



MIKE CAUSEY
INSURANCE COMMISSIONER

BRIAN TAYLOR
STATE FIRE MARSHAL

July 5, 2024

Mr. Nicholas Lutzweiler
Lutzweiler Engineering

RE: 2018 NCBC 1705.1.2 Specific elements always requiring special inspections

Mr. Lutzweiler:

This letter is in response to your request for a formal interpretation letter from the Office of State Fire Marshal ("OSFM"). Requests are addressed below in the order in which they are posed.

Your request stated in relevant parts:

"See attached documentation for a full picture of what's going on. In a nutshell: 1705.1.2 does not list welding as a "specific element always requiring special inspections". Therefore, I believe it is the responsibility of the local jurisdiction."

....

"Brief summary –

- I designed a structural frame for a 600 lb rooftop unit at an existing building. This was done at the request of the mechanical contractor installing the unit.
- This did require the installation of an L4x4 angle frame, which required some welding to the existing bar joists.
- It is a risk category II building with no special inspections requirement. I understand Pak and Todd agree with me up to this point.
- Todd with GSO inspections asked for the welds to be reviewed by either the engineer of record or a 3rd party inspector.
- As I read the building code, I do not see that requirement listed, so I asked for where this was in the code. This would add significant cost to not only this project, but projects moving forward.
- Pak and Todd graciously disagreed (you can see their responses below), and my client (The installer) and I agreed to comply with what they asked for on this project, which I highlighted below (Todd – I'm not sure what my client decided to do yet). However, moving forward, we feel it necessary to elevate this.
- I noted that I wanted the Building Code Council to opine on this, because if welds need to be inspected for every equipment install, it will increase costs significantly for many small projects, such as this. I know that the BCC is made up of a diverse group of individuals that includes contractors, and I believe their opinion matters in this greatly. As I note below, this is all about risk management. Ideally, every weld on every structure and every bolt would be checked. However, the cost of that would be too high. My essential argument is that requiring 3rd party inspections beyond the intent of Chapter 17 will create a less safe public environment. My logic is that as

OFFICE OF STATE FIRE MARSHAL

inspection costs go up, more contractors will choose to avoid getting permits and structural plans completed. They are already paying for plans, and then have to add inspection costs. Then, not even engineered plans and/or any inspections will be completed. I, nor my client, want to skirt anything. On the contrary, we want a level playing field so that when they quote a project that includes \$2,500 in engineering and inspections, they aren't competing against a company that has no intent to even pull a permit. We believe that small incidental things such as a 600 lb rooftop unit can be inspected by local inspectors. If a 600 lb rooftop unit requires 3rd party inspections, what doesn't?

- I believe that if the intent of the building code was to require 3rd party inspectors for all welds, it would be clearly noted in Chapter 17."

....

Background and commentary:

Attachment A is comprised of the request for formal interpretation as well as all supporting information submitted with the request.

Code Analysis: Structural steel framing elements that require verification by special inspection or testing are listed in 2018 North Carolina Building Code (NCBC), Section 1705.1.2 Specific elements always requiring special inspections and Section 1705.1.3 Structures requiring special inspections. Section 2204.1 Welding and Section 2205.1 General requires the design, fabrication, and erection of structural steel elements in buildings, structures and portions thereof shall be in accordance with AISC 360. AISC 360 is the referenced standard for the design, fabrication and erection of structural steel elements and is an enforceable extension of the code.

....

1705.1.2 Specific elements always requiring special inspections. *Special inspections* in accordance with Sections 1704 and 1705 are required for the following elements only, regardless of the building or structure that they are in:

1. Piles, piers and special foundations in accordance with Sections 1705.7, 1705.8, 1705.9, 1810.3.5.2.4 and 1810.3.5.2.5;
2. Sprayed fire-resistant materials in accordance with Section 1705.14;
3. Mastic and intumescent fire-resistant coatings in accordance with Section 1705.15;
4. Smoke control and smoke exhaust systems in accordance with Sections 1705.18;
5. Retaining walls and retaining systems exceeding 5 feet (1524 mm) of unbalanced backfill height in accordance with Section 1807.2.

Special inspections are not required for other elements unless the building or structure is one identified in Section 1705.1.3

1705.1.3 Structures requiring special inspections. *Special inspections* in accordance with Sections 1704 and 1705 are required for the building, building components or other structures according to the following:

1. Buildings or other structures listed in Table 1604.5 in Risk Category II if:
 - 1.1. Building height exceeds 45 feet (13.7 m) or three *stories*; or
 - 1.2. The building is an underground building in accordance with Section 405.1.
2. Buildings or other structures listed in Table 1604.5 in Risk Categories III or IV. 308.4 Institutional Group I-2.

....

2204.1 Welding. The details of design, workmanship and technique for welding and qualification of welding personnel shall be in accordance with the specifications listed in Sections 2205, 2206, 2207, 2208, 2210 and 2211. For *special inspection* of welding, see Section 1705.2.

....

2205.1 General. The design, fabrication and erection of *structural steel elements* in buildings, structures and portions thereof shall be in accordance with AISC 360.

....

Conclusions: The structural steel framing and welds for supporting the 600-pound rooftop unit referenced in this request for a formal interpretation response letter is not included within the scope of 2018 NCBC, Chapter 17 Special Inspections under Section 1705 and therefore does not require special inspections. The inspection for code-compliance of structural steel framing and welds that are not subject to 2018 NCBC, Chapter 17 Special Inspections is the responsibility of the building official by comparing the permit documents with the actual installation. Permit documents shall contain specific detailed information that the structural steel framing and welds design, fabrication and erection does comply with the relevant sections and standards noted in 2018 NCBC, Chapter 22 Steel, including AISC 360 and other applicable sections and standards contained within the suite of 2018 North Carolina Building Codes. Welding certificates complying with AISC 360 shall also be provided, as required by the standard. Once this information is provided to the building official, the inspection by the building official, involves verifying the permit documents and welding certificates with the actual installation for code-compliance.

Sincerely,



David B. Rittlinger, PE, LEED AP
Division Chief – Codes & Interpretations
North Carolina Office of State Fire Marshal

cc: Bridget Herring, Chair – BCC
Mark Matheny, Vice-Chair – BCC
Michael Ali, Chair, Commercial Super Committee - BCC
Nathan Childs, Esq., NCDOJ, counsel for NC Building Code Council, nchilds@ncdoj.gov

ATTACHMENT A



APPENDIX E
APPEALS
NORTH CAROLINA
BUILDING CODE COUNCIL
325 North Salisbury Street, Room 5_44
Raleigh, North Carolina 27603
(919) 647-0095

APPEAL TO NCDOI/NCBCC Hearing Date ___/___/___
GS 153A-374, GS 160A-434 GS 143-140, GS 143-141
Formal Interpretation by NCDOI Appeal of Local Decision to NCBCC
Appeal of Local Decision to NCDOI Appeal of NCDOI Decision to NCBCC

APPELLANT Nicholas Lutzweiler, P.E.
REPRESENTING Nicholas Lutzweiler, P.E.

North Carolina State Building Code, Volume 2018 Building - Section 1705.1.2

REQUEST ONE: [X] Formal Interpretation by NCDOI [] Appeal of Local Decision to NCBCC
[] Appeal of Local Decision to NCDOI [] Appeal of NCDOI Decision to NCBCC

Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.
See attached documentation for a full picture of what's going on.

In a nutshell: 1705.1.2 does not list welding as a "specific element always requiring special inspections". Therefore, I believe it is the responsibility of the local jurisdiction.

REASON:
I was overruled by NCDOI and Local jurisdiction. For a single project, obviously fine. However, I believe the cost implications of having all welds, even for 600 lb equipment frames is beyond the intent of the building code. 1705.1.2 could have easily had a line for "welds", but it does not. Doing 3rd party inspections on things not listed in 1705.1.2, in my opinion, is beyond the scope of the building code. That responsibility lies with the jurisdiction. If the jurisdiction does not have inspectors qualified to look at welds, or anything not listed in chapter 17, they should hire qualified people.

Signature [Handwritten Signature] DATE: 06/06/2023 APPEAL TO NCDOI/NCBCC FORM 3/14/17

202.9 Appeals

202.9.1 Engineering Division. A written technical interpretation shall be provided as specified in Section 203.2.1.2. Any person may appeal in writing an order, decision, or determination pertaining to the code or any state building law by filing written notice with the Commissioner of Insurance or his designee within ten (10) days after the order, decision, or determination. A copy of the appeal shall be furnished to each party.
(General Statutes 143-140, 153A-374 and 160A-434)

203.2.1 Interpretations

203.2.1.1 Informal Interpretations. The Engineering Division shall provide informal interpretations on code related matters either by e-mail, letter or telephone. These informal interpretations may be accepted by the local code enforcement official or party requesting the interpretation. Either party may request a formal interpretation of the code.

203.2.1.2 Formal Interpretations. Any person may request in writing a formal interpretation of the code. The request shall be addressed to the Chief Code Consultant for the Department of Insurance. The request shall be specific and shall reference the code sections in question. All formal interpretations shall be in writing. A formal interpretation shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. Formal interpretations determined to be of a general nature may be posted on the Department website. (General Statute 143-140)

203.2.2 Appeals. Any person may appeal in writing an order, decision, or determination of a code enforcement official pertaining to the code or any state building law. The appeal shall be addressed to the Chief Engineer for the Department of Insurance by filing written notice within ten (10) days after the order, decision, or determination. The appeal shall contain the type and size of the building in question, the location of the building, and shall reference the code sections in question. The decision shall be in writing and shall set forth the facts found. The decision rendered shall be based on the technical provisions of the code, public health and safety and shall be construed liberally to those ends. A decision shall be binding on all parties unless appealed to the Building Code Council as specified in Section 201.9.2. A copy of the appeal and written decision shall be furnished to each party. (General Statutes 153A-374 and 160A-434)

202.9.2 Building Code Council. The Building Code Council shall hear appeals from the decisions of State enforcement agencies relating to any matter related to the code. Any person wishing to appeal a decision of a State enforcement agency to the Building Code Council shall give written notice of appeal as follows:

202.9.2.1 Twenty one (21) copies including an original of the Notice of Appeal shall be filed with the Building Code Council c/o NC Department of Insurance, Engineering Division, 325 North Salisbury Street, Room 5_44, Raleigh, NC 27603 and one (1) copy shall be filed with the State enforcement agency from which the appeal is taken.

202.9.2.2 The Notice of Appeal shall be received no later than thirty (30) days from the date of the decision of the State enforcement agency.

202.9.2.3 The Notice of Appeal shall be legibly printed, typewritten or copied and shall contain the following:

- (1) Name, address of the party or parties requesting the appeal.
- (2) The name of the State enforcement agency, the date of the decision from which the appeal is taken, and a copy of the written decision received from the enforcement agency.
- (3) The decision from which the appeal is taken shall be set forth in full in the Notice of Appeal or a copy of the decision shall be attached to all copies of the Notice of Appeal.
- (4) The contentions and allegations of fact must be set forth in full in a clear and concise manner with reference to the sections of the code in controversy.
- (5) The original Notice of Appeal shall be signed by the party or parties filing appeal.
- (6) The Notice of Appeal shall be received by the first day of the month **prior to the Building Code Council's** quarterly scheduled meeting in order to be placed on the agenda for that meeting. The Chairman may schedule a special meeting to hear an appeal.

202.9.2.4 Upon the proper filing of the Notice of Appeal, the Building Code Council Secretary shall forward one (1) copy of the Notice of Appeal to each member of the Building Code Council. The Chairman may appoint a Hearing Committee to hear appeals. The Secretary shall send notice in writing to the party or parties requesting an appeal and to the Building Code Council Hearing Committee members at least fifteen (15) days prior to the Hearing Committee meeting. A written decision of the Hearing Committee meeting shall be provided to all Building Code Council Members. The actions of the Hearing Committee shall be final, unless appealed to the full Building Code Council in writing within 30 days of the Hearing Committee's action. If a Hearing Committee consists of at least seven Council members, it will constitute a quorum of the full Council. Further appeals shall be as specified in Section 202.9.3.

202.9.2.5 The Building Code Council shall, upon a motion of the State enforcement agency or on its own motion, dismiss appeals for the following reasons:

- (1) Not pursued by the appellant or withdrawn;
- (2) Appeal not filed in accordance with these rules; or
- (3) Lack of jurisdiction.

202.9.2.6 When the Building Code Council finds that a State enforcement agency was in error in its interpretation of the code, the Building Code Council shall remand the case to the agency with instructions to take such actions as the Building Code Council directs. When the Building Code Council finds on appeal that materials or methods of construction proposed are equivalent to those required by the code, the Building Code Council shall remand the case to the State enforcement agency with instructions to permit the use of such materials or methods of construction. The Building Code Council shall immediately initiate procedures for amending the code to permit the use of such materials or methods of construction.

202.9.2.7 The Building Code Council shall provide a written decision setting forth the findings of fact and the Building Code Council's conclusions to each party or parties filing the appeal and to the State enforcement agency from which the appeal was taken.

202.9.3 Superior Court. Whenever any person desires to appeal a decision of the Building Code Council or a decision of a State or local enforcement agency, he may appeal either to the Wake County Superior Court or the Superior Court of the county in which the proposed building is to be situated in accordance with the provisions of Chapter 150B of the General Statutes.
(General Statute 143-141(d))

Nicholas Lutzweiler

From: Rittlinger, David B <david.rittlinger@ncdoi.gov>
Sent: Tuesday, June 6, 2023 2:37 PM
To: Nicholas Lutzweiler
Cc: Yip, Pak; Todd.Dickson@greensboro-nc.gov
Subject: RE: [External] FW: Excel Imaging

Nick,
Good afternoon.
I hope you are well.
The best format for this at this point would be for you to issue a request for a formal interpretation using the form at the link below and emailing it back to me with all of the relevant information required to evaluate the intent of the code.
<https://www.ncosfm.gov/appeals-and-formal-interpretations>

Let me know if you have any questions.

Thank you

David B. Rittlinger, PE, LEED AP
Chief Code Consultant
Code Interpretations Supervisor
Engineering Division



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0008

david.rittlinger@ncdoi.gov

Link to free view of 2018 NC Codes
<https://codes.iccsafe.org/codes/north-carolina>

From: Nicholas Lutzweiler
Sent: Tuesday, June 6, 2023 1:18 PM
To: Rittlinger, David B <david.rittlinger@ncdoi.gov>
Cc: Yip, Pak <pak.yip@ncdoi.gov>; Todd.Dickson@greensboro-nc.gov
Subject:

CAUTION: External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Mr. Rittlinger,

I'm an engineer in the Kernersville area, and would like to see if you could have the Building Code Council opine on the below sequence of events. Both Pak and Todd have been gracious to work with, but we have a difference of opinion. I

understand and respect their position, but I think it is not the intent of the building code. I am open to being wrong, but I know there are big implications to whatever the correct interpretation is. Brief summary –

- I designed a structural frame for a 600 lb rooftop unit at an existing building. This was done at the request of the mechanical contractor installing the unit.
- This did require the installation of an L4x4 angle frame, which required some welding to the existing bar joists.
- It is a risk category II building with no special inspections requirement. I understand Pak and Todd agree with me up to this point.
- Todd with GSO inspections asked for the welds to be reviewed by either the engineer of record or a 3rd party inspector.
- As I read the building code, I do not see that requirement listed, so I asked for where this was in the code. This would add significant cost to not only this project, but projects moving forward.
- Pak and Todd graciously disagreed (you can see their responses below), and my client (The installer) and I agreed to comply with what they asked for on this project, which I highlighted below (Todd – I'm not sure what my client decided to do yet). However, moving forward, we feel it necessary to elevate this.
- I noted that I wanted the Building Code Council to opine on this, because if welds need to be inspected for every equipment install, it will increase costs significantly for many small projects, such as this. I know that the BCC is made up of a diverse group of individuals that includes contractors, and I believe their opinion matters in this greatly. As I note below, this is all about risk management. Ideally, every weld on every structure and every bolt would be checked. However, the cost of that would be too high. My essential argument is that requiring 3rd party inspections beyond the intent of Chapter 17 will create a less safe public environment. My logic is that as inspection costs go up, more contractors will choose to avoid getting permits and structural plans completed. They are already paying for plans, and then have to add inspection costs. Then, not even engineered plans and/or any inspections will be completed. I, nor my client, want to skirt anything. On the contrary, we want a level playing field so that when they quote a project that includes \$2,500 in engineering and inspections, they aren't competing against a company that has no intent to even pull a permit. We believe that small incidental things such as a 600 lb rooftop unit can be inspected by local inspectors. If a 600 lb rooftop unit requires 3rd party inspections, what doesn't?
- I believe that if the intent of the building code was to require 3rd party inspectors for all welds, it would be clearly noted in Chapter 17.

Lastly, I have copied Pak and Todd on this. While we disagree, I respect them, and I do understand where they are coming from, and I want to make sure that I don't take anything they say out of context (Pak/Todd, please feel free to reply if I say anything out of context). And if there is another protocol for submitting a formal question, please advise. I certainly appreciate you all's time and busy schedules, and I don't want to bypass any steps. This is just my first entry into this arena.

Respectfully submitted,

Nick

Nicholas Lutzweiler, P.E.
Lutzweiler Engineering PLLC

From: Nicholas Lutzweiler
Sent: Wednesday, May 17, 2023 7:58 AM
To: Yip, Pak <pak.yip@ncdoi.gov>; Todd.Dickson@greensboro-nc.gov

Pak,

Thank you for your response and the time on the phone the other day. I have researched this more, and I still respectfully disagree. However, I will obviously respect your decision for this project. On this project, and future ones like it, that you would accept (please confirm I understood that correctly):

1. An inspection by a CWI or engineer of record.
2. A note by the EOR saying that "certified welders must complete welds" and proof from the contractor that a certified welder did the welds.

With that said, that will hopefully serve to complete this project. However, I plan to raise this as a question to the Building Code Council of North Carolina. I believe that inspecting of welds is the responsibility of the inspections department unless special inspections is required. I do not believe your reference to AISC 360 below is relevant to this case. I do understand the logic, but I do not believe that was the intent of the Building code council. A simple line item in 1705.1.2 noting steel welds always require special inspections would have been sufficient to convince me, but it's not there. In addition, AISC 360 chapter N is really for structural steel buildings. This is an equipment frame. It is not a part of the structural frame of the building.

This has major implications for well beyond this project. If local jurisdictions can start asking for inspections on things that, in my opinion, go beyond the building code, it has major cost implications. It will take me some time to write up a response to the BCC, but I do plan to do that. With that said, if the BCC want to require welding to be inspected on equipment frames, they can obviously rule that way. I do think contractors on the BCC will push back though, and they will have to find a balance.

Lastly, please hear me that I do respect your opinion on this (and Todd's). We just have a different interpretation. My client and I respect that decision and will obviously comply on this project. I know each of you want to faithfully uphold the code, and I respect that. I simply want the BCC to provide more explicit language to clarify this. My client and I want a level playing field so that all jurisdictions and contractors are bidding on projects in a way that's fair. Adding a +/--\$600 inspection to a project can make or break their bid. Protecting the public is of course #1, however, this is all about risk management. We don't ultrasound every weld when special inspections are required, but we could. It's not deemed necessary, and it would drive costs up too much. My point is that everyone has a point in which they say enough inspections are enough. For me, if you have a client that pays for engineered drawings to support an equipment frame for a 600 # unit, I think I can trust them to put it in right. So, Todd, and Pak, thank you both for your time and responses in this. If the above two options are what I understood you to be saying, I'll talk with my client about which one we will pursue. He inherited this project from a retired project manager, so he's not sure who did the welds just yet.

Respectfully,

Nick

From: Yip, Pak <pak.yip@ncdoi.gov>
Sent: Monday, May 15, 2023 2:45 PM

Nicholas,

I agree the building is not required special inspection based on sections 1705.1.2 and 1705.1.3.

However, NCBC Section 2204 requires that welding be performed in accordance with the applicable steel specification referenced in Section 2205 for structural steel. Section 2205 required the fabrication of the structural steel elements in accordance with AISC 360. AISC 360, the quality control from Chapter N then provides minimum requirements for quality control (QC), quality assurance (QA) and nondestructive testing (NDT) for structural steel systems for buildings and other structures.

It appears to me that Section 2204 and Chapter 17 Special Inspection point to the same AISC 360 reference. Section 2204 does not detail welding requirements; rather, it requires that welding be accomplished in accordance with the requirements of the appropriate design specification.

Welding inspection and welding inspector qualification for structural steel shall be in accordance with AWS D1.1. AWS D1.1 requires qualification. AWS D1.1:2010 (and other recent versions), clause 6.1.4.1 on Inspector Qualification Requirements – Basis for Qualification, states the following:

“Inspectors responsible for acceptance or rejection of material and workmanship shall be qualified. The bases of Inspector qualification shall be documented. If the Engineer elects to specify the bases of inspector qualification, it shall be so specified in contract documents.

The acceptable qualification basis shall be the following:

- (1) Current or previous certification as an AWS Certified Welding Inspector (CWI) in conformance with the provisions of AWS QC1, Standard for AWS Certification of Welding Inspectors, or*
- (2) Current or previous qualification by the Canadian Welding Bureau (CWB) in conformance with the requirements of the Canadian Standard Association (CSA) Standard W178.2, Certification of Welding Inspectors, or*
- (3) An individual who, by training or experience, or both, in metals fabrication, inspection and testing, is competent to perform inspection of the work.”*

AWS D1.1 clause 6.1.4.5 states “The Engineer shall have authority to verify the qualification of Inspectors.”

As stated from AISC 360 Section N6 :

At the completion of fabrication, the approved fabricator shall submit a certificate of compliance to the AHJ stating that the materials supplied and work performed by the fabricator are in accordance with the construction documents. At completion of erection, the approved erector shall submit a certificate of compliance to the AHJ stating that the materials supplied and work performed by the erector are in accordance with the construction documents.

In summary,

When determining the QA requirements, the EOR may consider the Fabricator’s and Erector’s QC programs and the complexity of the work. If it is determined that the steel Fabricator or Erector have strong QC programs, the EOR and AHJ may waive (portions of the) QA. This can be accomplished by a QAI (Quality Assurance Inspection) review of QC program and QCI documentation.

I hope the information above is helpful to you. Please let me know if you have any questions.

Pak Keung Yip, P.E.
Chief Building Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0007

From: Nicholas Lutzweiler <nlutzweiler@ncdoj.gov>
Sent: Thursday, May 11, 2023 8:33 PM
To: Todd.Dickson@greensboro-nc.gov

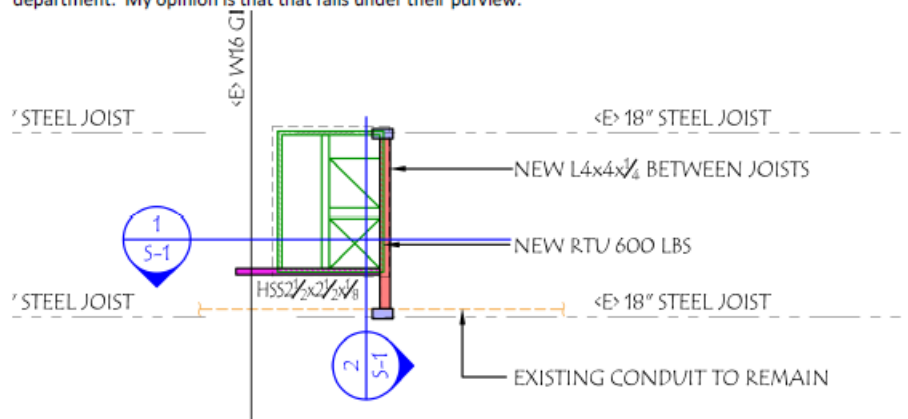
Yip, Pak <pak.yip@ncdoj.gov>

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Todd and Pak,

Thank you both for taking time today to talk. I have reviewed the code and here is what I personally found, but I welcome you all to point me somewhere else if I'm missing something:

1. Pak, as a reminder, this is a steel frame for a new 600 lb rooftop unit (small image of scope below). My understanding is that Todd has asked for the welds to be inspected by someone outside the inspections department. My opinion is that that falls under their purview.



2. I reviewed the NC Administrative code and found no reference to welding or structural steel (reinforcing steel for concrete is referenced several times, but obviously much different than what we have here).
3. I reviewed chapter 17 of the NC Building code and special inspections are exempt for this case, see below snapshot and my brief summary:
 - a. 1705.1.2 has the ALWAYS required special inspections, but it does not mention welding. It then notes that special inspections are not required for other elements unless 1705.1.3 applies.

- b. 1705.1.3 structures require special inspections, but we do not meet any of the (3) criteria for this one-story, less than 45' tall, Risk category II building structure.
4. Lastly, I am aware that section 107.4 "Independent inspections authorized by the code enforcement official" exists. However, the intent of that section is not to delegate inspections, but rather to provide a faster route for certain types of inspections. NCDOL has provided context on that here: [GS 160D-11-6 Acceptance of RA or PE \(ncosfm.gov\)](#)

**SECTION 1705
REQUIRED SPECIAL INSPECTIONS AND TESTS**

1705.1 General.

Special inspections and tests of elements and nonstructural components of buildings and structures shall meet the applicable requirements of this section.

1705.1.1 Special cases.

Special inspections and tests shall be required for proposed work that is, in the opinion of the building official, unusual in its nature, such as, but not limited to:

1. Construction materials and systems that are alternatives to materials and systems prescribed by this code.
2. Unusual design applications of materials described in this code.
3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code.

1705.1.2 Specific elements always requiring special inspections.

Special inspections in accordance with Sections 1704 and 1705 are required for the following elements only, regardless of the building or structure that they are on:

1. Piles, piers and special foundations in accordance with Sections 1705.7, 1705.8, 1705.9, 1810.3.5.2.4 and 1810.3.5.2.5;
2. Sprayed fire-resistant materials in accordance with Section 1705.14;
3. Mastic and intumescent fire-resistant coatings in accordance with Section 1705.15;
4. Smoke control and smoke exhaust systems in accordance with Sections 1705.18;
5. Retaining walls and retaining systems exceeding 5 feet (1524 mm) of unbalanced backfill height in accordance with Section 1807.2.

Special inspections are not required for other elements unless the building or structure is one identified in Section 1705.1.3.

1705.1.3 Structures requiring special inspections.

Special inspections in accordance with Sections 1704 and 1705 are required for the building, building components or other structures according to the following:

1. Buildings or other structures listed in Table 1604.5 in Risk Category II if:
 - 1.1. Building height exceeds 45 feet (13.7 m) or three stories; or
 - 1.2. The building is an underground building in accordance with Section 405.1.
2. Buildings or other structures listed in Table 1604.5 in Risk Categories III or IV.

Based upon that, I see no code sections that require inspections of welds from a 3rd party, but I welcome anyone to show me a reference. This inspection should, in my opinion, be under the purview of the Inspections department. If either of you find a code reference I'm missing, I'm glad to talk through it, but respectfully, I don't see it.

Therefore, if this all makes sense and no other code sections are found, I move to have Greensboro inspect the work, provide comments to Jason (contractor) if necessary, and close this one out.

Lastly, I do want to say that we all want the same thing, a safe system. The intent of the building code is risk management. The Building code council folks have, in my opinion, determined that the risk to a building and components such as this are low, and a local inspections department can complete that work. I agree with them on that. If this was a mission critical weld in a hospital, I 100% support a special inspection, as does the code, but this is a 600 lb rooftop unit in a Risk category II building. There isn't no risk, but I have faith in Todd and his inspectors to review my drawings and see if things align.

Respectfully submitted,

Nick

Nicholas Lutzweiler, P.E.
Lutzweiler Engineering PLLC

From: Nicholas Lutzweiler
Sent: Thursday, May 11, 2023 3:54 PM
To: Todd.Dickson@greensboro-nc.gov
Cc: jmelton <jmelton@kayheating.com>; Yip, Pak <pak.yip@ncdoi.gov>
Subject: FW: [External] FW: Excel Imaging

Todd,

See below from Mr. Pak Yip, P.E. I've copied him on this email too. I welcome any context you can provide, as does Jason. We want to make sure the code is followed, but not do more than what is needed, given 3rd party inspections are costly.

I've copied Pak, as I don't want anything he said to be taken out of context. I want to make sure he's in the loop. I think it would probably be best if you (Todd) and Pak spoke directly. I'd be glad to be on any call that happens or just hear a summary.

Best,

Nick

Nicholas Lutzweiler, P.E.
Lutzweiler Engineering PLLC

From: Yip, Pak <pak.yip@ncdoi.gov>
Sent: Monday, April 17, 2023 2:40 PM
To: Nicholas Lutzweiler
Subject: RE: [External] FW: Excel Imaging

Nicholas,

Unless the inspection is under Chapter 17 required Special Inspection, the local jurisdiction shall be responsible to perform all the required inspections.

Pak Keung Yip, P.E.
Chief Building Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0007

From: Nicholas Lutzweiler
Sent: Monday, April 17, 2023 1:03 PM
To: Yip, Pak <pak.yip@ncdoi.gov>
Subject: RE: [External] FW: Excel Imaging

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Pak,

Thank you very much for the follow-up and checking on this. I really appreciate that, as I know you have a lot on your plate. I was able to speak to David while you were out and he was very helpful. My takeaway was that building officials can ask for an engineer to review/inspect if the installation is a good bit different from the drawings. However, if special inspections aren't required AND the installation/drawings appear to match, it is the job of the inspections department to inspect. That makes sense to me.

I think in my particular case, my understanding was the inspections department was asking me to do the inspection for them, but that wasn't in my contract with the mechanical contractor, as Special inspections isn't required. I'm waiting to hear back from the code official for clarification though. Thanks again!

Best,

Nick

From: Yip, Pak <pak.yip@ncdoi.gov>
Sent: Monday, April 17, 2023 11:55 AM
To: Nicholas Lutzweiler
Subject: RE: [External] FW: Excel Imaging

Nicholas,

Have your questions been addressed by another consultant when I was out of the office?

Pak Keung Yip, P.E.
Chief Building Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0007

From: Nicholas Lutzweiler
Sent: Thursday, April 6, 2023 12:43 PM
To: Yip, Pak <pak.yip@ncdoi.gov>
Subject: [External] FW: Excel Imaging

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Hi Pak,

I hope all is well. Can you help me understand the below request from City of Greensboro?

Context: this was a small project, just adding a rooftop unit to an existing building. I did the structural design and provided a signed/sealed drawing for support. I also checked the existing steel joists. The city came back with the below. It is my opinion and understanding that it is the City's job to do the inspections. Special inspections were not required, and so I don't understand how the City can ask for this.

I very much welcome your thoughts if there is a code section I'm missing.

Best,

Nick

Nicholas Lutzweiler, P.E
Lutzweiler Engineering PLLC

From: Dickson, Todd <Todd.Dickson@greensboro-nc.gov>
Sent: Thursday, April 6, 2023 11:13 AM

Jason,

We will need an engineer letter stating that the work has been completed per design. With his seal and signature.

Thanks,

Todd Dickson, Chief Building Inspector
Development Services Divisions
Engineering & Inspections Department
Phone [\(336\) 202-5629](tel:3362025629)
PO Box 3136, Greensboro, NC 27402-3136
Email Todd.Dickson@greensboro-nc.gov

From: |
Sent: Thursday, April 6, 2023 10:40 AM
To: Dickson, Todd <Todd.Dickson@greensboro-nc.gov>

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Todd, I have contacted the engineer and he would like some more information about what exactly he needs to do.

If you could send me a E-mail on what we talked about yesterday, and how this will work moving forward.

So we all can be on the same page please.

Please Advise, Thank you.