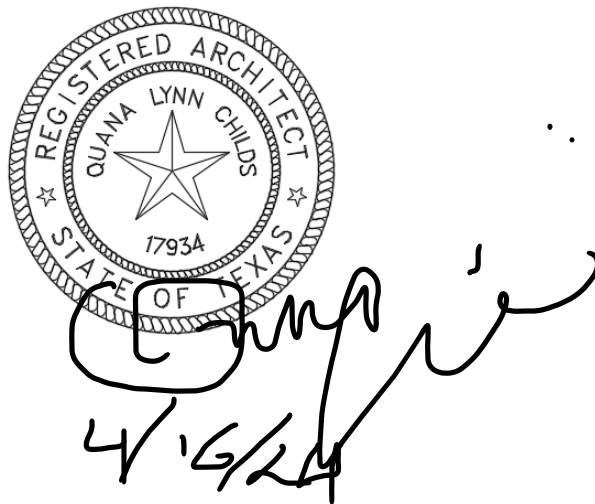


**PROJECT MANUAL**

Matagorda Island Wildlife Management Area  
Bunkhouse and Generator Shed Roof Replacements  
Project 1211291



Architect: Quana Lynn Childs

Issued: April 16, 2024

Texas Parks & Wildlife Department  
4200 Smith School Road  
Austin, TX 78744

## **Texas Parks & Wildlife Department: Matagorda Island WMA: Bunkhouse and Generator Shed Roof Replacements**

Scope: Contractor shall furnish all labor, equipment, tools, materials, transportation, and incidentals necessary to remove the existing asphalt shingle roof on two (2) buildings and install new metal panel roofs. Work shall include demolition, carpentry, painting, and metal panel roofing. Contractor is responsible for verifying all dimensions and existing conditions.

Location: Matagorda Island Wildlife Management Area (WMA), on Matagorda Island, not far from Port O'Connor, TX. Island is not accessible by car or truck. No bridge exists. The marina area on the island is approximately 150'x200', and a 100' long barge has been routinely used for work on the Island. Contractor is responsible for providing their own transport to the Island, for personnel, equipment, and materials.

There are videos of the Island online, that will give you a glimpse of conditions there:

<https://www.youtube.com/watch?v=WYD7KZR1CSs>

[https://www.youtube.com/watch?v=XGZERI\\_LiqQ](https://www.youtube.com/watch?v=XGZERI_LiqQ)

### Existing roofs:

1. Bunkhouse/Garage:
  - a. Building has two roofs:
    - i. a one-story bunkhouse at west side and
    - ii. a large high-bay garage at east side.
  - b. Roof configurations: Gable
  - c. Roof Slope Areas Approx.
    - i. Garage: 40'-7" x 19' slope length each side. 40.58'x19'x2 sides = 1,542 sf sloped area
    - ii. Bunkhouse: 59'-10" x 15'-5" slope length each side. 59.83'x15.42'x2 sides = 1,845 sf sloped area.
  - d. Slope: 4/12
  - e. Composition shingle roofs, with at least one layer of asphalt shingles seen below top layer.
  - f. Wood board deck, site-built truss structure below.
  - g. Six (6) attic air roof vents and one (1) gable vent over bunk area. Three (3) attic air roof vents and two (2) attic gable vents over garage. Attic air roof vents to be replaced with new vents to match existing. Plumbing vent abandoned and to be removed.
  - h. Some leaks known. Minimal damage to deck.
  - i. Hurricane Harvey damage:
    - i. Open soffit on north end of garage. Soffit to be replaced.
    - ii. Garage north side roofing destroyed, but roof deck remains. Currently covered with tarp.
  - j. Buildings originally constructed by the military, probably in the 1940's.
2. Generator Shed:
  - a. Roof configuration: gable
    - i. Roof slope area: 15'-7" x 6'-9" slope length each side. 15.58'x6.75'x2 sides = 211 sf sloped area
  - b. Slope: 4/12

- c. Composition shingle roof on wood board deck.
- d. Probably constructed by the military.
3. Contractor is responsible for verifying all dimensions and existing conditions.
4. Site: on the Bay side of the Island, nearest town is Port O'Connor.
  - a. Building Risk Category: II
  - b. Windspeed: Design Windspeed: 160 mph.
  - c. Surface Roughness: C to D
  - d. Exposure: C
  - e. Other.
    - i. Water: No potable water available. Contractor to provide their own water for drinking and cleaning.
    - ii. Electricity: Contractor to provide their own electrical generator and fuel.
    - iii. Restrooms: Contractor to provide their own chemical toilet.
    - iv. Contractor is responsible for providing their own transport to the Island, for personnel, equipment, and materials.
5. Hazardous Materials: Hazardous materials testing was conducted in 2024. No asbestos found. Lead-based paint was found only on the tan colored drip edge on the Garage portion of the Garage/Bunkhouse. The Hazardous Materials Report is available upon request.

Code: IBC 2021

Warranties: Manufacturer's standard warranty in which manufacturers agrees to replace or replace components of metal panel system that fail.

- Workmanship warranty: within a 2-year period from Substantial Completion
- Finish warranty: No excess color fading, excess chalking, and no cracking, peeling or paint failure within 20 years.
- Weathertightness warranty: 20 years NO DOLLAR LIMIT warranty.

**Material:**

All materials shall be new; provided and installed in accordance with the manufacturer's specifications and warranty requirements. Product info to be provided to TPWD Architect as shown in Submittals Table (attached). Review and approval of products is required before installation. Approval prior to purchasing is recommended.

If materials require (per manufacturer) certain fasteners, sealants, accessories or other items, then the required product must be provided. If no requirement is listed, but a recommendation is listed, then the recommendation will be considered a requirement.

- 1) Wood: as necessary to repair or replace existing.
  - a) Miscellaneous replacement lumber to match existing in dimensions and species.
  - b) Wood boards to match wood board deck if replacement is necessary.
  - c) Fascia board: any replacement to match existing in dimensions and species.
  - d) Soffit on north side of Garage: to match soffit on south side of garage. Plywood must be exterior grade.
- 2) Underlayment:

- a) All underlayment as required or recommended by metal panel roofing manufacturer for use on closely space sheathing. Provide information from metal panel roofing manufacturer as to which underlayment products are acceptable.  
**OR,**
  - b) If underlayment not specified by metal roofing panel manufacturer, all underlayment to meet or exceed ASTM D226 type II or ASTM D4869 type IV.:
    - i) Field: GAF Deck Armor (or approved equal or better) synthetic sheet roofing underlayment.
    - ii) Eaves, rakes, sidewall, ridges, penetrations: GAF StormGuard (or approved equal or better) self-adhering leak barrier.
    - iii) Underlayment fasteners as required or recommended by underlayment manufacturer.
- 3) Metal panel roofing:
- a) Roofing is considered a roofing system. All roof panels, flashings, underlayments, fasteners, sealants, components, and accessories are to be as required per the roof panel manufacturer. If a no requirement is listed, but a recommendation is listed, then the recommendation will be considered a requirement.
  - b) Roof systems may be either Architectural Metal Panel Roof Systems or Structural Metal Panel Roof Systems.
  - c) Panel systems may be either hybrid metal systems or exposed fastener systems.
  - d) Metal:
    - i) Type Series 5005 Aluminum, meeting ASTM B209, or
    - ii) Aluminized Steel meeting ASTM A463 T2 65, or
    - iii) Galvalume®
    - iv) All must be factory-coated. See j) Factory Coating below.
  - e) Material must be on approved list of the *Texas Department of Insurance: Windstorm Inspection Program; Product Evaluations; Formed Metal Panels*. Product for application over plywood deck, since a tightly spaced board deck option is not listed.
  - f) Panel profile: trapezoidal or intermediate rib profiles.
  - g) Thickness:
    - i) Aluminum: 0.024" or thicker,
    - ii) Aluminized Steel or Galvalume®: 26 gauge or thicker.
  - h) Wind resistance: At a minimum, the metal panel roof system must be wind resistant up to 160 MPH winds.
  - i) Impact resistance: At a minimum, the metal panel must be hail resistant up to UL Class 4 rating.
  - j) Factory coating: All must roof panels and flashings to be factory-coated with a 70% Polyvinylidene fluoride resin (PVDF, commonly known as Kynar 500®FSF®), or approved equal or better. No polyester coatings will be approved.
  - k) Panel Color: White, from the manufacturer's standard color selection.
- 4) Flashings:
- a) Drip edge and rake flashings: Face depth to match nearby Rangers shed, but minimum face depth as necessary to cover and extend past exposed wood roof deck by 2".
  - b) Material: By the metal panel roofing manufacturer, as part of their roofing system, else
    - i) Thickness:
      - (1) aluminum .024" or thicker,
      - (2) aluminized steel or Galvalume® 24 gauge or thicker.

- ii) Factory coating: Kynar 500®FSF®, or approved equal or better. Color to match roof.
- 5) Fasteners:
    - a) All fasteners as recommended or required by metal panel roofing manufacturer for a coastal environment. Exposed products should have the factory coating of Kynar 500®FSF®, or approved equal or better. Color to match roof.
    - b) Metal fasteners in contact with metal flashing or metal roof must be of same metal or have rubber or neoprene washers, pads, or other separation material to separate dissimilar metals.
  - 6) Sealants, Tapes, Adhesives, and Caulks
    - a) All sealants, tapes, adhesives, cements, and caulks as recommended or required by metal panel roofing manufacturer. Exposed products should match roof color, if possible.
  - 7) Vents and penetrations:
    - a) Plumbing vents: The one vent pipe penetration through the roof is abandoned. It should be removed, and the deck patched. The new roofing will cover the former vent location.
    - b) Attic air roof vents: New vents to match existing. Made by metal roof panel manufacturer or approved for use by metal roof panel manufacturer. Color to match metal roof color, if possible.
    - c) Attic air gable vents (2 at garage, 1 at bunkhouse) to be covered on the interior with ¼" - opening galvanized hardware cloth. This is to prevent bird and bat access.
  - 8) Accessories and Other Products (example, roof closure strips)
    - a) as recommended or required by metal panel roofing manufacturer. Exposed products should match roof color, if possible.
  - 9) Primers, paints, and coatings:
    - a) All primer to be by same manufacturer as the paint and be the primer recommended by the paint manufacturer. For wood surfaces, a paint with primer in the paint is acceptable.
    - b) For factory applied paints and coatings on metal roof panels: touch-up paint to match factory applied paints and coatings. Acquire paint from manufacturer if possible.
    - c) Paint for any other metal: corrosion resistant primer and an exterior acrylic coating. Coating must be corrosion resistant and weather resistant. Acceptable primers include Sherwin Williams® Pro- Industrial Pro-Cryl® universal acrylic primer, Rustoleum® Mathys® Pegalink®, (or approved equal or better).
    - d) Paint for wood surfaces: exterior latex semi-gloss or match existing as directed by WMA Staff. For wood surfaces, a paint with primer in the paint is acceptable.

## **Installation**

1. Roof to be a complete roofing system provided and installed in accordance with the manufacturers' specifications and warranty requirements. Refer to manufacturers' installation instructions and details.
2. Remove antennae and any associated hardware from roof and fascia. TPWD Site Manager has option to retain removed material for use at site.
3. Remove existing roofing down to roof board deck. All waste must be removed from the Island and transported to the mainland for disposal in legal landfill.
4. Rotted or damaged wood to be removed to a minimum of one (1) foot beyond the edges of the compromised wood and to the next rafter. Where only a portion of the wood is removed, all cuts

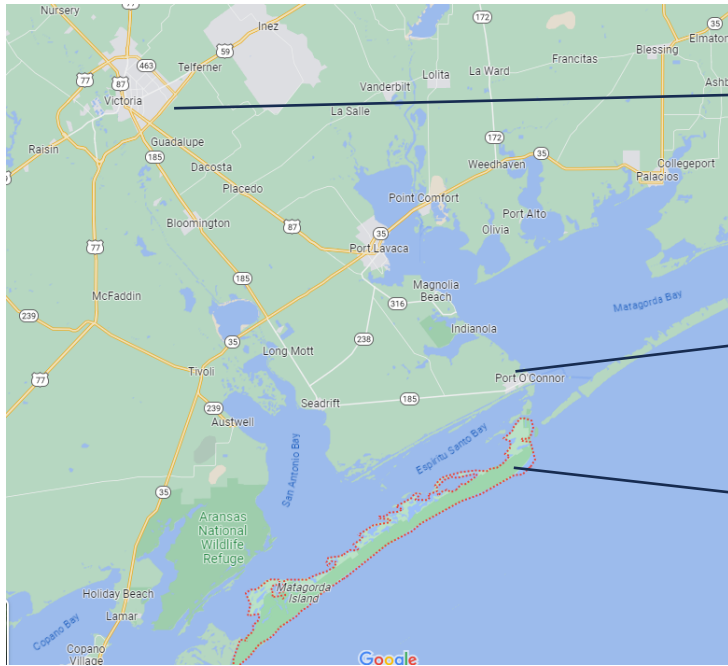
- are to be straight with edges supported and secured. If major areas of damaged or rotted wood is found, consult with TPWD Construction Manager.
5. Replace damaged roof deck to match existing materials. Assume 5% replacement. Sister in 2x4's along rafters at replacements areas, providing bearing support and fastener purchase. All edges of decking to be supported by roof framing.
  6. Vent pipe at Bunkhouse to be removed below surface of roof deck.
  7. Attic air roof vents on Bunkhouse/Garage to be replaced.
  8. Install new soffit plywood where missing at the Garage. Match existing soffit conditions.
  9. Prepare, prime, and paint (2 coats) all fascia boards and soffits at Bunkhouse/Garage.
  10. At gable vents at Bunkhouse/Garage:
    - a. On the exterior of the vents, prep, prime and paint, 2 coats.
    - b. On the interior of the vents, install galvanized hardware cloth (¼"-hole) to prevent bird and bat access.
  11. Install flashings, vents, and other metal and accessories as appropriate during underlayment and metal panel installation. Follow manufacturer's instructions.
  12. Sidewall flashing at Garage wall above Bunkhouse roof:
    - a. The wall siding is difficult to match. Some original siding has been replaced with pieces of sheet metal screwed to the wall and caulked at the edges. This sheet metal acts as a counter-flashing to the step flashing below.
    - b. Review the roofing manufacturer's standard details for sidewall installation. Sheet metal siding may need to be removed during sidewall underlayment and flashing installation, then reattached and caulked.
  13. Install underlayments per manufacturer's instructions.
  14. Install metal panel roofing per manufacturer's instructions.
  15. Clean site. Visually inspect and sweep the surrounding ground and landscaping with magnet. Remove all trash and errant metal.
  16. Legally dispose of waste off-site. All waste must be removed from the Island and transported to the mainland for disposal in legal landfill.
  17. Opened or partially used containers of materials (fasteners, sealants, adhesives, paints, etc.) to be provided to facility staff for future use.
  18. TPWD staff has option to retail large pieces of materials (boards, roof panels, flashings) for future use on-site. Coordinate with site manager.

**Submittals Table:** provide submittals to Architect.

<b>Products</b>	Product info	Safety Data Sheets	Installation Instructions	Notes, other, misc.
Roof is considered a roof system with all products as required per the roofing manufacturer.				
Wood	yes			Plywood info., photo of grading stamp acceptable.
Underlayment	yes	yes	yes	
Metal roofing panels	yes		yes	Manufacturer’s drawings for panel type used in project. Provide color samples. Provide <i>Texas Department of Insurance: Windstorm Inspection Program; Product Evaluations; Formed Metal Panels</i> pages showing roof product on approved list.
Flashings	yes		yes	Manufacturer’s drawings for all flashings used in project.
Fasteners	yes		yes	As required per metal roofing manufacturer for each fastener.
Roof Vents	yes		yes	
Roof accessories	yes		yes	As required per metal roofing manufacturer, for each accessory.
Sealants, tapes, caulks,	yes	yes	yes	As required per metal roofing manufacturer, for each product.
Paints, primers, and coatings	yes	yes	yes	For each product.

### Location Information

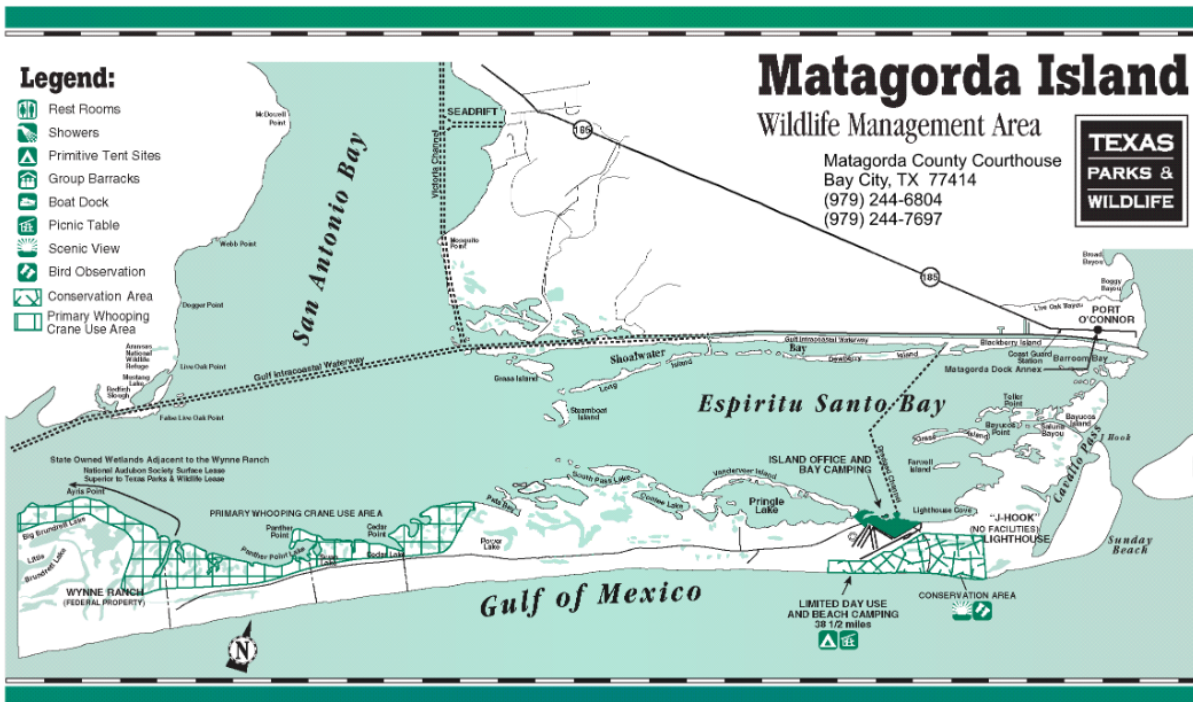
#### Large scale maps



Victoria is the closest big town.

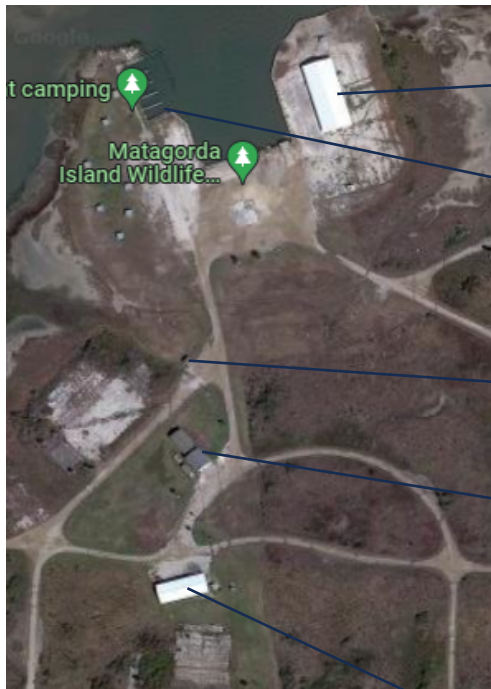
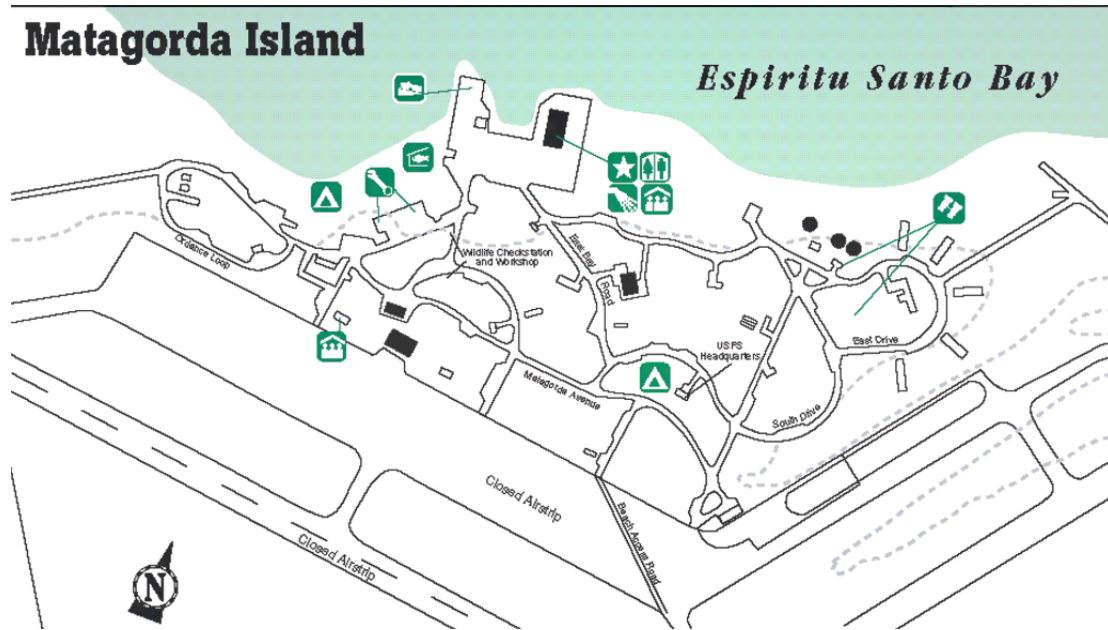
Port O'Connor

Matagorda Island





Site map:



Building with existing metal panel roof.  
Not in contract.

Docks

Generator Shed

Bunkhouse/Garage

Building with existing metal panel roof.  
Not in contract

**Photos**



1. Bunkhouse/Garage. Garage roof is tarped. White roof in background is not in contract.



2. On top of Bunkhouse. Note the sidewall flashing at Garage wall.





3. Garage roof; roof vents along ridge. The black tarping on the damaged area is deteriorating.



4. Bunkhouse. Attic wall vent shown.



5. Bunkhouse/Garage. Note the sidewall flashing at Garage.



6. Garage. Garage attic wall vent shown. Adjacent shed partially shown.





7. Bunkhouse: Truss and decking shown from inside attic.



8. Bunkhouse: Composition shingles and underlayment over earlier shingles.



9. Generator Shed



4. Generator shed: Bee colony in wall will be removed by TPWD before roofing. Wall panels not in contract.