



Cold Weather Concrete Protocol

The 2006 IBC 1905.12 states:

Concrete that is to be placed during freezing or near-freezing weather shall comply with the following:

1. Adequate equipment shall be provided for heating concrete materials and protecting concrete during freezing or near-freezing weather.
2. Concrete materials and reinforcement, forms, fillers and ground with which concrete is to come in contact shall be free from frost.
3. Frozen materials or materials containing ice shall not be used

Concrete Admixtures:

Type C accelerating admixtures are used mainly in cold weather operations to shorten the setting time of concrete and accelerate the strength development at early stages. The problem is that calcium chloride is the prevalent ingredient used in producing admixtures. Calcium chloride can cause an increase in drying shrinkage, reinforcement corrosion, discoloration of concrete, and or loss of strength at later stages and possible scaling.

For more information on cold weather concrete, see Concrete Standard – ACI360R

The City of Nixa's residential requirements for cold weather concrete are as follows:

1. At no time shall concrete be placed on frozen ground
2. If the temperature is to be below 32° at any time during the first 5 days after placing concrete. The concrete must be protected from freezing. Insulated blankets may be used and must be on site before inspection will be approved.
3. No more than 2% calcium chloride may be used
4. The temperature forecast for the 5 day period will be determined by KY3's morning forecast the day of the pour.

Please call our office with any questions. 417-725-5850.