



Lakewood

## **Non-prescriptive structures**

Non-prescriptive structures are structures that do not use design criteria that is published in the International Residential Code in Chapter 4, foundations, Chapter 6 wall construction, and Chapter 8 roof ceiling construction. Examples of prescriptive criteria are Tables R602 and R802.4. They lay out framing spacing and maximum spans and loads for dimension lumber and other prescriptive criteria provided in the code are for foundation reinforcing, foundation connections, bracing requirements, shear reinforcement requirements, sheathing and fastener requirements.

**Any structure that is not designed to the prescriptive standards of the 2021 IRC is considered a custom structure. Engineered drawings stamped and signed by a licensed professional engineer (P.E.) in the State of Colorado must be provided to the city for review.**

Areas that are in the special wind region as specified in the local amendments to table R301.2(1) of the International Residential Code, west of the 10,000 block in the city must be engineered due to the high wind loading that occurs in those areas. The prescriptive design criteria in the code provides design specifications for wind speeds up to 140 MPH, the special wind region requires structures be designed to withstand wind speeds up to 155 MPH, so the requirement for engineered drawings extends to structures in the special wind region.

Any structure over 600 square feet in area, or any addition over 600 square feet in area to a structure is required by local amendment to provide a soils report showing the bearing capacity and drainage characteristics of the soils that will support the structure. The City of Lakewood has many areas within city limits where soils are “Expansive”; they suffer inordinately from expansion when the soils are saturated with water. This has an extremely negative effect on structures that are supported on that soil, so precautions must be taken to spread the weight of the structure out over those soils to prevent cracking, heaving, settling, and other structural damage to the building. Areas where the soil report indicates expansive soils or soils with low bearing capacity must be engineered by a licensed engineer in the State of Colorado (P.E.) as well. An architect may not design the structural system for projects located in poor soil.

There are no example details the city can provide due to the unique nature of every structure that requires engineered structural systems.

We are happy you are building in Lakewood, and we want to provide whatever information you require. Please call 303.987.7500 with any questions.