COASTAL BEND BAYS & ESTUARIES PROGRAM

Protecting our bays and estuaries

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Date: March 5, 2026

To: Matagorda Bay Mitigation Trust

From: Rosario Martinez

RE: Statement of Work; Protection and Restoration of Ayres Point Oyster Reefs: Final Engineering/Design and Bid Package Development (Contract #73)

**Activities During Payment Request Period:**

A work order was executed on June 2, 2025, with HDR Engineering, Inc. Tasks on this work order included Task 1: Final Design; Task 2: Coastal Boundary Survey; Task 3: Construction Bid Solicitation and Support; and Task 4: Construction Administration.

A 70% design meeting with project partners was held on September 10, 2025. The meeting minutes are attached. HDR began the 100% preliminary design, coordinated and completed the revisions to the geotechnical report, and concluded the coastal boundary survey.

**Deliverables and Supporting Documentation included with this Payment Request:**

- HDR Invoice 1200769237 dated October 31, 2025, for the period of August 27, 2025 through September 27, 2025, with an Invoice total of $9,231.04.
- HDR Invoice 1200791763 dated January 9, 2026, for the period of September 28, 2025 through December 27, 2025, with an Invoice total of $34,580.86.
- Ayers Point Reef Restoration 70% Design Review Meeting Minutes (occurred on September 10, 2025)

# Meeting Minutes

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| Project: | Ayres Point Reef Restoration |
| Subject: | 70% Design Review Meeting |
| Date: | Wednesday, September 10, 2025 |
| Location: | 555 N. Carancahua Drive, Ste. 1600, Corpus Christi, TX / Microsoft Teams |
| Attendees: | Kiersten Stanzel, CBBEP<br>Rosario Martinez, CBBEP<br>John Blaha, CCA<br>Kieth Miears, FlatsWorthy<br>Katie Swanson, MANERR<br>Jenni Pollack, HRI<br>Terry Palmer, HRI<br>Philip Blackmar, HDR<br>Erin Rooney, HDR<br>Harrison McNeil, HDR |

On Wednesday, September 10, 2025 HDR Engineering, Inc. (HDR) hosted a meeting to discuss the recently submitted 70% design for the Coastal Bend Bays and Estuaries Program's (CBBEP) Ayres Point Reef Restoration project (No. 2419). HDR hosted a hybrid meeting with CBBEP and other project stakeholders, including Coastal Conservation Association (CCA), FlatsWorthy, the Mission Aransas Estuary Research Reserve (MANERR), and the Harte Research Institute (HRI). The meeting minutes below summarize the general discussion and consensus reached regarding the 70% design:

**Project Overview**
The project consists of two main components:

- The emergent oyster reef structure is essentially a breakwater, designed to avoid seagrass, and has a gradual waterward slope to increase the oyster recruitment area.
- The submerged oyster reef complex will consist of multiple mounds, constructed with 4-inch stone in a circular shape. The configuration was designed with consideration for constructability and resilience concerns.
    - The raised elevation from the existing substrate increases resilience to sedimentation and ecological value.
    - Due to the size of the mounds, some movement is expected throughout the project's life. The mounds are designed for a 3-foot crest diameter (1.5 - 2 feet high), with a crest elevation of 0 feet NAVD88.
    - The mounds will be 10 feet edge-to-edge from one another.
    - TPWD has used the mound approach at Carlos Reef.
    - HRI supported the mounding approach based on other observed constructed reefs.

**Navigation**
The 70% design depicts more aids to navigation (day beacons) than previous CBBEP projects due to the size of the submerged oyster reef complex.

- The Opinion of Probable Construction Cost (OPCC) includes 27 day beacons, which is a higher count than other projects, but is likely needed.
- The plans show what is recommended based on previous experience. HDR will need to talk with the U.S. Coast Guard (USCG) to give preliminary concurrence, but HDR expects it to be similar to what is shown.
- USCG Aids to Mariners will be incorporated into NOAA maps.
- CCA supported the need for detailed signage throughout the project area.

- CBBEP will cover the O&M for day beacons, which typically do not require much maintenance.

**Technical Specification and Acceptance Criteria**
Payment and acceptance for the mounds will be based on rock tonnage, and tolerance could be based on meeting target elevations. The breakwater will have more detailed acceptance criteria. HDR needs to be very present during construction.

- HDR will track how many mounds are being built and report stone quantities.
- HRI mentioned that smooth stone, like that used at Carlos Reef, may not be optimal for the mounds.
    - The specification calls for a stone diameter range but does not specify the type of rock.
    - The breakwater uses a larger riprap stone.
        - The specifications can be refined to exclude certain rock types or reduce the diameter range.
        - HRI indicates a stone closer to 2 inches, not 4 inches, would be preferable.
        - Any additional change to the specification of the materials must consider cost first.
- HDR will review the specifications on stone sizing and characteristics based on this discussion.

**Costs and Funding**
HDR's OPCC is estimated at $3.4 million. The project currently has $2.8 million in funding but is expected to have more in the spring.

- The budget shortfall is approximately the same as the 20% contingency amount in the OPCC
- Breaking the project into base bid and additive bids could help the project remain within the available construction budget.
- The breakwater is the most expensive item and could be modified for cost savings.
    - The breakwater could potentially be reduced in size or configuration to reduce costs further.
        - MANERR expressed concern with reducing the breakwater because the grant application represented 0.4 miles of breakwater to protect 0.4 miles of shoreline.
    - Reducing the breakwater height could also reduce cost and project the same length of shoreline.
- The surveying line item could be reduced by decreasing the frequency or collection parameters in the specifications, but surveying the mounds effectively will require extensive coverage.

**Next Steps**
Next deliverable – preliminary 100% design