

Scope of Work

Project: Structural Repair and Partial Replacement of Pierhead (Waterway Section)

Location: 125 South Shore Halstead Park Fishing Pier, Holden Beach, North Carolina

Specific Area: From the landward end of the elevated walkway transition (above mean high water) to the outermost end of the pier head (entire Waterway-exposed portion)

1. Project Overview

The pier head and Waterway-exposed portion of the Halstead Park public fishing pier have experienced significant deterioration of horizontal and diagonal structural members, guardrails, handrails, and deck framing due to long-term exposure to marine environment, weathering, and age. Timber piles appear structurally sound and are not included in this scope. The primary structural elements (stringers, joists, caps, and X-bracing) below and immediately above the deck have weathered to the point that they can no longer safely transfer design loads. The intent of this project is to restore full structural integrity and public safety while maintaining the existing footprint and appearance of the pier.

2. Limits of Work

- Begin at the first bent Waterway-ward of the elevated walkway (first bent fully exposed to tidal waters).
- Continue to the outermost end timber or railing post.
- Work shall include all deck-level and below-deck structural members, bracing, guardrails, handrails, and decking within these limits.
- Landward elevated walkway and pile caps/piles above mean high water are excluded unless specifically noted.

3. Scope of Repairs and Replacement

3.1. Demolition & Removal

- Remove and properly dispose of all deteriorated structural timber members including, but not limited to:
 - Stringers and outriggers
 - Floor joists/beams
 - Diagonal X-bracing and knee braces
 - Beam caps and blocking
 - Guardrails, mid-rails, top rails, and posts
 - Handrails and rub rails
 - Decking planks (full removal and replacement in repair areas)
- Remove all corroded fasteners, bolts, drift pins, and abandoned hardware.
- Cut and remove any protruding or failed elements flush with remaining sound material.

3.2. Structural Repairs/Replacement (Like-for-Like or Better)

- Replace all removed members with new, marine-grade materials meeting or exceeding current North Carolina Building Code, NCDENR/CAMA, and US Army Corps of Engineers requirements.
- Minimum material specifications:
 - All structural timbers: Southern Yellow Pine, pressure-treated with CCA or ACQ to 2.5 pcf retention (AWPA UC4B or UC4C marine use) or approved equal (e.g., polymer-coated timber or fiberglass-reinforced members if approved by engineer).
 - All bolts, fasteners, and hardware: Type 316 stainless steel or hot-dipped galvanized (minimum G185 coating) with isolation washers where dissimilar metals contact.
- Replicate existing X-bracing patterns and connections unless structural engineer directs upgrades for current wind/load standards.
- Sister or reinforce any marginally compromised members only if approved, in writing by the project structural engineer.

3.3. Guardrail & Handrail Replacement

- Install new 42" minimum height guardrail system meeting IBC 1015 and NC accessibility requirements.
- Post maximum 6'-0" on center, with top rail, mid-rail, and bottom rail or equivalent to prevent 4" sphere passage.
- Replace handrails on both sides of pier with a continuous grasping surface (1-1/4" to 2" diameter).

3.4. Decking

- Replace all decking within the limits of work with new 2x6 or 5/4x6 pressure-treated deck boards (marine grade) or approved composite/alternative material.
- Fasten with stainless steel or coated deck screws (two per board at each joist).
- Provide 1/4" spacing between boards for drainage.

3.5. Connections & Hardware

- All new connections shall use 316 stainless steel thru-bolts with nuts and oversized washers, or approved hurricane ties/straps where applicable.
- Replace all existing drift pins with new galvanized or stainless pins as required.

4. Additional Work Items

- Pressure-wash remaining sound members above deck prior to reinstallation of new decking (to remove marine growth and debris).
- Install new reflective pile markers or navigational lighting if required by USCG or NCDOT.

- Repair or replace any damaged bench seating, fish cleaning stations, or signage mounts on the pierhead (field verify quantities).

5. Exclusions (Not in Contractor's Scope)

- Pile inspection or replacement (piles assumed sound per Owner's statement).
- Dredging or modification of waterway bottom.
- Electrical or plumbing repairs unless specifically added by change order.
- Landside walkway or parking lot improvements.

6. Permitting & Regulatory Compliance

- Contractor shall obtain all required permits including:
 - CAMA Minor Permit (or Major if triggered)
 - US Army Corps of Engineers Nationwide Permit verification
 - Town of Holden Beach building permit
- Work shall comply with current NC State Building Code (2018 edition with local amendments), FEMA flood zone requirements, and 150 mph wind load design (Risk Category II).

7. Schedule & Access Restrictions

- Work windows restricted to avoid peak summer season if required by Town.
- All work over water shall use floating barges or crane barges; no driving on pier with heavy equipment.
- Maintain public safety barricades and signage at all times.

8. Deliverables

- As-built drawings showing all replaced members
- Material certifications and fastener schedules
- Photographic documentation of before, during, and after conditions
- Structural engineer's letter for completed repairs.

This Scope of Work is intended to be attached to bid documents or contracts for the Halstead Park Pier Head Rehabilitation Project. All work shall be performed by a North Carolina licensed general contractor with documented marine construction experience.