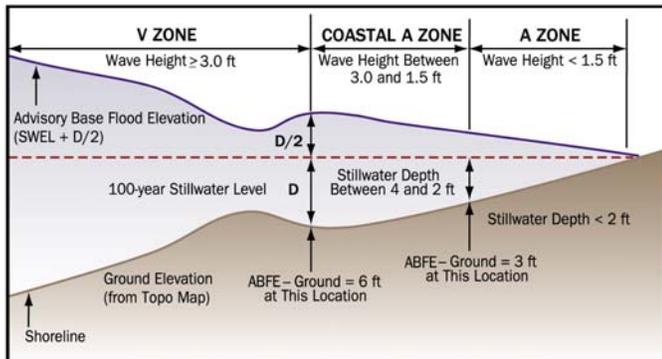


Recommended post-Katrina building standards in Coastal A Zones.



Cross-section showing 1 percent annual chance stillwater elevation, stillwater depth and ABFE, and inland limits of V Zone and Coastal A Zone.

## Coastal A-Zones in the 2010 Florida Building Code

By: Christy Brush and Laura Shepherd

Chapter 1612 (Flood Loads) of the 2010 Florida Building Code (FBC) incorporates new, more stringent floodplain management ("FEMA"-type) design criteria for construction in coastal areas such as barrier islands, open bay and estuarine coastlines, and other properties near the waterfront. These criteria affect high flood velocity areas and COASTAL A-ZONES, which are areas within a special flood hazard area, landward of a V-Zone, or landward of an open coast without mapped V-Zones. COASTAL A-ZONE design criteria are specific to structure type and design, and apply to new construction, substantial improvements, and additions to existing structures.

Similar to V-Zone requirements, the structural member of the lowest floor in a COASTAL A-ZONE is typically required to be above the Design Flood Elevation (DFE). The required magnitude of elevation above DFE varies by structure classification and structural member orientation to the shoreline. Additionally, space used below the DFE is required to include breakaway walls to allow for the automatic equalization of flood waters.

### Did you know...

**Basement construction and dry flood proofing are prohibited in areas with predicted storm/flood water flow velocities greater than 5 feet per second? This would effectively eliminate ground-floor retail, finished lobbies and other uses on the ground floor of commercial/mixed-use structures in these areas.**

Coastal Systems' engineers are experienced in calculating site-specific flow velocities.



In their June 2012 meeting, the Florida Building Commission approved through the 2012 "Glitch Amendment" process a revision to Chapter 1612, FBC, adding Section 1612.4.1, FBC, "Modification to ASCE 24-05" to allow dry flood proofing in Coastal A-Zones for nonresidential and non-residential portions of mixed-use buildings. Flood proofing may be provided in lieu of elevation "provided wave loads and the potential for erosion and local scour are accounted for in the design." Building officials can immediately reference/apply the code as amended.

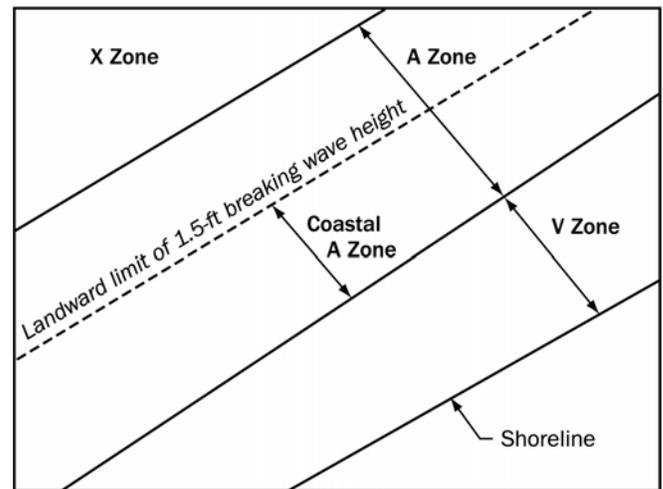
RESIDENTIAL single-family and small townhome structures in a COASTAL A-ZONE must have the lowest floor elevated 1 foot above BFE/DFE. This means that an addition to a house in a COASTAL A-ZONE may be required to be built at a higher elevation than the existing structure. Municipalities have the authority, pursuant to Section 553.73(5), F.S., to adopt provisions/procedures in their local code under which they can issue VARIANCE to Chapter 1612 of the FBC (provided there is no inconsistency with minimum federal standards).

Municipal code review as part of the building permit process will require that the design team confirm/certify that proposed structures are designed in compliance with Chapter 1612. THE GOOD NEWS is that a SITE-SPECIFIC COASTAL A-ZONE ANALYSIS by a QUALIFIED COASTAL ENGINEER can delineate the limits of both the Coastal A-Zone and the area where flood velocities are greater than 5 ft/sec, thus allowing basement construction and flood proofing of non-residential and mixed use-structures if outside the latter zone.

A site-specific engineering analysis can often document a proposed structure is outside of the Coastal A Zone and DOES NOT HAVE TO BE BUILT TO THESE LIMITING DESIGN STANDARDS.

COASTAL SYSTEMS INTERNATIONAL'S highly qualified coastal engineers have experience completing SITE-SPECIFIC COASTAL A-ZONE ANALYSES that meet FBC/FEMA standards under a variety of site conditions, and our project managers will help you through the process. For more information or an initial consultation regarding a particular site, please contact:

Laura Shepherd at (305) 669-6233;  
lshepherd@coastalsystemsint.com or  
Christy Brush at (305) 669-6231;  
cbrush@coastalsystemsint.com.



Local A-Zone Map

## References

FBC Chapter 1612

ASCE 24-05

Graphics from FEMA "CRS Credit for Coastal A-Zone Regulations" Coastal A-Zone Regulations Training Guide

**Disclaimer:** The material presented in this perspective is for general information only. The information should not be used without first securing engineering advice from qualified personnel with respect to its suitability for any application. Utilization of this information assumes all liability arising from such use.



464 South Dixie Highway  
Coral Gables, FL 33146  
Tel: 305-661-3655 Fax: 305-661-1914

2047 Vista Parkway, Suite 101  
West Palm Beach, FL 33411  
Tel: 561-640-1003 Fax: 561-640-1009

www.coastalsystemsint.com  
info@coastalsystemsint.com

