



DESIGN CRITERIA

Building Division
3726 E Campus Dr ste H.
Eagle Mountain, Utah 84005
Phone (801) 789-6614
buildinginspections@emcity.org

The City of Eagle Mountain's Building Division uses the following design criteria when reviewing projects submitted for a building permit within City limits.

1. **BUILDING CODES:** The Building Division enforces the following building codes with State amendments.
 - 2021 International Building Code
 - 2021 International Residential Code
 - 2021 International Plumbing Code
 - 2021 International Mechanical Code
 - 2021 International Fuel Gas Code
 - 2021 International Energy Conservation Code*
**as amended by the State*
 - 2021 International Existing Building Code
 - 2021 International Fire Code
 - 2020 National Electric Code
 - ICC A117.1-2017- Accessibility Standard
2. **SNOW LOADS:**
 - a) **Ground Snow Load:** Site-specific depending upon elevation. The majority of the City is at or above 4,900 feet. All ground snow loads to be determined per the following website:
<https://utahsnowload.usu.edu/>
 - b) **Roof Snow Loads:**
 - Shall be determined per Chapter 7 of ASCE 7-16.
 - At locations where the roof snow load exceeds 30psf, a percentage of the snow load must be considered in the effective seismic weight of the structure per Section 15A-3-107 of the Utah Amended Code.
3. **WIND:**
 - a) **Speed:** All wind speeds listed below are 3-second gust at 33 feet above the ground.
 - Residential: 100 - 105 mph
 - Accessory buildings: 115 mph
 - Commercial
 - Risk Category I = 95 - 100 mph (see IBC Figure 1609.3(4))
 - Risk Category II = 100 - 105 mph (see IBC Figure 1609.3(1))
 - Risk Category III = 105 – 110 mph (see IBC Figure 1609.3(2))
 - Risk Category IV = 110 – 115 mph (see IBC Figure 1609.3(3))
 - b) **Exposure:** Site specific (per Chapter 26 of ASCE 7-10). Assumed to be "C" unless justified.
4. **SEISMIC:**
 - a) **Seismic Design Category:**
 - Residential: D2
 - Commercial: D
 - b) **Site-specific:** Because ground motions tend to vary substantially throughout the City, the mapped spectral accelerations (S_s & S_1) should be obtained by considering the site-specific latitude and longitude values for the site and obtaining the ground motions from the "U.S. Seismic Design Maps" application developed by the USGS (<http://earthquake.usgs.gov/designmaps/us/application.php>).



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5. SOILS:

- a) **Frost Depth:** 30 inches.
- b) **Site Class:** Site specific. See geotechnical report for site class.
- c) **Commercial Soils Reports:** Full soils report required for all new buildings. *(Must be updated within 2 years of permit submittal)*
- d) **Residential Soils Reports:** Observation report required for each lot. *(Excludes accessory buildings)*
Note: Per ASCE 7-16: 11.4.8- A site response analysis and/or ground motion hazard analysis may be required per IBC 1613.2.3

6. **FLOOD HAZARDS:** See Flood Map.

7. **RAINFALL:** Average annual rainfall is 22 inches.

8. **CLIMATE ZONE:** 5B

9. **WEATHERING:** Severe

10. **TERMITE:** None to Slight

11. **WINTER DESIGN TEMP:** 0°F

12. **ICE SHIELD UNDERLAYMENT:** Yes

13. **AIR FREEZING INDEX:** ≤ 1000

14. **MEAN ANNUAL TEMP:** 45°F

Last Revised: 7/2023