



**County Engineer
Environmental Engineer
Building Department**
233 W. Sixth Street
Marysville, Ohio 43040
P 937. 645. 3018
F 937. 645. 3161
www.unioncountyohio.gov/engineer

Marysville Operations Facility
16400 County Home Road
Marysville, Ohio 43040
P 937. 645. 3017
F 937. 645. 3111

Richwood Outpost
190 Beatty Avenue
Richwood, Ohio 43344

Public Service with integrity

Cold Weather Concrete Policy

The purpose of this policy is to establish standards for placing concrete in cold weather conditions as defined by the American Concrete Institute Committee Report 306 (ACI 306). In accordance with ACI 306, concrete can be placed safely during the winter months if certain precautions are taken:

The ground on which the concrete is to be placed shall not be frozen. The sub grade material should not only be firm and dry, but it should be free of frost. Special precaution should be taken to ensure that forms and reinforcing are also free of frost.

The outside temperature shall be a minimum of 17° F and rising. If the temperature is below 17° F, then a written process by a registered design professional shall be submitted for review by the Building Official prior to the placement of concrete. At the time of inspection, all materials and methods shall be in place in accordance with the procedures outlined by the registered design professional for observance by the building inspector.

After being placed, the concrete must be covered by the appropriate insulation to maintain a concrete temperature of 50° F for three (3) days. Table 7.3.2 in ACI 306 prescribes insulation needed for various air temperatures.

For inspection purposes we will use the following guidelines:

**FOR LOW TEMPERATURES BELOW 50 DEGREES
AND NOT BELOW 42 DEGREES R-2
AND NOT BELOW 33 DEGREES R-4
AND NOT BELOW 25 DEGREES R-6
AND NOT BELOW 17 DEGREES R-8
BELOW 17 DEGREES DESIGN PROFESSIONAL REQUIRED**

Straw will be assumed to have a value of R-1 for each inch provided when it is not compacted and covered with plastic visqueen or tarpaulin.

The minimum concrete temperature as placed shall be 45-50° F.

When temperatures are below 17 degrees, in addition to the engineering as stated above, post holes using "sacrete" are not permitted without some protective means such as providing a tented enclosure with heat provided

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It is Union County's policy to discourage the use of admixtures such as calcium chloride. However, if admixtures are necessary, then ASTM C-494 "Standard Specifications for Chemical Admixtures for Concrete" shall be applied. In that event, the concrete contractor and the ready-mix supplier shall work together to reach the desired results for the site conditions. A letter from the design engineer shall be sent to the building official describing the admixture(s) used to meet the conditions in the field. The use of air entrained concrete as a method of controlling the curing process is encouraged.

Concrete inspections are to be performed the day of the pour. Non-structural slabs may be inspected the day prior to the pour with permission from the building official.

This policy does not apply to concrete for pavement, base course, curb, curb and gutter, sidewalks, and driveways. For the policy and procedures for these items, see the Administrative Policy and Procedure from the County Engineer. Concrete work associated with the building construction, such as porches, exterior steps, garage floors, patios, etc. shall be constructed in accordance with ACI 306.

All design and construction shall be in compliance with the Ohio Building Code or the Residential Code of Ohio.

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