

**REPLACE HVAC Replace HVAC UNITS & RANGE HOODS  
WORK REQUEST #6007778  
BUILDING 93**

**1. General Intention:** It is the declared and acknowledged intention of this solicitation to obtain the supervision, expertise, labor, materials, and equipment to accomplish the replacement of the existing air conditioning system, with a new 3 ton roof top package unit (RTU), to include all duct installation, insulate the existing drop ceiling, install two kitchen cabinets, and two electric range hoods vented to the outside of the building. The contractor will provide a one (1) year warranty on labor; a one (1) year manufactures warranty on materials, and a 2<sup>nd</sup> year through 5<sup>th</sup> year compressor replacement warranty on the RTU. All the equipment and materials must be installed to the manufacturer's installation specifications. Provide warranty information and two (2) copies of the equipment manuals to the Facility Maintenance Warranty Technician, Larry Brock, at 466-2919.

**2. Location:** Building 93

**3. Scope of Work:**

Install 3 Ton Heat Pump RTU Package System:

Selection of equipment similar or equal to the following:

TRANE:

Tag Data - 1.5-5 Ton Package Heat Pump Rooftop R-410A (Qty: 1)  
Item Tag(s) Qty Description Model Number

A1 No Tag (1)-3 Ton Package Heat Pump Rooftop 4WCZ6036A3000  
R-410A convertible heat pump 16 SEER  
3 Tons, 14 /16 SEER  
208-230/3/60

Roof-curb (Field)

7.51/10.0kw electric heat 208/240/3 (Field)  
Single power entry kit (Field)

1-2" Filter frame (Field)  
2-Position motorized damper (Field)

Programmable Electronic Night Setback Thermostat

**ENCLOSURE ( 1 )**

The Contractor shall:

a. Coordinate all work with the Contracting Officer's Designated Representative and building occupants. Keep all work areas clean and do a daily clean-up.

b. Lock and tag out all electrical circuits.

c. Use appropriate personnel protective equipment such as safety glasses, hard hats, hearing protection, protective clothing, and gloves.

d. Remove the refrigerant from the old mini split systems. The reclaimed refrigerant is the property of the contractor.

e. Remove any electrical conduit, wiring, switches, outlets, and disconnects to include high and low voltage wiring associated with the existing air conditioning system.

f. Disconnect and remove the existing wall mounted mini split units, condensers, refrigerant lines, and drains. This equipment is and will remain the property of the US Government.

g. Roof opening, roof curb and supports, framing, and roof sealing, shall be installed by a certified roofer.

h. Install vibration absorbers between RTU and roof curb.

i. Install 3 ton package heat pump rooftop unit per manufacturer's installation instructions.

j. Install the electric strip heat package on the AHU.

k. Installed duct trunk-line and branch configurations to be sized in accordance of the HVAC manufacturer's instructions, properly sized for the packaged unit. Fabricated rectangular, galvanized steel, includes fittings, joints, supports and allowance for flexible connections to minimize vibration and noise. (SMACNA standards, or equivalent, for structure, sealing, leak testing, etc., shall be followed:

- Duct shall be constructed, braced, reinforced and installed to provide structural strength and durability.

- Return duct shall be constructed to allow an even distribution of air over the entire return filters area.

- Any and all hangers shall be galvanized, sized and spaced to accommodate the weight of the ductwork and to prevent sagging.

- Utilize flexible connections between equipment and duct systems.

- Prior to insulating the duct work, longitudinal and transverse joints, seams and connections, shall be sealed with

the appropriate UL-181 A-M for mastic and UL-181 A-H for heat-sensitive tapes.

- All rectangular ducts shall be insulated with blanket type fiberglass, flexible, foil-back vapor barrier wrap, .75lb. density, minimum of 2" thick, R-6.

- Note: (HVAC system shall be leak tested before installation of duct insulation)

l. Install a minimum of nine (9) supply ducts, whereas; six (6) in the break room, plus two (2) in the kitchen, plus (1) in the server room. All to be of flexible metalized polyester jacket on corrosion resistant metal helix, minimum of 2" insulation, R-6. All metallic ducts shall be constructed as specified in the SMACNA duct construction standards and in accordance with UL-181.

m. All nine (9) ceiling supply registers/diffusers shall be aluminum 24" x 24" connectors, fully insulated lay-in panel, opposed blade damper.

n. The existing grid acoustical drop ceiling is 24" x 48" and shall be configured for the 24 x 24 supply and return registers/diffusers at each supply and return location.

o. The return duct is to be sized in accordance of the manufacturer's instructions of the above listed heat pump CFM requirements, properly sized and insulated as in #k and l above.

p. Three return drop ceiling registers, two (2) in the break room located opposite ends of the room, and one in the server room on the opposite wall as the supply, fully insulated as in #g above, 24" x 24" with applicable air filters installed in each.

q. Install thermostat similar to the Honeywell Vision Pro in a central location in the break room, 7-Day Programmable featuring touch screen, menu-driven programming, minimum 3 heat and 3 cool.

r. Install outdoor rated weather tight electrical disconnect within reach of the rooftop unit sized to manufacturer's recommended minimum and maximum ampacity rating.

s. Install 115 volt rain-proof service outlet within reach of the rooftop HVAC unit.

t. Start unit, check operation, make necessary adjustments.

Note: Low Voltage control wiring from the thermostat to the Roof Top Unit shall be installed in conduit.

Note: All high voltage wire shall be pulled and routed in conduit from electrical panel LP 3 that is located on the inside wall of the welder's shop.

u. Total air balance (TAB) air flow the system by adjusting air CFM in each air supply branch.

v. Provide three copies of the equipment installation instructions and owner's manuals filter information, belt sizes, and acceptance date to the Facility Maintenance Warranty Technician. Store one copy of the service manuals with the installed HVAC equipment.

#### **4. Install new kitchen cabinets and range hoods:**

Note: Prior to installation of the kitchen cabinets, remove conduit and wire of the two electric ranges to a point above the drop ceiling, install junction boxes and reroute the conduit and wire to the two ranges. This is so the wall cabinets can be installed flat on the wall above the range tops.

a. Install new kitchen wall cabinets, hardwood, prefinished oak, two doors, 12" deep, 30" high, and 30" wide over the existing 30" wide stove.

b. Install new kitchen wall cabinets, hardwood, prefinished oak, two doors, 12" deep, 30" high, and 40" wide, (side to side of item a above) and over the existing 40" wide stove.

c. Install new range hoods under the respective sized cabinets and vent directly above the cabinets and to the right of the cabinets, through the block wall, to the buildings outside. Appliances shall be variable speed; 30" and 42 inches maximum to fit the appropriate sized cabinets and stove tops.

d. Exhaust vent pipe shall be metal and installed per range hood manufacturer's installation guidelines.

e. Range hoods shall be similar or equal to Broan models No. 463604 and fit under the installed cabinets.

f. Hood wall caps should be similar or equal to Air King PWC7R Professional Hood Wall Cap.

G. Electrically wire the range hoods, wire sized per the manufacturer's installation instructions. Wire shall be pulled and routed in conduit from electrical panel LP 3, on its own breaker, located on the inside wall of the welder's shop.

## 5. Ceiling Insulation:

1. Install Kraft faced blanket insulation over the existing suspended ceiling in the break-room and kitchen with an insulation value of R-30. (9" thick 24" wide) (Approx. 955<sup>2'</sup>)

2. Insulate the suspended ceiling in the server-room to match item 1 above. (Approx. 96<sup>2'</sup>)

## 6. Special Requirements:

The Contractor shall be required to:

a. Notify Contracting office prior to commencement of work.

b. Have all materials on-site prior to commencement.

c. Complete the work within sixty (30) calendar days.

d. The existing mini split condensers, evaporator units, to include refrigerant tubing is the property of the US Government and remain on MCAS Cherry Point. All other material associated with the installation of the new HVAC equipment, is the property of the contractor and shall be removed from the air station and discarded in an approved certified NC landfill.

e. The Contractor shall accomplish the above items, and all work requirements shall be in accordance with the Naval Facilities Guide Specifications, manufacturer's recommended specifications to ensure warranty. All North Carolina Building Codes, Fuel Gas Code, Statues, National Electrical Code, and OSHA Safety Codes will be strictly enforced. The contractor is responsible for any required permits.

f. All outages require Contractor's written request fifteen (15) days prior to commencement of such work and coordinated with the Contracting Officer for approval.

g. Make a site visit and take steps as may be reasonable necessary to ascertain the nature and location of the work and general conditions that could affect the work or the cost thereof. Perform an inspection of each work item, take their own measurements, developing their own material requirements in accordance with the specifications to install, and leave operational the listed items in the contract. Failure to do so will not relieve the Contractor from the responsibility of estimating properly.