



A Tradition of Stewardship
A Commitment to Service

BASIC DESIGN CRITERIA FOR CONVENTIONAL CONSTRUCTION

The current adopted codes are: 2016 California Administrative Code (CAC), 2016 California Building Code (CBC), 2016 California Residential Building Code (CRC), 2016 California Historical Building Code (CHBC), 2016 California Existing Building Code (CEBC), 2016 California Green Building Standards Code (CGBSC), 2016 California Mechanical Code (CMC), 2016 California Plumbing Code (CPC), 2016 California Electrical Code (CEC), 2016 California Energy Code (CEnc) and County of Napa Code of Ordinances.

Wind Speed¹:

Risk Category	Ultimate (mph)
I	100
II	110
III, IV	115

Importance Factor by Risk Category²:

Risk Category	Importance Factor
I	1.00
II	1.00
III	1.25
IV	1.50

Wind Exposure³: C

Seismic Design Category⁴:

Calculated S_{DS}	Seismic Design Category (Residential)	Seismic Design Category (Commercial)
$0.50g < S_{DS} < 0.67g$	D ₀	D
$0.67g < S_{DS} < 0.83g$	D ₁	D
$0.83g < S_{DS} < 0.1.25g$	D ₂	D
$1.25g < S_{DS} < 0.67g$	E	E

Snow Load:	0 psf.
Roof Live Load⁵:	20 psf.
Soil Load Bearing Pressure⁶:	1500 psf.
Lateral Loads:	See CBC 1806.3
Live Loads:	See CBC Table 1607.1 and CRC Table 301.5
Minimum Concrete Compressive Strength⁷:	$f'_c = 2500$ psi.
Grab Bars⁸:	Concentrated load of 250 pounds
Annual Rainfall⁹:	1.5 in./hr.
Soil Site Class¹⁰:	D
Climate Zone:	2
Minimum Required Sanitary Facilities¹¹:	See CPC Table 422.1

¹ See CBC 1609.3, CRC 301.2.1, and CRC 301.2.1.3. See CRC Table 301.2.1.3 for conversion to ASD.

² See CBC 1604.5

³ See CBC 1609.4.3. Wind exposure B may be used if data is submitted to justify its use.

⁴ See CBC 1613.3.5 and CRC 301.2.2.1. See USGS map for exact S_{DS} at <http://earthquake.usgs.gov/designmaps/us/application.php>

⁵ Load is reducible. See CBC section 1607.12.2 and CRC 301.6

⁶ See CBC 1806.2 and CRC 401.4.1. When deep foundations are used a geotechnical investigation is required per CBC 1803.5.5

⁷ See CBC 1904 and CRC 402.2

⁸ See section 1607.8.2

⁹ See 2016 California Plumbing Code Appendix D

¹⁰ Soil site class may be changed by design professional only.

¹¹ Use CPC Table A to find the occupant load for use with Table 422.1. Do not use occupancy loads from CBC Table 1004.1.2