

Construction Code Communicator

State of New Jersey
Philip D. Murphy, Governor

Department of Community Affairs
Jacquelyn A. Suárez, Commissioner

Volume 37, Number 1

Spring 2025

UCC Inspectors and Their Responsibilities

















The Code Assistance Unit has been receiving increased complaints about UCC inspectors enforcing statutes and regulations that are under the jurisdiction of the Division of Consumer Affairs, specifically the Licensed Contractors statutes and regulations. As UCC inspectors that were licensed contractors, sometimes the line between being a contractor and an inspector get blurred. As such, we wanted to help reestablish that line by reminding everyone of your enforcement responsibilities and role as a UCC inspector.

As a UCC inspector, it is your responsibility to “administer and enforce” the Uniform Construction Code. It is NOT your responsibility to enforce the contractor’s licensing statutes and regulations.

The UCC Act states at N.J.S.A. 52:27D-126(a): "The appointing authority of any municipality shall appoint a construction official, any necessary subcode officials and technical assistants to assist such officials to administer and enforce the code."

The Uniform Construction Code defines enforcing agency as follows: "Enforcing agency" means the municipal or State administrative entity charged with the administration and enforcement of the regulations consisting of the construction official, subcode officials and assistants thereto appointed in accordance with N.J.S.A. 52:27D-126 of the act and the regulations.

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(UCC Inspectors and their Responsibilities)

Many municipalities even cite in their Ordinances that the State Uniform Construction Code enforcing agency for their locality shall adopt the State Uniform Construction Code as the authority of their jurisdiction. So, as a local code official, it is important to remember the limits of your jurisdiction and act within the requirements of your ordinance.

As a UCC inspector, it is your responsibility to verify that the Licensed Contractor is indeed licensed in good standing at the Division of Consumer Affairs. It is also your responsibility to ensure that the work performed meets or exceeds the codes under the UCC. If the work is UCC code compliant, then it is your responsibility to provide the job with an "Approved" sticker for the applicable discipline. Should you have questions about whether the Licensed Contractor is working under their respective Scope of Work within their specific licensing requirements, then you may forward your concerns to the respective Licensing Board at the Division of Consumer Affairs, and they will follow up with the contractor, should the need arise.

The following is a link to the Division of Consumer Affairs webpage where you can find information on licensing boards: <https://www.njconsumeraffairs.gov/>.

We know that it's sometimes hard to take off your contractor's hat and put on your inspector's hat, but it's imperative that we act within our assigned jurisdictional responsibilities.

Source: Scott Borsos and Anthony Menafro
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FAQs for the Residential Structural Integrity Law

If you recall the Summer 2024 Communicator article related to this, we now have a Frequently Asked Questions (FAQs) document posted on our website related to P.L. 2023, c.214. The FAQs are directed toward those residential buildings that operate as associations and the related capital reserve studies. So, if you are a Uniform Construction Code official reading along, this is more of a resource for your multiple-family dwelling buildings subject to this law. But whoever is reading this, the information can be found on the Bureau of Homeowner Protection's webpage, listed as "FAQs - Residential Structural Integrity Law, P.L. 2023, c.214" on the right side of the page: <https://www.nj.gov/dca/codes/offices/homeownerprotection.shtml>.

➔ Direct link: https://www.nj.gov/dca/codes/forms/pdf_pred/str_int_cap_res_faq.pdf

The FAQ currently contains information for the following six questions:

- Who is required to conduct a structural integrity inspection pursuant to N.J.S.A. 52:27D-132.4?
- If my association is not a "Covered building" and exempt from the structural integrity inspection requirements of N.J.S.A. 52:27D-132.4, is my association also exempt from the capital reserve study contained in N.J.S.A. 45:22A-44.2 and 45:22A-44.3?
- What are "common area capital assets" that would exempt our association under the legislation?
- Can our association board members prepare the capital reserve study?
- How much money does our association need to keep in reserves?
- Does the New Jersey Department of Community Affairs oversee and review our association's capital reserve accounts and balances?

The FAQ document also contains the Summer 2024 article and the pertinent laws.

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

Department Notice on Inflatable Amusement Rides

The New Jersey Department of Community Affairs

NOTICE OF USE OF NON-PERMITTED INFLATABLE AMUSEMENT RIDES AND INSURANCE LIABILITIES FOR NEW JERSEY RESIDENTS, TOWNSHIPS & SCHOOL DISTRICTS

The New Jersey Department of Community Affairs (DCA) Amusement Ride Safety Inspections Unit (Unit), under the Bureau of State & Local Code Inspections, has received several recent complaints from registered inflatable ride owners who are losing many of their commercial contracts to owners illegally operating within the State without the required ride permits, as per NJAC 5:14A. The operation of inflatables inherently involves a risk to the public and it is crucial that these rides be properly set up and operated by qualified persons. The Unit ensures that these rides are safe through a permitting and annual inspection process.

Registered and permitted ride owners are required to renew their ride permits and to be inspected annually. During this annual inspection, owners are required to demonstrate to the Department their ability to correctly set up and operate the equipment in accordance with the ride manufacturer's requirements and specifications. They are also required to provide training certification for all ride operators. Non-permitted, illegal operators may not be adhering to these requirements, thus making for potentially improper and dangerous equipment set up. In fact, an incident recently occurred in Maryland involving a young child who lost their life due to improper set up and assembly, allowing the inflatable ride to blow away while children were occupying the inflatable.

While many unpermitted inflatable rides are rented illegally at private residences (for birthday and graduation parties, for example), many continue to be contracted for use at events sponsored by schools, daycare centers, churches, and town events. The Department would like to point out that any inflatable being advertised, contracted, and/or operating for public use requires a current and valid annual ride permit issued by the DCA, whether it be for a public or private event. The Department is asking for reciprocal assistance via our many municipalities to prevent the continued advertising, contracting, and use of illegal non-permitted rides at public events. Our local partners would include Uniform Construction Code and fire safety officials, school boards, and parent organizations, and the public at large.

The Department would also like to emphasize that **use of unregistered and unpermitted inflatable rides in New Jersey could present issues with insurance coverage and may result in a homeowner, ride owner, and/or municipality exposed to liability, as the equipment would be deemed to have been operated illegally.**

In addition to a current and valid annual ride permit, an annual inspection is also required, resulting in the DCA safety inspector affixing a "passed inspection" green sticker to the ride at the time of inspection. We are asking all municipal and school district personnel to be aware of, and to look for the required **"Passed Inspection Permit to Operate" green sticker** on any inflatable ride(s) you may encounter operating at public events in your town/municipality, and if not found, to call the ride hotline at 609-292-2099, or contact us at rides@dca.nj.gov so we may respond accordingly.

Together, we can best serve our state and its residents by working cooperatively to ensure public safety while offering assistance to current ride owners who are permitted and operating legally.

Source: Carnival and Amusement Ride Safety
Bureau of State and Local Code Inspections
(609) 292-2097

Sprinkler Exemptions for Townhomes



Lately, the Department has been receiving questions concerning sprinkler exemptions for townhomes as a result of recently passed legislation, so, to help provide some clarification on the matter, here's some additional information to help clear things up. In short, the initial law was passed in 2023 and then amended in 2024 to extend the compliance date.

The initial law stated that all newly constructed townhomes are required to have sprinkler systems in accordance with the International Residential Code as of February 1, 2024. Where this gets tricky is the second addition to the Law that was signed in 2024, states that any project in which an application for development was submitted to a municipality, county, or state agency before the effective date of the amendment (July 10, 2024), is not subject to the requirements for the sprinkler system. So, if a project went to a planning board, or received county approval, etc., before July 10, 2024, these requirements won't apply.

Ultimately, with all of this being the case, as of February 1, 2025, all newly constructed townhomes must have a sprinkler system.

While there's currently a proposal for incorporation of the requirements in the Uniform Construction Code ([56 N.J.R. 2263\(a\)](#)), it has not yet been adopted. A lot of people may think that they don't have to comply until it's in the Uniform Construction Code (UCC) or think that once it's adopted, the 6-month grace period will apply. However, this is a unique situation because it's a law, and law supersedes regulations. The 6-month grace period does not apply, and the requirements kick in on February 1st, regardless of whether the UCC Regulation adoption is finalized.

Source: Ian Rayfield
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Multiple Dwelling Registration and Certificates of Occupancy



It has come to the attention of the Bureau of Housing Inspection that some local construction officials have been issuing Certificates of Occupancy to properties that were not registered as multiple dwellings prior to the issuance of their certificates. In response to this, the Bureau would like to highlight the regulations at N.J.A.C. 5:23-2.24, Conditions of certificate of occupancy, and specifically to the regulations located at N.J.A.C. 5:23-2.24(e):

No certificate of occupancy shall be issued for a hotel or multiple dwelling, as defined in the Hotel and Multiple Dwelling Law (N.J.S.A. 55:13A-1 et seq.), except after filing by the owner with the construction official of a photocopy of a certificate of registration issued by the Bureau of Housing Inspection of the Department of Community Affairs.

This requirement applies to all properties with three or more dwelling units, including townhomes and condominiums, and properties of ten or more, two-unit structures, as these property types are all under the jurisdiction of the Bureau of Housing Inspection.

Ultimately, the goal is to ensure the safety and compliance of all regulated properties because any unregistered multiple dwellings are a significant cause for concern due to the dangerous conditions that may arise due to a lack of oversight. In many instances, the failure to register could have been caught at the varying levels of municipal review and approval, but the property still falls through the cracks. So, let's do our part and if there is a multiple dwelling requesting a Certificate of Occupancy in your municipality, please ensure proof of registration with the Bureau of Housing Inspection prior to the issuance of the certificate to help keep tenants and the municipality protected. For further information, please call (609) 633-6216 or email us at BHInspections@dca.nj.gov.

Source: Bureau of Housing Inspection
(609) 633-6216

UCC Self-Certification Plan Review Program

For all my fast-food aficionados, let's just say the Uniform Construction Code (UCC) now has a Burger King take-out window installed. For those design professionals who can meet and follow the program, this fast-food take-out window may be helpful, where you can *Have It Your Way!*

Starting with some background, this law started, as all laws do, as a bill. Note, Assembly and Senate Bills can be found at <https://www.njleg.state.nj.us/>, and you can view their progress as they move through the chambers of state government. A version of this bill that made its way through the Governor's desk for a signature as [Assembly Bill 4360](#). On August 22, 2024, the "New Jersey Design Professional Self-Certification Act," was signed into law as [P.L.2024, c.58](#). This law enabled DCA to establish a design professional self-certification program for UCC plan review for specific projects. Full details can be found on the website in the following link but here are the highlights; https://www.nj.gov/dca/codes/resources/self_cert.shtml.

1. Applicability; scope of work

It includes the four (4) major realms of a Rehabilitation project: Repair, Renovation, Alteration, and Reconstruction projects, as defined by [N.J.A.C. 5:23-6](#). It further notes that it applies to all occupancy classifications except Groups A, E, H, I, and U (see [Ch 3 of the building subcode](#)) with certain square footage limitations; note that construction type is not a limitation. Exclusions from the program are (1) projects where plan review is reserved solely to the Department of Community Affairs, N.J.A.C. 5:23-3.11, (2) projects that include a new commercial kitchen, (3) projects that include new electrical service exceeding 400 amps, (4) projects that include structural alterations involving lateral design, or any project that requires a special inspection (see Ch 17 of the building subcode), and (5) prototype plan submittals.

2. Authorization to participate

To start, one would need current licensure as a design professional (architect or engineer) for at least three years in NJ and designs applicable to the [Building Design Services Act](#) (N.J.S.A. 45:4B-7). The second part is current licensure by this DCA (not the Division of Consumer Affairs) where one can inspect high-rise and hazardous structures (HHS) for the applicable State Uniform Construction Code Jurisdiction, N.J.A.C. 5:23-5.3. Thirdly, proof of, or a certificate demonstrating professional liability insurance coverage. To provide a quick and easy example of application, an alteration project of a public bathroom would require the applicable design professional(s) to be licensed by the UCC as building HHS and plumbing HHS.

3. Program function, in general

The Qualified Design Professional (QDP) of record, an architect or engineer who is authorized to participate in the self-certification program, is required to remain with the project until the enforcing agency signs off on the project through the issuance of the applicable certificate pursuant to N.J.A.C. 5:23-2.23. In the event that a QDP of record withdraws from a project before the enforcing agency's issuance of a letter of completion or certificate of approval, all work shall cease and no permit, or certificate shall be issued until a successor QDP is designated as indicated in the law.

Design professional of record self-certification form:

To be submitted with each application utilizing self-certification.

- [Design professional of record self-certification form](#) - The QDP of record shall complete and submit the form to the enforcing agency, together with the submission of a self-certified construction permit application and accompanying plans and specifications.

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The Construction Code Communicator is an online publication of the New Jersey Department of Community Affairs' Division of Codes and Standards. It is typically published four times a year.

Copies may be read or downloaded from the division's website at: www.nj.gov/dca/divisions/codes.

Please direct any comments or suggestions to the NJDCA, Division of Codes and Standards, Attention: Code Development Unit, PO Box 802, Trenton, NJ 08625-0802 or codeassist@dca.nj.gov.

(UCC Self-Certification Plan Review Program)

Owner Certification Statement & Owner Hold Harmless Letter:

To be submitted with each application utilizing self-certification.

- [Owner Certification Statement](#) - For each project, the owner responsible for the work identified in the permit application shall certify that the owner has authorized the work and shares joint responsibility.
- [Owner Hold Harmless Letter](#) - For each project, the owner shall sign, date, agree to, and furnish to the QDP of record who shall submit the letter to the enforcing agency, which shall provide that the owner agrees with the conditions of the law.

Again, this is just the highlights, one should visit the website for all the details of this new law. And remember, as Burger King would say to all of you in the construction industry, *YOU RULE!*

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

Supplemental Inspection Agencies: What to Do? 

The Office of Regulatory Affairs (ORA) has heard that there may be some confusion about the application and enforcement of the new supplemental private on-site inspection agency (SPOIA) regulations. This article is intended to provide clarity and guidance on how to enforce these new provisions of the Uniform Construction Code.

On April 1, 2024, the SPOIA regulations were adopted and unlike the adoption of model codes which have a grace period, these administrative changes take immediate effect upon adoption. The updated rules afforded both municipalities and applicants another way to provide for inspections, **only** when N.J.A.C. 5:23-2.18(c) cannot be adhered to. In other words, not meeting 24-hour notice and 3 business days after that for a total of 4 business days to perform a required inspection.

Digging in deeper, the updated rules require that notices for inspection are to be made in writing with an exception for minor work, which still allows for inspections to be called in. In writing can mean anything that the local enforcing agency requires, i.e., email, paper application, etc. The preferred method would be a distinguishable email to every applicant so that a written request can be made and a response generated. The enforcing agency has 24 hours from the request of inspection to get back to the requestor with an inspection date as per N.J.A.C. 5:23-4.16(c)2. The failure of an enforcing agency to respond with a date does not automatically allow an applicant to contract with a supplemental agency; however, an enforcing agency would then be subject to N.J.A.C. 5:23-4.16(h), which could allow the department to authorize an applicant to utilize a supplemental agency. Please note, N.J.A.C. 5:23-4.16(g)5 provides that in any event, an unforeseen circumstance, such as an illness or accident, shall not be considered a missed inspection so long as the agency performs the inspection as soon as practicable.

As per N.J.A.C. 5:23-4.16(e), an enforcing agency may, at its discretion, authorize an owner, agent, or other authorized person in charge of work to directly contract with a private on-site inspection agency, authorized pursuant to N.J.A.C. 5:23-4.12, to perform all inspections on a specific project. Such approval shall be confirmed, in writing, as a part of the permit files. This would generally happen when a larger project comes to a municipality and said enforcing agency could not possibly perform the inspections due to the current staff. This would be the only time that an enforcing agency can elect to accept or deny a request.

The updated rules now provide an applicant with three options should an enforcing agency violate N.J.A.C. 5:23-2.18(c). Option one is to accept the provided inspection date, option two is to agree to a different date, so long as it is within 30 days as per N.J.A.C. 5:23-4.16(f), and the third option is to choose to contract with a private on-site inspection agency as per N.J.A.C. 5:23-4.16(g). These options are only available to the applicant in the above instance; therefore, no approval is required. However, in each of these options, the applicant must place in writing the option that they chose. Neither an applicant nor an enforcing agency can change the option that was chosen unless agreed upon by both parties in writing.

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(Supplemental Inspection Agencies: What to Do?)

If an applicant chooses to contract with a supplemental agency, the only thing required at that time would be their choice to go with a supplemental agency. Once that agency is chosen, those agencies should contact the local enforcing agency asking what would be required. At a minimum, you should be requiring a copy of the agency's certification, which is signed by ORA, a copy of the inspection sticker, a copy of the inspector's inspection log, and the name and license number of the inspector. A list of authorized agencies can be found by clicking *Private Onsite Agencies* under the Related Forms and Publications heading on the ORA webpage at <https://www.nj.gov/dca/codes/offices/regaffairs.shtml>.

If an applicant chooses to contract with a supplemental agency, said contract is between that agency and the applicant, which includes the cost of any inspections provided. As per N.J.A.C. 5:23-4.16(g)4, at the end of the project that utilized supplemental agencies, a refund can be requested. That refund is to be calculated by the local enforcing agency and can include an administrative charge. However, that administrative charge cannot be more than what is required to be refunded. Let me provide an example: If an applicant requests a refund and the amount due back is \$50, and the administrative charge is \$100 then nothing would be refunded, and no additional money is required to be paid. However, if a refund is \$150 and the administrative charge is \$100, then a refund of \$50 is given back.

When enforcing the SPIOIA regulations, please use some common sense. If someone calls in for an inspection, please do not just dismiss the inspection request because it does not meet the written requirement. Use some common sense and advise the caller of the new regulations and how to proceed in the future. Take the inspection request and email that request back to that caller so there is a written record. This written record is to protect not only the applicant but also the local enforcing agency. This written record also provides the means as to whether the use of a supplemental agency is allowable.

Source: Chris Ferrara
Office of Regulatory Affairs
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Solar and Reroofing: Detached One- and Two-Family Dwellings

There appears to be some confusion about when a permit is required for reroofing on a detached one- or two-family dwelling that contains existing rooftop-mounted photovoltaic panels. This topic will build on two previous articles, *Rooftop Photovoltaic Solar Energy Systems – Access and Pathways*, originally published in the Fall 2021 edition of the *Construction Code Communicator* and then updated in the Fall 2022 edition for permit fees.

The last paragraph of the Fall 2021 article stated:

"Regarding permit requirements, a roof covering replacement on a detached one- or two-family dwelling is considered ordinary maintenance per N.J.A.C. 5:23-2.7(c)1x. However, if the rails of the photovoltaic solar energy system are removed and the grounding/bonding is compromised, an electrical permit would be required to ensure proper reconnection."

This interpretation remains valid -- only an electrical permit is required if the rails are removed, and the grounding/bonding is compromised. However, some may be requiring a building permit for the reattachment of the solar system, which would be incorrect.

As provided above, reroofing is classified as ordinary maintenance for these homes. Roof access and pathway requirements outlined in Section R324 of the 2021 International Residential Code (IRC) do not apply unless the solar system is newly installed or entirely replaced, as specified at N.J.A.C. 5:23-6.8(h)1xii. For a photovoltaic panel system to be considered completely replaced, both the photovoltaic panels and the rack support system must be replaced, per the definition of a Photovoltaic Panel System:

A system that incorporates discrete photovoltaic panels that convert solar radiation into electricity, including rack support systems.

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(Solar and Reroofing: Detached One- and Two-Family Dwellings)

A typical roof replacement that includes existing rooftop photovoltaic panels would not require a building permit for the reinstallation of the panels. The key word here is reinstallation and there are some items already accounted for, such as Section R324.4, which includes structural items such as the roof and wind loads. This section of the IRC would not factor in, therefore eliminating the need for a building technical section.

The same would apply to the pathways of Section R324.6, which currently lie under the fire protection subcode for responsibility; they are accounted for in the original design which is being reinstalled. Note that there is a pending September 16, 2024, proposal to align this responsibility to the electrical subcode. This leaves the OG interpretation intact for the electrical permit of the panel connections to each other (National Electrical Code) and the roof (Section R324.3)

Lastly, with the 2024 I-codes on the horizon, Section R324 will be located in the new code at Section R329.

Source: Adam Matthews
Code Assistance Unit
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Structure Walls as a Pool Barrier: A History Lesson

To those of you who, like me, were alive in 1979 when Pink Floyd released “Another Brick in the Wall,” you probably remember loving the lyrics “we don’t need no education.” Unfortunately, when it comes to structure walls as pool barriers, we could all use a history lesson.

By the way, for those keeping track, I was born in 1979 – so technically, I am still a 70’s baby. With that said, let’s dive into the content of this article.

We will begin with the current amendment within the one- and two-family dwelling subcode: N.J.A.C. 5:23-3.21(c)3xliii amends the 2021 International Swimming Pool and Spa Code (ISPSC), by means of Section R327 of the 2021 International Residential Code (IRC), stating that Section 305.4, Structure wall as a barrier, shall be deleted. This is found at item 3.4.3 within the list of amendments at Section R327. Also, it should be noted that the same amendments can be found in the building subcode via Section 3109.

In my Summer 2020 article for Swimming Pool Etiquette, I note that “Section 305.4, Structure wall as a barrier, is deleted...” and “If a wall of the home/building meets the other criteria of Section 305, it should be allowed as a barrier.” I thought that would be the end of the situation but alas, the thread was pulled, and the sweater came apart into a ball of yarn, I suppose.

This deletion dates back to the adoption of the 1996 BOCA National Building Code, adopted July 6, 1998. The proposal provided the following, back when swimming pool barrier criteria were in Chapter 4 of the BOCA code:

Section 421.10.1: In the 1993 edition of the model code, the requirements for swimming pool enclosures were expanded to require separation of the pool from the dwelling to which it is accessory. The requirement for the door from the dwelling unit which opens into the pool area to have an alarm or to be self-closing is an excessive level of regulation to impose within a single-family dwelling unit. The Department believes safety is to be encouraged, but it does not believe that a building code should require parents to manage their children's safety in a specific and prescriptive matter. The Department proposes the deletion of Section 421.10.1 #9 in its entirety, thus reverting to the 1990 edition of the model code N.J.A.C. 5:23-3.14(b)4x. Section 421.10.1 #9 of the 1996 BOCA National Building Code is deleted in its entirety.

This amendment prompted an article back then, Summer 1998 - Pool Barriers and the Code Adoption. It is provided below:

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(Structure Walls as a Pool Barrier: A History Lesson)

With the adoption of the 1996 BOCA National Building Code, there will no longer be a need to put an alarm in the door from a dwelling where the dwelling unit wall serves as a part of the pool barrier. There has been some confusion as to whether the dwelling can serve as part of the barrier. It can.

Section 421.10.1 #9 is the text being deleted. This subsection of the building subcode deals only with the requirements for the door. It remains appropriate to allow the dwelling unit wall to serve as a portion of the barrier. This is reinforced by the definition of the term "Barrier" in section 421.2 which states: "A fence, a wall, a building wall, the wall of an above-ground swimming pool or a combination thereof... "

So, remember, the barrier requirements are similar to what we are all used to, however, the door from the house is no longer required to have an alarm.

The above only speaks to residential pools but that is because the public pool section did not have any alarm requirements. So, when the BOCA code was retired and we entered the days of the International Code Council, the swimming pool barrier requirements took a journey through Appendix G of the IRC before landing in Chapter 3; the building subcode had always had a reference in Chapter 31/IBC. When New Jersey adopted the 2015 IBC and IRC, the ISPSC was introduced as a reference standard, in which New Jersey adopted the same standard/amendments for pool barriers of all buildings. Section 305 has been the barrier requirement since then and remains today. New Jersey maintains that any building can use the structure wall as a barrier without alarm.

We understand that over the years of the ISPSC development, Section 305.4 has been expanded (e.g., window alarms) but the justification for the deletion remains just as it did back then, as a status quo that dates back to the 1996 BOCA code and that the wall of a home or a building can be used as a swimming pool barrier.

So, there you have it folks, a history lesson of swimming pool barriers. Teacher, out!

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

Guardrails - When Are They Required?

Building a safe home isn't just about choosing the perfect paint color or countertops. It's also about protecting your space from hazards that might not be immediately obvious, like falls. That's where guards, as outlined in Section R312 of the 2021 International Residential Code (IRC), come into play. Let's break it down:

What Are Guards?

Guards are protective barriers designed to prevent falls from elevated walking surfaces like balconies, stairs, decks, landings, etc. Think of them as safety nets that keep you from accidentally falling over the edge, especially in areas where you might not expect the need for extra protection. Guards can be made from materials like wood, metal, or even glass—whatever fits the design of the building—but they must meet specific requirements.

Here are some of the key requirements:

- **Height:** Guards must generally be at least 36 inches tall, with two exceptions:
 1. Stairs: Guards can be 34 inches high.
 2. Handrails: The guard must be between 34 inches minimum and 38 inches maximum if the top of the guard also serves as a handrail.
- **Opening Limitations:** The openings in a guard should not allow the passage of a 4-inch diameter sphere, with two exceptions:
 1. Triangular openings (formed by risers, treads, and bottom rails of guards) must not allow the passage of a 6-inch diameter sphere.
 2. Guards on stairs must not allow the passage of a 4 and 3/8th inch diameter sphere.

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(Guardrails - When Are They Required?)

- **Strength:** Guards must be strong enough to resist a live load of 200 pounds per square foot. See Table R301.5 of the 2021 IRC for more details such as guard in-fill components and the affiliated footnotes.

When Are Guards Required?

Guards are required for open-sided walking surfaces (like balconies, stairs, decks, landings, etc.) if the drop from the edge of the surface to the floor or ground below is 30 inches or more, and this drop occurs within 36 inches horizontally from the edge.

Here's a simple way to understand when guards are needed:

1. Measure the drop straight down from the edge of the surface to the ground or floor below. If the drop is 30 inches or more, a guard is required.
2. Measure 36 inches horizontally away from the edge of the surface. If the drop is still 30 inches or more within that 36-inch area, a guard is needed.

In other words, if the ground below slopes downward from the edge of an open-sided walking surface, a guard is required if the drop is 30 inches or more within 36 inches horizontally from the edge.

Final Thoughts

When building your new home, always prioritize safety. Guards are a simple yet important feature that can significantly reduce the risk of accidents. Whether you're designing a beautiful deck with sweeping views or a stylish staircase in your foyer, remember to follow these key guidelines from the 2021 IRC to ensure everyone stays safe. Happy building!

Source: Keith Makai
Code Assistance Unit
(609) 984-7609

Sill Plates and 3 x 3 Plate Washers

In wood-framed construction, many assume that 3-inch by 3-inch plate washers on anchor bolts securing sill plates are always required. However, the International Residential Code (IRC) and International Building Code (IBC) only mandate their use in specific cases, particularly in seismic regions or where braced wall panels are present. The purpose of this article is to address the fact that some municipalities are requesting the addition of plate washers in the design.

The IRC and the IBC provide clear direction on when these washers are necessary. According to IRC Section R602.11.1 and IBC Section 2308.3.1.1, 3x3 plate washers are required only under two conditions. First, they must be used in Seismic Design Categories D, E, and F, where they enhance the connection between the sill plate and foundation, helping to resist uplift and sliding forces during an earthquake. It should be noted that within the IRC, Section R301.2.2 specifically exempts all seismic requirements from all detached one- and two-family dwellings and single-family townhouses. Second, they are required when securing braced wall panels, ensuring the walls perform effectively against lateral forces from wind or seismic activity.

In contrast, if a structure is not located in a seismic zone and the anchor bolts are not part of a braced wall panel, Section R403.1.6 of the IRC states, "a nut and washer shall be tightened on each anchor bolt," and Section 2308.3.1 states "a properly sized nut and washer shall be tightened on each bolt to the plate." You'll note that there is no mention of what size washer is required when using the anchor bolt method as opposed to an anchor strap.

While 3x3 plate washers play a critical role in structural performance under specific conditions, they are not a universal requirement for all sill plates. However, if the designer includes plate washers in the design and they are specified on the plans, they must be installed; otherwise, omitting them would constitute a deviation from the released plans.

Source: Adam Matthews
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Cord and Plug Connected Equipment

We all know that depending on the type of sheathing used, electrical wiring lasts approximately 50 to 70 years. The number 50 ties in nicely with the Uniform Construction Code Act being the same age. I'm not saying the question I'm about to address dates back that far, but the coincidence is timely. So, when is there a need for an electrical permit for equipment that is cord and plug connected?

To provide an example, let's take a look at low-voltage landscape lighting, which is an item that we hear code officials vacillate over the need for an electrical permit. In short, if the power supply can be readily disconnected via a cord, what is the need for a permit? Do floor lamps need a permit? Room air conditioners? Vacuum cleaners? Based on that, the obvious answer would be, no.

NFPA agrees via Informative Annex H (which we know is not enforceable). Article 80.19(C)(1) of the 2020 National Electrical Code (NEC) states, in part: "...no permit shall be required to execute any of the classes of electrical work specified in the following: (1) Installation ...of electric utilization equipment approved for connection to suitable permanently installed receptacles."

Now, the caveat to this would be if the lighting system is permanently connected to premises wiring. If yes, then a permit is required as this system now becomes part of the permanently wired system of the structure and the NEC will apply.

Source: Scott Borsos
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Vertical Platform Lifts

This article addresses Vertical Platform Lifts (VPLs), and the important distinction between elevators and elevator devices. People often use the term elevator to mean both "elevator" and "elevator devices;" this common misconception can be solved by taking a closer look at the language in the Uniform Construction Code at N.J.A.C. 5:23-12.2(e):

For purposes of this subchapter, "elevator" or "elevator device" means a hoisting and lowering device equipped with a car or platform which moves in guides for the transportation of individuals or freight in a substantially vertical direction through successive floors or levels of a building or structure; or, a power driven, inclined, continuous stairway used for raising or lowering passengers; or, a type of passenger carrying device on which passengers stand or walk, and in which the passenger carrying surface remains parallel to its direction of motion and is uninterrupted. This includes, without limitation, elevators, escalators, moving walks, dumbwaiters, wheelchair lifts, manlifts, stairway chairlifts, and any device within the scope of ASME A17.1 (Safety Code for Elevators and Escalators), ASME A18.1 (Safety Standard for Platform Lifts and Stairway Chairlifts), or ASME A90.1 (Safety Standard for Belt Manlifts).

The section references both "elevators" and "elevator devices;" this is to differentiate between elevators and other elevator devices – it also differentiates between the applicable reference standards. Which have differing requirements largely based on the equipment they govern.

When the term elevator is used, it is specifically defining an elevator. When the term elevator device is used, it includes escalators, moving walks, dumbwaiters, wheelchair lifts, manlifts, stairway lifts, and any device within the scope of ASME A17.1 or ASME A18.1.

The elevator devices that fall under A18.1 (Safety Standard for Platform Lifts and Stairway Chairlifts) do not operate the same way as elevators do. Among those devices are VPLs. Often, the Division is asked the same two questions about VPLs, as follows:

(Continued on next page)

(Vertical Platform Lifts)

Question: Should a VPL be incorporated into the fire control panel?

Answer: Simply put, no. This question usually arises when a fire alarm system initiating device is in the location of the VPL. Note that ASME 18.1, Section 2, does not reference NFPA 72. This is because the operation of the device requires constant pressure via the up or down button to move in the desired direction. It cannot automatically return to a floor like an automatic elevator when a fire alarm system initiating device is activated. Because the VPL is designed for slow speed and is under complete control by the operator, the fire code is silent, and no fire recall is required.

Question: Is a shunt trip breaker required when a sprinkler is activated?

Answer: The answer to this question is also no. The purpose of a shunt trip breaker is to terminate the power to the elevator controller when water is introduced. When this occurs in elevators, the automatic capabilities activate the fire recall and return the elevator to the designated floor, thus preventing entrapment. However, if a shunt trip were to be activated in a VPL, it would shut down the device even if it was in use and trap the person manually operating the VPL. These devices are used largely as accessibility devices for wheelchair users, so that function would be problematic, especially in the event of a fire. The NEC does not require a shunt trip breaker for VPLs.

It is important to keep the differences between elevators and elevator devices in mind because they have unique operating systems and utilize different standards and regulations.

Source: Dan Tober
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Fire Alarm Systems: Dedicated Function

Most of the fire alarm systems in Section 907 of the 2021 International Building Code NJ edition (IBC) are building fire alarm systems you would expect to see in a restaurant, school, nursing home, or hotel. Instead, as the title of this article suggests, we will delve into another type of fire alarm system: Dedicated Function Fire Alarm Systems.

To familiarize yourself with the different types of fire alarm systems, including dedicated fire alarm systems, a review of the definitions sections of the 2021 IBC and NFPA 72-2019: National Fire Alarm and Signaling Code is in order:

2021 IBC defines the term “fire alarm system” in Chapter 2:

Fire Alarm System: A system or portion of a combination system consisting of components and circuits arranged to monitor and annunciate the status of fire alarm or supervisory signal-initiating devices and to initiate the appropriate response to those signals.

NFPA 72-2019 mirrors the 2021 IBC definition of a fire alarm system at Section 3.3.111, however, NFPA goes a step further by defining the different types of fire alarm systems including protected premises “building fire alarm systems” at Section 3.3.111.4.1 and “dedicated fire alarm systems” at Section 3.3.111.4.2.

Protected Premises (Local) Fire Alarm System: A fire alarm system located at the protected premises.

Building Fire Alarm System: A protected premises fire alarm system that includes any of the features identified in 23.3.3.1 and that serves the general fire alarm needs of a building or buildings and provides notification.

Dedicated Function Fire Alarm System: A protected premises fire alarm system installed specifically to perform emergency control function(s) where a building fire alarm system is not required.

(Continued on next page)

(Fire Alarm Systems: Dedicated Function)

Based on the terms/definitions provided, “fire alarm system” can be viewed as a general term, while building *fire alarm system* and *dedicated function fire alarm system* are specific types of protected premises fire alarm systems.

As said earlier, building fire alarm systems are, for the most part, the required protected premises fire alarm systems found in Section 907 of the 2021 IBC. Building fire alarm systems are typically more robust protected premises fire alarm systems that incorporate any number and type of initiating devices, occupant notification appliances, emergency control functions, etc.

Conversely, dedicated function fire alarm systems are permitted when a facility is without a building fire alarm system but specific functions such as Phase I Emergency Recall Operation (2021 IBC, Section 907.3.3) and/or automatic sprinkler system supervision (2021 IBC, Section 903.4) are required. Required initiating devices for dedicated function fire alarm systems are limited to the specific function they serve. Additionally, unlike building fire alarm systems, NFPA 72-2019 explains in Section 23.3.3.2.1 that dedicated function fire alarm systems are not required to include other functions or features of a building fire alarm system, this includes notification appliances.

Phase I Emergency Recall Operation: Automatic fire detection requirements are found in the 2021 IBC at Section 907.3.3. Information found in NFPA 72-2019, Section A.21.3.2 provides a synopsis of the general requirements for an elevator recall dedicated function fire alarm system, “In facilities without a building alarm system, dedicated function fire alarm control units are required by 21.3.2 for elevator recall in order that the elevator recall systems be monitored for integrity and have primary and secondary power meeting the requirements of this Code. The fire alarm control unit used for this purpose should be located in an area that is normally occupied and should have audible and visible indicators to annunciate supervisory (elevator recall) and trouble conditions; however, no form of general occupant notification or evacuation signal is required or intended by 21.3.2.”

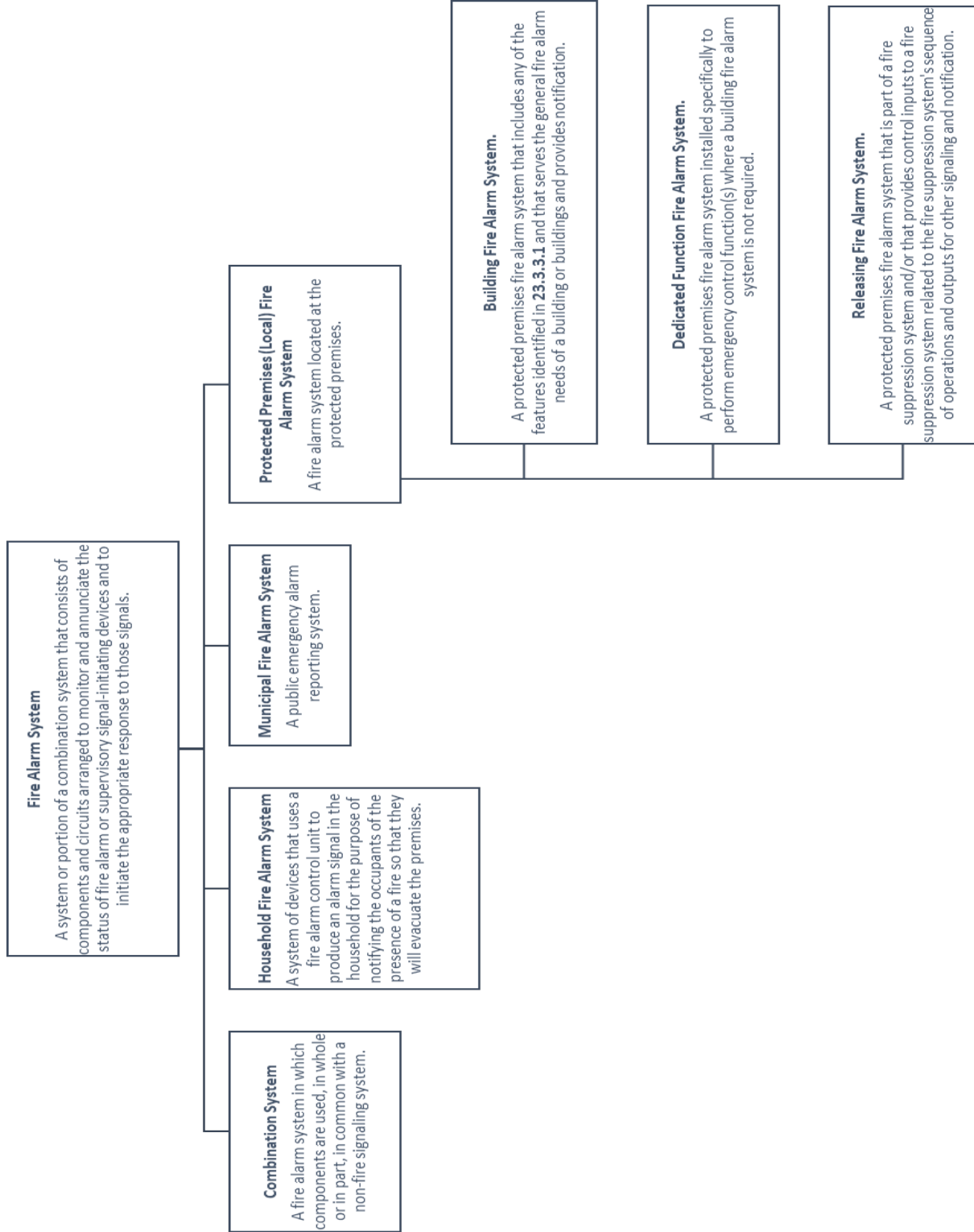
Sprinkler Waterflow Supervision: Where a building fire alarm system is not required, a sprinkler system is still required to be supervised for alarm, supervisory, and trouble signals. Section 903.4 of the 2021 IBC states that valves, pumps, tanks, water levels and temperatures, critical air pressures, and water flow switches shall be electronically supervised by a listed fire alarm control unit and be monitored in accordance with Section 903.4.1. Additionally, in accordance with Section 903.4.2, an approved audible device, connected to the automatic sprinkler system, shall be located on the exterior of the building in an approved location and be activated by a sprinkler water flow alarm device.

Additional NFPA 72 – 2019 sections and requirements for dedicated function fire alarm systems

- 21.3.2; In facilities without a required building fire alarm system, fire alarm initiating devices used to initiate elevator Phase I Emergency Recall Operation shall be connected to either a nonrequired building fire alarm system or a dedicated function fire alarm control unit that shall be designated as “Elevator Recall Control and Supervisory Control Unit,” permanently identified on the dedicated function fire alarm control unit and on the record drawings.
- 23.3.3.2.2; Where a dedicated function fire alarm system exists and a building fire alarm system is subsequently installed, the systems shall be interconnected and comply with Section 23.8.2.
- 23.8.5.5.1 & 23.8.5.6.1; Where required by other governing laws, codes, or standards to be electronically monitored, supervisory signal-initiating devices shall be connected to a dedicated function fire alarm control unit designated as “Sprinkler Waterflow and Supervisory System” and permanently identified on the control unit and record drawings.
- A.3.3.108.2.1, Dedicated Function Fire Alarm Control Unit. A dedicated function fire alarm control unit could serve more than one emergency control function, for example, a dedicated function fire alarm control unit could serve as a single control unit for sprinkler system monitoring and elevator recall. In that case, the control unit should be labeled as follows: Sprinkler Waterflow and Elevator Recall Control and Supervisory Control Unit

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(Fire Alarm Systems: Dedicated Function)



Source: Keith Thedinga
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Emergency Responder Communication Coverage: Technical Criteria

Section 510.4.2.2 of the 2021 International Fire Code states that “the fire code official shall maintain a document providing the specific technical information and requirements for the in-building, two-way emergency responder communication coverage system.”

The technical information in the document may vary from jurisdiction to jurisdiction based on the existing radio equipment being used and the needs of emergency responders; but, at a minimum, the fire protection subcode official shall be providing a technical criteria document to the emergency responder communication coverage designer/installer that contains at least the following information:

1. The various frequencies required
2. The location of radio sites
3. The effective radiated power of radio sites
4. The maximum propagation delay in microseconds
5. The applications being used and
6. Other supporting technical information necessary for system design.

The fire protection subcode official should coordinate with all appropriate Federal Communication Commission (FCC) license holder(s) to obtain the required technical criteria information. An FCC license holder may be an individual in the fire department, police department, first aid squad, office of emergency management, etc. It may be necessary to speak with more than one agency to determine that each agency’s technical criteria are included in the document.

Below is a link to the FCC Universal Licensing System search page, which can be used to assist fire protection subcode officials in determining the license holder contacts in specific jurisdictions.
<https://wireless2.fcc.gov/UlsApp/UlsSearch/searchLicense.jsp>.

Source: Keith Thedinga
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Signing and Sealing Technical Sections: Revisited

We have had many calls regarding signing and sealing of technical sections; who is allowed and what technical sections to sign and seal?

The mechanical technical section is only used in existing Group R-3/R-5 submissions as per, but not limited to, N.J.A.C. 5:23-3.4(d). For a more in-depth list, please refer to the Mechanical Matrix in the Fall 2024 Communicator that begins on pg. 9 ([Construction Code Communicator](#)).

Back to who signs what and when, licensed HVACR contractors are to sign and seal the mechanical technical section as a licensed contractor for the mechanical portion of the submission and they would sign as an exempt applicant on the electrical technical section. The reality is that the licensed HVACR contractor is technically not an exempt applicant, they are allowed to perform certain electrical replacements as per their licensing laws and regulations as per the Division of Consumer Affairs as listed in their “Scope of Work,” but the electrical technical section does not have the option to check off as a licensed contractor. Licensed Electrical contractors shall sign and seal the mechanical technical section for existing Group R-3/R-5, or the plumbing technical section for any other application as a licensed contractor when they are installing natural gas piping to their specific appliance as long as they have provided proof that they have completed the required two-hour continuing education training. Licensed Master Hearth shall submit the same technical sections as the licensed electrical contractors for natural gas piping to their specific appliances as well and only sign the forms as they are not provided with a pressure seal. They also must show proof that they have completed the required two-hour training for natural gas piping for appliances that are within their scope of work. Licensed Master Hearth contractors must submit a plumbing technical section for the natural gas piping on all use groups other than existing Group R-3/R-5 and sign off as a licensed contractor.

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(Signing and Sealing Technical Sections: Revisited)

Now it gets tricky! HVACR licensed contractors are to sign and seal the mechanical technical section for existing Group R-3/R-5, or the plumbing technical for all other use groups when they are “replacing” a non-testable backflow preventer on a hydronic boiler as long as the mechanical inspector is also a licensed plumbing inspector. If the mechanical inspector does not hold a plumbing license, then a plumbing technical section shall be submitted in all use groups and the non-testable backflow preventer must be inspected by the plumbing inspector. If a “new” non-testable backflow preventer is being installed in any use group, it must be submitted on a plumbing technical section for all use groups and must be signed and sealed by a Licensed Master Plumber.

Also, on all use groups outside of existing Group R-3/R-5, Licensed Master Plumbers, Licensed HVACR contractors, and, when applicable, Licensed Master Hearth contractors shall submit fire technical sections for their fuel-burning appliances and check off as a Certified/Licensed Contractor and sign off on the technical section as explained above and Licensed HVACR contractors shall sign and seal a building technical when installing ductwork on all uses other than existing Group R-3/R-5 uses.

Source: Anthony Menafro
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Irrigation Systems and UCC Responsibilities

The shocking question swirling around the toilet bowl these days is, according to the Uniform Construction Code (UCC), who is responsible for the lawn irrigation systems and its components? Plumbing right...or is it electrical?!?! (See what I did there? ...swirl/toilet, plumbing; shocking, electrical – it’s okay, you can laugh.)

The simple answer is... neither! There is a regulatory board for Landscape Irrigation Contractors that oversees the certification requirements for the installation of lawn irrigation systems and what work the contractors are allowed to perform on these systems. The only portion(s) of the lawn irrigation system where the UCC code official has a responsibility is the backflow preventer, and when applicable, the rain sensing device.

For background, the UCC was updated to adopt the 2018 edition of the I-Codes, 2018 NSPC, and 2017 NEC, September 3, 2019. The established responsibility of the rain-sensing device was moved from the electrical subcode requirement to the plumbing subcode and when this adoption occurred, the Division noted the following in the proposal:

“N.J.A.C. 5:23-3.15(c) would implement requirements for an automatic rain sensor device for newly installed automatic lawn sprinkler systems, as mandated by the Uniform Construction Code Act at N.J.S.A. 52:27D-123.13. This amendment would assign inspection responsibility to the plumbing subcode official to ensure that the required device is installed.”

This change aligned responsibility with the more appropriate UCC official since given changes in technology. The plumbing subcode is already responsible for one item, the backflow preventer, and therefore, they could verify that the other related item, a rain-sensing device, is installed as part of the irrigation system. As far as the plumbing inspector is concerned, all piping installed after the backflow preventer and into the yard is outside the scope of the UCC. If the rain-sensing device requires electrical wiring, boxes, etc., then the electrical subcode official would be involved. However, if the rain-sensing device is a plug-in type where it can utilize an existing receptacle, then there is no need for an electrical permit or inspection. The same is true if the rain-sensing device has no physical electrical connection and uses a wireless connection (i.e., “smart device”), then again, no electrical permit is required.

As per N.J.A.C. 5:23-2.15(b)6, if the work involves a landscape irrigation system, any contractor performing this work is required to be certified pursuant to the Landscape Irrigation Contractors Certification Act, N.J.S.A. 45:5AA-1 et seq. The seal and signature of the certified contractor shall be affixed to the permit application. When this was added to the UCC, it was noted that the amendment would require verification of certification as part of the construction permit application. Keywords, verification of certification, nothing more, nothing less. When applicable, the local enforcing agency just makes sure that the permit applicant provides the information of the certified contractor involved for the system beyond the backflow preventer and outside the UCC jurisdiction.

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(Irrigation Systems and UCC Responsibilities)

For reference, the Board of Landscape Irrigation Contractors does fall under the Department of Community Affairs. Contractor certification and system installation questions can be directed to them at (609) 984-7834 or lic@dca.nj.gov

Source: Anthony Menafro
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Underground Heating Oil Tank Removals

We receive numerous calls about the removal of underground oil tanks long after they have been decommissioned under the Uniform Construction Code (UCC) regulations. In many of these cases, the underground heating oil tanks are properly filled with sand, foam, gravel, etc., and the UCC permit has been satisfied and therefore closed, all in accordance with the regulations concerning the decommissioning of these tanks. But then comes the resale of the property, where the underground tank is found during the home inspection sweep and the property owners would like to remove it.

Note: if the tank has been properly decommissioned as per the UCC, it is then only considered to be a piece of scrap metal and a reinspection is not required to be performed (Summer 2021 Communicator, pg. 3: https://www.nj.gov/dca/codes/publications/pdf_ccc/CCC_Smr_2021.pdf).

When this happens, we strongly urge the hiring of a contractor licensed to close underground storage tanks, to remove the underground tank as they are the most familiar with the signs of discharge that may have occurred and were not found during the abandonment of the tank. These licensed contractors know what to look for to verify proper cleanup has been completed, and that protection of the environment has been maintained. Additionally, a contractor licensed to close underground storage tanks will know how to file a case with the New Jersey Department of Environmental Protection and properly remediate the site. For a list of contractors licensed to close underground storage tanks see the section titled, "Hire a Certified Contractor" on DEP's website at <https://dep.nj.gov/srp/unregulated/>.

Should you have any questions, please reach out to Michael.Justiniano@dep.nj.gov or call (609) 633-0544.

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