CORNELL UNIVERSITY
FACILITIES CONTRACTS
121 HUMPHREYS SERVICE BUILDING
ITHACA, NEW YORK 14853-3701

BRADFIELD HALL G12 GROWTH
CHAMBER INSTALLATION

ADDENDUM NO. 2

January 18, 2024

This Addendum contains changes to the requirements of the Contract Documents and Specifications. Such changes are to be incorporated into the Construction Documents and shall apply to the work with the same meaning and force as if they had been included in the original document. Wherever this Addendum modifies a portion of a paragraph of the specifications or a portion of any Drawing, the remainder of the Paragraph or Drawing shall remain in force.

NOTE: Provisions of all Contract Documents apply.

Item 1. **ADD** Specification Section 23 82 19 – FAN COIL UNITS, attached.

Item 2. Drawing M-111

DELETE in its entirety.

REPLACE with revised Drawing M-111R, attached.

Item 3. RFI Questions and Clarifications
See attached RFI Log (items 1-3)

Attachments: Specification Section 23 82 19 – FAN COIL UNITS
Drawing M-111R
RFI Log (items 1-3)

******END OF ADDENDUM******

SECTION 23 82 19 - FAN COIL UNITS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Provide labor, materials, equipment and services as required for the complete installation shown on Contract Drawings.

1.2 SUBMITTALS

A. Submit product data for room fan coil units and accessories.

PART 2 - PRODUCTS

2.1 GENERAL

A. Baked enamel finish of color selected from manufacturers standard colors. Each piece of equipment boxed separately and tagged by room number.

2.2 CONSOLE FAN COIL UNITS

A. Cabinets:

1. 18 gauge steel removable front enclosure so that internal operating parts are accessible for service or replacement.
2. Bar supply grilles.
3. Isolated valve compartment.
4. Access to motor, fan assembly, and filters.
5. Type as required for job conditions.
6. Return air grilles.
7. Insulated drip pan for coil and valve sections.
8. Insulated cabinet with material in compliance with NFPA 90A requirements.

B. Cooling Coils:

1. Copper tubes and headers, nonferrous fins.

C. Motors:

1. Multispeed, tapwound permanent split capacitor high efficiency type.

2. Built-in overload protection.

3. Resilient mountings to dissipate noise and magnetic vibration.

4. Quick detachable motor cords.

D. Pleated Throw-Away Filter

1. The units are equipped with 2 in. flat pleated media filters and a minimum MERV 11 rating based on ASHRAE Standard 52.2.

E. Drain Pan

1. The drain pan is to be externally insulated, noncorrosive (stainless steel) and double-sloped to allow condensate drainage. For units without external insulation as an option shall be field insulated. Coils mount above the drain pan, not in the drain pan - thus allowing the drain pan to be fully inspected and cleaned. The drain pan can also be removed for cleaning. The 3/4" main drain connection is at the lowest point of the drain pan. An auxiliary drain connection is provided on the same side as the main connection. Provide with factory overflow switch.

F. Design Equipment: Trane.

G. Make: Johnson Controls, Daikin Applied, Trane.

PART 3 - EXECUTION

3.1 GENERAL

A. Left hand or right hand piping connections for supply and return. Obtain complete instructions from unit manufacturer regarding each item and proper installation of same. Adjust motor speed.

3.2 INSTALLATION

A. In accordance with manufacturer's recommendations. Install piping within valve compartment to allow for pipe insulation. Provide drain piping. Vacuum clean inside of unit prior to operating units. Provide flexible duct connections at supply and return connections to ceiling units. For recessed and ceiling units, coordinate location of valves, fittings, filters, with access panels, to allow for convenient service of components. Install remote speed switch for recess and ceiling units. Provide wiring.

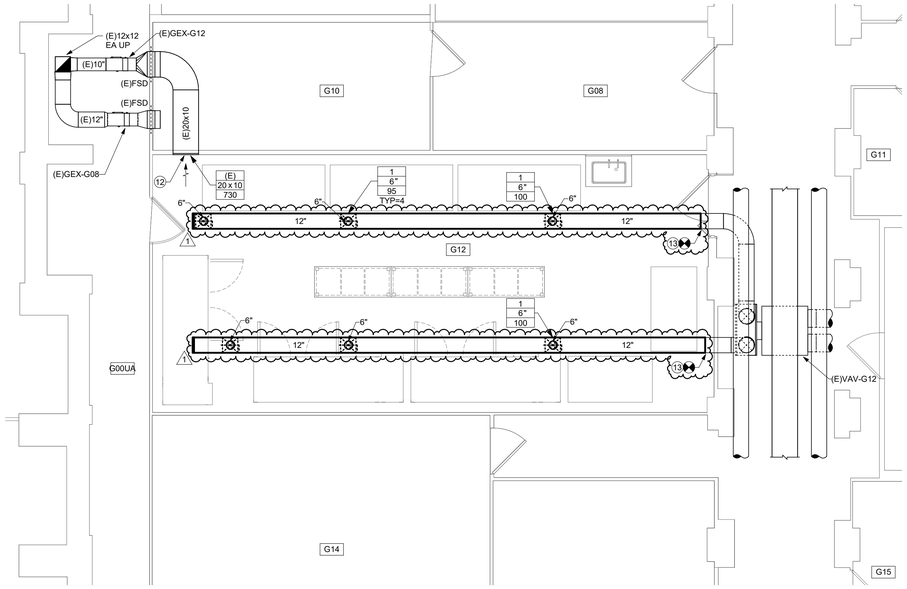
END OF SECTION 23 82 19

DEMOLITION NOTES

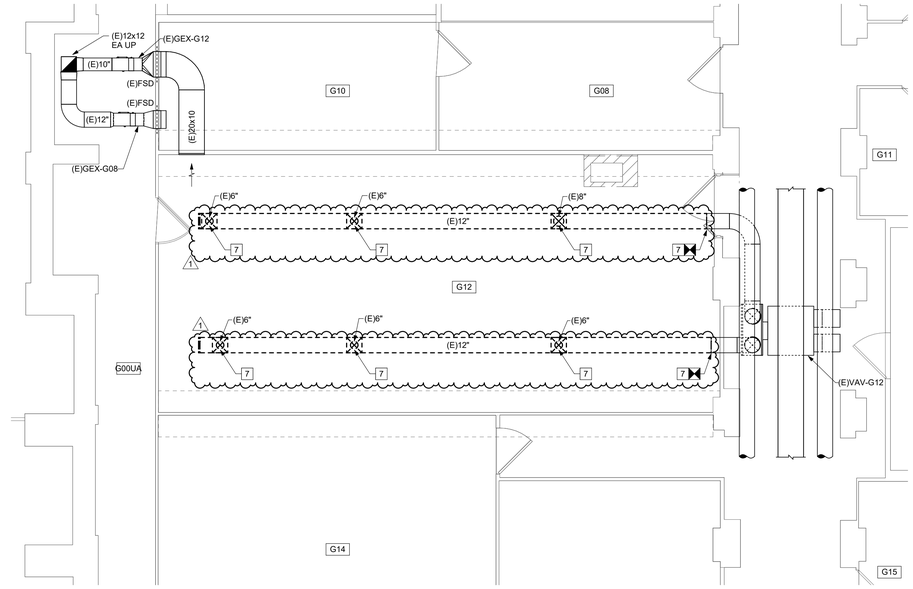
1 DISCONNECT AND REMOVE PIPING AND ACCESSORIES. CAP AND SEAL WATER TIGHT.
2 DISCONNECT AND REMOVE PIPING AND ACCESSORIES. PREP FOR CONNECTION TO NEW.
3 DISCONNECT AND REMOVE FAN COIL UNIT AND ALL ASSOCIATED CONTROLS. REMOVE PIPING AS NOTED.
4 DISCONNECT AND REMOVE EXISTING THERMOSTAT AND ALL ASSOCIATED CONTROL WIRING / PNEUMATIC TUBING BACK TO SOURCE.
5 DISCONNECT AND REMOVE EXISTING FAN SPEED CONTROLLER AND ALL ASSOCIATED CONTROL WIRING / PNEUMATIC TUBING BACK TO SOURCE.
6 DISCONNECT AND REMOVE EXISTING TEMPERATURE SENSOR AND ALL ASSOCIATED CONTROL WIRING BACK TO SOURCE.
7 DISCONNECTION AND REMOVAL OF THE EXISTING DUCTWORK AND DIFFUSERS SHALL BE DONE BY THE ABATEMENT CONTRACTOR.

DRAWING NOTES

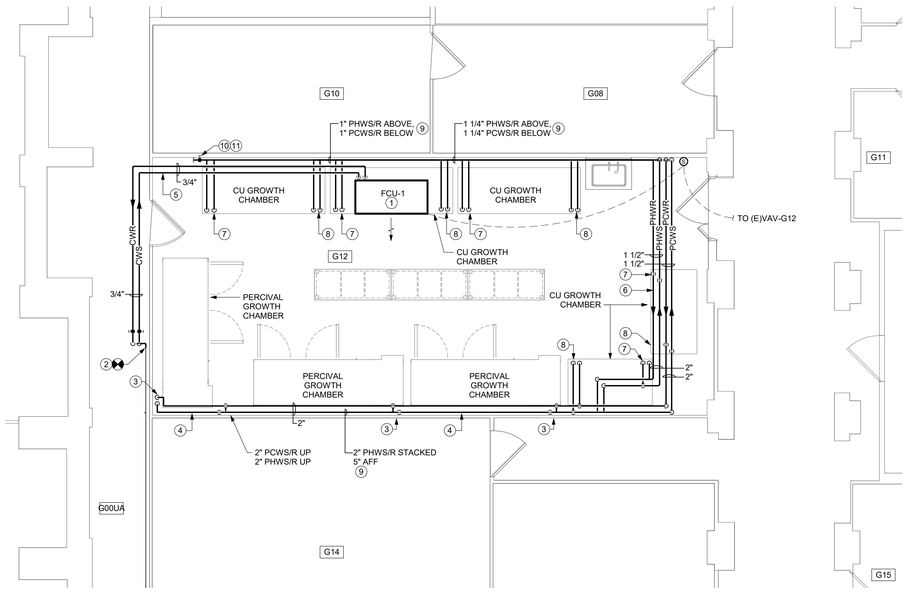
1 MOUNT FAN COIL UNIT TIGHT TO THE BEAMS ABOVE.
2 TIE PIPING INTO EXISTING. PROVIDING ALL PIPING MODIFICATIONS AS REQUIRED TO MAKE THE CONNECTION.
3 TIE 3/4" PCWS/R PIPING INTO PERCIVAL GROWTH CHAMBER. CHILLED WATER PIPING CONNECTIONS WILL BE ON THE REAR OF THE UNIT IN THE LEFT SIDE, APPROXIMATELY 22" AFF. REFER TO UNIT SHOP DRAWING FOR EXACT LOCATION. PROVIDE BRANCH PIPING PER THE ASSOCIATED DETAIL. BALANCE TO UNIT TO 0.92 GPM AND PROVIDE FINAL CONNECTION TO UNIT.
4 ROUTE PCWS/R PIPING ABOVE THE CEILING IN THE BEAM POCKET.
5 ROUTE CWS/R PIPING ABOVE THE CEILING IN THE BEAM POCKET.
6 ROUTE PHWS/R AND PCWS/R PIPING TIGHT TO THE BEAM. LOCATE TIGHT TO THE EXISTING SOFFIT, COORDINATE WITH THE EXISTING UTILITIES.
7 TIE 1" PHWS/R PIPING FUTURE CORNELL GROWTH CHAMBER. UNIT WILL BE 80" AFF. CHILLED WATER PIPING CONNECTIONS WILL BE ON THE TOP OF THE UNIT IN THE FRONT RIGHT CORNER. PROVIDE BRANCH PIPING PER THE ASSOCIATED DETAIL. FINAL CONNECTION AND BALANCING OF THE SYSTEM WILL BE BY OWNER. SYSTEM IS DESIGNED FOR FLOW RATE OF 6 GPM.
8 TIE 1" PCWS/R PIPING FOR FUTURE CORNELL GROWTH CHAMBER. UNIT WILL BE 80" AFF. CHILLED WATER PIPING CONNECTIONS WILL BE ON THE TOP OF THE UNIT IN THE FRONT LEFT CORNER. PROVIDE BRANCH PIPING PER THE ASSOCIATED DETAIL. FINAL CONNECTION AND BALANCING OF THE SYSTEM WILL BE BY OWNER. SYSTEM IS DESIGNED FOR FLOW RATE OF 6 GPM.
9 PIPING SHALL BE STACKED AND WALL MOUNTED.
10 PROVIDE DANFOSS AVDO, OR EQUAL, AUTOMATIC BYPASS CONTROL VALVE. BALANCE TO 5PM. REFER TO PIPING SCHEMATIC FOR FURTHER DETAILS.
11 AUTOMATIC BYPASS CONTROL VALVE IS REQUIRED UNTIL CORNELL CHAMBERS ARE INSTALLED. AFTER CORNELL CHAMBERS ARE INSTALLED, ISOLATION VALVES ON THE AUTOMATIC BYPASS CONTROL VALVE CAN BE LOCKED CLOSED.
12 REBALANCE EXISTING GRILLE TO AIRFLOW INDICATED.
13 TIE DUCTWORK INTO EXISTING. TRANSITION AS REQUIRED TO MAKE THE CONNECTION.



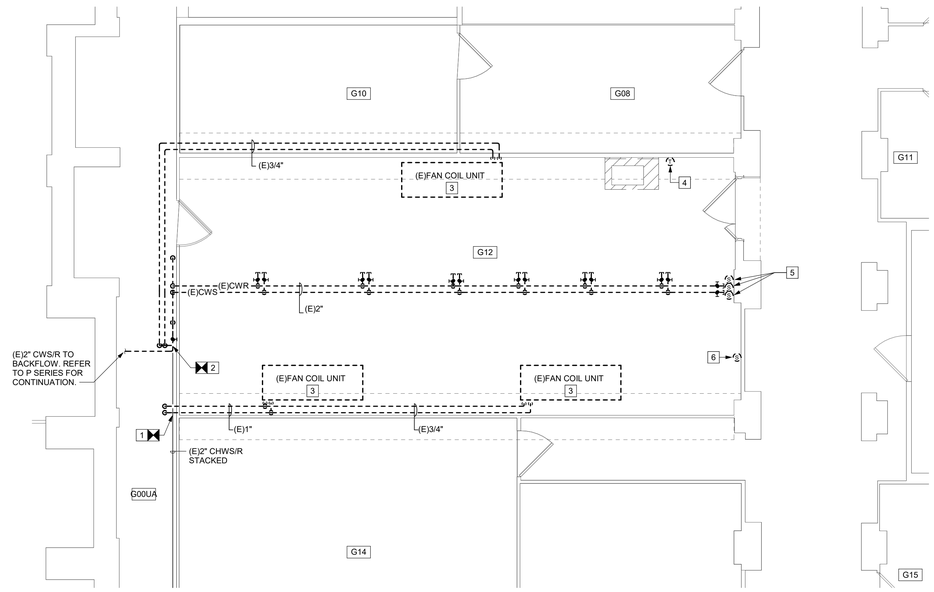
4 GROUND FLOOR PLAN - DUCTWORK
1/4" = 1'-0"



3 GROUND FLOOR DEMOLITION PLAN - DUCTWORK
1/4" = 1'-0"



2 GROUND FLOOR PLAN - PIPING
1/4" = 1'-0"



1 GROUND FLOOR DEMOLITION PLAN - PIPING
1/4" = 1'-0"

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Revisions

1 01/18/2024 Addendum No. 2

Bradfield Hall G12 Growth Chamber Installation
306 Tower Road
Ithaca, NY 14850

SWBR Project Number 23179.00

Cornell University
Ithaca, NY

M-111R
GROUND FLOOR PLANS - HVAC

November 22, 2023
100% Construction Documents

PROJECT: Bradfield Hall G12 Growth Chamber Installation **Date: January 18, 2024**

RFI Form

RFI/ Response Index	Page/ Dwg./Spec./Rep. Number	Section/ Paragraph/Topic	RFI	Design Team Response
1	3/P-100		Drawing P-100, plan 3- Will the 3" IW line need P-traps, trap primers or vent piping? How is it terminated at the pit?	The 3" IW does not require P trap, trap primers, or vents since it is Indirect waste. It will terminate at the pit with a Air Gap.
2	M-400		Drawing M-400- please provide a spec for FCU-1	See Addendum No. 2, Item 1.
3			Where we are coring for the new floor drains, will the floor need to be scanned /x-rayed for potential conduit/etc.?	Cornell confirmed scanning/x-raying for potential conduit/etc. will not be needed.