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Cayman Islands



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CAYMAN ISLANDS
Department of Planning

1st June 2017

Design Criteria for the 2016 Cayman Island Building Codes

The following wind and seismic design criteria's are based on the Cayman Islands Amendments to the 2016 Building Code Regulation.

2009 Cayman Islands Building Code

All Buildings except 1 & 2 Family Dwellings and Townhouses (Maximum. 3 Stories)

Wind Design Data: Section 1603.1.4 (ASCE 7 – 05')
Basic Wind Speed = 150 mph 3 second gust

Seismic Design Data: Section 1603.1.5 (ASCE 7 – 05')
(mapped spectral response accelerations) $S_s = 0.659g$, $S_I = 0.300g$

Rainfall Design Criteria: Section 1611.1 = 4.0" (based on a 100-year event)

Termite Infestation Requirements: Very Heavy

2009 Cayman Islands Residential Code

1 & 2 Family Dwellings and Townhouses (Maximum. 3 Stories)

Wind Design Data: Section 1603.1.4 (ASCE 7 – 05')
Basic Wind Speed = 150 mph 3 second gust

Seismic Design Data: Section 1603.1.5 (ASCE 7 – 05')
(mapped spectral modified response accelerations) $S_s = 0.659g \times (75\%) 0.75 = 0.494g$

Seismic Design: Table R301.2 (1) 209 CIRC with values per the 2016 Building Code Regulations
Exposure Category = Category C

Prescriptive Design Criteria shall comply with one of the following:

- ✓ R301.2.1.1 Cayman Islands Residential Code
- ✓ ICC-600 2008 edition
- ✓ AF&PA WFCM 2008 edition
- ✓ AISI S230 2007 edition
- ✓ ASCE 7- 2005 edition

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Rainfall Design Criteria: Section R903.4 = 4.0" (*based on a 100-year event*)

Termite Infestation Requirements: Very Heavy

NOTE:

- *When a building contains structural elements exceeding the elements of the prescriptive design criteria's or otherwise not conforming to the code, these elements shall be designed in accordance with acceptable engineering practices and drawings affixed with a signed engineer seal.*
- *If the design professional would like to design the structure using ASCE – 10, the “Alternative Design Criteria” is allowed as noted on the next page.*

Sincerely,

A handwritten signature in black ink, appearing to read "Haroon L. Pandohie", written over a horizontal line.

Haroon L. Pandohie, AICP
Director of Planning

Alternative Design Criteria

2009 C.I. Building Code (all buildings except 1 & 2 family and Townhouses up to 3 stories)		
	2009 Cayman Code ASCE7-05	Alternate for Structural Design ASCE 7-10
Wind Speed Design	150 (3 sec)	Risk I 170 mph Risk II 186 mph Risk III-IV 200 mph
Surface Roughness	C (all hurricane areas)	D
Exposure Category	C (all hurricane areas)	D =water edge to 600 ft. inland C =over 600 ft.
Seismic (earthquake)		
S _s Data	0.659g	0.659g
S ₁ Data	0.30g	0.30g
To be provided by engineer	F _a , D ₂ , and S _{Ds}	F _a , D ₂ , and S _{Ds}
2009 C.I. Residential Code (1 & 2 family and Townhouses up to 3 stories)		
Wind Speed Design	150	186
Seismic Design Category (mod 75%)	C	C
Seismic (earthquake)		
S _s Data	0.659g	0.659g
S ₁ Data	0.30g	0.30g
To be provided by engineer	F _a , D ₂ , and S _{Ds}	F _a , D ₂ , and S _{Ds}