## **ADDENDUM NO. 1**

DATE:	May 3, 2023
PROJECT:	NC Department of Adult Corrections Tyrrell Prison Work Farm – Air Conditioning Installation SCO ID#22-25530-01A
OWNER:	NC Department of Adult Corrections 2020 Yonkers Road, Raleigh, NC 27699
ENGINEER:	Dewberry Engineers Inc.

2610 Wycliff Road, Suite 410, Raleigh, NC 27607

This Addendum, applicable to the work designated herein, shall be understood to be and is an Addendum to the contract documents and, as such, shall be become a part of and included in the contract.

- 1. Please note this addendum is changing the Bid Opening date of the project. The bid opening will take place on Monday, May 8, 2023 at 1:00pm at Central Engineering Large Conference Room, 2020 Yonkers Road, Raleigh, NC 27699. Enter through Door #8. No fax or email bids will be accepted.
- 2. Please see attached April 26, 2023 Pre-Bid Meeting Minutes. The Pre-Bid Meeting Minutes shall become part of the contract documents.
- Please reference Sheet MD211 FIRST FLOOR ENLARGED DUCTWORK DEMOLITION PLAN. Please see attached revised drawing indicating ductwork adjustments in the mechanical rooms.
- 4. Please reference Sheet M-211 FIRST FLOOR ENLARGED DUCTWORK PLAN. Please see revised drawing indicating ductwork adjustments in the mechanical rooms.
- 5. Please reference Sheet M-211 FIRST FLOOR ENLARGED DUCTWORK PLAN, Boiler Room. Existing 1" make-up water backflow preventer is currently leaking. Contractor shall remove existing backflow, discard, and provide new 1" Watts 009-QT (or equal), reduced pressure zone backflow preventer. Provide with air gap fitting and route relief piping to floor drain.
- 6. Please reference Specification Section 232119, Hydronic Piping Valves. Please add Pro Hydronic Specialties to list of approved manufacturers.
- 7. Please reference Specification Section 232133, Underground Hydronic Piping, Paragraph 1.3.C and Paragraph 1.3.C.1. Remove these paragraphs from the contract.
- Please reference Specification Section 232133, Underground Hydronic Piping, Paragraph 2.3.D. Change text from "thermal conductivity (k-value) shall not exceed 0.14 Btu x in./h x sq. ft. x deg F at 75 deg F after 180 days of aging." "thermal conductivity (k-value) shall not exceed 0.18 Btu x in./h x sq. ft. x deg F at 75 deg F after 180 days of aging."
- 9. Please reference Specification Section 232133, Underground Hydronic Piping, Paragraph 3.5 A. Change text from "continuous plastic underground warning tapes" to "continuous plastic underground detectable warning tapes"
- 10. Please reference Specification Section 232133, Underground Hydronic Piping, Paragraph 3.2.A. Change text from "Heating Hot Water and Heat Recovery Piping, Direct Buried:" to "Heating Hot Water and Heat Recovery Piping sizes indicated on the plans are based on carbon steel carrier piping. Contractors option to provide Polypropylene Random (PP-R) piping SDR 9 in

place of carbon steel carrier piping. However, all nominal carbon steel pipe sizes listed on the plans shall be increased on nominal pipe size."11. Please find the following responses to questions:

a Question:	What is the maximum operating temperature and pressure of the
a. Question.	boiler system on the hot water lines?
Response:	Maximum working pressure on the existing cast iron boiler is 50 psi. Maximum pressure in the heat recovery piping is 50 psi.
b.Question:	What are the design conditions of the hot water system?
Response:	The existing boiler is designed for an entering water temperature of 160°F and a leaving water temperature of 180°F. Heat recovery system is designed for an entering water temperature of
	110°F and a leaving water temperature of 135°F.
c. Question:	Is the piping system manufacture responsible for the design of the piping system or is the layout shown the final design?
Response:	The piping layout shown on the drawings should be followed as much as practical for bidding purposes. Some field adjustments may be required to coordinate with existing and unforeseen conditions. The successful bidder may propose alternate routing as a cost savings to be credited back to the owner. Provide additional fitting and offset as required to accommodate any piping stresses.
d.Question:	Section 23 21 33 1.3 C, calls for United states pipe and fittings does this apply to the preinsulated pipe systems since the next sentence mentions factory fabricated does not need to meet this requirement?
Response:	This requirement is removed from the specification.
e. Question:	Section 23 21 33 1.3 C, if the above question is the USA
	material applies to the pre-insulated pipe does this include the PPR pipe and fittings?
Response:	This requirement is removed from the specification.
f. Question:	Section 23 21 33 1.4, indicates a 10-year warranty, since we are not installing the pipe system, nor operating the system what will determine it is a factory defect? The warranty should be on the contractor since they are handling and installing the pipe system.
Response:	Section 1.3 F, vendor is to provide 2 inspections during construction to verify that the system is properly installed.
g.Question:	Section 23 21 33 2.2 Steel pipe and fittings is bending allowed on the pipe elbows?
Response:	Bending for fittings and elbows is allowed if stresses are no more than 75% of allowable.
h.Question:	Section 23 21 33 2.3 Cased Piping System Paragraph D indicates a K-factor no longer produced due to the Kyoto accord on greenhouse gases, polyurethane foam produced in the US is a minimum .18 ka factor, please change this.
Response:	Change K factor to 0.18 Btu x in./h x sq. ft. x deg F at 75 deg F.
1. Question:	Section 23 21 33 2.3 cased piping does not indicate if

	Response:	preinsulated pipe fittings are required, can insulation kits be provided? Provide field insulation kits and all necessary material required for a complete installation for all pipe, pipe joints, and pipe fittings.	
	j. Question:	Section 23 21 33 3.5 indicates plastic warning tape, if the plastic carrier pipe is used should the contractor install aluminum backed locator tape?	
	Response:	Provide detectable warning tapes.	
Attached:	1. April 26 <sup>th</sup> 2. MD211 – 3. M-211 – F	Pre-Bid Meeting Minutes First Floor Enlarged Ductwork Demolition Tirst Floor Enlarged Ductwork Plan	

End of Addendum No. 1

Dewberry	Engineers Planners Surveyors	Pre-Bid Meeting Minutes
Dewberry Engineers Inc.		
2610 Wycliff Road, Suite 410		(919) 881-9939 Phone
Raleigh, North Carolina 27607-3073		(919) 881-9923 Fax
Prepared by: Johnny Wood/John Teeter	DD	DI Project No.: <u>50153654</u>
Project: Tyrrell Prison Work Farm Air Co	onditioning	_ Page 1 of 3
<b>SCO ID #:</b> <u>22-25530-01A</u>		
Date: April 26, 2023		

Purpose: Pre-Bid Meeting

## **Items Discussed:**

- 1. John Teeter thanked everyone for their interest in the project and attendance at the pre-bid meeting.
- 2. John Teeter discussed the Owner and Design Team members. The NC Department of Adult Corrections (DAC) representative is Matthew Wells. The Dewberry Team is John Teeter-Mechanical, Peter Andersen-Electrical, Adam Hayes-Structural, Fred Rash-Civil, and Raymond Engineering -Architecture, and Johnny Wood. Johnny Wood will be contact during construction.
- 3. All members present indicated they had received the project drawings and project manual.
- 4. John Teeter explained the general Scope of Project:
  - Install air conditioning to the existing Prison Work Farm.
  - Installation of air cooled chillers, pumps, chilled water piping, air handling units, controls, etc.
  - Construction of a small new building to house the chilled water pumps and accessories.
  - Supporting general and electrical support needed for the HVAC installation.
  - Project Location: 620 Snell Road, Columbia, NC 27925
  - Construction time frame is 365 calendar days. We understand the equipment lead times the industry is facing during these times. There was somewhat of a concern with the construction time frame of 365 days. The DAC is well aware of lead time issues and stated that the duration can be extended based on lead times provided by vendors. DAC has not had any problems with this approach in the past as long as the contractor keeps good documentation from the vendors and communicates with DAC.
- 5. John Teeter indicated to be familiar with the General Conditions. These are standard Formal General Conditions.
- 6. John Teeter indicated to please note the Supplementary Conditions.
  - a. A work schedule will be established during construction that goes along with the operation of the facility. DAC stated that they are flexible with work hours. The most efficient method is to make sure that starting and stopping times do not coincide with staff shift changes. Starting or stopping 30 minutes before or 30 minutes after a shift change is best.
  - b. Background Checks will be required for all staff working on site.
  - c. Tools need to be checked and inventoried at the beginning and end of every day. This process is usually efficient and can be achieved in about 10 minutes if the contractor

keeps everything organized.

- d. The Owner representatives present presented additional security measures, policies, for the Contractors to understand:
  - i. No phones on site, except for the superintendent.
  - ii. Security procedures for deliveries will be discussed after the project is awarded. DAC indicated that there is a procedure but usually runs smoothly with there is good contractor coordination and communication.
- 7. John Teeter indicated Liquidated Damages are included in the Contract. \$500/day for any days in excess of the Completion date. Again, we will work through any lead time issues.
- 8. John Teeter explained the Bid Form:
  - a. Single Prime Bid.
  - b. No unit prices.
  - c. No allowances.
  - d. Two (2) manufacturer preferred alternates.
  - e. MBE documentation is required to be submitted with the bid. Affidavit A or B with bid.
  - f. Bid bond is required.
- 9. John Teeter noted both Performance Bond and Payment bond are required.
- 10. John Teeter indicated a Photo ID must be generated and worn by all Contractors at all times on site during construction.
- 11. John Teeter discussed a portion of the Temporary Facilities required by the contract:
  - a. Contractor shall be allowed to utilize existing electricity and water, if in the area of work. If not in the area, Contractor shall provide their own. Contractor shall repair all utilities back to original working order after reused.
  - b. Contractor shall provide their own toilets for use.
  - c. Other staging areas needed will be coordinated during construction.
  - d. DAC noted that they own the land outside of the perimeter fence and the contactor can use those locations for con-ex containers, campers if needed, staging, etc. DAC staff periodically do fence walks throughout the day and night, so security of items outside of the fence should not be a major concern.
  - e. DAC noted the access gates for the perimeter fence and the mechanical area fence which will allow for larger deliveries and concrete trucks.
- 12. John Teeter noted there will be State Construction Electrical Inspections to be coordinated with the Owner & State Construction Office during the construction phase.
- 13. Ray Brewer asked if DAC had a contact for the vendor that they work with for the existing fire alarm system. DAC did not have a contact name and indicated that DAC has certified service technicians in house that normally do all of their fire alarm system maintenance. It was noted that the existing fire alarm system is a Simplex 4100 ES system.
- 14. Nathan Ziegler asked about a network drop for the controls. DAC believes there is already an available network drop, but if not DAC will arrange for one.
- 15. DAC stated that currently, one wing of the dormitory (5 dorms) is not currently occupied. If these dorms remain vacant, DAC would like the contractor to perform work and conduct air shutdowns on the vacant side first. This should allow for the inmates to be shifted after one side is complete to allow for the other 5 dorms to be vacated. Matt Wells stated that the current occupancy condition could change. DAC would also like to make sure the work is performed in a manner that limits downtime and interruptions to occupied areas. For instance, work on the hot water system should take place outside of the heating season. Work for the admin portion of the building should not take place at a time where cooling or heating will be greatly impacted. The admin portion of the building houses the infirmary area for the campus. Careful coordination between the contactor and DAC should go a long way towards mitigating and minimizing major disruption.
- 16. Matt Wells stated that there will not be an E-procure system for this project.

- 17. It was noted that SCO will have a representative for construction meetings.
- 18. Matt Wells indicated that there will be limited commissioning, but noted to refer to the control specifications for specific items that may be required related to controls. It was noted that we will have SCO final inspections and that we will have to have functional testing of equipment as it relates to fire alarm interfaces and smoke / purge system operation.
- 19. DAC confirmed that the building is served by natural gas and it is believed that the underground gas service is plastic. The old propane lines are likely abandoned in place.
- 20. DAC noted that all of the ductwork for the two existing H&V units is lined.
- 21. It was noted that the make-up water backflow preventer in the boiler room has been leaking and corroding the drain and domestic water piping below. Replacement of the backflow preventer will be added to the addendum.
- 22. John Teeter indicated any bid clarification questions should be submitted in writing to us at the following contact information:

Johnny Wood Dewberry Engineers Inc. 2610 Wycliff Road, Suite 410 Raleigh, NC 27607 (919) 215-2010 jwood@dewberry.com

- a. Also please copy Matt Wells with the NC Department of Adult Corrections at matthew.wells@dac.nc.gov
- 23. John Teeter noted project bids will be received up until 1:00pm on Tuesday, May 16<sup>th</sup>, 2023 at Central Engineering Large Conference Room, 2020 Yonkers Road, Raleigh, NC 27699. Enter through Door #8. No fax or email bids will be accepted.
- 24. John Teeter indicated all questions must be submitted by end of day on Friday, May 5<sup>th</sup>. An addendum will be issued on Tuesday, May 9<sup>th</sup>, if needed to respond to any questions. This would be (7) days prior to the bid opening. Please go ahead and take a look at the documents with-in that time frame so we will be in a position to where we can respond to any questions.
- 25. All parties present visited the project site to view the existing conditions. The team walked the area behind the mechanical rooms where most of the work is to take place. The team viewed the mechanical rooms, electrical room, and boiler room. DAC will verify that the boiler inspection paperwork is current so that we have no issues with SCO during inspections.



Engineers Planners

Pre-Bid Sign-In Sheet

Surveyors

Dewberry Engineers Inc. 2610 Wycliff Road, Suite 410 Raleigh, North Carolina 27607-3073

(919) 881-9939 Phone (919) 881-9923 Fax

Project: NC Dept of Adult Corrections Tyrrell Prison Work Farm Air Conditioning

Dewberry Project No: 50163654

SCO ID #: 22-25530-01A

Date/Time: April 26, 2023 / 11:00 am

Subject: Pre-Bid Meeting

Name	Company	Phone #	Email
JAmes Olecki	TPWF_	e	James. Olectio DAC, NC, GOV
RAY BREWEN	Allne Meat	252-443-5457	ray called micht anical, com
NATHAN ZIEGLER	ELS	919 801 2341	NATHAN, ZIEGLER BSCONTROLS, NOT
Mg Hhaw Wells	NCDAC	919-324-129	19 Matthew, wells ODAC. M. Gou
TONY PAIOZZOLO	PEZMA RUS	336-46-50	19/ PALOZT CHOTMARL. CUL
ike DuinnJim FIELDS	Superior.	336 3005	JFIELDIS & SUPERIOURMERIT SERME
MIKE QUINN	Superion MFRA	_ LREP Ton.	Jim Fillos
Tyler Tysen	AMER CARA BUILDA	K_ 252-756-1994	tylen Tysen a AMER, eAxeblde . Com
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KEY NOTES (#) REMOVE AIR HANDLING UNIT IN ITS ENTIRETY. REMOVE ASSOCIATED DUCTWORK TO POINTS INDICATED, SUPPORTS, CONTROLS AND THERMOSTAT. PATCH ALL DAMAGED OR NEWLY

- EXPOSED SURFACES TO MATCH EXISTING ADJACENT FINISHES.
  REMOVE CONDENSING UNIT IN ITS ENTIRETY, INCLUDING ALL ASSOCIATED PIPING, SUPPORTS AND CONTROLS. RECLAIM ALL REFRIGERANT.
- 3. DISCONNECT AND REMOVE SUPPLY AIR DUCT FROM JUST BELOW THE CEILING AT THE EXISTING FIRE DAMPER BACK TO AIR HANDLING UNIT. EXISTING FIRE DAMPER AT CEILING TO REMAIN.
- DISCONNECT AND REMOVE RETURN AIR DUCT FROM JUST BELOW THE CEILING AT THE EXISTING FIRE DAMPER BACK TO AIR
- HANDLING UNIT. EXISTING FIRE DAMPER AT CEILING TO REMAIN.5. REMOVE WALL LOUVER AND PREPARE OPENING FOR NEW WORK
- 3. HVAC CONTROL PANELS TO BE REMOVED.
- 7. EXISTING EXTERIOR DOMESTIC HOT WATER HEATERS TO REMAIN

## GENERAL LEGEND <u>#</u> **REVISION NUMBER (#**) KEY NOTES LIGHT LINES INDICATE EXISTING OR BY OTHERS. — — — — — DARK DASHED LINES INDICATE DEMOLITION. ------ DARK SOLID LINES INDICATE NEW WORK $\bullet$ CONNECT NEW TO EXISTING POINT OF DISCONNECTION WALL RATING LEGEND FIRE RESISTIVE RATED 1 HOUR FIRE RESISTIVE RATED 2 HOUR FIRE RESISTIVE RATED 4 HOUR SMOKE PARTITION





<ol> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	OUTDOOR DUCTWORK SHALL BE DOUBLE WALLED. REF SPECIFICATIONS FOR MORE INFORMATION. ROUTE SUPPLY AND RETURN DUCTWORK THROUGH ME ROOM WALL OPENING AT REMOVED LOUVER. PROVIDE WALL INSULATED SHEET METAL BLANK OFF AROUND DU IN EXISTING OPENING UP TO THE BOTTOM OF REPLACED LOUVER ABOVE. PROVIDE 120-INCH WIDE X 36-INCH HIG DRIVEN RAIN LOUVER ABOVE DUCTWORK SIMILAR TO R
<ol> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	ROUTE SUPPLY AND RETURN DUCTWORK THROUGH ME ROOM WALL OPENING AT REMOVED LOUVER. PROVIDE WALL INSULATED SHEET METAL BLANK OFF AROUND DU IN EXISTING OPENING UP TO THE BOTTOM OF REPLACED LOUVER ABOVE. PROVIDE 120-INCH WIDE X 36-INCH HIG DRIVEN RAIN LOUVER ABOVE DUCTWORK SIMILAR TO R
3. 4. 5.	ELF6375DXD. PROVIDE INSULATED BLANK OFF FOR HAL LOUVER ABOVE THE RETURN AIR DUCT. PROVIDE 60-INC 36-INCH HIGH GRAVITY BACK DRAFT DAMPER FOR MECH ROOM RELIEF AIR.
4. 5.	PROPOSED LOCATIONS FOR HVAC CONTROL PANELS.
э.	EXISTING MOTORIZED DAMPER TO BE INTERLOCKED WI FAN OPERATION.
	HMCEA PANEL. DUCT SHALL NOT BLOCK ADJACENT PAN CLEARANCE REQUIREMENTS.
6.	CONNECT SUPPLY AIR TO UNIT FULL SIZE OF AHU CONN PROVIDE FLEXIBLE CONNECTION AT UNIT. TRANSITION SIZE INDICATED.
7.	CONNECT RETURN AIR TO UNIT, FULL SIZE OF AHU CON PROVIDE FLEXIBLE CONNECTION AT UNIT. TRANSITION SIZE INDICATED.
8.	CONNECT OUTSIDE AIR TO UNIT, FULL SIZE OF AHU CON PROVIDE FLEXIBLE CONNECTION AT UNIT. TRANSITION SIZE INDICATED.
9.	REHEAT COIL IN SUPPLY AIR DUCT. TRANSITION FULL S AHU DISCHARGE TO REHEAT COIL INLET. TRANSITION F REHEAT COIL OUTLET TO CONNECT TO EXISTING SUPPL DUCT AT CEILING AT EXISTING FIRE DAMPER, FIELD VER EXACT SIZE. PROVIDE DUCT ACCESS DOOR BELOW COI CLEANING AND ABOVE TO PROVIDE ACCESS TO FIRE DA
10.	CONNECT TO EXISTING SUPPLY AIR DUCT AT CEILING A EXISTING FIRE DAMPER, FIELD VERIFY EXACT SIZE. PRO DUCT ACCESS DOOR FOR FIRE DAMPER INSPECTION.
11.	CONNECT TO EXISTING RETURN AIR DUCT AT CEILING A EXISTING FIRE DAMPER, FIELD VERIFY EXACT SIZE. PRO DUCT ACCESS DOOR FOR FIRE DAMPER INSPECTION.
12.	TRANSITION SUPPLY DUCT TO 89X38, TURN VERTICALLY MITERED ELBOW WITH VANES, WYE DUCT INTO TWO 382 (FIELD VERIFY SIZE) FOR CONNECTION TO EXISTING SUB DUCT AT CEILING.
13.	PROVIDE PLENUM BOX FULL SIZE OF EXISTING LOUVER CONNECTION OF OUTSIDE AIR DUCT.
14.	36X36 RETURN DUCT, TRANSITION OFF THE END TO THE AIR FAN. RELIEF FAN TO FREE DISCHARGE TO MECHAN ROOM. PROVIDE MOTORIZED RELIEF AIR DAMPER AND SCREEN ON OUTLET. SUPPORT FAN FROM STRUCTURE WITH VIBRATION ISOLATORS.
15.	RETURN AIR DUCT TO RISE UP ABOVE THE ELEVATION OF PIPING CABINET, MINIMUM 6 FEET ABOVE FINISHED SLAN TO STRUCTURAL DRAWINGS FOR DETAIL OF ELEVATED SUPPORTS. MID SPAN SUPPORT FOR DUCTWORK IN FR PIPING CABINET SUPPORTED FROM EACH POST.
16.	OUTSIDE AIR INTAKE HOOD, PROVIDE EXTENSION AS REFOR AFMS MOUNTING.
17.	MIXING BOX WITH ACCESS DOOR.
18. 19.	FILTER SECTION WITH ACCESS DOOR. HOT WATER PRE-HEAT COIL WITH ACCESS.
20.	CHILLED WATER COOLING COIL WITH STAINLESS STEEL PAN.
21.	HOT WATER REHEAT COIL.
22. 23	ACCESS SECTION.
20. 24.	DISCHARGE PLENUM SECTION.
25.	INSULATED PIPING CABINET.
26.	MIXING BOX WITH FILTER SECTION AND ACCESS DOOR.
∠1. 28.	CHILLED WATER COOLING COIL WITH ACCESS.
29.	PAN AND ACCESS. TRANSITION TO FULL SIZE OF UNIT CONNECTION IN VER
30.	RETURN AIR SMOKE DAMPER, ACTIVATED BY SMOKE CO
31.	EXISTING EXTERIOR DOMESTIC HOT WATER HEATERS T

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SMOKE PARTITION

