

**Addendum
No. 2**

Date: December 30th, 2015

Project: DFS Wilmington – Rooftop HVAC Replacement

Project No: SJ 14073 / MC1002000249

The work herein shall be considered part of the bid documents for the referenced project and carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Acknowledge receipt of addendum on the bid form as indicated.

Clarification:

1. As detailed on the structural drawings, the only new structural steel required is the reinforcing rod and angles for the three bar joists at unit RTU2. At all other locations, the existing roof framing is sufficient to support the new mechanical units.

Changes to Drawings:

1. *Drawing G8.3:*
 - a. Revise Discipline to “M.”
 - b. Revise plan title at top left of sheet to read “Second Floor Mechanical Demolition Plan”.
 - c. Revise plan number at bottom left of sheet to read “2/8.3.”

Changes to Project Manual:

1. *Section 095100 – Acoustical Ceilings:* Please see attached revised specification clarifying requirements for suspended acoustical ceilings.
2. *Section 237413 – Packaged Outdoor Central-Station Air-Handling Units:* Paragraph 2.08, Item D: Remove requirement for outdoor airflow monitoring station. This is not required on the units for this project.

END

SECTION 09 51 00
ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system and tiles for clean room application.
- B. Support hangers, channels, and wires.

1.02 REFERENCE STANDARDS

- A. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
- C. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.

1.03 SUBMITTALS

- A. See Section 01 30 00 - General Conditions, for submittal procedures.
- B. Product Data: Provide data on suspension system components.
- C. Samples: Submit two samples 4x4 inch in size illustrating material and finish of acoustical units.
- D. Samples: Submit two samples each, 6 inches long, of suspension system main runner, cross runner, and perimeter molding.
- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.04 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.
- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.

1.05 FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

1.06 PROJECT CONDITIONS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Install acoustical units after interior wet work is dry.

1.07 EXTRA MATERIALS

- A. See Section 01 60 00 - Product Requirements, for additional provisions.
- B. Provide 250 SF of tile for Owner's use in maintenance of project.

PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

- A. Manufacturers:
 - 1. Armstrong World Industries, Inc: www.armstrong.com.
 - 2. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Acoustical Units - General: ASTM E1264, Class A.

- C. Acoustical Tile Type A: Washable faced mineral fiber, with the following characteristics:
 - 1. Size: 24 x 24 inches.
 - 2. Thickness: 5/8 inches.
 - 3. Composition: Water felted or mineral fiber.
 - 4. Edge: Square.
 - 5. Surface Color: White.
 - 6. Surface Pattern: Unperforated.
 - 7. Product: Clean Room VL Unperforated by Armstrong Item No. 868.

2.02 SUSPENSION SYSTEM(S) UNLESS NOTED OTHERWISE ABOVE.

- A. Manufacturers:
 - 1. Same as for acoustical units.
 - 2. Armstrong World Industries, Inc: www.armstrong.com.
 - 3. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Suspension Systems - General: ASTM C 635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
- C. Exposed Tee Steel Suspension System: Formed galvanized steel, commercial quality cold rolled; heavy-duty.
 - 1. Profile: Tee; for square edge panels 15/16 inch wide face.
 - 2. Construction: Double web.
 - 3. Finish: White painted.
 - 4. Product: Clean Room by Armstrong.

2.03 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.
- B. Perimeter Moldings: Same material and finish as grid.
- C. Gasket For Perimeter Moldings: Closed cell rubber sponge tape.
- D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C 636, ASTM E 580, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:240.
- C. Lay out system to a balanced grid design with edge units no less than 50 percent of acoustical unit size.
- D. Locate system on room axis according to reflected plan.
- E. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- F. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- G. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

- H. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- I. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- J. Do not eccentrically load system or induce rotation of runners.
- K. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Install in bed of acoustical sealant or with continuous gasket.
 - 2. Use longest practical lengths.
 - 3. Miter or Overlap and rivet corners.
- L. Form expansion joints as detailed. Form to accommodate plus or minus 1 inch movement. Maintain visual closure.

3.03 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION