

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Statement of Compliance

Code: 2018 NC Energy Conservation Code
Section: C408.1

Date: July 1, 2019

Question:

Do the Statement(s) of System Commissioning - (Part 1: Mechanical, Part 2: Service Water Heating, Part 3: Electrical System Installation) document(s), referenced in Section C408.1 and located in Appendix C1, need to be completed by the Engineer-of-Record?

Answer:

The Board that interprets the responsibilities and limits of the Professional Engineering Licensure Laws is the NC Board of Engineers and Land Surveyors (www.ncbels.org). This question to Section C408.1 was posed to this Board, and the response is provided in this document for convenience:

Beginning of Responseⁱ-

The NC Board of Examiners for Engineers and Surveyors, notes that there is a recognizable break in scope between the production of permit drawings and Construction Administration or site observations and because of this the initial engineer, or engineer of record may complete, however is Not required to complete the code required site observation or Appendix C1 and that it May be completed by a second third party engineer that is local to the project if the end user so chooses.

A successor (or second) engineer can only certify as to items that the PE can verify under his/her responsible charge and must do adequate observation (or supervise an employee of the PE who makes the observations) to do so. Reference is to Board Rule 21-56.0701(c)(3) and (4) for the requirements of responsible charge.

-End of Response.

Follow-up Question #1:

Is this system commissioning required to be by a third-party commissioning agent?

Answer:

No. Minimum code does not require this to be performed by a third-party commissioning agent. If someone desires a third-party commissioning, that would have to be handled contractually.

Follow-up Question #2

How is Section C408ⁱⁱ applied with regards to work in existing buildings?

Answer:

If the space being altered exceeds 10,000 SF, the systems within said space being altered are required to meet the requirements of C408.1. It is understood there may be systems that are unaffected in an alteration; those items can be so noted. If the space being altered is less than 10,000 SF, then the commissioning requirements of C408.1 are not invoked by code.

Example #1:

An alteration is being performed in a 300,000 SF building that is supplied by a remote chiller and boiler plant, but the permit area for the alteration is for a 6,000 space. Although the building is over 10,000 SF, the area of alteration is less than 10,000 SF and the requirements of C408.1 are not invoked by code.

Example #2:

Suppose an alteration is being performed in the same building as the preceding example, and the permit area for the alteration is 12,500 SF. Since the area is greater than 10,000 SF, section C408.1 is invoked, but only for the area being altered.

There may of course be scenarios where systems such as chilled water and central steam or shared air handlers will be affected that cross the boundary of the alteration area. The code does not get down to the level of illustrating where exactly on the plans the demarcation point is for affected vs. unaffected building systems, but Section C503.1 has the general statement that “..alterations shall not create an unsafe or hazardous condition or overload existing building systems...” so the design professional(s) may have to make a call on a case-by-case basis if these shared systems are encountered and where to end the system commissioning required by minimum code.

Keywords:

none

ⁱ Re-confirmed for 2018 Energy Code

ⁱⁱ Please refer to the Existing Buildings Chapter, Section C503. Section C503.1 reads:

Alterations to an existing building, building system or portion thereof shall conform to the provisions of this code as those provisions relate to new construction without requiring the unaltered portions of the existing building or building system to comply with this code. Alterations shall not create an unsafe or hazardous condition or overload existing building systems.

Following this main paragraph are a long list of exceptions, but section C408.1 (Systems Commissioning) is not one of the exceptions, therefore the area of alteration is subject to the requirements of C408.1.