Gateway National Recreation Area
Sandy Hook Unit

Replace HVAC Systems at Building 47 & Building 58

DATED:

March 2026

NATIONAL PARK SERVICE

NORTHEAST REGION

SCOPE OF WORK
Replace HVAC Systems at Building 47 & Building 58
Gateway National Recreation Area - Sandy Hook Unit

Intent
The intent of this contract is for a complete Replacement and installation of the HVAC systems at Building 47, and for the complete replacement and installation of the cooling systems at Building 58.

The replacement of the heating and cooling systems at Building 47 will include, but not limited to, two (2) -five (5)-ton air conditioner condensing unit, two (2) air handler, line set, oil burning hot water boiler, and thermostat. This work will be conducted at 47 Kearney Road located in the Sandy Hook Unit of Gateway National Recreation Area, Fort Hancock, and Monmouth County, New Jersey 07732.

The replacement of the cooling systems at Building 58 will include, but not limited to, two (2) -four (4)-ton air conditioner condensing unit, two (2) air handler, line set, and thermostat. This work will be conducted at 55 Magruder Road located in the Sandy Hook Unit of Gateway National Recreation Area, Fort Hancock, and Monmouth County, New Jersey 07732.

The Contractor shall:
<u>Heating In Building 47:</u>

- Contractor shall complete decommissioning and removal of the existing Smith 8 Series S/W-5 boiler and all associated near-boiler piping (as necessary). Existing boiler shall be properly disposed of offsite. The boiler is located in the basement of Building 47.

- Contractor shall provide and replace the existing oil burning hot water boiler (Smith 8 Series S/W-5). The replacement boiler shall be a **High-Efficiency 3-Pass Cast Iron Water Boiler**. The new boiler shall be **Energy Star** rated with a **minimum of 86% AFUE**.

- Contractor shall perform a **Manual J Heat Loss Calculation** to determine the correct BTU output for the building to ensure the new unit is properly sized. The boiler shall be sized based on the calculations and fit within the space of the existing boiler and be able to be piped directly into the existing heating system with minimum pipe work.

- Install a **magnetic system filter** on the return line to protect the new heat exchanger from existing system sludge. Install a new expansion tank, air separator, water feed valve, backflow preventer, and a Low Water Cut-Off (LWCO) safety device.

- The boiler shall have burner access with a swing-away burner door for ease of future burner conversion and maintenance.

- The hot-water boiler shall have a display Manager and base. New boiler shall be commercial grade oil heat boiler and connected to the exist fuel line.

- Inspect the existing chimney flue and install a new **barometric damper, and liner if necessary**.

- Update boiler emergency switch and wiring to meet current **National Electrical Code (NEC)** standards.

- Boiler shall be a "Universal" or "Dual-Fuel Ready" heat exchanger approved by the manufacturer for both heating oil and propane (LP) gas firing. Shall install a high-performance Flame Retention Oil Burner. The unit must be compatible with a future swap to a Power Gas Burner.

- Contractor shall Modify existing hydronic heating system to use glycol mixture. Drain existing system water, flush all heating loops, and introduce a -20°F rated propylene glycol solution. Adjust system components for glycol compatibility, including pump sizing, expansion tank capacity, and control settings. Refill and purge all air from the system, verify proper circulation, and test system performance under glycol conditions. This shall be a closed system.

- Perform a full **combustion analysis** after installation and provide a printed report of the efficiency, CO2, and smoke levels.

- Minimum 10-year manufacturer warranty on the heat exchanger and 1-year labor warranty from the contractor.

Cooling In Building 47:

- Contractor shall complete decommissioning and removal of the existing two (2) 5-ton air conditioning condensers (Goodman GSX130601BB) and provide and replace them with high-efficiency units.

- Contractor shall perform a fresh load calculation to verify that the existing two (2) 5-ton units remain the appropriate size for the building. The load calculation shall be discussed with the Park and if the existing condenser size is determined to be appropriate, the replacement condensers shall be a minimum of 5-tons with a R-454B refrigerant. The condenser shall be Energy Star Certified, no less than 18 SEER2, and be a variable or 2-stage compressor.

- The condenser shall be designed for a coastal and Marine environment and shall be saltwater corrosion resistant. If the condenser is not called out as specifically for coastal/marine use, a coastline anti-Corrosive coating for saltwater environment shall be applied on all components including but not limited to:
    - Condenser coil and internal exposed components
    - Evaporator Coil and some internal exposed components
    - And copper corrosion resistant "Grenade" fitting shall be installed.

- The new condensers shall be installed in the exact location of the old units. New condenser pads, whips, and disconnects shall be provided and installed for each new condenser. The condensers do not need to be raised or elevated. The AC condenser unit replacement shall fit in the existing footprint and be a low-profile unit that vents upwards.

- The two (2) horizontal air handlers shall be replaced with the same brand of condenser to ensure compatibility and tied into the existing systems and ductwork. Ductwork modifications shall be completed as needed. Seal the connection between the new air handler and the existing plenum to ensure an airtight bond. The two air handlers are located in the attic (2nd floor) of Building 47

- The new air handlers shall include hot water coils. The heating coils shall be connected, and the heating system shall be operational. The air handles shall be a High Efficiency blower with Variable Speed. The air handlers shall be connected to the condenser for maximum efficiency.

- All line-sets shall be entirely replaced, running a new copper refrigeration line-set from new outdoor condensers to the new indoor air handlers. However, if the attic system line sets cannot be easily accessed, these line-sets shall be cleaned, flushed, reconnected and leak tested from the new outdoor condensers to the new air handlers for the upstairs system. All line sets shall be properly insulated.

- A Flex Connector shall be supplied and installed to isolate the Fan Coil from the ductwork

- No compression/Crimped fittings shall be used. All fittings and refrigerant lines shall be brazed.

- New drain pans with safety switches shall be provided and installed for both air-handlers. New condensation pumps shall be provided and installed for both air-handlers. Install new primary and secondary drain lines with **float safety switches** to prevent water damage,

- Reconnect PVC drain to new air handlers with new emergency shut off switches and new backup emergency shut off. New drain lines from condensation pumps shall be run to an existing drain in building.

- Two (2) smart thermostats shall be provided and installed to manage the variable-speed stages of the new equipment. The thermostats are located on the 1st floor. The thermostats shall be 7-day programmable with 4-program periods per day scheduling. Thermostats shall have a digital backlit display. The thermostats shall control the heat and cooling of the building.

- Contractor shall be responsible for any additional electric services needed for the proper operation of the HVAC system. This would include but not limited to additional outlets, increase wire sizing, any additional electric runs including the conduits, cables, and breakers. Any additional electrical work shall be discussed with the COR prior to work commencing.

- Shall have a minimum 10-year warranty on compressor. Contractor shall complete the registration of all components for the warranty.

Cooling In Building 58:

- Contractor shall complete decommissioning and removal of the existing two (2) 4-ton air conditioning condensers (York CZH04812CA) and provide and replace them with high-efficiency units.

- Contractor shall perform a fresh load calculation to verify that the existing two (2) 4-ton units remain the appropriate size for the building. The load calculation shall be discussed with the Park and if the existing condenser size is determined to be appropriate, the replacement condenser shall be a minimum of 4-tons with a R-454B refrigerant. The condenser shall be Energy Star Certified, no less than 18 SEER2, and be a variable or 2-stage compressor

- The condenser shall be designed for a coastal and Marine environment and shall be saltwater corrosion resistant. If the condenser is not called out as specifically for coastal/marine use, a coastline anti-Corrosive coating for saltwater environment shall be applied on all components including but not limited to:
    - Condenser coil and internal exposed components
    - Evaporator Coil and some internal exposed components
    - And copper corrosion resistant "Grenade" fitting shall be installed.

- The new condensers shall be installed in the exact location of the old units. New condenser pads, whips, and disconnects shall be provided and installed for each new condenser. The condensers do not need to be raised or elevated. The AC condenser unit replacement shall fit in the existing footprint and be a low-profile unit. The condenser units are located under the decking and have an access grate from above.

- The two (2) horizontal air handlers shall be replaced with the same brand of condenser to ensure compatibility and tied into the existing systems and ductwork. Ductwork modifications shall be completed as needed. Seal the connection between the new air handler and the existing plenum to ensure an airtight bond. The two air-handlers are located in the attic (2nd floor) of Building 58.

- The new air handlers shall include hot water coils. The heating coils shall be connected, and the heating system shall be operational. The air handles shall be a High Efficiency blower with Variable Speed. The air handlers shall be connected to the condenser for maximum efficiency.

- All line-sets shall be entirely replaced, running a new copper refrigeration line-set from new outdoor condensers to the new indoor air handlers. However, if the attic system line sets cannot be easily accessed, these line-sets shall be cleaned, flushed, reconnected and leak tested from the new outdoor condensers to the new air handlers for the upstairs system. All line sets shall be properly insulated.

- A Flex Connector shall be supplied and installed to isolate the Fan Coil from the ductwork

- No compression/Crimped fittings shall be used. All fittings and refrigerant lines shall be brazed.

- New drain pans with safety switches shall be provided and installed for both air handlers. Install new primary and secondary drain lines with **float safety switches** to prevent water damage,

- Reconnect PVC drain to new air handlers with new emergency shut off switches and new backup emergency shut off

- One (1) smart thermostat shall be provided and installed to manage the variable-speed stages of the new equipment. The thermostat is located on the 1st floor. The thermostat shall be 7-day programmable with 4-program periods per day scheduling. Thermostats shall have a digital backlit display. This thermostat shall control the heat and cooling of the building.

- Contractor shall be responsible for any additional electric services needed for the proper operation of the HVAC system. This would include but not limited to additional outlets, increase wire sizing, any additional electric runs including the conduits, cables, and breakers. Any additional electrical work shall be discussed with the COR prior to work commencing.

- Shall have a minimum 10-year warranty on compressor. Contractor shall complete the registration of all components for the warranty.

For all Contracted Work:

- All work shall be done by code. All manufacturers' guidelines and requirements shall be followed.

- Complete an entire system inspection and start-up, including pressure testing, of the new equipment to verify the entire system(s) is working properly.

- Contractor shall be qualified to work on units being installed. All parts/materials shall be from or approved by the manufacture of the units being installed.

- All labor, parts, and materials shall be provided to replace the existing HVAC systems as described in this Scope of Work. All removal and proper disposal of existing equipment shall be included.

- **The Primary Contractor Shall hold all required mechanic licenses to work on the HVAC replacement, and the Primary Contractor shall perform a minimum of 51% of the labor.**

Deliverables /Information Package on Materials Provided:

- Contractor shall Provide a printed combustion analysis report which consists of the efficiency, CO2, and smoke after installation of the heating system at Building 47.
- Detailed load calculations for the heating and cooling systems of Building 47 and Building 58.
- Contractor must provide all manufactures specs, manuals, and information on all materials they are providing.
- Contractor must register for and supply warranty information on all applicable materials.

Quality Assurance

The contractor is responsible for ensuring all work meets the standards set by the relevant authorities and regulations. Regular inspections and quality checks are to be conducted throughout the project to ensure compliance with the specifications outlined in this document.

Site Visit

All potential contractors are strongly encouraged to visit the site prior to bidding the work. If a contractor does not complete a site visit, it does not relieve them of the accuracy of their pricing. The set days of the site visit will be specified, and the hours of the site visit will be between 9 am and 2 pm. The visit needs to be scheduled through the park POC.

Work Location

The location of the work to be performed is at the Sandy Hook Unit of Gateway National Recreation Area, 47 Kearney Road and 58 Magruder Road, Fort Hancock, NJ 07732. The distance of these buildings is approximately 0.2 miles. Vendor shall contact COR and coordinate all onsite work to be performed.

Period of Performance

All HVAC replacement and construction work shall commence within 6 weeks of Contract Award. Work shall be completed within 30 days after the CO issues the notice to proceed. Work shall be performed in between the hours of 7 a.m. and 5 p.m. during the work week of Monday thru Friday excluding Federal Holidays, unless prior approval is given by the COR.