CAPE HATTERAS NATIONAL SEASHORE

Outer Banks Group

STATEMENT OF WORK

Replace Roofing and Siding at Ocracoke Maintenance in Ocracoke, NC

PMIS# 328839 A

1.0 INTRODUCTION

The National Park Service (NPS) Cape Hatteras National Seashore (CAHA) has a requirement to replace the existing roofing, siding, windows, and doors at the Ocracoke Maintenance Building in Ocracoke, NC.

1.1 LOCATION

The Ocracoke Maintenance building is located at 100 NPS Road in Ocracoke, NC 27960.

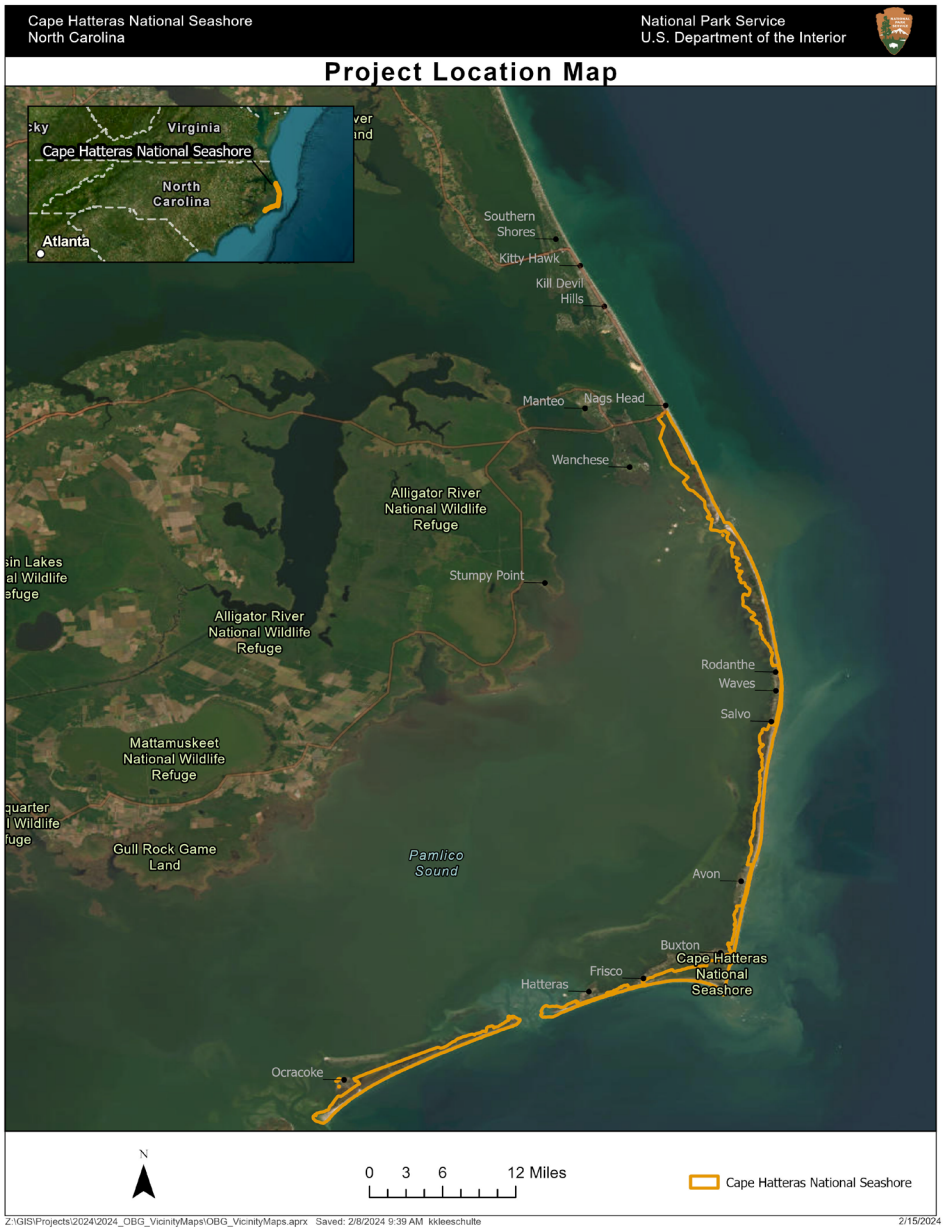

Figure 1: Cape Hatteras National Seashore

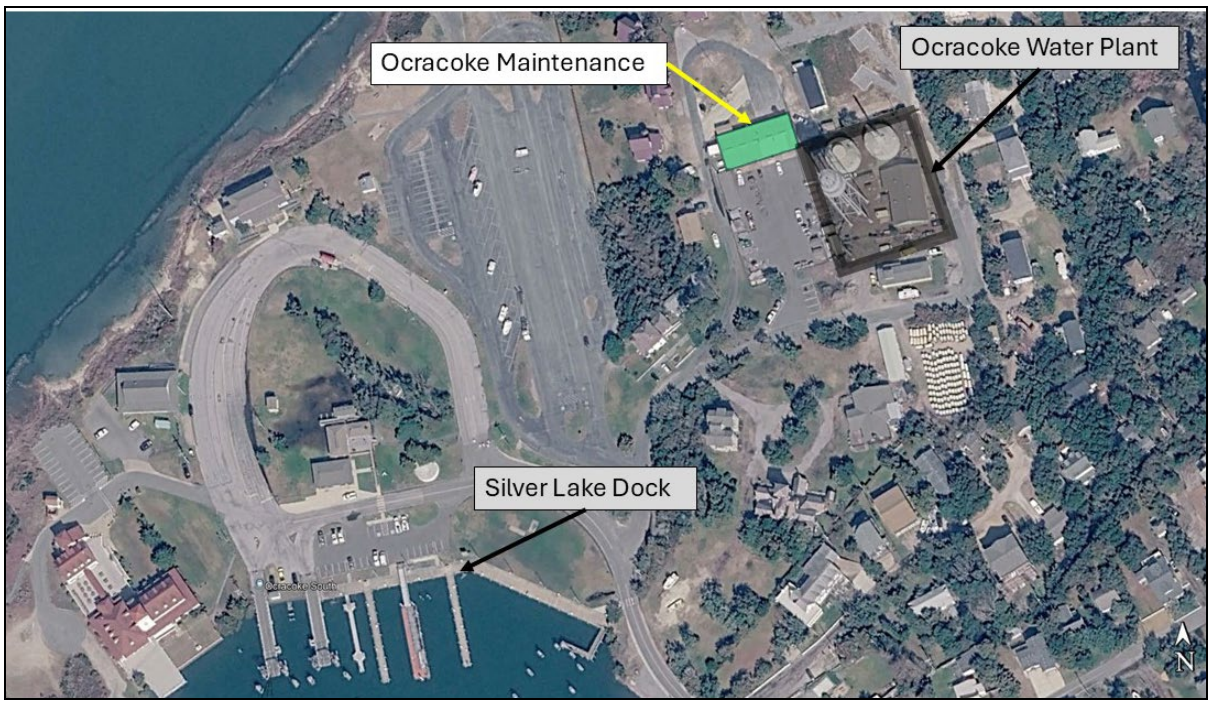

Figure 2: Site Location

1.2 BACKGROUND AND EXISTING CONDITIONS

The Ocracoke Maintenance Building was constructed in 1977 as a metal framed building with insulated corrugated metal siding and roof. There are 5 roll up doors on the structure which are not insulated. The building is approximately 40' x 100' and constructed on a monolithic concrete slab with thickened edge. The eave height is approximately 14 ft. The roof has a 3 ft overhang on the eaves and rakes, with bolted structural framework providing support for the overhang. Original design drawings and specifications from the original construction are not available. Structural members visible on the inside of the building have factory finish of red oxide primer coating.

Figure 3: Ocracoke Maintenance Building Exterior South Facing Exterior

Figure 4: Ocracoke Maintenance Building North Facing Exterior Wall

Figure 5: Ocracoke Maintenance Building Roof in December 2013

2.0 PERIOD OF PERFORMANCE

The contractor shall have 30 days after award of this project to provide submittals for this statement of work. The contractor's construction schedule shall consider the visitor season of Memorial Day through Labor Day, housing availability, and ferry schedule. The project shall be completed within 120 days of issuance of Notice to Proceed subject to contractor's construction schedule approval.

3.0 SCOPE OF WORK

The contractor shall provide all technical support, materials, tools, equipment, and labor required to replace the siding and roofing with new siding and roofing according to this scope of work. Workmanship shall follow International/North Carolina Building Code.

BASE BID:

The contractor shall:

1. Submit product material data to be used on this project. No work shall be completed on site until submittals are accepted by the Contracting Officer's Representative (COR).

2. Coordinate project schedule with Contracting Officer (CO) and COR to cover Ocracoke Maintenance Interior Items with suitable cloth/plastic.

3. Coordinate on site with the CO and COR regarding penetrations through the roof and siding, and mounted items on the roof and siding to determine which are to be abandoned and may be removed permanently.

4. Securely remove penetrations and mountings for each of the items on the exterior siding of the structure. The major penetrations include:

   a) HVAC heat pump electrical connection, shut-off breaker, and line sets
   b) Electric Meter (coordinate with Tideland Electric)
   c) Fuel lines
   d) Internet conduit and other telecommunications conduit, elbows, LB penetrations into the building.

5. Coordinate with Tideland EMC electric utility cooperative for the electric utility meter removal from the building.

6. Mock Up. For the new roofing and siding, include on the schedule a mock up of the newly installed roofing and siding consisting of approximately 100 sf - 200 sf to display the materials in place including metal siding, roofing and insulation which allows the Contracting Officer's Representative to visually observe materials used, installation techniques, fastening, and final installation shown to be according to this scope of work and manufacturer's instructions.

7. Remove existing siding (approx. 4000 sf) and roofing material (approx. 5,796 sf) from the building. Demo of insulation on siding and roofing is included (approx. 9,796 sf). Remove wood siding and windows located on the north side of the structure. Remove two 3' x 7' personnel doors, frames, and thresholds. Existing roll up doors and frames shall remain in place.

   a) While siding is removed from the building, the contractor shall secure open portions of the building siding with 6-foot-high construction fencing/barrier sufficient to keep public from entering the building/construction site.

8. Prior to installation of new siding or roofing, inspect existing metal structural components, paying particular attention to the condition of the purlins and the framing at the connection to the concrete slab foundation. Note any corrosion which has caused laminating, degradation, or deterioration of the structural steel members. After exposure of structural members following the demolition, photograph each location/connection to show the existing condition. Provide a memo from a licensed structural engineer that the condition/corrosion of the existing structural members does or does not require repair.
   a) Locations which do require repair shall be identified in the memo.
   b) Coordinate with the CO/COR for an on-site inspection to view exposed areas requiring repairs.

9. Remove excess peeling and flaking paint from the existing metal structural members (approx 2500 sf). Meet the SSPC SP-2 level of cleaning for the metal surfaces: Remove loose rust, loose mill scale, and loose paint/coatings using non-power hand tools. Vacuum equipment to contain debris and facilitate removal is acceptable. Cover the floor and equipment below the cleaning operation with plastic or suitable drop cloth. Remove paint/rust flecks which fall to the plastic/drop cloth.

10. Provide new corrosion resistant coating. Apply two coats allowing first coat to dry according to manufacturer's recommendations before applying second coat. Provide coating to the newly cleaned existing structural members as well as new/replacement structural members. Provide new coating to the door frames for the personnel doors and roll up doors. New coating shall be rated for marine environments and corrosion resistance, suitable for use directly applied to structural metal components with factory red oxide primer. New coating shall be one of the following:

    a) Acrylic Urethane Direct To Metal (DTM) enamel paint
    b) Moisture Cured Urethane (MCU)

11. Provide fenestration and new windows to match opening sizes in the wall frames of the office spaces. New windows shall be new construction type impact resistant single hung windows without muntins, meeting paragraph C402.4 of North Carolina Energy Code for climate Zone 3.

12. Provide two new exterior personnel doors, 3 ft x 7 ft and new door frames. Doors shall be hollow metal painted the same color as the new siding. Pre-hung doors are acceptable provided they can be matched in color. Provide new thresholds. Doors shall have bore holes to match existing doors. Remove, store, and re-install the door hardware.

13. Provide new corrugated metal panel roofing and siding system.
    a) New Metal panels shall be aluminum 0.050" thickness rated by the manufacturer for coastal high wind, marine, corrosive, humid environments.
    b) Due to low slope of the roof, sealing of overlaps is required per manufacturer instructions. Per NC Energy Code para C402.5.2.3.1: Sheet steel and aluminum materials shall be deemed to comply with code air leak requirements "…provided that joints are sealed and materials are installed as air barriers in accordance with the manufacturer's instructions."
    c) New fasteners and metal panels shall be installed per North Carolina Building Code for hurricane prone areas. Provide corrosion resistant fasteners coated to match the paint color of the siding and roof.
    d) Provide new insulated metal panel system meeting insulation requirements of the North Carolina Energy Code. Insulate the siding and roof to meet NC Energy Code, Table 402.1.3 R value based or the U-value for continuous insulation: R-19 for siding fiberglass roll with faced insulation. R-30 liner system with vapor barrier facing for the roof. Rock Wool insulation is acceptable from floor level to 6 ft above finished floor where interior finished walls will enclose the insulation except where code requires continuous insulation.

e) New Roof shall have no ridge vents or roof vents. Required ventilation and other penetrations shall be installed through the siding. Downspouts shall
f) Install gutters on the eaves of the building.

14. Provide new louvered vents on each end of the gable ends of the building. Frame and trim the louvers to match the siding. Louvered vents shall be of the same size and approx. 8 sf each. Place louvers near the ridgeline protected by the overhang. New louvers shall be certified for Miami-Dade impact and high wind:
    a) Architectural Louvers, Inc. Model E6WF (Hurricane NOA and WDR Rated Wall Louver | Model E6WF)
    b) Greenheck, Inc. Model EHH-701 or EHH-601 (Horizontal Blade Louvers - EHH-701 | Greenheck)
    c) Ruskin Hurricane/Wind Driven Wave Models (Ruskin > Catalog > Category)
    d) Approved Equal

15. Securely reinstall penetrations and mountings for each of the items on the exterior siding of the structure. Plywood mounting panel or boards, conduit, grommets, etc. required by manufacturer to protect each item is included. The major penetrations include:

    a) HVAC heat pump electrical connection, shut-off breaker, and line sets
    b) Electric Meter (coordinate with Tideland Electric)
    c) Fuel lines
    d) Internet conduit and other telecommunications conduit, elbows, LB penetrations into the building.

OPTION 1: Repair identified corroded members

16. In accordance with memo from a N.C. structural engineer regarding the adequacy or inadequacy of the existing structural connections at the purlins and the connection to the foundation, make 10 repairs approximately 1 square foot each as follows:
    a) For deteriorated surface rust:
        i) Remove rust up to SSPC-SP-3 standards using solvents, hand tools, and power tools.
        ii) Continue with installation if rust is no deeper than surface rust, no lamination and no measurable loss of the thickness of the original steel member.
    b) For locations where surface rust is deep enough in a purlin or of a diameter to affect a screw or other fastener from obtaining effective bite of the metal, such as around the diameter of the penetration of a removed screw so that the hole is stripped:
        i) Install an additional screw fastener by placing a fastener on each side of the deteriorated location. Place new screws far enough away from the deteriorated spot to provide full thickness of the metal for the fastener.
    c) For locations where measurable thickness of the original steel member is more than 50% of the original thickness, reinforce the area by adding a plate over the area. A piece of angle iron may be used to provide new connection to the concrete at the base of a vertical column. Angle iron shall have legs of equal width as the member being reinforces, and length of each leg shall be at least 8”.

OPTION 2: Demo Existing Heating

17. Remove existing heating system components from the interior of the building.

    a) Remove ceiling mounted heat systems, ducting, and mounting brackets, supports, and hangars.
    b) Remove electrical connections, conduit, and wiring back to the electrical panel. Relabel panel circuits appropriately for these circuits.
    c) Remove copper fuel lines back to the wall on the south side of the building. Leave approximately 3 ft – 5 ft of copper fuel pipe in place inside the building. Install a shutoff valve at the end of the copper line along with a minimum 6 inch extension past the shutoff valve and properly capped end of pipe.

4.0 CONTRACTOR QUALIFICATION REQUIREMENTS

The contractor shall:

1. Possess qualifications to install metal building system components certified by the metal building manufacturer. Qualifications must be shown in the form of previous projects completed by contractor/sub-contractor personnel specifically with the brand name of the metal product manufacturer used in this project. Contractors submitting qualifications by a subcontractor, the subcontractor qualifications must meet the same requirements as stated above.

2. Confine storage of materials to the immediate work area.

3. Remove all material and waste generated during this project and properly dispose of offsite.

4. Remove safety fencing and equipment from the work area after project completion.

5. Restore disturbed areas to a suitable condition, which may include backfilling, reseeding, and or sodding disturbed areas.

6. Supervise contracted employees performing services under this order at all times. Contractor management will ensure that employees properly comply with the performance work standards outlined in the statement of work, specifications, and contract documents.

The Contractor is advised to visit the site and verify all existing conditions and measurements prior to submitting a quote. Site visits will be coordinated with the Primary Point of Contact (POC) and the CO.

5.0 DELIVERABLES/SUBMITTALS

1. Provide a proposed work schedule in the form of a graph or chart indicating the proposed work schedule for the phases of the work. To track the progress of the contracted work, the schedule should include beginning and ending dates of each phase and shall include time to coordinate with Dare County and CHEC.

2. Provide CO and COR with:

   - Product data/specifications for approval prior to acquiring materials.
   - Daily progress reports on a weekly basis.
   - Certified Payroll
   - Warranty for parts and labor
   - Receipts from Landfill/recycling center for all materials disposed of and those materials diverted from the Landfill showing weight or volume of the material.

6.0 INSPECTION

Representatives of the contractor and the National Park Service will conduct a final inspection. This inspection includes testing to determine the completion and functionality of the contract work. Testing to ensure proper operation and certification of the BFP is the responsibility of the contractor. The NPS reserves the right to have the completed project retested. The National Park Service will not authorize final payment until the inspection is complete with full acceptance of the work.