State of Alaska, Department of Environmental Conservation,
Division of Air Quality

A Street Air Monitoring Shelter
RFQ No. 18-620-24
Fairbanks, Alaska

Date of Issue: February 23, 2024

Purpose:

The State of Alaska, Department of Environmental Conservation, Division of Air Quality is soliciting quotes for a test equipment shelter for the A Street air monitoring station in Fairbanks, Alaska, under the Division's Air Monitoring & Quality Assurance (AMQA) Program.

The Procurement Officer for this document is:

Bryant Trujillo, Procurement Specialist 3
State of Alaska, Department of Environmental Conservation,
Division of Administrative Services
Email: **DECDASPROCUREMENT@alaska.gov**

Item Description:

The Department of Environmental Conservation (DEC) has received funding to replace the A Street air monitoring site shelter in Fairbanks, Alaska, and outfit it with a dedicated heating, ventilation, and air conditioning (HVAC) unit. The A Street station is a particulate matter maximum impact site for the Fairbanks area that provides required data crucial to decision-making in a high-profile non-attainment area.

Ensuring adequate heating is necessary to protect the equipment on site and ensure data integrity. The HVAC unit must be either a 120-volt or 240-volt alternating current (AC) forced air device capable of maintaining stable internal climate control between 20 and 30 degrees Celsius (°C), 68 and 86 degrees Fahrenheit (°F) during typical interior Alaska summer and winter weather conditions (-50°F to +90°F). The HVAC unit must be mounted on or through a shelter wall, with a minimal interior space requirement, and use no floor space. The unit must have a digital thermostat. The HVAC will be connected to the supplied shelter's 120/240-volt AC electrical panel by the winning offeror.

The shelter houses EPA-required air monitoring equipment and will be equipped to house at least two (2) semi-continuous particulate monitors inside and two (2) low-volume filter-based samplers on the roof, to be installed and maintained by DEC personnel. The contractor must provide four (4) "passthrough" ports that will be located on the shelter, two (2) on the roof, and two (2) on the walls for sample collection inlets, wiring, and instrument exhausts. The shelter will have a lockable door to access the interior and a ladder or stairs for roof access. The roof will have a walking platform with appropriate handrails and electrical outlets. The contractor will ensure the interior and exterior of the shelter are well-lit, and a breaker box and outlets will be present to power all necessary equipment. The contractor must guarantee that the provided structure will be "connection ready" to a meter base. DEC will ensure the site is free of debris before the delivery of the shelter, that power is present at the site and operational, and that all air monitoring equipment is installed.

Specifications:

The HVAC unit shall meet the following technical specifications:

- The unit must have a 120-volt and/or 240-volt AC electrical interface;
- The unit must be equipped with both a forced air electric heater and air conditioning;
- The unit must be wall-mounted to conserve floor space;
- The unit shall be able to maintain a stable temperature within a range of +/- 2.1°C;
- The unit must maintain an internal air temperature range between 20°C and 30°C (approximately from 68°F to 86°F);
- The unit must maintain the above temperature and stability during typical Fairbanks, Alaska weather conditions (estimated to be -50°F in the Winter to +90°F in the Summer);
- The unit must be weather resistant to prevent water infiltration and corrosion resulting from rain, snow, and ice common to the geographical area;
- The unit must be tamper resistant and be able to withstand periodic moderate impacts (i.e., an impact from a baseball or football);
- The unit must be equipped with a function that drains condensate away from the vendor-supplied enclosure;
- The unit must have replaceable air filtration;
- The unit shall be designed to minimize the impact of noise in the surrounding environment;

- The unit must be supplied with a digital thermostat capable of maintaining the above-noted conditions; and
- The capability to interface with a hard-wired Ethernet connection and/or through wireless Wi-Fi communications is preferred but not required.

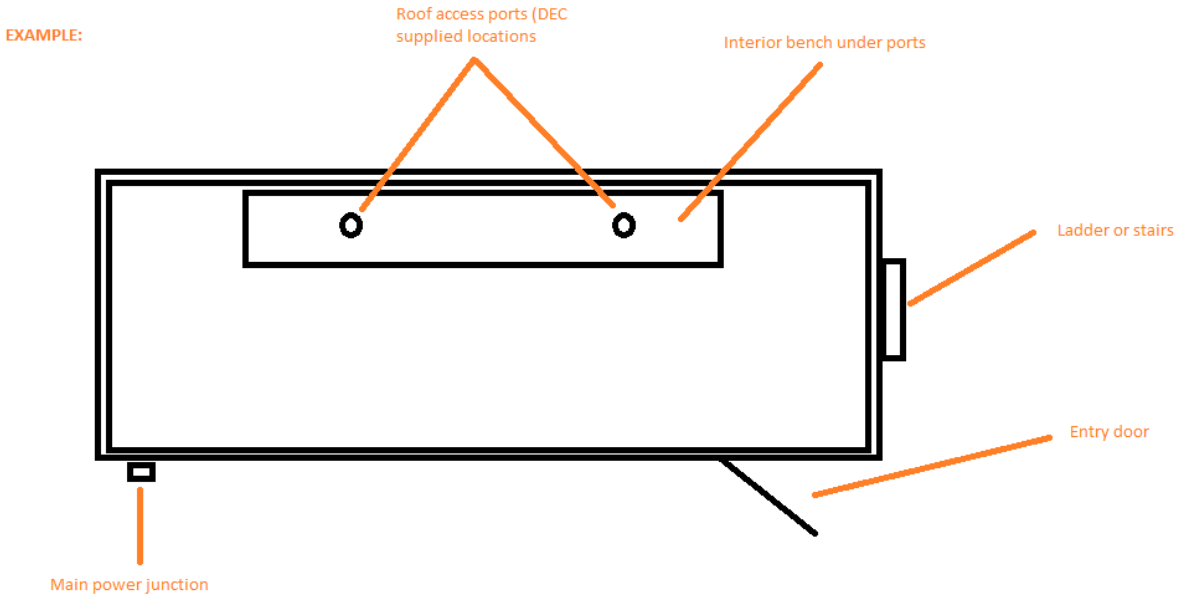
Examples include a one-ton Bard W12AB-K02, an ICEqube vertical mount AC enclosure, or a split unit.

The above-noted picture is for reference purposes only and is not a direct replacement for the requested HVAC unit. The HVAC unit must be a self-contained device mounted on the shelter's exterior or interior wall; no appreciable space shall be consumed in the shelter's interior. No backup power is required in this requested HVAC system.

The shelter shall meet the following technical specifications:

- Minimum finished interior dimensions 7 feet by 15 feet, maximum 8-1/2 feet by 22 feet, with a minimum unobstructed interior ceiling height of greater than or equal to 6 feet 4 inches from wall to wall, with a maximum ceiling height of 108 inches;
- Floors, walls, and ceiling shall be wood, fiberglass, composite, or metal, and the floor must be covered with a slip and water-resistant, easy-to-clean flooring material;
- Floors, walls, and ceiling shall be adequately insulated to prevent drafts and excessive heat loss;
- Shall have an adequate grounding provision for the shelter structure if the frame, floor, or exterior covering is metal;
- Walls must have a light-colored (white, off-white, tan, etc.) non-dusting material covering the insulation as prefinished panels or coated with paint or another protectant;
- An exterior door, opening to the outside, with a minimum opening width from jamb to jamb of 32 inches with a lockable knob and deadbolt for shelter access;

- The structure must be adequately insulated to maintain consistent indoor temperatures regardless of weather conditions and to reduce drafts.
- The HVAC unit must have a digital thermostat located at least 6 feet away in an area with indirect airflow;
- The shelter shall have, at minimum, a 100 amp, 120/240-volt alternating current (AC) load center;
- The load center must be wired to:
  - Power the 120/240-volt HVAC;
  - Wired with sufficient interior light emitting diode (LED) lighting and at least one (1) each roof light near the roof access point and door entry, with interior and exterior lights on separate switches;
  - Interior must have, at minimum, eight (8) 120-volt 15-amp duplex outlets, evenly spaced at above counter height and on at least four (4) separate breakers;
  - Roof must have, at minimum, four (4) 120-volt 15-amp weather-protected duplex outlets on separate breakers; and
  - A 240-volt power access point and conduit or junction box for power to be brought into the load center from the meter.
- A walking roof platform with handrails, mid-rail, and kickplate; platform and handrails must be constructed of metal and be corrosion resistant, with the platform being capable of supporting 400 lbs. of equipment continuously and up to three (3) persons intermittently;
- Ladder or stairs to access the roof platform, with the first step/rung no higher than 12 inches above ground level with a lockable cover;
- The roof platform must have a gate to prevent unauthorized access;
- Install two (2) 1.5-inch female pipe thread (FNPT) capped steel or aluminum ports on the roof at DEC-supplied locations for sample collection; ports must be sealed against leaks from melting snow/ice/rain and will be provided by DEC personnel for the winning offeror to install;
- Install two (2) 3-inch cord "passthrough" ports with plugs/caps on the sidewall; this may be aluminum or steel pipe, PVC, ABS, or other durable weather-resistant material;
- The shelter shall have a bench at least 24 inches deep and greater than or equal to 36 inches high, covering at least 10 feet below the roof with 1.5-inch FNPT ports, and the bench must be capable of supporting 125 lbs. at any portion;
- The exterior shall be protected from the elements with paint, galvanizing, gel coat, or other finish to prevent deterioration or oxidation and present a clean, professional appearance;
- The shelter must be equipped for placement on level ground, pads, or corner footings;
- Install a minimum of two (2) RJ45 Ethernet wall plates, which the winning offeror must connect to the site's network box;
- Preparations must be provided to ensure a stable and level non-permanent installation that resists sinking, such as 18- to 24-inch concrete precast corner pads; and
- Delivery and unloading on the pad, with connection from site power and internet at the installation site in Fairbanks, Alaska.



The above image is for reference only and does not directly represent the requested structure.

Please note that the monitoring shelter on site will be removed by DEC before the preparation phase. This will provide ample space for the winning offeror to install precast supports and perform necessary leveling procedures. For further details regarding the site, refer to the website address: https://dec.alaska.gov/air/air-monitoring/instruments-sites/site-info/fairbanks-a-street/

To DEC's satisfaction, the contractor must provide the item and perform the one-year warranty/maintenance support included in the purchase. The contractor shall be responsible for all communications regarding the progress of maintenance/services performed and shall discuss with the DEC any issues, recommendations, and decisions related to the contract. The contractor will be the sole point of contact on all matters related to the purchase.

Questions regarding this document shall be addressed in writing to the Procurement Officer and sent to the following E-mail address: DECDASPROCUREMENT@alaska.gov.