

# COASTAL TEXAS STUDY



US Army Corps  
of Engineers®  
Galveston District



## GALVESTON RING BARRIER FACT SHEET

### About the Study

Serving as an important economic and industrial hub for the United States, the Texas Gulf Coast is home to a coastal ecosystem vital to our national economy which provides valuable natural resources, abundant seafood, recreational fishing and tourism, and a rich cultural heritage. Growth of a healthy economy and preservation of natural resources along the Texas coastline is imperative to provide improved coastal protection measures thus ensuring the stability of the state of Texas and the nation for years to come. Historical and current weather events continue to challenge the vulnerabilities of the Texas coast emphasizing the need for enhanced resiliency of the coast to prevent future damage and loss.

With this in mind, the Coastal Texas Protection and Restoration Feasibility Study, also known as the Coastal Texas Study, was developed to identify coastal storm risk management and ecosystem restoration measures. These key measures will protect the health and safety of Texas coastal communities, reduce the risk of storm damage to industries and businesses critical to the national and local economy, and address important coastal ecosystems needing restoration.

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### About the Proposed Galveston Ring Barrier

The proposed coastal barrier system along the upper Texas coast is comprised of multiple lines of defense from storm surge. Each proposed structure will work together to provide the most storm surge flood protection possible.

During Hurricane Ike, in the City of Galveston the most severe flooding came from the bayside. In order to protect the City of Galveston, a ring barrier is suggested. **The current proposal is a system of flood walls, highway and railroad gates, and a 2,400-foot crossing of Offatts Bayou with surge gates for navigation and environmental flow.** The proposed ring barrier would encompass the Harborview Drive, or "Fish Village," neighborhood on the far east end of Galveston, consisting of a two-foot flood wall on top of the existing piers adjacent to the Strand Historical District on the north side of the island, continue west on Harborside Drive, wrap around Offatts Bayou to 103rd Street, and connect to high ground at the west end of the Seawall. The proposed ring barrier alignment extends to the west end of the Seawall to reduce risk to critical infrastructure (e.g. Scholes International Airport) and to avoid separating communities as much as possible. Near the west end of the seawall the ring barrier would tie into a gulf-side 18-mile beach and dune system that would extend west to a tie-in point at the San Luis Pass Bridge. San Luis Pass will not have a closure structure.

Because Galveston Island currently operates on a gravity drainage system, the plan would add a forced drainage system consisting of six new pump stations to move water off the island. The pump stations would address storm surge flooding as well as rainfall during a storm.

The measure may be further refined with continued coordination between the study team and stakeholders during the next phase of the project, Pre-Engineering and Design, or PED.











***Misconception: The proposed Galveston Ring Barrier would create a "bathtub effect" in Galveston city proper, trapping water within the barrier on the island and creating a severe flooding threat.***

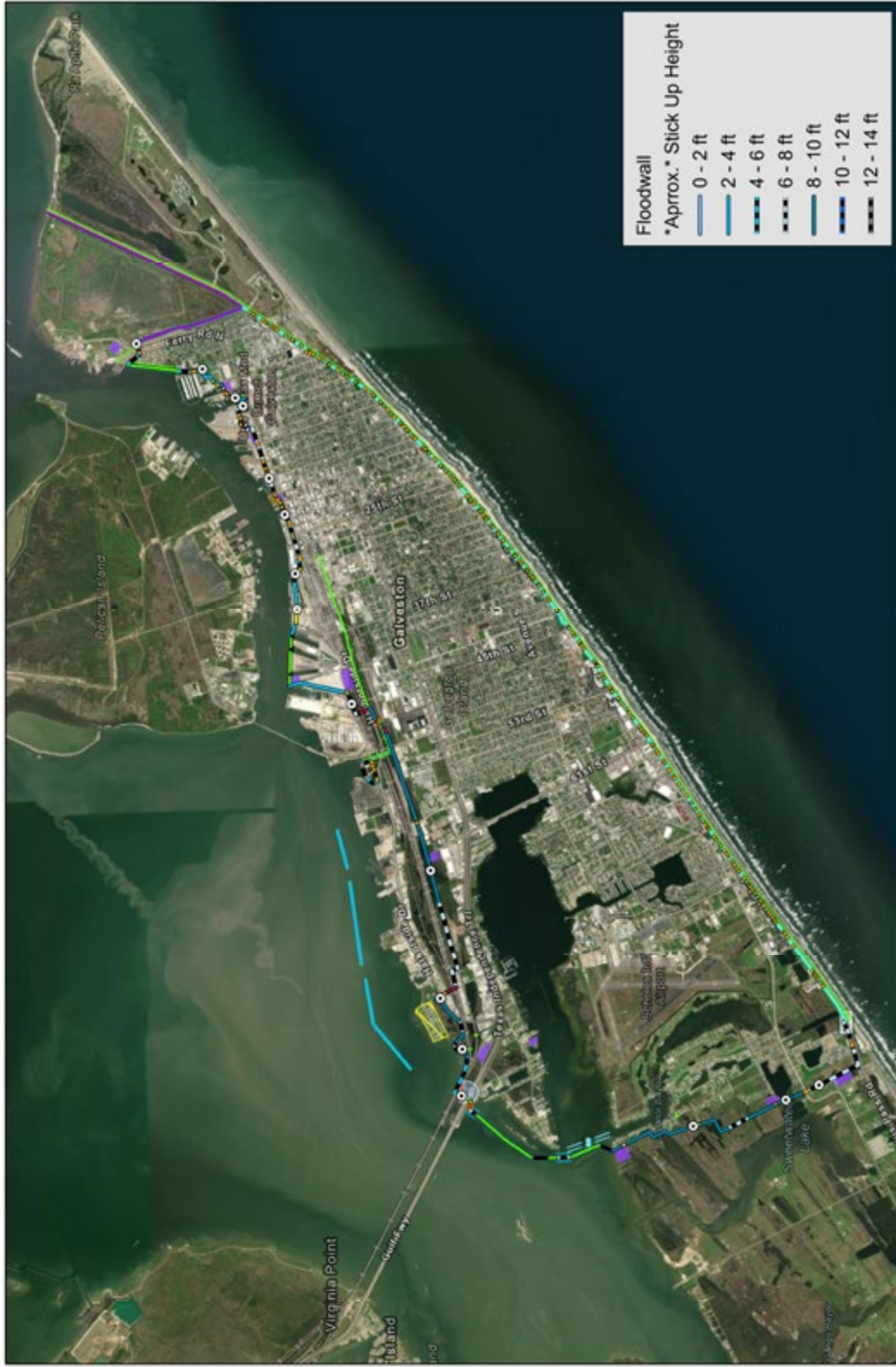
Because Galveston is above sea level, pumps and drainage features will work with the natural contours of the land to move water out of the barrier system and into the Bay. Any features proposed by the study are not permitted to worsen any existing conditions (i.e. the risk of flooding from a rain event cannot be increased with the implementation of the proposed ring barrier). Pump stations would be implemented to expedite the release of water back into Galveston Bay and the Study team is working with the City of Galveston to determine potential solutions for the City's drainage system.








More information is available online at: [coastalstudy.texas.gov](http://coastalstudy.texas.gov)

# Coastal Texas Protection and Restoration Feasibility Study

## Galveston Ring Barrier System

-  Drainage Structure
-  Combi-Wall
-  Seawall Improvement
-  Circulation Gate
-  Navigation Gate
-  New Channel
-  Levee
- Transportation Access**
-  Access Gate
-  Rail Closure
-  Road Closure



- Floodwall**  
 \*Approx. \* Stick Up Height
-  0 - 2 ft
  -  2 - 4 ft
  -  4 - 6 ft
  -  6 - 8 ft
  -  8 - 10 ft
  -  10 - 12 ft
  -  12 - 14 ft










DATUM: NAD 1983  
 PROJECTION: STATE PLANE  
 ZONE: TX-SC 4204

1 August 2020

-  Drainage Mitigation
-  Pump Station
-  Elevated Roadway
-  Breakwater
-  Nonstructural Improvements
-  Cofferdam
-  Temporary Staging
-  Temporary Easement
-  Permanent Easement