


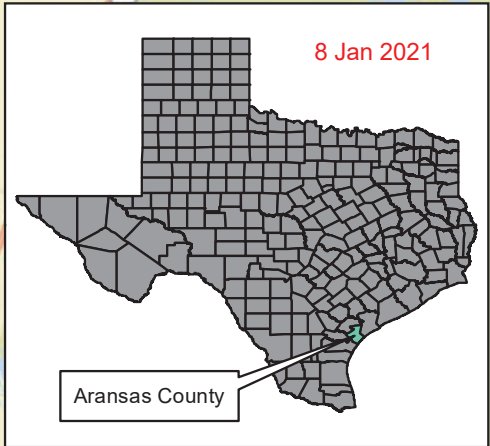


Vicinity Map  
 Misho's Oyster Company  
 Copano Bay Proposed Breakwaters  
 Rockport, Aransas County, Texas

Notes:  
 -Prepared by Belaire Environmental, Inc., January 8, 2021 (CRB).  
 -Base Map Source: ESRI World Street Map, 2020.  
 -For planning and permitting purposes only, not for construction

SWG-2020-00041

Project Plan View Map

Misho's Oyster Company  
 Copano Bay Proposed Breakwaters  
 Rockport, Aransas County, Texas

Notes:  
 -Prepared by Belaire Environmental, Inc., January 8, 2021 (CRB).  
 -Base Map Source: 2018 NAIP 0.6-meter aerial imagery, obtained from  
 TNRS, Aransas County, Texas.  
 -For planning and permitting purposes only, not for construction.



Legend

8 Jan 2021

- Applicant's Property Boundary
- Proposed Breakwater Footprint
- Approximate Turbidity Curtain Location
- Cross Section Location
- Deepest Edge of Seagrass

SWG-2020-00041



Western Breakwater	
Latitude	Longitude
28.118446	-97.035338
Eastern Breakwater	
Latitude	Longitude
28.117645	-97.034272

Notes:

- Average bay bottom elevation at proposed breakwaters is approximately -5.2 feet NAVD 88.
- Turbidity curtains will be installed around work area and will remain until all turbidity has settled.
- No sensitive resources identified within 100 feet of the proposed project.
- Minor deviations to project specifications within the proposed footprints may occur during construction based on site conditions.

**Western Breakwater:**

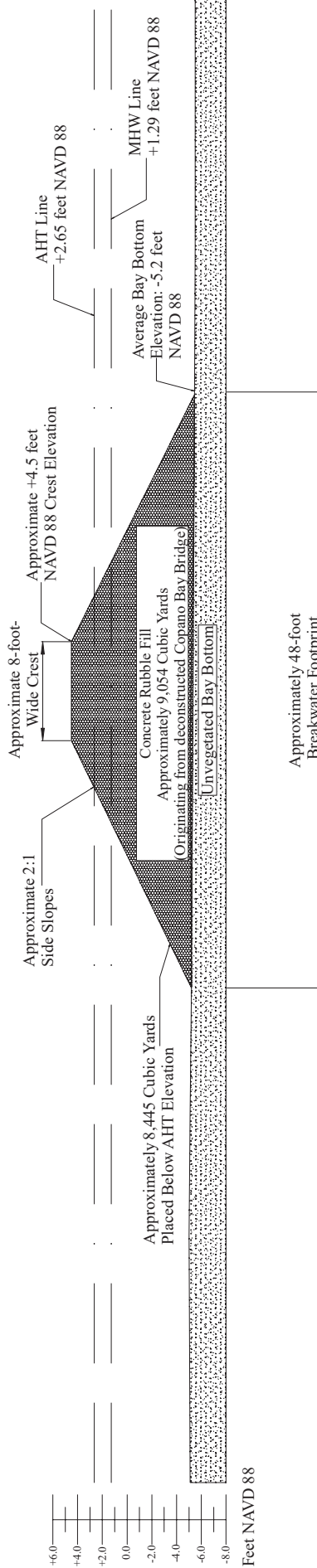
- 550-foot long, 48-foot wide, and 9.7-foot tall (approximately 0.61 acre).
- 8-foot crest at an approximate elevation of +4.5 feet NAVD 88.
- Side slopes constructed with an approximate 2:1 slope.
- 5,516 cubic yards of fill below the AHT elevation of +2.65 feet NAVD 88.
- 5,533 cubic yards total for construction.

**Eastern Breakwater:**

- 350-foot long, 48-foot wide, and 9.7-foot tall (approximately 0.39 acre).
- 8-foot crest at an approximate elevation of +4.5 feet NAVD 88.
- Side slopes constructed with an approximate 2:1 slope.
- 3,284 cubic yards of fill below the AHT elevation of +2.65 feet NAVD 88.
- 3,521 cubic yards total for construction.

# Project Section View

Letter of Permission (LOP)  
 Copano Bay Proposed Breakwaters  
 Rockport, Aransas County, TX









**Notes:**

- Prepared by Belaire Environmental, Inc., January 8, 2021 (CRB).
- Minor deviations to project specifications within the proposed footprints may occur during construction based on site conditions.
- All elevations are shown in feet NAVD 88.
- Seagrass, oyster, and bathymetric survey completed December 15, 2020.
- The permittee is proposing to fill approximately 0.99 acre of unvegetated bay bottom at an elevation below AHT to construct two long-shore breakwaters for the purpose of shoreline protection.
- The western breakwater would require approximately 5,533 cubic yards of material with approximately 5,161 placed below the AHT elevation.
- The eastern breakwater would require approximately 3,521 cubic yard of material with approximately 3,521 placed below the AHT elevation.
- The crest elevation of both proposed breakwaters is +4.5 feet NAVD 88 consisting of an approximate 8-foot wide crest and side slopes constructed at approximate 2:1.
- The permittee will install temporary turbidity curtains around the proposed work area during construction activities to protect sensitive resources located within the vicinity.
- Material used for breakwater construction will include concrete riprap originating from the deconstructed Copano Bay Bridge.
- For planning and permitting purposes only, not for construction.

Not to Scale




8 Jan 2021

**Legend**

-  Project Survey Area
-  500-ft Project Buffer
-  Proposed Breakwater Footprint
-  Survey Transect
-  Deepest Edge of Seagrass
-  Seagrass Observation Points

**Survey Overview Map**  
 Misho's Oyster Company  
 Copano Bay Proposed Breakwaters  
 Rockport, Aransas County, Texas










Notes:  
 -Prepared by Belaire Environmental, Inc., January 8, 2021 (CRB).  
 -Base Map Source: 2018 NAIP 0.6-meter aerial imagery, obtained from TNRS, Aransas County, Texas.  
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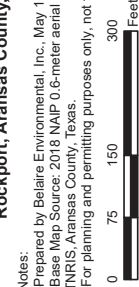




**Legend**

-  Project Survey Area
-  500-ft Project Buffer
-  Proposed Breakwater Footprint
-  Proposed Pier Footprint
-  Survey Transect
-  Deepest Edge of Seagrass
-  AHTL (+2.65 feet NAVD88)
-  MHW (+1.29 feet NAVD88)
-  Sample Point

**Survey Overview Map**  
**Misho's Oyster Company**  
**Copano Bay Proposed Pier and Breakwaters**  
**Rockport, Aransas County, Texas**

Notes:  
 -Prepared by Belaire Environmental, Inc., May 12, 2021 (HER).  
 -Base Map Source: 2018 NADP 0.6-meter aerial imagery, obtained from TNRS, Aransas County, Texas.  
 -For planning and permitting purposes only, not for construction.


Derelict Barges  
 (containing living oyster adhered to exposed metal)

Previous Pad Site  
 (containing living oysters adhered to remaining wooden pilings)

**Legend**

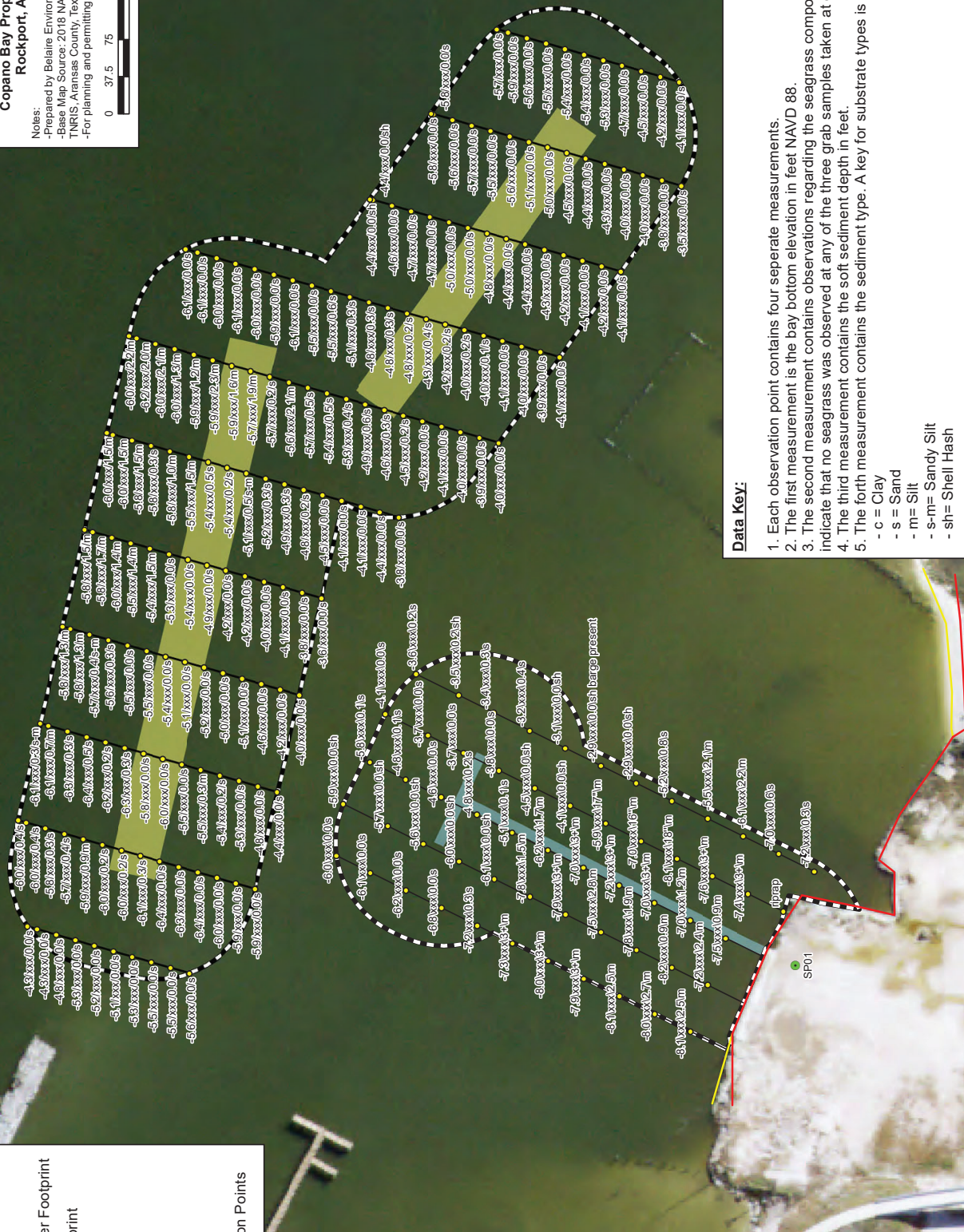
- Project Survey Area
- Proposed Breakwater Footprint
- Proposed Pier Footprint
- Bulkhead
- Survey Transect
- AHTL
- MHW
- Sample Point
- Seagrass Observation Points

**Survey Data Map**  
**Misho's Oyster Company**  
**Copano Bay Proposed Pier and Breakwaters**  
**Rockport, Aransas County, Texas**

Notes:  
 - Prepared by Belaire Environmental, Inc., April 28, 2021 (HER).  
 - Base Map Source: 2012 NADIP 0.6-meter aerial imagery, obtained from TNRS, Aransas County, Texas.  
 - For planning and permitting purposes only, not for construction.

0 37.5 75 150 Feet

SWG-2020-00041




**Data Key:**

1. Each observation point contains four separate measurements.
  2. The first measurement is the bay bottom elevation in feet NAVD 88.
  3. The second measurement contains observations regarding the seagrass composition and coverage. Three x's indicate that no seagrass was observed at any of the three grab samples taken at each observation point.
  4. The third measurement contains the soft sediment depth in feet.
  5. The fourth measurement contains the sediment type. A key for substrate types is provided below:
- c = Clay
  - s = Sand
  - m = Silt
  - s-m = Sandy Silt
  - sh = Shell Hash
- Example: "-5.5xxx0.1/s" represents a bay bottom elevation of -5.5 feet NAVD 88/no vegetation observed at any of the three grab samples/0.1 feet of soft sediment depth/sand substrate






Project Plan View Map  
 Misho's Oyster Company  
 Copano Bay Proposed Pier Plan View  
 Rockport, Aransas County, Texas

Notes:  
 -Prepared by Belaire Environmental, Inc., May 19, 2021 (CRB).  
 -Base Map Source: 2018 NAIP 0.6-meter aerial imagery, obtained from TNRS, Aransas County, Texas.  
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**Legend**

-  HTL and MHWL
-  Proposed Pier Footprint
-  Deepest Edge of Seagrass

SWG-2020-00041

Commercial Pier Coordinates:  
 Latitude 28.117384  
 Longitude -97.036142



Notes:  
 -Average bay bottom elevation at the proposed pier is approximately -6.0 feet NAVD 88.  
 -Turbidity curtains will be installed around work area and/or around nearby sensitive resources and will remain until all turbidity has settled.  
 -No sensitive resources identified within 100 feet of the proposed project.  
 -Minor deviations to project specifications within the proposed footprints may occur during construction based on site conditions.

**Commercial Pier:**  
 -Walkway: 330-feet long by 10-feet wide.  
 -T-Head: 100-feet by 10-feet  
 -Total length: 340-feet.

Misho's Oyster Company  
 Copano Bay Proposed Pier  
 and Breakwaters  
 Rockport, Aransas County, Texas



PREPARED BY:  
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