

**THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY
TWO MONTGOMERY STREET - 1st FLOOR
JERSEY CITY, NJ 07302**

April 30, 2025

ADDENDUM NO. 1

TO PROSPECTIVE BIDDERS ON CONTRACT **JFK-114.366** – JOHN F. KENNEDY INTERNATIONAL AIRPORT – DESIGN AND CONSTRUCTION OF BUILDING 14 ROOF REPLACEMENT – PHASE II

The following changes are hereby made in the Contract documents for the subject Contract.

This communication should be physically annexed (electronically) behind the last page of the Contract booklet and initialled by each bidder before submitting his Bid.

In case any bidder fails to conform to these instructions, his Bid will nevertheless be construed as though this communication had been so physically annexed and initialled.

CHANGES IN THE CONTRACT BOOKLET

- | | |
|----------------------------|--|
| Pages 230 -
through 232 | Delete these pages in their entireties and substitute therefor new pages attached hereto and made a part hereof. |
| Pages 234 -
through 237 | Delete these pages in their entireties and substitute therefor new pages attached hereto and made a part hereof. |
| Pages 239 -
through 240 | Delete these pages in their entireties and substitute therefor new pages attached hereto and made a part hereof. |

REVISED CONTRACT DRAWINGS

Drawing M101 has been revised as of 4/22/25. A copy of this drawing is transmitted herewith (via email or download). Destroy the drawings of this number now in your possession and substitute therefor the revised drawing.

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

M. Rizwan Baig, P.E.
Chief Engineer/Director

INITIALLED BY THE BIDDER:

PART 7 - STRUCTURAL

1. General
 - A. This section provides the structural requirements for the design and construction of the roof replacement at JFK Building 14. The Design-Builder must refer to other requirements in these Contract Documents.
2. Applicable Codes and Standards
 - A. New York City Building Code (NYCBC), 2022 with latest supplements
 - B. American Society of Civil Engineer "Minimum Design Loads and Associated Criteria for Buildings and Other Structures" (ASCE 7)
 - C. American Concrete Institute "Building Code Requirements for Structural Concrete" (ACI 318)
 - D. American Institute of Steel Construction (AISC) "Steel Construction Manual"
 - E. American Welding Society "Structural Welding Code – Steel" (AWS D1.1)
 - F. Port Authority of NY&NJ – Structural Design Guidelines
3. Design and Performance Requirements
 - A. Perform structural inspection to the existing roof slab and document all structural deficiencies such as concrete crack, delamination, spall and corroded roof framing members. The inspection shall include non-destructive testing and structural probes to uncover any underlying condition that is not visually observed.
 - B. When and as directed by the Engineer, provide structural design and implement of repairs to all structural deficiencies found at the roof slab and defected roof framing members.
 - C. Provide structural analysis and evaluation of existing roof slab and roof framing for the proposed roofing system and new mechanical/electrical/plumbing (MEP) equipment.
 - D. Provide design and construction of supplemental structural reinforcement to existing roof slab and roof framings as necessary to support design roof loads defined in NYCBC and all other architectural items such as proposed roof access ladders, guard rails and Fall-Protection system, and proposed rooftop MEP equipment.
 - E. Remove and replace existing concrete pads with new at roof for MEP equipment.
 - E.1 Remove existing abandoned concrete pads B2-M-4, B2-M-5, B2-M-9 and B2-M-10 on the Roof B6 as shown on Basic Contract Drawing M101.
 - F. Remove and replace existing steel dunnage with new for MEP equipment.
 - G. Remove and replace existing expansion joints with new at roof slab.
 - H. Remove and replace existing sealant and backer rod with new at roof slab.
 - I. For all other roof loads and loading conditions not listed in the Contract Documents, refer to the NYC Building Code for minimum requirements.

END OF PART 7

PART 8 - MECHANICAL

1. General

- A. This section provides Mechanical Heating, Ventilating, and Air-Conditioning (HVAC) requirements for design and construction of mechanical systems which are located on Roof Area B of JFK Building 14.
- B. Design-Builder must provide coordination, design, procurement, construction, testing and commissioning of HVAC systems for JFK Building 14 in this section and as required by the Applicable Standards.
- C. The HVAC work involves removal and temporary removal and re-*installation* of existing mechanical equipment and installation of new equipment for JFK Building 14 due to the Roof Area B roof replacement.

2. Applicable Codes and Standards

- A. Mechanical HVAC design and construction must comply with all applicable Laws, codes and standards, including at a minimum:
- B. The following are Mechanical HVAC reference requirements, standards, codes, and specifications:
 - 2022 New York City Mechanical Code;
 - 2022 New York City Building Code;
 - 2022 New York City Fire Code – Section 608;
 - 2020 New York City Energy Conservation Code (2020 NYCECC);
 - American National Standards Institute (ANSI);
 - American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE);
 - National Electric Code – Section 480;
 - National Fire Protection Association;
 - PORT AUTHORITY Mechanical Design Guidelines;
 - Sheet Metal and Air Conditioning Design-Builders' National Association (SMACNA).

3. Design and Performance Requirements

A. Administrative Requirements

i. Lead Mechanical Engineer

The Design-Builder must engage a Mechanical Professional Engineer licensed in the State of New York for the duration of the Work. The Mechanical Professional Engineer must meet the New York State licensing requirements and possess an active certificate of authorization.

The Mechanical Professional Engineer must be responsible for all design activities involving the mechanical systems. All mechanical Design Documents, including all Design Reports, design drawings, Contract Specifications, procedures, analyses, and Design Calculations must be Signed and Sealed by the Mechanical Professional Engineer. The Mechanical Professional Engineer must also be responsible for approving all mechanical construction documents, including nonconformances and design changes.

ii. Certified TAB Technicians

Design-Builder must engage the services of technicians who are certified by the National Environmental Balancing Bureau (NEBB) to conduct Testing, Adjusting, and Balancing (TAB) of the HVAC systems.

B. Scope & Criteria

Design-Builder must provide design, construction, coordination, procurement, testing and commissioning of the HVAC systems and work required for the removal and temporary removal and re-installation of existing equipment and installation of new equipment located on Roof B of JFK Building 14, as necessitated by the roof replacement.

The Mechanical HVAC scope of work must include, but not limited to the following:

- Design-Builder must remove, temporarily relocate, store, re-install, test and commission mechanical roof-mounted units that will be impacted by repair or replacement of the building roofs.
- Design-Builder must perform testing, including but not limited to measuring airflow, static pressure and horsepower of all active HVAC equipment before removal and after installation of the equipment to ensure that the equipment will meet existing capacities after re-installation.
- All mechanical roof-mounted units which are not operational or exceeding the service life based on the latest ASHRAE Applications Handbook, Chapter A37, Table 4 must be replaced. List of the equipment with action required is provided in Tables 8.1 to 8.3. The existing supporting dunnage, roof curbs, penetrations, electrical connections, electrical power, control connections, refrigerant piping, ductwork, condensate piping, etc. must be modified or replaced accordingly to accommodate the new installations.
- All areas that are served by HVAC equipment which require removal, modification, alteration, or relocation must be provided with temporary cooling / heating and ventilation to maintain the necessary design environment for served areas. The Design-Builder must provide temporary unit selection, site plan location approved by the Facility/PANYNJ, ductwork connections, sequence of operation, controls and electrical connections for all temporary units.
- Remove existing Computer Room Air-Conditioning Units (CRAC) units and associated Condensers including refrigerant piping and appurtenances serving the Computer Room (UNISIS) and the Telecom Room.
- Design-Builder must perform detailed HVAC load calculations for the Computer Room (UNISIS) and the Telecom Room. A 20% factor of safety must be applied to the calculated capacity to account for future load growth and ensure system reliability.
- A 100% redundant CRAC system must also be provided for the Computer Room and the Telecom room, utilizing an N+1 configuration to maintain full operational capacity in the event of equipment failure. The CRAC control system shall include automatic switchover functionality to ensure seamless and uninterrupted operation of any unit fails.
- All CRAC units must be heavy-duty, computer room-type air conditioning units, specifically engineered for continuous, mission-critical operation. The basis of design shall be Vertiv (formerly Liebert), or an approved equal that meets all performance and quality standards.
- Design-Builder must provide the design, construction, coordination, procurement, installation, testing and commissioning of the CRAC systems, including CRAC units, condensers, refrigerant piping, electrical power, controls, equipment curbs, supports, penetrations, condensate piping, ductwork with air inlets/outlets, connections to existing BMS system. (See Table 8.2).

- Mechanical equipment require replacement with new units listed in Table 8.2

Table 8.2 Mechanical equipment that shall be replaced with new equipment.

UNIT ID (PHOTO ID)	UNIT TYPE	ROOF LOCATION	AREA SERVED	EQUIP. TYPE & DESCRIPTION	MOUNT TYPE	Existing MANUF	Existing MODEL	NOTES
ROOF B1								
B1-M-3	Flue Vent	Central Offices	Cafeteria	8"Ø Metal Capped Vent Terminal	-	-	-	Furnish and install new curb and extend the flue terminal at least 36" above the finished roof.
B1-M-5	Rooftop Ventilator (Used as Pipe Box)	Central Offices	AirTrain	Old 34"x34" Square Hood Rooftop Ventilator	6"H Roof Curb	-	-	Replace the ventilator and curb.
ROOF B2								
B2-M-1	Condenser/CR AC	Central Offices -Low Roof Area	UNISIS RM 3rd FL	Condenser for Indoor CRAC unit	Steel Support on 7"H Eqpt Rails	Liebert	DCSF083-Z, BU067A-AAEI	Replace the Computer Room Air Conditioning (CRAC) system, including one CRAC unit, one condenser, refrigerant piping, electrical power, controls, equipment curbs, supports, penetrations, condensate piping, ductwork with air inlets/outlets, connections to existing BMS system.
B2-M-2	Condenser/CR AC	Central Offices -Low Roof Area	UNISIS RM 3rd FL	Condenser for Indoor CRAC unit	Steel Support on 7"H Eqpt Rails	Liebert	DCSF083-Z, BU067A-AAEI	Replace the Computer Room Air Conditioning (CRAC) system, including one CRAC unit, one condenser, refrigerant piping, electrical power, controls, equipment curbs, supports, penetrations, condensate piping, ductwork with air inlets/outlets, connections to existing BMS system.
B2-M-3	Condenser/CR AC	Central Offices -Low Roof Area	2nd FL Telecom RM	Condenser for Indoor CRAC unit	Steel Support on 7"H Eqpt Rails	Liebert	DCSF083-Z, BU067A-AAEI	Replace with two Computer Room Air Conditioning (CRAC) systems, with one of the units being 100% redundant, including two CRAC units, two condensers, refrigerant piping, electrical power, controls, equipment curbs, supports, penetrations, condensate piping, ductwork with air inlets/outlets, connections to existing BMS system.
B2-M-7	Exhaust Fan	Central Offices -Low Roof Area	Garage	Utility Exhaust Fan w/ 54"x30" Exhaust Duct	Steel Support on 7"H Pad	Snyder	445 AF CW	Replace the fan and curb.
B2-M-11	Exhaust Fan	Central Offices	Bathroom	Centrifugal Downblast Exhaust Fan	24"H Roof Curb	Greenheck	184 BCR A	Replace the fan and install a seismic curb.
ROOF B3								
B3-M-10	Gooseneck Vent	Central Offices - Upper Roof Area	Boiler Fresh Air	Galv. Sheetmetal w/o WMS	12"H Roof Curb	-	-	Replace the fan and install a seismic curb.
B3-M-12	Gooseneck Vent	Central Offices - Upper Roof Area	Chiller Vent	Long Steel Gooseneck Vent Pipe	-	-	-	Replace the Gooseneck and curb.
B3-M-13	Gravity Vent	Central Offices - Upper Roof Area	Elevator Room Fresh Air	36"Ø Metal Hood Gravity Vent	10"H Roof Curb	Greenheck	-	Replace the vent and curb.
ROOF B4								
B4-M-1	Roof Vent	Central Offices - Upper Roof Area	Elevator Shaft	Old 52"x52" Square Hood Rooftop Ventilator	3"H Roof Curb	Bilco	D-SH	Replace the fan and curb.

UNIT ID (PHOTO ID)	UNIT TYPE	ROOF LOCATION	AREA SERVED	EQUIP. TYPE & DESCRIPTION	MOUNT TYPE	Existing MANUF	Existing MODEL	NOTES
ROOF B5								
B5-M-1	Rooftop Ventilator	Central Offices - Upper Roof Area	Spill Vent for Units	Square Hood Rooftop Ventilator (FAI)	12"H Roof Curb	-	-	Replace the ventilator and curb.

- Mechanical equipment require reinstallation listed in Table 8.3

Table 8.3. Mechanical equipment that shall be reinstalled.

UNIT ID (PHOTO ID)	UNIT TYPE	ROOF LOCATION	AREA SERVED	EQUIP. NAME	CAPACITY (TONS)	EQUIP. TYPE & DESCRIPTION	MOUNT TYPE	Existing MANUF.	Existing MODEL #	NOTES
ROOF B1										
B1-M-1	Exhaust Fan	Central Offices	Cafeteria	KX-1	N/A	Utility Exhaust Fan	Steel Support on 2"H Eqpt Support Rail	Trane	CBID30FS	Temporary remove the fan and re-install with new seismic supports.
B1-M-6	Condensing unit	Central Offices	AirTrain	ACCU-8	3.75	Small Outdoor Condensing Unit (Split System)	5"H Equipment Rails	Fujitsu	AOU45RLXFZ	Temporary remove the condensing unit and re-install with new seismic supports roof. Modify refrigerant piping, controls, etc.
ROOF B2										
B2-M-8	Condensing Unit	Central Offices -Low Roof Area	2nd FL Conference RM	-	12	Air-Cooled Condensing Unit (VRF type)	8"H Equipment Rails	Mitsubishi	PUHY-P144YJMU-A	Temporary remove the condensing unit and re-install with new seismic supports. Modify refrigerant piping, controls, etc.
ROOF B3										
B3-M-14	Exhaust Fan	Central Offices - Upper Roof Area	Elevator Room Exhaust Fan	-	N/A	Centrifugal Downblast Exhaust Fan	10"H Roof Curb	Greenheck	GB-130-5	Replace the fan and install a seismic curb.

C. Existing Conditions

The Roof Area B at the JFK Building 14 Administration Building consists of several adjoined roofs that support HVAC vents, fans, condensing units, outside air intakes, heating and ventilating units, capped and abandoned sheet metal, and concrete roof curbs.

Design-Builder must verify all conditions and dimensions in the field prior to design, preparation of shop drawings, procurement, construction and ordering any materials and equipment.

D. Design Weather Conditions

Outdoor weather criteria used for the design of the building mechanical systems must be as stated in the latest ASHRAE Handbook - Fundamentals:

- Work Location: John F. Kennedy International Airport, Queens, NY USA

- All conditions are representative of the 0.4% of the year where conditions exceed these temperatures

Summer: Design Dry Bulb 89.8°F / Design Wet Bulb 73.0°F

Winter: Design Dry Bulb 13.5°F

E. Indoor Design Temperature and Humidity

Design-Builder must use ASHRAE recommendations and the Port Authority Mechanical Design Guidelines to identify the temperature and humidity requirements for building areas based on the current type of occupancy and condition requirements for the equipment.

Telecom and Computer Room

- Heating Design Temperature 68°F DB (minimum)
- Cooling Design Temperature: 72°F DB

Office Space

- Heating Design Temperature 70°F DB (minimum)
- Cooling Design Temperature 75°F +/- 2°F DB, 50%RH (+/- 5%)

F. HVAC Requirements

- Cooling, heating, and ventilation requirements must comply with the latest NYC construction codes.
- Design-Builder must design HVAC systems for individual rooms, with sizing contingent upon calculated cooling and heating loads and ventilation prerequisites for each area.
- If units are fully operational, are not exceeding their service life, and their supports are sufficiently elevated, removal of these units may not be required. However, Design-Builder must ensure that these units will not impede the roof replacement process.
- All new units must comply with latest NYC Construction Codes, laws and regulations and applicable ASHRAE standards.
- All equipment must be stored in location(s) protected from weather elements. Design-Builder must comply with manufacturer's recommendations for storage and handling of equipment during the project.
- All mechanical equipment installed on roof curbs must be 30 inches high measured from the top of roof deck to accommodate increased roofing assembly.
- All mechanical equipment installed on steel dunnage must be 48 inches high measured from the top of roof deck to accommodate increased roofing assembly.
- In cases where the HVAC unit is replaced with new equipment, new support structures must be provided in accordance with manufacturer requirements.
- Electrical equipment, including disconnect switch boxes and associated wiring, must be raised to accommodate new mechanical equipment installation and to accommodate increased roofing assembly.

- x. Design-Builder must replace all existing flue stacks/vents as noted in Table 8.2 to accommodate increased roofing assembly by terminating a minimum of 36 inches above the finished roof with material to match existing.
- xi. Design-Builder must ensure that all pipes, pits, manholes, pumps, and other equipment or structures within or near the area(s) of work are kept free from materials that would hamper the performance of the systems.
- xii. All equipment and materials must be installed in accordance with the manufacturer's recommendations and instructions.
- xiii. Design-Builder must take all precautions necessary to minimize any disturbances to the continuous operation of the facility.
- xiv. Design-Builder must provide mechanical ventilation of sufficient capacity, in accordance with OSHA's construction standards, in work area(s) where performing welding, brazing, and cutting activities.

- ducts attached to rotating and oscillating equipment must be isolated from such equipment by flexible connectors.
- ii. Design-Builder must design and install supports for HVAC equipment in accordance with the latest NYC Building Code for wind loads and seismic design. Specified devices, such as cables, struts, and anchors, must be compatible with vibration control devices so as not to impede the performance of said devices. Comply with the seismic design criteria outlined in the Applicable Standards and the structural requirements of Part 7.

J. Temporary HVAC equipment

- i. During construction, all existing spaces and offices must remain fully operational. Design-Builder must furnish and install temporary cooling/heating and ventilation equipment as required to maintain the temperature in those spaces as described below.
- ii. Temporary HVAC equipment must be portable, self-contained, air-cooled and electrically operated. Equipment must be as manufactured by Movincool, Kwik or approved equal. The equipment must operate automatically under variable load conditions. The Design-Builder must provide all required materials and equipment and perform all required installation work, including all hook-ups, to provide temporary HVAC service. Condensate from portable equipment must be pumped/drained to the nearest floor drain. All heat rejected by the temporary HVAC equipment must be discharged to the outdoors.
- iii. Temporary HVAC equipment must have minimum heating and cooling capacities to maintain a room temperature of 70 degrees F during heating mode operation and 75 degrees F during cooling mode operation for each space.

K. Equipment and System Testing

- i. Design-Builder is responsible for all testing, commissioning, and acceptance testing activities in accordance with the testing and commissioning requirements. Testing, adjusting, balancing, and commissioning must be performed for all effected mechanical systems.
- ii. Prior to the removal of any mechanical equipment, testing of the existing HVAC equipment must be performed to determine if the existing equipment operates in accordance with their design parameters and manufacturer data. Airflow test must be performed, recorded, and submitted to the Port Authority. After the installation of equipment, the same tests must be performed to verify that the new performance matches that of the existing equipment performance.

L. Spare Parts

Design-Builder must provide spares in the quantities and types specified by Manufacturer(s) and by Technical Specification(s), including, but not limited to components shown in the following table:

MECHANICAL SPARE PARTS	QUANTITY
• Fan Belts	2 sets per each fan (exhaust/supply)
• Air Filters	1 set per each outside air intake system/louver

M. Construction Requirements

- i. Design-Builder must protect from damage all existing equipment that are to remain. Any piping/ductwork and/or equipment damaged by the Design-Builder must be repaired or replaced.
- ii. The Design-Builder must schedule the Work to minimize disruptions to heating and cooling operations.
- iii. The Design-Builder must submit the Mechanical Construction Phasing Plan to the Port Authority for review and commenting prior to the start of Construction Work.

N. Submittals

A. The Design-Builder shall prepare and submit to the Port Authority Design

Calculations including but not limited to:

- i. Cooling and heating load
- ii. Static pressure

B. The Design-Builder shall prepare and submit to the Port Authority Design Drawings indicating all HVAC system configurations including but not limited to:

- i. Floor plans of HVAC equipment layout
- ii. Enlarged part plans of HVAC equipment layout
- iii. Flow/Riser diagrams
- iv. Details
- v. Equipment schedules

C. The Design-Builder shall prepare and submit to the Port Authority for record as for information only submittals Shop Drawings indicating detailed and final HVAC system configurations indicating the following:

- i. HVAC and CRAC units
- ii. Fans
- iii. Controls/ Sequence of operations
- iv. Refrigeration piping
- v. Sensors
- vi. Roof curbs
- vii. Seismic support
- viii. System components
- ix. Dampers
- x. Insulation
- xi. Ducts

D. All Design Calculations, Design Drawings, and Shop Drawings shall be signed and sealed by a Professional Engineer licensed in the state of New York.

END OF PART 8