

ARTICLE 200
MINIMUM FOUNDATION, BASEMENT, CRAWL SPACE AND GARAGE REQUIREMENTS

202. Cold Weather Concrete Practice- The I.C.C. Council and the American Concrete Institute ACI-318 have established thresholds for placement of concrete when cold weather conditions exist. The following information is from various excerpts of the applicable code sections as they apply to the placement of concrete in cold weather conditions.

PROTECTION OF CONCRETE IN COLD WEATHER

FOOTINGS

Footings can be poured when the temperature is 20 degrees Fahrenheit or above, however the following precautions must be adhered to:

Concrete shall be maintained at a temperature of not less than 50 degrees Fahrenheit for a minimum of 3 consecutive days after placement of concrete.

INSULATED BLANKETS MUST PROTECT THE CONCRETE AND FORMS LEFT IN PLACE.

The hole should not be left open for more than 24 hours. Protection must be provided to keep soil from freezing with STRAW or INSULATED BLANKETS.

FOUNDATION WALLS

Foundation walls can be poured when the temperature is 40 degrees Fahrenheit or above.

Concrete shall be maintained at a temperature of not less than 50 degrees Fahrenheit for a minimum of 7 consecutive days.

INSULATED BLANKETS SHALL BE SECURELY FASTENED TO BOTH SIDES AND THE FORMS MUST BE LEFT IN PLACE.

FLATWORK

After the first frost, it is the discretion of the Building Official if flat work can continue. Flat work is allowed if the temperature of the concrete is maintained at 50 degrees for 7 consecutive days after concrete placement.

The use of salamanders, or other equipment that exhaust flue gases into the area above concrete floors must be avoided, because of the danger of carbonation to the fresh concrete.

The I.C.C. Code Council and American Concrete Institute ACI – 318 provides for alternates for the above. High early strength may be used to substitute the following guidelines. An increase in the amount of cement to a minimum of a 6-bag mix and maintaining the concrete at 50 degrees for 3 consecutive days provides an option for the builders. Additionally, admixtures for high early strength may be added in accordance with the manufactures requirements.

The use of visqueen and straw are not an acceptable means of protection, INSULATED BLANKETS ONLY.

Please contact the Building Department prior to ordering concrete.

203. Drain tile shall be installed around the outside of the foundation adjacent to the footings, leading to a sump pump, which should discharge into an approved drainage facility. Drainage must be provided on all basement and crawl spaces when encompassing a habitable space. With the prior approval of the Building Official, drain tile may be "daylited", at his sole discretion.
204. All poured crawl spaces must be provided with a drain tied into the tile which is to be located at the interior of the footing. The drain tile is to then discharge into a sump pit.
205. In no case shall footing drains be connected to any sanitary sewer system, or septic system.
206. Footings for single family dwelling units containing no basement or crawl space are permitted provided that it has a trench footing that is a minimum 12" width and a minimum of 42" depth. This depth is to be measured below grade.

207. Bottom of footings, shall be not less than three feet six inches (3'6") below finished grade, except where placed on solid bed rock. Minimum size of footings shall be 10" x 20" with standard "keyway", or as approved by the building official.
208. A foundation wall is required under all stoops supporting a roof.
209. Foundation shall be backfilled with clean fill. Do not use debris for backfilling.
210. All columns supporting beams must rest on a minimum 36" x 36" x 12" deep concrete pier footing. Rivet, weld or bolt top of steel column to steel girders (or lag screw to wood girders) and anchor bottom by bolts or embed in concrete.
211. All floor slabs shall be a minimum of 4" thick including all accessory structures. All slabs shall have a minimum of four-inch stone base.
212. When concrete floor is installed in heated areas, a vapor barrier must be provided.
213. The wing walls used to support stoops must be properly reinforced.
214. Detached garages shall have a minimum 12" by 12" trench footing with a minimum 4" slab and 6" stone base.
215. An attached garage shall be completely separated from the residence and its attic by a minimum 5/8" drywall applied to the garage side with joints properly taped and cemented, or equivalent. Sills of all door openings between the garage and adjacent interior habitable space of Group R shall be raised not less than four inches above the garage floor.
216. Concrete shall be placed only on clean compacted fill (compacted to 95% Proctor density) stone fill or virgin clay free from any vegetation debris or organic soils.
217. All structural pier drawings shall be designed and stamped by a registered design professional.
218. All wood decks enclosed or otherwise after removal of organic vegetation shall have installed a minimum of two inch stone base over six mil visqueen or as approved by the AHJ. (exception to the above where the entire space under the deck is readily accessible).