & Temporary Utility: Onsite utilities without reimbursement
- d. Temporary Toilet Facilities: Onsite facilities are not for construction use, portlets required
- e. The contractor must submit Material Safety Data Sheets for all chemicals that will be brought into the facility

11. SECURITY (01 11 00)

- a. NCDAC Security requirement for contractors: Background checks are required
- b. No tobacco products of any kind are allowed at the Lumberton Correctional Institution
- c. COVID Requirements: There are no supplemental COVID requirements, but CDC guidelines should be followed for known infections.
- d. 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).
- e. The facility will provide the same escorts to the contractor daily if possible
- f. Toolbox & hazardous tools: Daily Tool Inventory, do not leave tools unattended
- g. Ladder: Customer ladder is not available, bring a chain for your ladder for security with inmates
- h. Work hours & break time: (M-TH, 6:00 AM - 6:00 PM)
 - a. Best days for deliveries through the sallyport are Monday or Thursday.
- i. Cellphone: Not Allowed
- j. Inclement weather: Refer to 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

The above summary is our understanding of items discussed and decisions reached during this meeting. We request any changes, additions or deletions be brought to our attention as soon as possible but no later than 7 days from date of issuance for the minutes to be corrected and reissued. In the absence of any corrections, we assume the minutes to be correct and the final draft. Please contact me with questions or revisions.

Mitchell A. Brown, PE
Engineer of Record
McKim & Creed
End of Minutes

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	Mitchell Brown	McKim & Creed		mbrown@mckimcreed.com	919-624-8336
3	Dale Cranford	Piedmont Services Group	YES	dcranford@piedmontsg.com	336-553-7768
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SCO ID#: 22-25591-01, Code: 42107, Item 4112**

SECTION 26 05 33 – RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.1 REQUIREMENTS

- A. All material shall be UL listed and shall be installed in conformance with the National Electrical Code.

1.2 SUBMITTALS

- A. Shop drawings for:

1. Conduits
2. Couplings and fittings
3. Boxes
4. Floor boxes
5. Conduit seals

- B. Provide list of conduit types indicating where each type is used.

PART 2 PRODUCTS

2.1 RACEWAYS

- A. Galvanized Steel Rigid Metal Conduit (RMC):

1. Heavy wall tubing with hot dipped galvanized coating
2. Connections shall be made with double locknuts and bushings. Bushings to be steel with integral insulator except conduits 2” and below may have high impact thermoplastic Phenolic insulating bushings.

- B. Intermediate Metal Conduit (IMC):

1. Intermediate grade metallic tubing with hot dipped galvanized coating.
2. Connections shall be made with double locknuts and bushings. Bushings to be steel with integral insulator except conduits 2” and below may have high impact thermoplastic Phenolic insulating bushings.

- C. Electrical Metallic Tubing (EMT) Conduit:

1. Thin wall tubing with hot dipped galvanized coating.
2. Couplings and connections shall be threaded steel, watertight gland compression type.
3. All connectors shall have insulated throat.

- D. Rigid Nonmetallic Conduit:

1. Heavy wall rigid, type 40, listed for underground encased and above ground applications.

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2. Heavy wall rigid, type 80, listed for underground encased and above ground applications.

E. PVC Coated Conduit:

1. RMC or IMC Conduit
2. 40 MIL PVC exterior coating
3. 2 MIL Urethane coating on interior and treads
4. Plastic tread protector caps

F. Flexible Metal Conduit (FMC):

1. Electro-galvanized single strip steel.

G. Liquid Tight Flexible Metal Conduit:

1. Electro-galvanized single strip steel with PVC coating.

H. Stainless Steel Conduit:

1. Type 304 or 316

I. Standard and special radius elbows

1. Threaded couplings

2.2 BOXES

A. Manufactured by Midland Ross/Steel City, T&B, Raco, or Appleton.

B. Galvanized or aluminum of gauge required by NEC.

C. All junction and pull boxes shall be 4-inch square by 2-1/8-inch-deep minimum.

D. Stamped steel boxes with knockouts are not acceptable for surface mounting in finished spaces in the building.

E. PVC coated or stainless steel.

2.3 FASTENINGS AND SUPPORTS

A. Shall be of good quality, galvanized steel or other non-corroding material.

PART 3 EXECUTION

3.1 RACEWAY INSTALLATION

A. All wire and cable shall be run in raceway.

B. Minimum raceway size shall be 3/4" (interior) and 1" (below grade) unless noted otherwise. Half inch flexible conduit may be used from junction box to above ceiling light fixtures (6' maximum length).

C. All runs of empty conduit only shall have a 100# nylon pull rope installed in the conduit.

D. Rigid metal conduit shall be made up with full threads to which T&B "Kopre-Shield" compound has been applied, and butted in couplings.

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- E. Z. Split or "Erickson" couplings where necessary.
- F. No conduit shall be run in poured concrete floors or slabs. Conduit runs shall normally be run overhead. Where it is necessary to run underneath a concrete slab poured on-grade, conduit shall be buried in trench beneath gravel base and turned up through slab. Where it is necessary to run underneath a floor above a crawl space or another floor, conduit shall be run along ceiling space under floor and stubbed through floor using appropriate methods, such as "poke-through" devices or other means U.L. approved for such purpose.
- G. Underground runs, except under concrete floor slabs, shall be encased by a minimum of three (3) inches of concrete on all sides and shall have a minimum of eighteen (18) inch (non-roadway) and twenty-four (24) inch (roadway) cover, except for raceways containing circuits above 600V, which shall have a minimum cover of 30". Backfill shall be made in six (6) inch layers - tamping each layer to a density of 95% of maximum possible. Red dye shall be applied to the top of freshly placed concrete in all underground duct banks as a warning of electrical hazard in the event of future excavation. In addition, all underground raceway shall be identified by underground line marking tape located directly above the raceway at six (6) to eight (8) inches below finish grade. Tape shall be permanent, bright-colored, continuous printed, plastic tape compound for direct burial not less than 6" wide and 4 mils thick. Printed legend shall be indicative of general type of underground line below.
- H. Where passing through a below grade wall from a conditioned interior building space, raceways shall be sealed utilizing fittings similar and equal to OZ/Gedney type "FSK" through wall fitting with "FSKA" membrane clamp adapter if required.
- I. Attach rigid metal conduits with double locknuts - one inside and one outside - and fiber bushing.
- J. Grounding type insulated bushings shall be used where raceway enters boxes with concentric or oversized knockouts. These bushings shall also be used wherever conduits stub into switchboards or transformer cabinets. Grounding type insulated bushings shall always be used on both ends of conduits feeding panelboards.
- K. Provide suitable fittings where raceway crosses building expansion joints.
- L. Securely fasten in place using approved strap or hanger within three feet of each termination and not over ten feet apart in runs.
- M. Run concealed in finished areas unless otherwise noted.
- N. Make all cuts square with hacksaw. Remove any burrs or shoulders by reaming.
- O. All runs exposed and all runs above accessible ceilings shall be neat and square with building structure such as walls and ceiling/roof structures. Multiple parallel runs shall use trapeze supports where possible.
- P. "Flex" and "Sealtite" connections with T&B "Tite-Bite" and "Super-Tite" or approved equivalent fittings. Shall have insulated throats.
- Q. Where installing raceway on interior surface of exterior walls. Mount raceway ¼" from wall with clamp-backs or strut.

3.2 APPLICATION

- A. Galvanized Steel Rigid Metal Conduit (RMC) Conduit required:

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1. Installations below grade (and in or under slabs where approved), except where specifically noted otherwise.
2. Below 6 ft AFF in exposed areas of mechanical equipment rooms, except where specifically noted otherwise.

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3. Building Exterior applications

B. Electrical Metallic Tubing (EMT) Conduit required:

1. Interior panel feeders, except where specifically noted otherwise, etc.
2. Interior partitions
3. Above suspended ceilings
4. Above 6 ft AFF in exposed areas of mechanical equipment rooms, except where specifically noted otherwise.
5. Sizes 2" and smaller except as approved, except where specifically noted otherwise.

C. Nonmetallic Rigid Conduit required:

1. Direct burial, concrete encased.
2. Direct burial, in sand fill on bottom and top.
3. Corrosive atmospheres, except where specifically noted otherwise.

D. Liquid Tight Flexible Metal Conduit required, not over 4 ft in length, for final connections to:

1. Equipment in wet locations.
2. Equipment with vibration isolation mounting.
3. Equipment housing ferromagnetic cores or with integral moving components, capable of generating noise or vibrations including transformers and motors.
4. Pumps and associated equipment.
5. Instruments and control devices.
6. All flexible connections to equipment in fire pump room below 60" AFF.

E. Flexible Metal Conduit required, not over 4 ft in length, for final connections to:

1. Equipment in dry locations.
2. Equipment in dry locations with vibration isolation mounting.

F. PVC Coated Conduit shall be used:

1. In corrosive atmospheres as noted on plans.
2. In exterior environments needing additional protection.

G. Stainless Steel Conduit shall be used for:

1. Exposed conduits in GMP Clean Room or Wash Down environments.

3.3 BOX INSTALLATION

- A. Attach EMT with connector only.

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- B. Outlet boxes shall be sized in accord with NEC Section 314. All lighting outlet boxes shall have fixture studs. Device boxes shall be sectional type or 4" square equipped with plaster rings as required to mount the device. Set edge flush with finished surface. Boxes may be installed at top or bottom of a masonry course. Raco, or approved equivalent, masonry boxes in sawed block. 1-1/4" and deeper plaster rings may be of die-cast aluminum of Steel City make, or approved equivalent.
- C. Where installed in metal stud partitions, wall boxes shall be supported from two adjacent studs using a system such as Caddy Bar Hanger Assembly, or approved equivalent. Support on a single stud is not acceptable.
- D. Fixtures weighing more than six pounds shall be supported from the fixture stud.
- E. Where not shown differently on the drawings, mount:
 - 1. Switch boxes 46" from finished floor to center. Boxes beside doors shall be mounted so edge of trim plate is 2" from edge of door trim on strike side.
 - 2. Telephone boxes 18" from finished floor to center and vertical. Boxes for wall phones shall be 46" from finished floor and vertical.
 - 3. Bracket light boxes as indicated on plans or as directed by Engineer.
 - 4. Clock outlet boxes 7'-0" from finished floor, or 6" below finished ceiling, to center.
 - 5. Panel cans 6'-4" (± 4 " in concrete block construction) from finished floor to top of can.
 - 6. Fire alarm pull stations 46" from finished floor to center.
 - 7. Fire alarm chimes, horns, strobes, etc., 80" above finished floor or 6" below finished ceiling, whichever is lower, and shall comply with ADA requirements.
- F. Where not shown differently on the drawings, mount boxes for receptacles to receive device in a vertical position and be:
 - 1. Centered 18" above finished floor.
 - 2. Centered 6" above counters, shelves, or cabinets where apparently intended to be so placed.
 - 3. Centered 4" above high edge of backsplashes.
 - 4. Where devices are to be ganged, provide boxes to receive devices trimmed with a gang plate.
- G. As soon as installed, all raceway openings shall be closed with plastic inserts to prevent entrance of foreign matter during construction. All enclosures shall be kept clean of any foreign matter. Install Jordan "Kover-All" plastic covers over outlet boxes ahead of plastering or painting.
- H. Conduit(s) from all boxes installed on exterior walls or in areas going from conditioned to unconditioned space shall have conduit(s) sealed with duct seal or equivalent to prevent moisture formation. Duct seal or equivalent shall also be installed in all raceways entering from exterior of building.

3.4 FASTENINGS AND SUPPORTS INSTALLATION

- A. Inserts in masonry shall be lead, fiber, or plastic types installed in drilled holes. Wooden plugs shall not be used. Lead only shall be used on all exterior masonry or

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interior masonry subject to permanent moisture. Hung raceways shall be supported from the structure with rod supports at least 5/16" in diameter.

- B. All equipment and flat raceways attached to outside wall or interior walls subject to permanent moisture shall be shimmed out with non-corrodible material so as to provide 1/4" air space between wall and equipment or raceway.
- C. All materials, whether exposed or concealed, shall be firmly and adequately held in place. Fastening and support shall afford safety factor of three or higher.
- D. All fixtures, raceways, and equipment shall be supported from the structure. Nothing may be supported on suspended ceilings, including the hanger wires, unless definitely noted so on the drawings or specifically permitted by the Engineer.
- E. Recessed fixtures shall be supported at the two (2) opposite ends to the structure. Supports shall be provided with the same type of wire as used to support the lay-in ceiling track. Attach one end of the wire to one corner of the fixture and the other end to the building's structural system. Lay-in fixtures shall also be screwed to the main runners of the lay-in ceiling track at all four corners using sheet metal screws.
- F. Recessed ceiling speakers, where specified with an enclosure, shall have the enclosure supported directly from the structure with a minimum of two 10-gauge wires run perpendicular to the ceiling and not pulling to one side. If recessed ceiling speaker is specified without an enclosure and is mounted in a suspended ceiling, the speaker shall be supported using T-Bar bridges such as Soundolier No. 81-8, or other device specifically designed for such support. In addition, each of the four corners of the ceiling grid block enclosing the speaker shall be supported from the structure using 10-gauge steel wire run perpendicular to the ceiling plane.
- G. Other devices using octagonal or 4" square ceiling boxes, such as smoke detectors, dome lights, exit signs, etc., where installed in suspended ceilings shall be supported from the ceiling system using Caddy, or other, hangers specifically designed for such support. In addition, each of the four corners of the grid block enclosing the box shall be supported from the structure using 10-gauge steel wires run perpendicular to the ceiling plane.
- H. Support for pipe straps or clamps shall be toggle bolts on hollow masonry; metal expansion shields and machine screws, or standard pre-set inserts, on concrete or solid masonry; machine screws or bolts on metal surfaces; and wood screws on wood construction. The resulting fastening shall be completely secure.

END OF SECTION 26 05 33