



Building Design Criteria

(Updated January 2023)

The design criteria for building projects within the City of Calistoga are provided as general guidelines. They are not intended to be used in place of specific information supplied by a licensed design professional or geotechnical engineer.

Applicable Codes

- 2022 California Administrative Code – Title 24, Part 1
- 2022 California Building Code (based on the 2021 International Building Code) – Title 25, Part 2, Volumes 1 and 2
- 2022 California Residential Code (based on the 2021 International Residential Code) – Title 24, Part 2.5
- 2022 California Electrical Code (based on the 2020 National Electrical Code) – Title 24, Part 3
- 2022 California Mechanical Code (based on the 2021 Uniform Mechanical Code) – Title 24, Part 4
- 2022 California Plumbing Code (based on the 2021 Uniform Plumbing Code) – Title 24, Part 5
- 2022 California Energy Code – Title 24, Part 6
- 2022 Historical Building Code – Title 24, Part 8
- 2022 California Fire Code (based on the 2021 International Fire Code) – Title 24, Part 9
- 2022 California Existing Building Code – Title 24, Part 10
- 2022 California Green Building Standards Code – Title 24, Part 11
- 2022 California Referenced Standards – Title 24, Part 12

Seismic Design

- Most building (Occupancy Category I, II, or III structures) will typically be Seismic Design Category D. Areas of the City where mapped spectral response acceleration parameter at 1-second period S_1 is greater than or equal to 0.75 will be Seismic Category E. Essential Facilities (Occupancy Category IV structures) located where the mapped spectral acceleration parameter at 1-second period S_1 is greater than or equal to 0.75 will be Seismic Category F. (2016 CBC Section 1613.3.5)
- Use soil Site Class D unless otherwise indicated in a geotechnical report specific to the site (2016 CBC Section 1613.3.2)
- When using the conventional construction provisions per the 2016 California Residential Code, (CRC), the Seismic Design Category used for braced wall panel design is typically D_2 for the entire City of Calistoga as the short-period design spectral response acceleration, S_{DS} , is 1.0 for the City of Calistoga per the USGS Seismic Design Maps.

Wind Design

- The minimum **Ultimate Design Wind Speed, V_U , at any location is 110 miles per hour for risk category II buildings and other structures**, (2022 CBC Figure 1609.3(1)). The minimum **Ultimate Wind Speed, V_U , at any location is 115 miles per hour for risk category III and IV buildings and other structures**, (2022 CBC Figure 1609.3(2)).
- When using the conventional construction provisions per the 2022 California Residential Code, (CRC), the minimum **Ultimate Design Wind Speed, V_U , to be used for braced wall panel design at any location is 110 miles per hour per 2022 CRC Figure R301.2(4)A.**



- The wind design shall comply with **Exposure B or C** requirements, depending upon the location within the City. Areas in the western and eastern parts of the City may require exposure C design. The Building Official will make the determination for exposure B in that case.

Climate Zone

- For Title 24 Energy Efficiency Design: **Zone 2.**

High Fire Severity Zones:

- Some areas of the City are designated high fire severity zones. See GIS maps. These areas may require additional fire preventative design depending upon the type of project proposed. See 2022 CBC Chapter 7A for commercial construction and 2022 CRC R337 for residential construction.

Roof Drainage:

- California Plumbing Code Section 1101.12 states that the design storm for the primary roof drainage system is “a storm of 60 minutes duration and 100 year return period. Refer to Table D101.1 (in appendix D) for the 100 year, 60 minute storms at various locations”. The 3 closest locations to Calistoga listed in Appendix D, Table D101.1 are San Francisco, Eureka and Redding. The roof drainage system design value for all 3 locations is 1.5 inches/hour. Designers are advised to use the 1.5 inches/hour for Calistoga.