

# Construction Code Communicator



State of New Jersey  
 Chris Christie, Governor  
 Kim Guadagno, Lt. Governor

Department of Community Affairs  
 Richard E. Constable III, Commissioner

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## Citing the Code

Having been with the Code Assistance Unit for some time now, I have noted one issue that continually crops up. Some officials have not been citing code sections when they provide an applicant with a list of code violations. Please keep in mind, in terms of a Notice of Violation, code citations must be provided and after an inspection, provided upon request.

As code officials, we understand the codes and sometimes provide the applicant in "short hand," what is needed to comply with code. However, the applicant does not always understand the letter of the code, especially when it is presented in shorthand. As public servants, we need to assist the layperson in understanding what section of the code has been violated. The only way this can be done correctly is by providing the code cite as required at N.J.A.C. 5:23-4.5(a)3ii.













By citing the exact code sections, we can often speed the process, because when the applicant is informed, correction of the plans, or construction, can be undertaken without the arguments which often result from incomplete information.

That being said, we all know we can't recite code verse from the top of our heads at all times and sometimes have to refresh our memories. And this is why we always provide code citations for a Notice of Violation and provide code citations upon request after an inspection.

Lastly, if any municipality has "counter documents" that they provide to permit applicants regarding frequently violated code sections/citations, please feel free to share them with the Department. We all know having shared resources can help, especially when it comes to enforcing the Uniform Construction Code. The easiest way to share is by email at [codeassist@dca.state.nj.us](mailto:codeassist@dca.state.nj.us) or mail at NJ-DCA, PO Box 802, Trenton, NJ 08625.

Source: Rob Austin  
 Code Assistance Unit

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### Demolition Permits Again

There are few sources of information from every municipality every month. Building permits are one. Many rely on them for economic indicators and to follow development and settlement patterns. In 2013, New Jersey technical assistants and code officials sent information on over 487,000 building permits. More than 22,000 were for demolitions, authorizing the removal of buildings, underground tanks, and other structures. Construction officials authorized demolitions for about 7,300 dwellings in 2013. Many were in Ocean and Monmouth County, as shown in the table below. Demolition permits are an important measure of the effects of Super Storm Sandy.

<b>Housing Demolitions: New Jersey and Ocean and Monmouth County</b>				
<b>Period</b>	<b>New Jersey</b>	<b>Ocean County</b>	<b>Monmouth County</b>	<b>Ocean &amp; Monmouth as % of NJ</b>
<b>Jan – Dec 2013</b>	7,288	3,343	940	58.8
<b>2012</b>	3,222	416	443	26.7
<b>2011</b>	3,067	433	335	25.0
<b>2010</b>	4,415	477	343	18.6
<b>2009</b>	3,040	436	292	23.9
<b>2008</b>	4,455	571	396	21.7
<b>2007</b>	5,022	595	398	19.8
<b>2006</b>	6,460	696	450	17.7
<b>2005</b>	6,926	783	445	17.7

Source: N.J. Department of Community Affairs, 2/7/14

This article is on demolition basics. It discusses how we see demolition permits and pitfalls to avoid for better, more accurate data.

Demolition Essentials: A demolition permit has information on many things. Four items stand out.

1. What is being demolished?
2. The cost of removal.
3. Is there a loss of housing?
4. If so, how many dwellings?

What is being demolished: No item of information is more critical than the use of the structure. Make a mistake here and more follow. If you issue a demolition permit to remove an oil tank and call it a house, the reporting software requires information on dwelling(s) lost. An oil tank, of course, is not a house; don't call it that. It is an accessory structure (U).

Entering the right use is not always simple and straightforward. One reason is poor software design. Some reporting applications ask for both present and proposed uses. This should only apply to the change of use of an existing building, for example, the conversion of an office building (B) to multifamily housing (R-2).

While proposed uses do not matter for demolitions, some software applications ask anyway. This can trip up code officials and technical assistants. Some enter "U" because they don't know what the proposed use will be and see this as a "safe," catch-all response. Don't do this. If asked, enter the present use again. If the building is an old harness factory, enter "F." If it is a storage tank, enter "U." If it is a single-family house or duplex, enter "R-3" or "R-5." Again, if the reporting software for the demolition asks for both the present and proposed uses, enter the current use of the structure for both responses.

(article continued on next page)

Sometimes it is hard for us to know what's going on from the monthly activity reports we see. This problem is on our end. We have a blind spot with mixed-use buildings. Code officials and technical assistants are trained to enter the predominant use first, followed by secondary use(s). We only see the first use entered. So, when you issue a permit for a mixed-use building, and it has housing, enter the residential use first. If you demolish a building with multifamily housing (R-2), retail (M), and office space (B), enter the residential use first (R-2). This helps us identify the housing impact of the permit, which is especially important.

**Demolition dollars:** Another item of information on demolition permits is a dollar amount. There is little to say about this, but dollar amount is the cost of the removal. It is not the value of what will be torn down. That's all there is to say about dollars and demolitions.

**Dwelling units lost:** The primary reason we look at demolitions is to count lost housing. This is a key indicator. It is important for housing and population trends. Some confuse buildings with dwellings. A building is a structure that may have housing. We want to know about dwellings. A dwelling is a house, apartment, or condominium. It can be for sale or rent. If you issue a demolition permit for a single-family house, the number of dwellings lost is one. If you authorize a tear down of a duplex, the number of dwellings lost is two. If you demolish a multifamily building with 100 apartments, then 100 for-rent units are lost. If you are unsure whether the units are for sale or rent and you enter 100 in each field, we see 200 units lost. Make your best guess on tenure, but don't count dwellings twice.

If you have questions, call (609) 292-7898 or e-mail [John.Lago@dca.state.nj.us](mailto:John.Lago@dca.state.nj.us). We appreciate your professional and dedicated work. We are pleased to respond to questions, comments, and concerns.

*Building permit data appears in the New Jersey Construction Reporter at <http://www.nj.gov/dca/divisions/codes/reporter/>.*

Source: John Lago  
Director's Office

## Gas Utilities Residential Gas Load Data Inquiry

The Department has become aware that gas utility companies have been requiring a "Residential Gas Load Data Inquiry" form to be completed when adding new loads or making changes to the existing gas load for a single family or multi-family (up to three residential dwelling units).

The reason for this is that the gas utility company needs to verify whether the existing gas service and meter are of adequate size for the additional gas load when a new gas emergency generator or new tankless water heater that increases the gas load is installed.

Because the Uniform Construction Code (UCC) does not require this form to be approved by the utility company as a prior approval before a permit is issued, the contractor or homeowner must notify utility company of any gas loads that would be added to their gas system. Code officials should inform the permit applicant of the utility company's requirement.

There have been cases in which a permit has been issued for a new residential gas generator and the installation was completed, but when the gas utility company became aware of the installation, it made a determination that the gas service and meter were undersized and had to be replaced at an additional cost to the owner. Owners have been very upset that this utility company requirement was not brought to their attention before the permit was issued.

Although this is not a required prior approval, in the interest of providing complete information to the permit applicant, the code enforcement office should inform the homeowner or contractor that they should contact their gas utility company and advise them of the proposed additional gas load before the permit is issued and the installation begins.

Should you have any questions, you may contact me at 609-984-7609.

Source: Thomas C. Pitcherello  
Code Assistance Unit

## Heat Tracing Systems and Aboveground Water Filled Fire Sprinkler Piping

Recently the Department has been receiving inquiries on whether all heat tracing systems need to be listed for fire protection sprinkler system piping. The simple answer is NO.

The National Fire Protection Association (NFPA) 13/07, Section 8.16.4.1, Protection of Piping Against Freezing, allows listed heat tracing systems to be installed on feed mains or any type of riser piping. It requires only that the system be listed; it does not require that it be specifically listed for fire protection.

NFPA 13, Section 8.16.4.1.4, requires these systems to be monitored to ensure the piping does not freeze. It does not require the monitoring to be connected to the fire alarm system. NFPA 13 allows other forms of monitoring, such as a stand-alone system.

NFPA 13, Section 8.16.4.1.5, requires heat tracing systems that are used on branch lines be specifically listed for fire protection use. All other heat tracing systems for other portions or components of a fire protection system are required to be listed, but are not required to be specifically listed for fire protection.

If you have any questions on protection of piping against freezing, please call the Code Assistance Unit at (609) 984-7609.

Source: Michael E. Whalen  
Code Assistance Unit

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## Insulating Spaces Under Floors

When completing the building thermal envelope in new low-rise residential construction, Sections 402.2.7, Basement walls, and 402.2.9, Crawl space walls, of the International Energy Conservation Code (IECC)/2009 require floors over unconditioned spaces to be insulated. Examples of this are naturally-ventilated crawl spaces and non-heated/cooled basements.

However, a design professional may decide not to insulate the floor above these spaces. In the case of a basement, conditioned or unconditioned, Section 402.2.7 would require the basement walls to be insulated to complete the thermal envelope (a conditioned basement will always have insulation on the walls). In the case of a crawl space, Section 402.2.9 would require the walls of the non-naturally ventilated crawl space to be insulated and mechanically ventilated or conditioned in accordance with Section R408.3, Unvented crawl space, of the International Residential Code (IRC)/2009, the walls of a basement, conditioned or un-conditioned, are required to be insulated to complete the thermal envelope (a conditioned basement will always have insulation on the walls).

For required insulation levels, please see Table 402.1.1, Insulation and Fenestration Requirements by Component, of the IECC/2009 and revisit Bulletin 11-1, Energy Subcode Compliance, which may be found at [http://www.nj.gov/dca/divisions/codes/publications/pdf\\_bulletins/b\\_11\\_1.pdf](http://www.nj.gov/dca/divisions/codes/publications/pdf_bulletins/b_11_1.pdf).

Should you have any questions, you may contact me at 609-984-7609.

Source: Rob Austin  
Code Assistance Unit

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## Issuing Notices for Existing Buildings & Homes

The Department is getting word that there may be some confusion as to when to issue a Notice of Violation pursuant to N.J.A.C. 5:23-2.30 in regard to existing homes. Typically, issues like this arise when an inspector is in a home for a rehabilitation project. There are a few things to consider, and hopefully, the following helps sort things out:

*(article continued on next page)*

**\* Rehabilitation Projects \***

Let me start by saying, focus on N.J.A.C. 5:23-6.2(b). This section is entitled "Scope" telling you as a code official why you are on the job site and specifying what you are to be inspecting. This means, if the project has been completed with no violations within the scope, you are to pass it regardless of other violations you may have found elsewhere. And if violations are found outside the scope of the job, please use N.J.A.C. 5:23-2.32, Unsafe Structures, as to whether a violation notice is truly justified. In other words, confine your inspection(s) to the owner's scope of work unless something else rises to the level of an "unsafe structure" as defined in the rules. (Note that this is not just limited to "structural" issues).

**\* Recently Constructed Homes only \***

Here, the home is technically "existing" but it was recently constructed (defined as within the last ten years) and in this case, N.J.A.C. 5:23-2.35 can be cited but within certain limitations. As many of you may recall, this section of the Uniform Construction Code was adopted in the wake of the DKM decision to provide a process for code officials to follow in investigating and acting on complaints in residential developments. More specifically, N.J.A.C. 5:23-2.35(b)1 states that this section applies to violations in a residential structure in a development, other than Group R-1, subsequent to the issuance of a certificate of occupancy. These violations are limited to the adopted subcodes of the UCC in effect at the time of permit application. This means that, if you are called to a home and a potential violation is observed, you must keep in mind that the violation is supposed to be based on the code in effect at the time of construction or at the time the work was performed.

Some inspectors have expressed concerns about liability for things they see, but don't cite. Under the Tort Claims Act, both the municipality and its employees are immune from suit for negligent inspections or failure to inspect. If you have further questions or concerns regarding this, please speak to your municipal attorney.

Should you have any questions, you may contact me at 609-984-7609.

Source: Rob Austin  
Code Assistance Unit

## **Modular Construction Permits: What Needs to be Submitted?**

Regardless of the number of articles that have been published on this topic, there still seems to be some confusion regarding exactly what must be submitted for the placement of modular construction on a site.

As I am sure you are all aware, as Construction Officials and sub-code officials, we have no jurisdiction over the "box". The "box" is that which is constructed in the factory and delivered to the site. All that is required to be submitted for the "box" is a set of schematics, that is, floor plans and elevations that are NOT required to be signed and sealed by a design professional but are required to be stamped by the third party inspection company.

Additionally, a set of installation instructions for the "box" is also required to be submitted. As with the schematics, these documents are NOT required to be signed and sealed by a design professional, but, they too are required to be stamped by the third party inspection company.

Lastly, all site work that is NOT included in the installation instructions needs to be submitted. This is where it gets tricky! Typical site work includes the foundation system and utility hook-ups. However, any other work that is being performed on-site that is not included in the installation instructions must also be submitted. This could include garages, porches, and decks. Unlike the other documents, the site work documents MUST be signed and sealed by a NJ licensed design professional.

Should you have any questions, please feel free to contact the Code Assistance Unit at [codeassist@dca.state.nj.us](mailto:codeassist@dca.state.nj.us) or by phone at (609) 984-7609 or Melinda Reisner in the Bureau of Code Services at [melinda.reisner@dca.state.nj.us](mailto:melinda.reisner@dca.state.nj.us) or by phone (609) 633-6728.

Source: John N. Terry  
Code Assistance Unit

## NFPA 13R - When it's Appropriate/When it's Not – Revisited and Updated

In both the International Building Code (IBC) and the National Fire Protection Association (NFPA) standards, scoping limits the use of a NFPA 13R sprinkler system to residential occupancies up to and including four stories in height. What happens when another group is located below a residential occupancy? Is a mixed system appropriate: NFPA 13 for the nonresidential use and NFPA 13R for the residential portion?

**Example #1:** A grade-level, nonresidential space is appropriately separated (per Section 508.4, Separated Occupancies, of the IBC/2009) from three residential stories above (a four-story building). The grade level (nonresidential) is protected with an NFPA 13 system. Can the three residential stories be protected with a 13R system? The answer is yes.

The IBC, Section 903.3.1.2, NFPA 13R Sprinkler Systems, (IBC/2000, 2006, and 2009) allows an NFPA 13R system for Group R occupancy buildings that are up to and including four stories in height. Therefore, in the example above, it would be permissible to install an NFPA 13 system on the first (nonresidential) floor and an NFPA 13R system in the three stories of Group R above. This is because the total building does not exceed four stories in height.

**Example #2:** A grade-level, nonresidential space is appropriately separated (per Section 508.4, Separated Occupancies, of the IBC/2009) from four residential stories above (a five-story building). The grade level is protected with an NFPA 13 system. Can the four residential stories be protected with a 13R system? The answer is no.

Based on the same code sections cited above, the required fire-sprinkler system for the entire building, including the residential portion, is NFPA 13. This is because the total building is greater than four stories in height.

**Example #3:** A four-story residential occupancy is situated above a grade-level parking garage (S-2) and is appropriately separated (per Section 509.2, Horizontal Building Separation Allowance, of the IBC/2009). Can an NFPA 13 system be installed in the S-2 portion and can the residential portion be protected with an NFPA 13R sprinkler system? The answer is yes.

The IBC allows a three hour fire resistance rated horizontal assembly to be used to create a separate building when the building below the horizontal assembly is at grade level and of Type I construction, with appropriate shaft enclosures. Historically, Sections 508.2, Group S-2 Enclosed Parking Garage with Group A, B, M, or R Above, (IBC/2000) and 509.2, Group S-2 Enclosed or Open Parking Garage with Group A, B, M, R or S Above, (IBC/2006) allowed only Group S-2 enclosed or open parking garages on grade level. Now, Section 509.2, Horizontal Building Separation Allowance, (IBC/2009) allows Groups A, B, M, R, S-2 parking garages or incidental uses such as lobbies, storage areas and mechanical rooms to be below the horizontal assembly. Because the separate building above the horizontal assembly does not exceed four stories in height, the residential occupancy can be protected with an NFPA 13R system.

If you have any questions, please call the Code Assistance Unit at (609) 984-7609.

Source: Michael Whalen  
Code Assistance Unit

## Placement of Houses on Pilings

As the Sandy rebuild continues, many communities are seeing a large number of houses being elevated on pilings. There are two areas of concern that require the attention of local code officials.

**Pile Certification:** The pile certification must be in hand before construction of a new house or placement of an existing house proceeds. Pursuant to N.J.A.C. 5:23-2.18(b)1.i. and ii., the inspections for which construction must cease include the bottom of footing trenches and foundations and walls up to grade. In the case of a house or other building on a pile foundation, the pile certification takes the place of this inspection.

**Connections:** After the house is placed on the pilings, inspections must be performed to ensure that all connections are done properly. It does little good to know that the pilings were installed properly if the house is not tied to the pilings. Pursuant to N.J.A.C. 5:23-2.18(b)1.iv(1), structural framing and connections also are listed as items for which construction must cease until an inspection is made.

Vigilance in getting the proper documentation and performing the required inspections is essential to the success of the rebuilding effort. Should you have any questions or need any further information, please feel free to contact the Code Assistance Unit via telephone at (609) 984-7607 or via e-mail at [codeassist@dca.state.nj.us](mailto:codeassist@dca.state.nj.us).

Source: Code Assistance Unit

## Process Equipment and Electrical Requirements

The Code Assistance Unit has received many questions about process equipment and local jurisdiction. At N.J.A.C. 5:23-2.2(a)1, the Uniform Construction Code (UCC) says that manufacturing, production and process equipment is not under the jurisdiction of the UCC. "Electrically speaking," if the equipment is not pre-wired, then wiring between pieces of equipment for the process is under the jurisdiction of the UCC. This means that, if three panels come from overseas with no listing or labeling, but are for a specific process (as defined in the UCC at N.J.A.C. 5:23-1.4), the wiring methods between each cabinet are required to be inspected. In addition, the raceways and supports must be inspected. If the panels or drawings show #12-gauge wire where normally #10-gauge would be required, there would be no failure. The installation should comply with the design and not with the electrical subcode requirements that would apply to non-process type equipment.

In the Uniform Construction Code's definitions, N.J.A.C. 5:23-1.4, under "manufacturing, production and process equipment," many items are listed that could be considered process equipment. In item number 16, it states:

16. Electrical work which forms a part of the power or control system of industrial process equipment, up to the point where that work connects to the plant electrical distribution system. Such a point shall be considered a suitable junction box, panel board, disconnect switch, or a terminal box which constitutes the final connection to the factory-installed equipment wiring. **Where these items are not supplied as a part of the equipment; they shall be subject to local enforcing agency jurisdiction** (emphasis added).

So, although the switch gear, motor control center, variable frequency drives, pumps, conveyors, cable tray, conduit and wire are all part of the process, when the methods for connecting all the pieces together did not come as pre-wired assemblies, all methods required to wire the units together fall under the UCC. If, however, the wiring to all the components came pre-manufactured, then only the first point of connection from the panel must be inspected.

I hope this helps clarify how process equipment should be handled and what we need to review and inspect. If there are further questions feel free to call me at 609-984-7609

Source: Dave Greenhill  
Code Assistance Unit

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## Proper Disposal of Construction Materials and Debris – Revisited

In the *Construction Code Communicator* in 1996, Volume 8, Number 3, page 4, I wrote an article regarding the Department of Environmental Protection's (DEP) requirements for the proper disposal of construction debris generated on site.

Since that time, there has been much discussion and debate regarding the contents of this article. Well, the debate is over! We have been informed that the Department of Environmental Protection, Bureau of Transfer Stations and Recycling Facilities does not take a position on the removal of below-ground concrete supports (foundations) as it is not considered solid waste or recyclable material until such time as it is removed. DEP has informed us that there have no regulations mandating the removal of below grade concrete.

With that said, the property owner will decide whether to remove the foundations or other below grade concrete.

Should you have any questions regarding this article, please feel free to contact me at 609-984-7609 or email at [john.terry@dca.state.nj.us](mailto:john.terry@dca.state.nj.us).

Source: John N. Terry  
Manager, Construction Code Enforcement

## The Statewide Non-Residential Development Fee – Another Moratorium?

The non-residential development fee was established by P.L. 2008, c. 46. The first moratorium was contained in P.L. 2009, c. 90. That moratorium ended July 1, 2010. The second moratorium was found in P.L. 2011, c. 122. This extended the moratorium to July 1, 2013.

As of July 1, 2013, the suspension of the Non-Residential Development Fee Act had again expired and municipalities were again required to impose a non-residential development fee of 2.5 percent of the equalized assessed value pursuant to the Statewide Non-Residential Development Fee Act on developments seeking approval subsequent to July 1, 2013. The fee was not to be collected on projects that received site plan approval prior to that date provided that the construction permit was issued by July 1, 2015.

The NRDF Certification/Exemption Form (Form N-RDF rev/ 6-28-10) was updated and can be found at [http://www.state.nj.us/treasury/taxation/pdf/other\\_forms/lpt/nrdf.pdf](http://www.state.nj.us/treasury/taxation/pdf/other_forms/lpt/nrdf.pdf).

*So towns are to collect the fee now, right? Well, yes, that is what the law says, but ....As of this writing, a bill to extend the moratorium has passed both houses of the Legislature and is awaiting the Governor's signature. Under the terms of this bill, towns are to refund any monies collected since July 1, 2013 unless those funds have already been committed to affordable housing projects. We will send out a notice as soon as we receive word that the Governor has taken action on this bill.*

Questions concerning the Non-Residential Development Fee or municipal development fee ordinances should be directed to the Department of Community Affairs, Council on Affordable Housing at (609) 633-6186 or (609) 292-3000.

Source: Code Assistance Unit

## Flood Resistant Materials Usage

R322.1.8 (Flood-resistant materials) of the 2009 International Residential Code (IRC) states, "Building materials used below the elevation required in Section R322.2 (flood hazard areas including A Zones) or R322.3 (coastal high-hazard areas including V Zones) shall comply" with the two listed provisions. Following the references of R322.1.8 and incorporating NJ DEP's rules at NJAC 7:13, the elevation requirements are as follows:

A zone and Coastal A zone (R322.2.1 and N.J.A.C. 7:13)

- The lowest floor must be elevated to or above the best available data (BAD) plus one foot [formerly, advisory base flood elevation (ABFE) plus one foot].

V zone (R322.3.2 and N.J.A.C. 7:13)

- If the lowest horizontal structural member is parallel to the wave action, the bottom of the lowest horizontal structural member must be elevated to or above the BAD [formerly ABFE];
- If the lowest horizontal structural member is perpendicular to wave action, the bottom of the lowest horizontal structural member must be elevated to BAD plus one foot [ABFE plus one foot].

*(The above information was published in the Department's Construction Code Communicator: ABFE info published Spring 2013 edition and can be found at*

*[http://www.nj.gov/dca/divisions/codes/publications/pdf\\_ccc/ccc\\_2013\\_spring.pdf](http://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2013_spring.pdf) and BAD info published Fall 2013 and can be found at [http://www.nj.gov/dca/divisions/codes/publications/pdf\\_ccc/ccc\\_2013\\_fall.pdf](http://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/ccc_2013_fall.pdf).)*

In an A Zone, the "design flood elevation" for the use of flood resistant materials required by Section R322.1.8 of the 2009 IRC is determined as follows:

- Section R322.1.8 of the 2009 IRC requires the use of flood resistant materials below the elevations required by R322.2 (A-zones).
- Section R322.2.1 #1 requires buildings in the A zone to be elevated such that the lowest floor is at or above the design flood elevation.
- Section R322.2.1 #2 requires buildings in the Coastal A zone to be elevated such that the lowest floor is at or above the base flood elevation plus one foot or the design flood elevation, whichever is higher.

Based on these code requirements, it is clear that, as used in the 2009 IRC, the design flood elevation and base flood elevations are not synonymous and may be at two separate and distinct points. Therefore, the elevation required by the DEP, the BAD plus one foot, is the design flood elevation for New Jersey and when applying R322.1.8 and R322.2, this then is the design flood elevation that must be used to scope the flood resistant materials requirement.

If you have any questions, please call the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin  
Code Assistance Unit



## When is it Appropriate to Have a Non-Sprinklered Child Care Facility?

It appears that there is some confusion as to when a fire sprinkler system is required for a child care facility. Recently, the Department has calls from supervisors at the Department of Children and Families, the agency that licenses child care facilities, advising me that new facilities have received Certificates of Occupancy in Type VB buildings without fire sprinkler systems being installed.

The International Building Code/2009 (IBC) at Section 903.2.6, Group I, requires the installation of National Fire Protection Association (NFPA) 13 fire sprinkler systems in all Group I fire areas. There are two exceptions to this rule. The first exception is for Group I-1 facilities, which may have a NFPA 13R system installed. The second exception deals with Group I-4 facilities, child care facilities. NFPA 13 systems must be installed in all child care facilities of Type IIIB or Type VB construction. In all other types of construction, a fire sprinkler system is not required when the occupant load is 100 or fewer children and each child care room has an exit door that goes directly to the outside of the building.

The confusion appears to come from the wording of the first part of the second exception. "For other than buildings of construction Types IIIB or VB, an automatic fire sprinkler system shall not be required for Group I-4 child care facilities." That means all Type IIIB or VB buildings must have fire sprinkler systems installed. When a portion of the building is being changed to a Group I-4 child care facility, a fire sprinkler system would be required only in that fire area when appropriately separated from other areas of the building by fire barriers or horizontal assemblies in accordance with IBC Section 707.3.9, Fire Areas.

If you have any questions, please call the Code Assistance Unit at (609) 984-7609.

Source: Michael Whalen  
Code Assistance Unit

## Wireless Systems and Permits

With the advances in technology, the ability to protect your home or business has become very easy with wireless devices. A question that typically asked is, "Do I need a permit for the installation of a wireless security or supplemental wireless fire alarm system?" The answer is: It depends on the answers to the following questions:

- (1) Will the power supply require running a low voltage wire(s) from a transformer to the control panel?
- (2) Are the key pads or annunciators also wireless or do they require a low voltage, hard-wired connection?
- (3) If using a low voltage wire(s) from a remote power supply or to key pads, will they penetrate a fire rated assembly?

If the answer to any of these questions is yes, then a permit is required for a wireless installation.

Also, if a control panel has an attachment plug, or modular plug (one resembling that which comes with a computer or coffee pot), and no wire is run for the keypads, no permit is required.

However, if the attachment plug is not plugged directly into an existing receptacle (in other words, if an extension cord is used), a permit is required because extension cords are not a permanent wiring method.

For example, I have seen an installation in an existing garage where the nearest available receptacle was the one on the ceiling supplying the garage door opener. After carefully stapling two extension cords neatly from the control panel to the existing ceiling receptacle, the installer thought that the job was complete. Not so. This is not acceptable because the Article 400.8 of the National Electrical Code (NEC), which applies to flexible cords, states that extension cords are not to be used as a substitute for the fixed wiring of a structure. Therefore, when there is an existing receptacle that the manufactured supplied power cord can reach, no permit is required. When there is no receptacle within reach, a new receptacle must be installed and a permit is required (N.J.A.C. 5:23-2.17A, minor work).

I hope this helps clarify the permit requirements. If further questions arise, feel free to contact me at (609) 984-7609.

Source: Dave Greenhill  
Code Assistance Unit

## The 33<sup>rd</sup> Annual Building Safety Conference of New Jersey

The 33<sup>rd</sup> Annual Building Safety Conference was held May 7<sup>th</sup> through 9<sup>th</sup> at Bally's in Atlantic City. Our focus this year was on the continued rebuilding effort in New Jersey. We had a successful conference this year with over 500 people in attendance.

The kickoff event for the Conference, as always, was the "Crackerbarrel." This very popular event gives our guests the opportunity to hear from a variety of presenters in a short format style that focuses on new items of particular interest to the code enforcement community. The topics this year ranged from the elevation of residential structures in a flood zone to a review of available online tools to determine site specific information for wind speeds and seismic design.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. We were honored to once again have Commissioner Richard E. Constable, III join Director Edward Smith and the Presidents of the respective associations in making the award presentations at the annual luncheon.

The following awards were presented:



New Jersey Building Officials Association  
Building Inspector of the Year - James Zaconie



New Jersey State Plumbing Inspectors Association  
Plumbing Inspector of the Year - Frank G. Speranza



New Jersey Fire Prevention and Protection Association  
Fire Protection Inspector of the Year - Robert Ferrara



Municipal Electrical Inspectors Association of New Jersey  
Electrical Inspector of the Year - George W. Selah, Jr.



New Jersey Association of Technical Assistants  
Technical Assistant of the Year- Kathy Newcomb

Congratulations to all for your hard work and dedication to improving code enforcement in New Jersey!

The Building Safety Conference is a terrific opportunity to broaden your knowledge of cutting-edge code enforcement and building construction techniques. It also provides an opportunity to meet with officials from throughout the State to share ideas and promote camaraderie and collegiality among the code enforcement community.

We hope to see you all next year at Bally's in Atlantic City May 6<sup>th</sup> through 8<sup>th</sup>, 2015. Please save the date!

Source: John Delesandro  
Supervisor, Education and Licensing Units

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](http://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.

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Division of Codes and Standards  
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# Construction Code Communicator



State of New Jersey  
Chris Christie, Governor  
Kim Guadagno, Lt. Governor

Department of Community Affairs  
Richard E. Constable III, Commissioner

Volume 26, Number 2

Fall/Winter 2014

## The Winter Communicator: A Reminder (& More)

The final (Winter) issue of the *Construction Code Communicator* each year typically consists of a collection of Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website during the calendar year. This year, we are including articles that were printed in earlier editions of the *Construction Code Communicator* on topics that continue to generate questions. *This issue also commemorates the 40th anniversary of the signing of the Uniform Construction Code Act into law.*

Also, the Index for all four issues of the *Construction Code Communicator* 2014 is included in this issue as a handy reference.

Prospectively, we plan to have the *Construction Code Communicator* follow this format: three issues, Spring, Summer, and Fall, that contain new articles and a Winter issue that will provide in one place all the Alerts, Hot Topics, Letters from the Director, guidance documents, and other information items that were posted on the Division's website in that calendar year with previously printed articles where the topic continues the generate questions.

If you have any questions about the *Construction Code Communicator*, or if you have any recommendations for articles, please feel free to contact me at (609) 984-7609 or at [Emily.Templeton@dca.nj.gov](mailto:Emily.Templeton@dca.nj.gov).

Source: Emily W. Templeton  
Division of Codes and Standards



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### The UCC Act at 40

On October 7, 1975, then Governor Brendan Byrne signed the Uniform Construction Code Act into law.

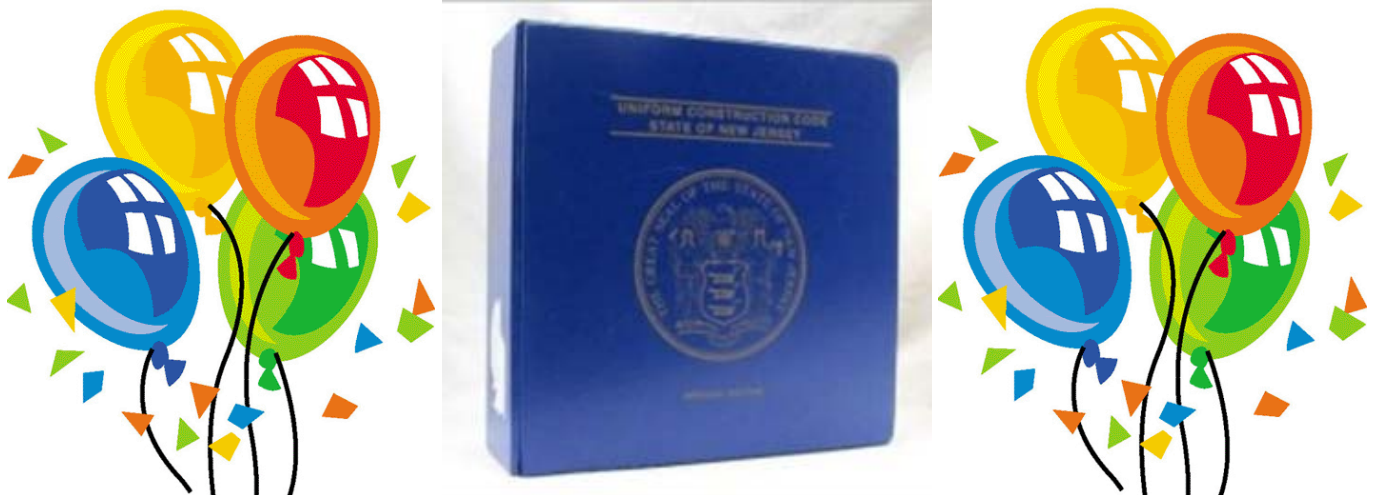
The Uniform Construction Code itself was brought into existence through the visionary work of two people: Bill Connolly and Chuck Decker. Both were architects by training. Their creative work was not in the design of a building, but in the design of a code enforcement system. This code enforcement system has met the test of time. The passing years have brought new challenges and many changes, but the basic structure of New Jersey’s code enforcement system has remained intact.

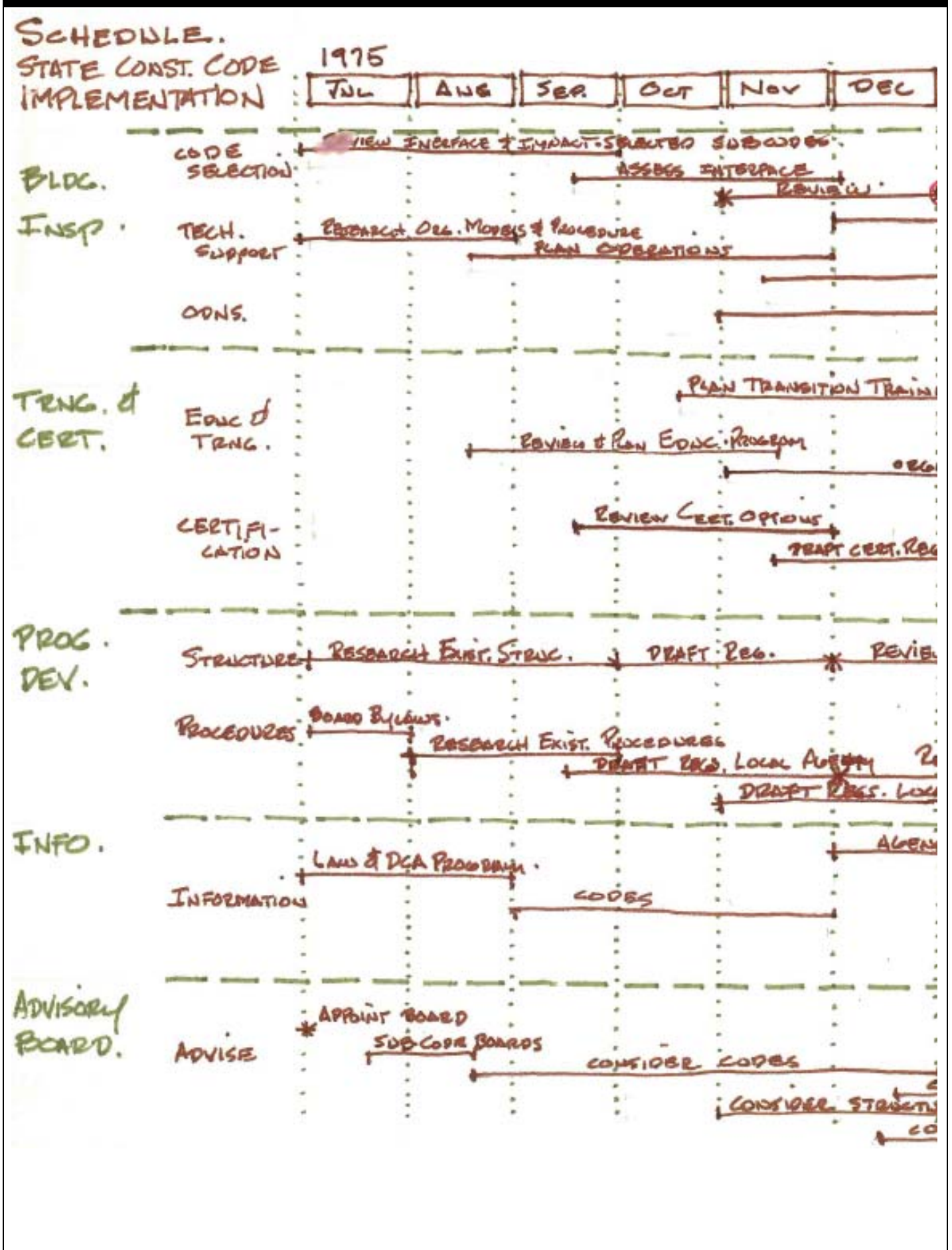
On the following pages, Chuck’s handwritten timeline for implementation of the Uniform Construction Code, beginning from passage of the Act in 1975, is reprinted. It is followed by his hand-drawn flow chart—a depiction of the code enforcement process which continues to be remarkably accurate. These documents truly are the blueprints for the Uniform Construction Code enforcement system.

Our code enforcement system is straightforward and logical. From our vantage point, 40 years later, it is easy to say “of course.” There are few still working in code enforcement who remember what existed before the adoption of the UCC. In 1975, each town adopted its own construction requirements. Some were outdated. Some were non-existent. Some were specification codes rather than performance codes. Some did not provide even minimal protection to the public. Enforcement of these requirements was scattered and uneven. Property owners went to the local fire prevention bureau for approval to install or to replace oil burners or tanks; the plumbing inspectors were under the local board of health and electrical inspectors worked through a third party agency under the jurisdiction of the Board of Public Utility Commissioners (now the Board of Public Utilities.) At the State level, there were 22 different agencies or authorities regulating some aspect of construction. It seems crazy now to think about each municipality having different requirements and permit applicants running from one desk to another in town hall to obtain approvals. The idea of a single set of requirements adopted at the State level and enforced at the municipal level by a single administrative unit, headed by a construction official, became law in New Jersey with that bill signing. The plans were laid for the creation of a body of well trained professionals to enforce the new rules. And New Jersey went on to become recognized as a national leader in code enforcement.

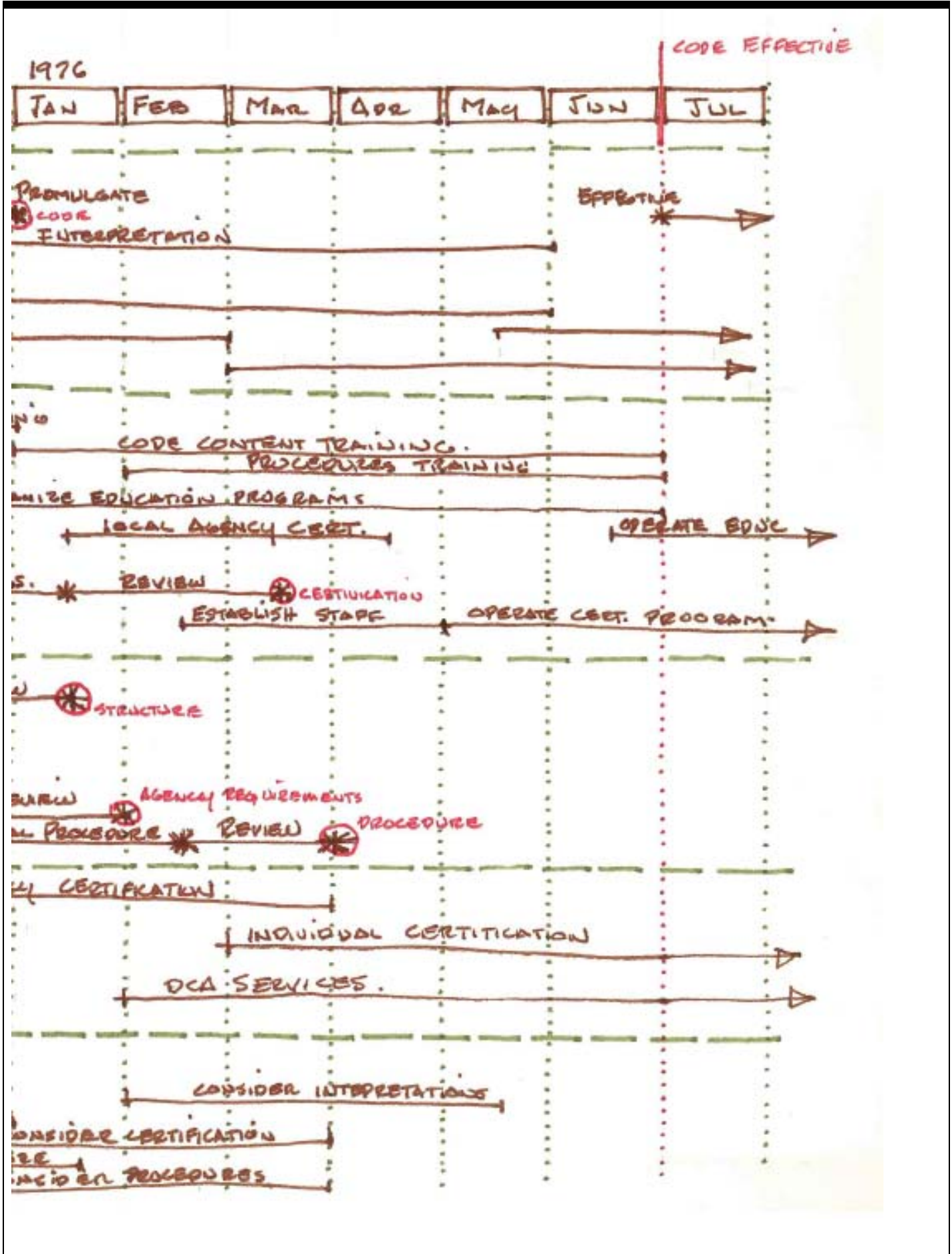
As we mark this milestone, we are also looking to the future of code enforcement in New Jersey. How do we attract qualified people to this field? How should code enforcement be organized so that it continues to serve the citizens of New Jersey well? It is incumbent on us to ensure that this highly effective system of code enforcement is adapted to continue for the next 40 years.

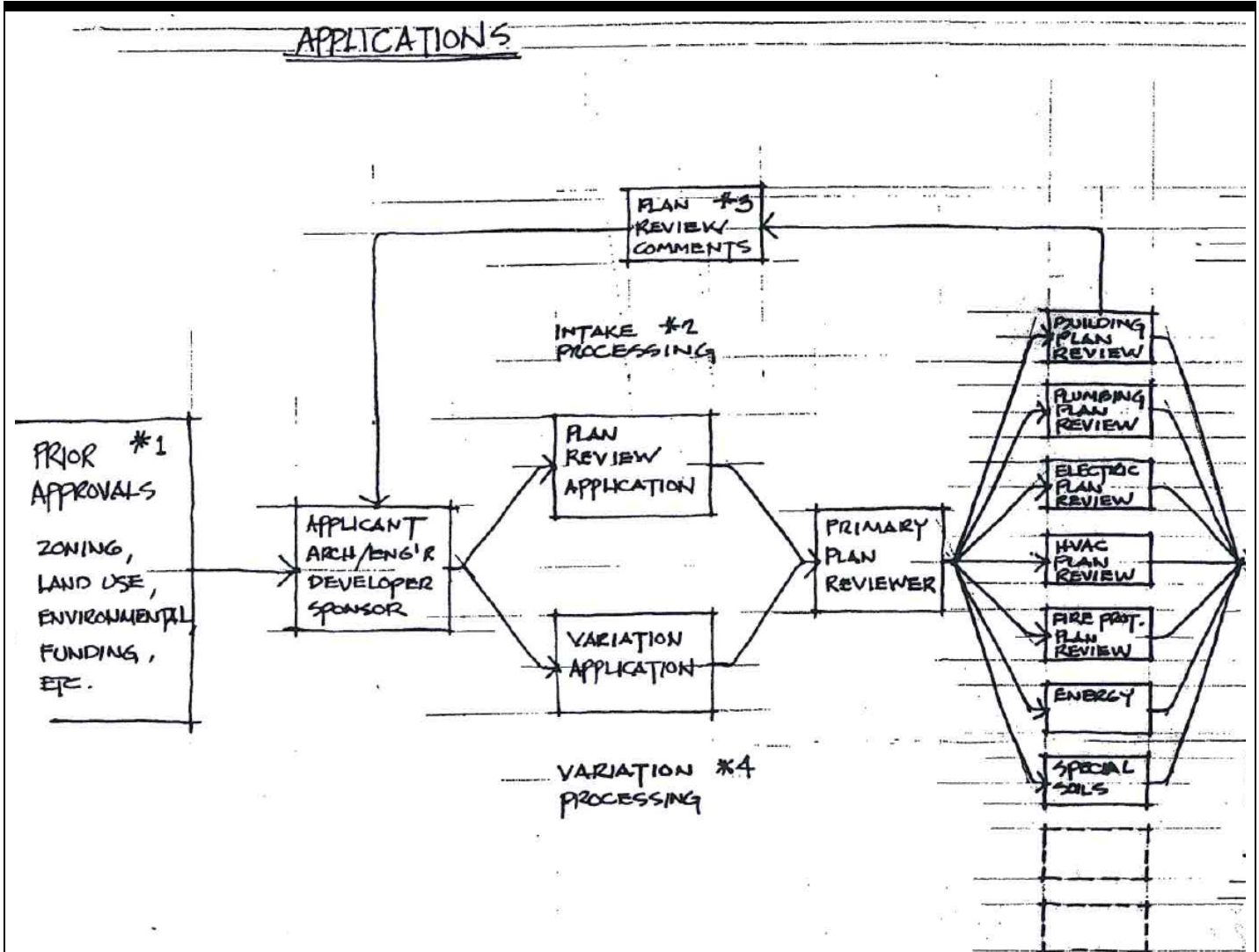
Source: Amy Fenwick Frank  
Division of Codes and Standards











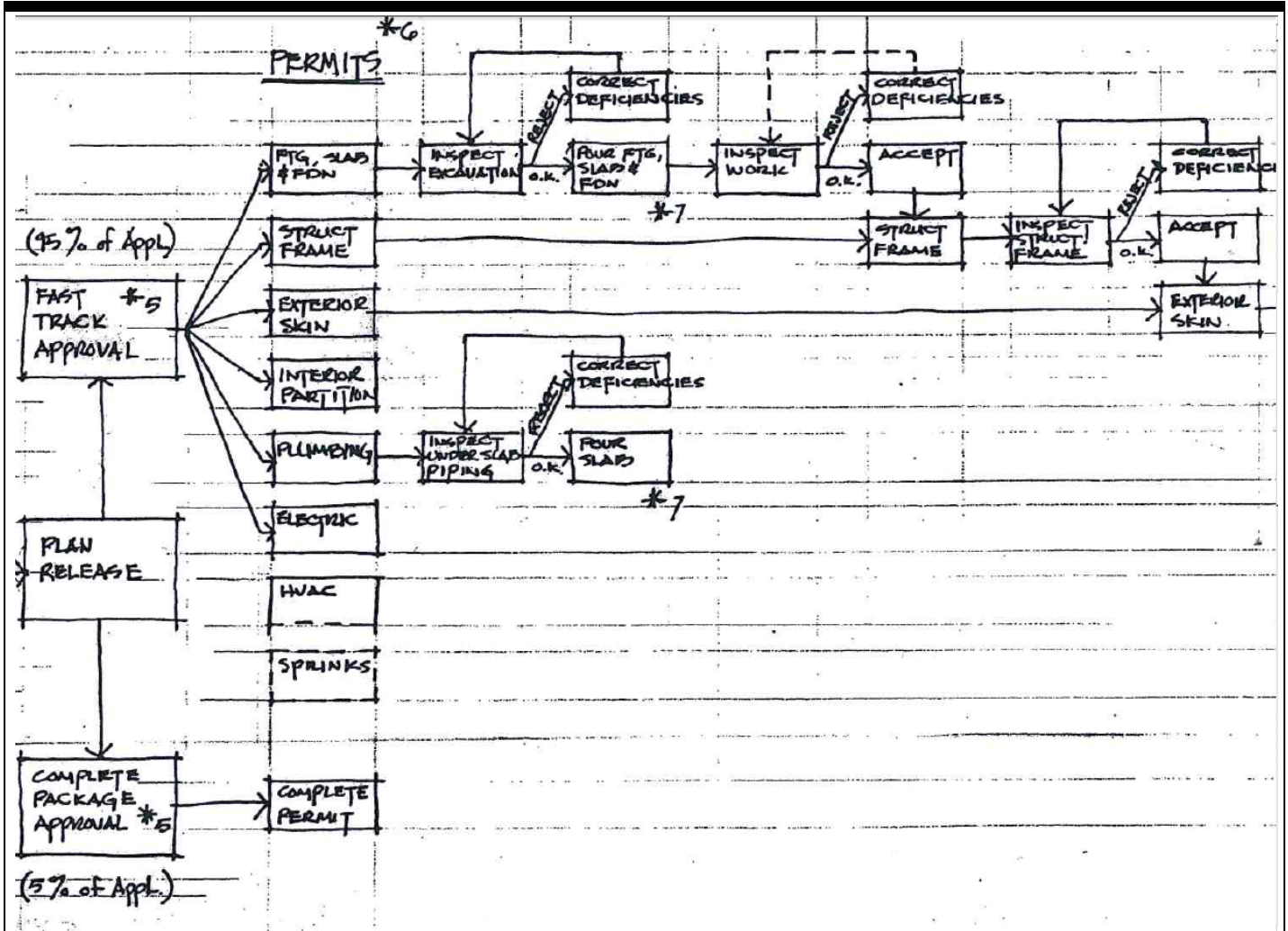
**Simplifying Building Codes  
Why New Jersey Scrapped Local and State Codes in favor of National Model Codes**

*(The below is an abridged and edited version of an article William M. Connolly wrote more than 20 years ago. It was published in a construction industry magazine to describe New Jersey's code enforcement system for a national audience.)*

Locally written building codes, by their nature, promote duplication and non-uniformity and detract from timeliness and predictability. A better choice is based on national model codes and a strong working partnership between levels of government. In New Jersey, local and State officials have formed a partnership that has gone a long way toward providing an open, responsive, timely, predictable and effective regulatory system.

Reliance on national model codes establishes a framework that makes possible several desirable characteristics, beginning with timeliness and predictability. Because the model codes are the product of associations of public sector enforcement experts working in conjunction with private sector standards and testing systems, they also serve as valuable referees on maintaining a fair balance between public health and safety on one hand and costs on the other. The organizations promulgating these codes provide the soundest of technical and safety foundations for a building regulatory program. No state, county or local government can sustain, or as a practical matter will sustain, comparable code research and writing for very long. Even where the effort can be sustained, the wisdom of expending taxpayers' money to develop what is already available is questionable. Adopting national model codes has an additional benefit. With an accessible, reliable national organization handling codes and standards, local officials can devote their attention to implementation issues, such as efficient administration, effective enforcement and continuing education.

*(continued on page 7)*



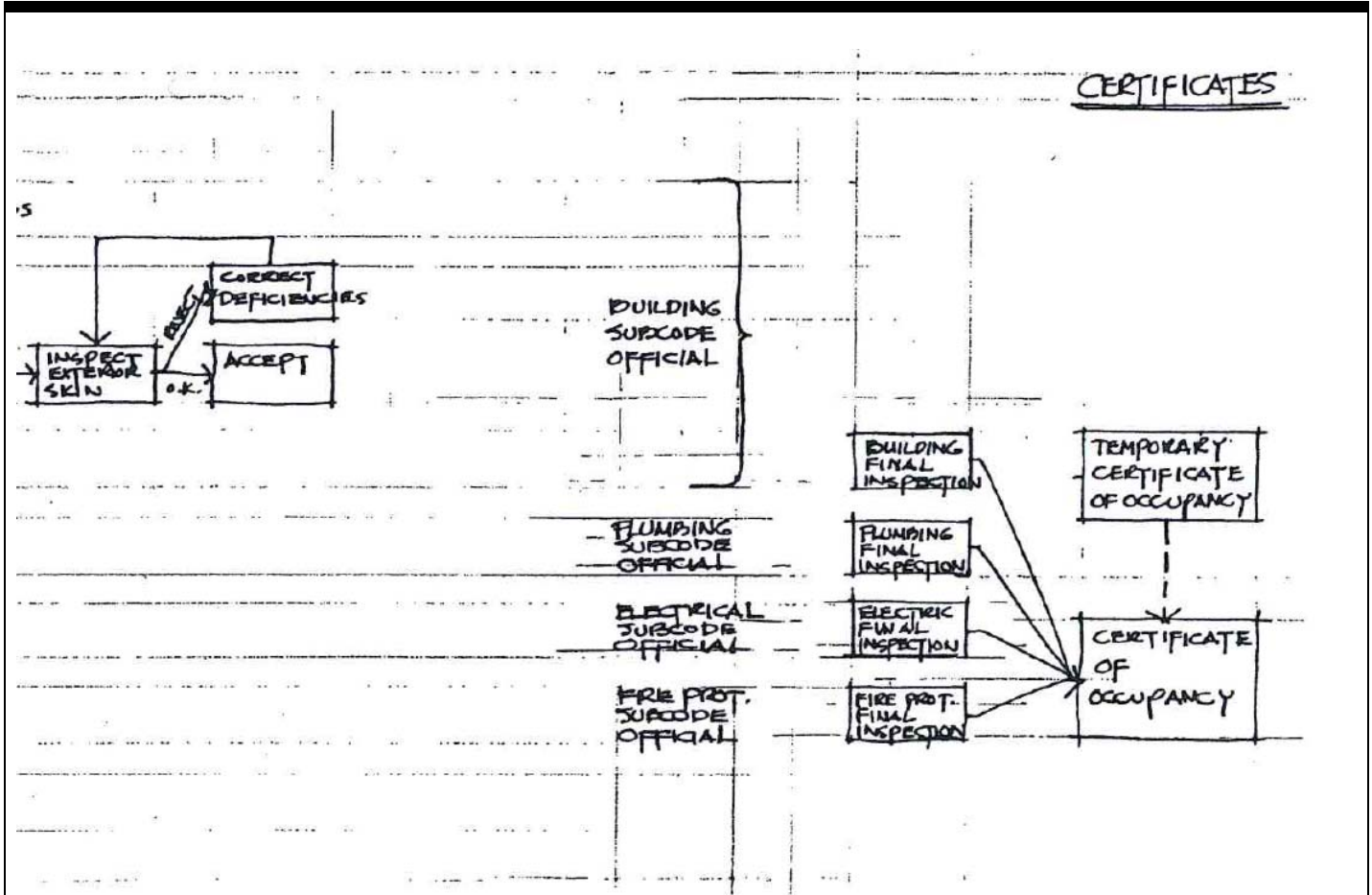
(Simplifying Building Codes – continued from page 7)

No public agency in New Jersey writes the technical provisions of construction codes. Instead, New Jersey adopts national model codes by reference. We do not amend these codes at the State or local level. We have adhered to this policy without exception since January 1, 1977. On that day, New Jersey swept away a web of confusion and duplication and implemented the Uniform Construction Code (UCC.) There is no question in my mind that the citizens of New Jersey are safer today because of it.

Because no code or code enforcement system is any better than the professionals who administer it, we seek to promote the technical competence and ethical integrity of the profession through the following enforcement principles:

- **Licensing of code enforcement professionals.** Every construction official, subcode official and inspector must be licensed the Department of Community Affairs. The UCC provides for separate technical licenses for each discipline.
- **Plan review system.** The UCC provides for levels of licensure. If a project is proposed in a municipality without adequate licensing, the plans are reviewed by the State. When released, the plans then serve as the basis for inspections by local officials.
- **Tenure of officials.** While New Jersey has a strong tradition of civil service protection for public employees, include code enforcement employees, about half of our towns do not offer civil service protection. In those towns, code officials are appointed for four year terms. A second appointment brings tenure. This kind of protection is necessary if we expect code officials to carry out their responsibilities professionally.
- **Professional accountability.** When technical incompetence, dishonest conduct or failure to maintain adequate public records are found, New Jersey takes action, include the ability to suspend or to revoke the license of the official involved.

(continued on page 8)



(Simplifying Building Codes – continued from page 8)

- **Conflict of interest.** One cannot be involved in the construction industry and properly regulate it. The UCC contains strong provisions limiting the outside employment of code officials.
- **Code variations.** Literal application of even the best code will sometimes prove impractical. Rather than relying on variance boards, the UCC empowers subcode officials to judge written variation requests on life-safety equivalence criteria.
- **Professional Responsibility.** Each of the subcode disciplines has clear and distinct responsibilities. All necessary enforcement activities must be approved by officials with appropriate licenses.
- **Administrative civil penalties.** In some situations, traditional enforcement resources, such as stop-work orders or withholding a certificate, become inadequate. Uncorrected violations are civil matters, with violators subject to administrative assessment of civil penalties. Unpaid penalties are subject to summary civil collections proceedings just as any other debt would be.
- **Fee-supported enforcement.** The Uniform Construction Code requires that enforcement be self-supporting through user fees. The construction industry in New Jersey has acknowledged that it is far better to pay realistic fees than to suffer the financial consequences of delay and confusion resulting from inadequately funded enforcement.
- **Education and training.** The education and training that support the design professions and the construction industry do not provide satisfactory background in codes, standards or code enforcement. New Jersey created extensive education and training programs. These include: approved courses which provide the prerequisite instruction for licensing test and continuing education required during each cycle to meet license renewal criteria. This extensive education and training effort is supported by a small surcharge levied on most permits.

This, then, is the "state of the art" regarding construction code enforcement in New Jersey. Our approach has been based on national model codes and a strong working partnership between the State and local officials. I am convinced that we have made our State safer through this system characterized by timeliness, predictability and professionalism.

**Home Elevation Contractor Registration and Home Elevation Standards**

*(In a memorandum to Construction Officials dated October 3, 2014, Director Smith wrote...)*

P.L. 2014, c. 34, signed into law by Governor Christie on August 15, 2014, calls for the Division of Consumer Affairs, in the Department of Law and Public Safety, to adopt rules for the registration of home elevation contractors. The Department of Community Affairs is charged with the adoption of rules governing the methods, procedures and other requirements that must be followed in performing home elevations. The statute authorized the two agencies to adopt special rules to implement these new requirements as quickly as possible. The rules are a special adoption and concurrent proposal. What does this mean? It means that the rules became effective on October 1, 2014 when they were filed with the Office of Administrative Law. And they have been proposed for public comment at the same time. The Notice of special adoption and concurrent proposal is posted on the Division's webpage and is attached for your review. It will appear in the New Jersey Register on November 3. The public comment period will extend until January 2, 2015. But the rules are on the books and must be enforced now.

The rules adopted (and concurrently proposed) by the Division of Consumer Affairs require a registered home elevation contractor for contracts to elevate entered into on or after October 1, 2014. (A copy of a notice on the new rules sent out by the Division of Consumer Affairs is attached. These rules include experience and insurance requirements for home elevation contractors.)

The following is a summary of the amendments to the Uniform Construction Code to establish standards for the elevation of existing buildings.

**PERMIT APPLICATION** – These requirements apply to permit applications submitted on or after October 1, 2014. N.J.A.C. 5:23-2.15 is amended to require that a permit application to elevate an existing home include the registration number of the home elevation contractor—or home improvement contractor if the contract was entered into prior to October 1.

**Certification** – The permit application must be accompanied by a certification signed by the contractor. A form to use for this purpose is attached. (Please note that this requirement is statutory.) When issuing permits for home elevations, it will be necessary to ask whether the contract was entered into before October 1. In every case, have the contractor complete the certification indicating that he/she is in compliance with the applicable provisions of the new laws. Those with contracts signed before October 1 may be home improvement contractors. Those with contracts signed on or after October 1 must be home elevation contractors.

**INSPECTIONS** – N.J.A.C. 5:23-2.18 is amended to state that a pile certification, prepared by a licensed professional engineer, takes the place of an inspection for pile foundations. The amendments include a description of what the certification must include and a requirement that the certification be based on the engineer's personal observations. (The person on site may be an employee of the engineer.)

**REQUIREMENTS FOR HOME ELEVATIONS** – A new rule, N.J.A.C. 5:23-2.37, contains the requirements for elevation, including addressing utility service connections, methods and equipment required, and protection of adjoining property. This is similar to the requirements contained at N.J.A.C. 5:23-2.17 for demolitions.

**AMENDMENT TO THE ONE- AND TWO-FAMILY DWELLING SUBCODE FOR CONSTRUCTION ON PILES** – N.J.A.C. 5:23-3.21 is amended to require the use of American Society of Civil Engineers (ASCE) Standard 24 for the construction of one- or two-family homes on piles. Previously, the use of ASCE 24 was required for buildings other than one- or two-family homes, but was listed as an alternative in the one- and two-family dwelling subcode. ASCE 24 is recognized as the industry standard for construction on piles. Its use is now required for all construction on piles. Alternate designs that do not conform to ASCE 24 may still be used through application for and granting of a variation. Because this is an amendment to an adopted subcode of the Uniform Construction Code, the six month grace period provided at N.J.A.C 5:23-1.6 will apply.

Up until this point, the Uniform Construction Code has not contained requirements specifically applicable to the elevation of an existing house. All of us have witnessed incidents of unscrupulous or incompetent contractors taking advantage of homeowners in the Sandy-affected communities. The intent of these new rules is to protect homeowners and to provide local code enforcement agencies with regulatory tools to be used for this purpose. Should you have any questions or concerns, please feel free to contact the Code Assistance Unit at (609) 984-7607 or [codeassist@dca.nj.gov](mailto:codeassist@dca.nj.gov).

**No DCA Approval Required for Local Review of Plans for Projects Undertaken at Schools**

*(In a letter to Construction Officials dated September 3, 2013, Director Smith wrote...)*

September 3, 2013 Dear Construction Official: I am writing to inform you of a change in the process for review of plans for projects at schools. Effective immediately, no Department of Community Affairs approval will be required for local review of plans for projects to be undertaken at schools. The use of Department of Education Form DOE-124 is being discontinued. If a local code enforcement agency is classified at the appropriate level to review the project in question, as with all other types of construction projects, that agency may accept the project. If a local code enforcement agency declines to perform plan review for a school project or is not classified at the appropriate level for the project in question, then the project may go to an appropriately classified local code enforcement agency in a neighboring town or to the Department for review. Because of the added security requirements, plans and specifications for the construction of new schools will continue to be reviewed by the Department. Projects involving a change of use or an addition may be reviewed by a local enforcing agency classified at the appropriate level for the project. All Schools Development Authority (SDA) projects will continue to be reviewed by the Department.

Please note that, in addition to plan review for compliance with all applicable provisions of the adopted subcodes of the Uniform Construction Code, the local code enforcement agency also has responsibility to ensure compliance with N.J.A.C. 5:23-3.11A(c) and with the Department of Education's public school facility requirements enumerated in Bulletin 00-3.

Approval from the Department of Education is still required pursuant to the Educational Facilities Construction and Financing Act, P.L. 2000, c. 72. The Department of Education also performs a review for compliance with the educational adequacy requirements set forth in N.J.A.C. 6A:26-5. As before, the approval of the Department of Education must be in place before a plan review is undertaken pursuant to the Uniform Construction Code.

Should you have any questions about this letter or enforcement of the requirements of the Uniform Construction Code applicable to schools, please contact John Terry at john.terry@dca.nj.gov or (609) 984-7609. Should you have questions about the Department of Education approval, please contact Frank LoDolce in the Department of Education's Office of School Facilities at frank.lodolce@doe.nj.gov or (609) 292-7078.

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**Private Garages Below Living Spaces**  
*(updated from Volume 13, Number 1, Spring 2001)*

Recently, the Department has received a number of inquiries regarding the requirements for floor/ceiling separation assemblies between the dwelling unit and a private garage located beneath living spaces in single-family homes. According to Section 406.1.4 of the 2009 International Building Code (Building Subcode) and Section R302.6 of the 2009 International Residential Code (One- and Two-family Dwelling Subcode), fire partitions and floor/ceiling assemblies that have a minimum one-hour fire-resistance rating shall separate private garages located beneath habitable rooms from adjacent interior spaces.

In Formal Technical Opinion (FTO)-13, the Department has provided some working examples of construction practices that meet the intent of the Building Subcode and One- and Two-family Dwelling Subcode and which are considered acceptable methods of providing a one-hour fire-resistance-rated assembly. FTO-13 does not, however, supersede the Building Subcode and One- and Two-family Dwelling Subcode. FTO-13 provides examples of acceptable ways to meet the requirements of the Building Subcode and One- and Two-family Dwelling Subcode. Designs other than those included in FTO-13 are possible. Therefore, it is up to the design professional to decide which resource to use.

If you have any questions, please contact me at (609) 984-7609.

Source: Marcelino Iglesias  
Code Assistance Unit

**Permit Extension Act 2008**

*(In a letter the Construction Officials dated January 15, 2015, Director Smith wrote...)*

P.L. 2014, c. 84, signed into law by the Governor on December 26, 2014, amends the "Permit Extension Act of 2008," P.L. 2008, c.78, and again extends the expiration date of certain permits. Under this new law, only the dates have changed. All of the other terms and conditions of the Permit Extension Act remain as they were. Below please find updated guidance on the application of the Permit Extension Act which has been revised to reflect the new expiration dates.

As code officials, you will continue to deal with this law on two levels: its impact on permits issued under the UCC and its impact on prior approvals. The Act stops the clock on the running of approvals during the "extension period," which is now defined as January 1, 2007 through December 31, 2015. This means that any UCC permit that was valid as of January 1, 2007 will still be valid on December 31, 2015. On December 31, 2015, when the clock starts again, the permit is valid for an additional six months or for the time that would have remained on January 1, 2007, whichever is shorter. Any permit issued during the extension period (between January 1, 2007 and December 31, 2015) will be valid until June 30, 2016 (six months beyond the end of the extension period,) or until the date when it would have expired if the Permit Extension Act had not been passed, whichever is longer. (Some examples of how to apply the Permit Extension Act to UCC permits are enclosed.)

There continues to be an exclusion in the Act for permits issued for projects in environmentally sensitive areas. To determine whether your municipality or any portion of your municipality is an "environmentally sensitive area" as that term is defined in the Act, please refer to the enclosed attachment.

In order to determine whether a prior approval qualifies for extension under this Act, construction officials should check with the agencies and officials responsible for issuing those prior approvals to make sure that those prior approvals remain in effect. A list of the approvals included and of those excluded by the Act is enclosed.

In those cases where plan review was done by DCA, any plan release that was valid on or after January 1, 2007 may be used to support issuance of a permit through June 30, 2016. The same would be true of released prototypes. Once again, before issuing a permit, it is necessary to check with the agencies or officials involved to ensure that any required prior approvals remain valid.

Information, including this letter and the full text of the Act, is posted on the Division's website for your use. <http://www.nj.gov/dca/divisions/codes/topics/#pea>

Should you have any questions about the application of the Permit Extension Act, please feel free to call the Code Assistance Unit at (609) 984-7607.



**Code Citations Decoded**

*(reprinted from Volume 10, Number 1, Spring 1998)*

I can't tell you how many times I get calls from architects and contractors asking if a code official is required to provide a code citation for a plan review rejection comment. The answer simply is YES.

N.J.A.C. 5:23-2.16(a), Construction permits-procedure, states, "If the application is denied in whole or in part, the enforcing agency shall set forth the reasons therefor in writing." An applicant has a due process right to question a rejected item. The applicant's due process right entitles him/her to know what specifically has been violated. Therefore, written comments MUST be accompanied by the appropriate code citation. This provides the applicant the ability to appeal a rejection. Also, remember the code citation must be accurate and complete. If you can't find an applicable code section, you can't cite the item as a violation.

Source: Gerald Grayce *(Retired)*  
Bureau of Regulatory Affairs

### Lead-Free Fixtures and Piping

*(In a memorandum to Plumbing Subcode Officials dated February 24, 2014, Director Smith wrote...)*

The Reduction of Lead in Drinking Water Act (P.L. 111-380) is a federal law, enacted on January 4, 2011, that amends the Safe Drinking Water Act (42 USC 300g-6) by setting new, lower standards for the amount of lead allowed in plumbing products that come into contact with potable (drinkable) water. This change reduces the permissible levels of lead in the wetted surfaces of pipe, pipe fittings, plumbing fittings and fixtures to a weighted average of not more than 0.25 percent. For solder and flux, the limit remains 0.2 percent lead. The amendments also address the method for calculating lead content. Products that meet this standard are defined in the law as "lead free."

This law became effective on January 4, 2014. It is anticipated that the 2015 edition of the National Standard Plumbing Code will address this issue. However, since the federal law is in effect, local code officials should begin enforcing this requirement now. All pipe, pipe fittings, plumbing fittings and fixtures used in potable water systems should comply with this new requirement.

There are resources available on the International Code Council website that may be helpful in the identification of compliant fixtures and piping. The links are provided below for your convenience. Should you have any questions, please feel free to contact Thomas Pitcherello in our Code Assistance Unit at (609) 984-7607.

This site has examples of product markings: <http://www.iccsafe.org/cs/PMG/Documents/GetTheLeadOut.pdf>

Under "Lead in Plumbing Products," this site has information on the new federal requirements: <http://www.iccsafe.org/cs/PMG/Pages/default.aspx>

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### Vapor Retarders

*(updated from Volume 23, Number 3, Fall 2011)*

The requirements --and the exceptions--for vapor retarders in the International Residential Code (IRC)/2006 have been distributed throughout the text of IRC/2009 regarding the building thermal envelope. The Department has received many questions on the application and installation of vapor retarders, so, in this article, we are providing the IRC/2006 text, footnoted, to help you find the requirements in the IRC/2009; keep in mind that climate zone 4 is exempt for framed assemblies, so the following applies to climate zone 5, unless otherwise noted.

#### IRC/2006

##### R318.1 Moisture control.

In all framed walls<sup>a</sup>, floors<sup>b</sup> and roof/ceilings<sup>c</sup> comprising elements of the building thermal envelope, a vapor retarder shall be installed on the warm- in-winter side of the insulation.

##### Exceptions:

1. In construction where moisture or freezing will not damage the materials.
2. Where the framed cavity or space is ventilated to allow moisture to escape.
3. In counties identified as in climate zones 1 through 4.

#### IRC/2009

a – R601.3, General wall construction

b – R408.1 and R408.2, Naturally ventilated underfloor spaces; R408.3, Unvented under-floor spaces; R506.2.3, Concrete floors on ground (not a framed assembly and contains its own exceptions)

c – R806.4, Unvented attic assemblies

If you have questions, please contact me at (609) 984-7609.

Source: Rob Austin

Code Assistance Unit



**When is a Demolition Permit Required?**  
*(updated from Volume 13, Number 3, Fall 2001)*

The Department of Community Affairs has become aware of some confusion in the field about when permits are required for demolition. As a general rule of thumb, a true demolition permit is required when the entire building is being demolished. Under the Rehabilitation Subcode, when a portion of a building is being demolished, this type of work is considered an alteration or reconstruction. In an alteration or reconstruction project, a permit may be issued for the portion of the building being demolished in conjunction with a construction permit.

The exception to this rule is that, when a building or structure is going to be demolished and the foundation left in place, a full demolition permit is required. Any portion of the new structure built on the existing foundation is treated as new construction and is required to comply with the Building Subcode; the existing foundation is required to comply with the Rehabilitation Subcode.

If you have any questions, you may contact me at (609) 984-7609.

Source: Marcel Iglesias  
Code Assistance Unit

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**Owners Doing Work In Their Own Homes**  
*(reprinted from Volume 21, Number 1, Spring/Summer 2009)*

This article intends to help clear up some confusion between home improvement contractors (HIC) and homeowners preparing their own plans.

The HIC requirements, as they pertain to the Uniform Construction Code (UCC), can be found at N.J.A.C. 5:23-2.15(b)8. The exception for single-family homeowners preparing their own plans can be found at N.J.A.C. 5:23-2.15(f)1ix.

Please keep in mind that the UCC references above have distinct differences. N.J.A.C. 5:23-2.15(f)1ix. allows the construction official to waive the requirement for signed/sealed plans in the case of a single family homeowner who has **prepared** construction plans to a detached structure used or intended to be used exclusively as his or her private residence. As per N.J.A.C. 5:23-2.15(b)8ii, a HIC registration is not required for any person **performing** a home improvement upon a building or structure in Group R-2, R-3, R-4 or R-5 owned by that person, or by a member of that person's immediate family.

As you can see from the bolded/italicized words above, N.J.A.C. 5:23-2.15(f)1ix deals with the **preparation of the plans**, while N.J.A.C. 5:23-2.15(b)8ii deals with **construction work being performed**. As an example, a single family homeowner owns two homes; one is his residence, the other is a rental property. The homeowner has decided to build an attached deck at his home and also to build an attached deck at the rental property. The homeowner is allowed to draw the deck plans for the home he lives in, but may not draw the deck plans for the rental property; the plans for the rental property must be drawn by a design professional. However, the homeowner may construct the deck his home and may also construct the deck at the rental property without being registered as a HIC.

If you have any questions on this matter, you may contact me at (609) 984-7609.

Source: Rob Austin  
Code Assistance Unit

### **The Natural Nuisance - Mold**

*(updated from Volume 13, Number 4, Winter 2004)*

What's green, black, or a variety of other colors; is sometimes hairy and smelly; and oftentimes hides in the dark, or can be found in places where water is present? Drum roll, please ... MOLD.

Recently, there has been much in the media about the effects mold has on health. Understandably, the media's sometimes sensational approach to informing the public has caused some uneasiness among New Jersey's homeowners. The Department of Community Affairs has received inquiries about mold in homes. The most fundamental question is whether the Uniform Construction Code has jurisdiction over this problem -- as a construction issue-- or whether jurisdiction lies with the Department of Health (DoH) as a health problem.

Before we jump to conclusions, what do we know about mold? Molds are fungi. They can be found everywhere - indoors and outdoors - and they grow anywhere, and I mean anywhere, moisture is present. Approximately 1,000 of the 10,000 species of mold are found in the United States, with the most commonly found being Cladosporium, Penicillium, and Aspergillus.

Molds play a saprophytic role, which means that they derive their nourishment from metabolizing or breaking down carbon surfaces, examples of which are cellulose, carpet, wood, dirt, asbestos, insulation, and wallboard. As a result of this metabolic process, molds release millions upon millions of spores containing proteins.

Now, let's consider how molds might affect a person's health. Imagine you are a person with an allergy to pollen. When the air contains pollen, your allergies act up. Your nose might get stuffy, your eyes might be itchy, your chest might be a little congested, and you probably sneeze a lot. Common sense would tell us then that when spores from a certain species of mold are released into the air and are free floating, a person's allergy to that particular species of mold might be triggered, much as it would were he or she allergic to pollen. Similarly, persons with compromised immune systems might be sensitive to molds. Here's an important rule of thumb: the lower your immunity, the greater the chance of being susceptible to allergy and illness.

Through investigation, it has become clear that this is not a construction issue. However, if water/moisture is a problem in the building and is code related, then code officials should address this. Otherwise, medical problems resulting from exposure to molds in buildings or homes are due to an indoor air quality problem, which is a health issue. Jurisdiction for addressing complaints lies with DoH.

Code Officials: If homeowners have questions about mold or general indoor air quality problems, you may direct them to the DoH Indoor Environments Program at (609) 826-4950. Also, information may be obtained from the DoH website at <https://www.nj.gov/health/ceohs/environmental-occupational/mold/>.

If you have any questions, please contact the Code Assistance Unit at (609) 984-7609.

Source: Megan Sullivan Cyz  
Code Development Unit

### What Is the Meaning Behind the Issuance of a Certificate of Occupancy?

*(reprinted from Volume 10, Number 1, Spring 1998)*

The Uniform Construction Code Act itself states that "the Certificate of Occupancy shall certify that the building or structure has been constructed in accordance with the provisions of the construction permit, the code, and other applicable laws and ordinances." There are three important concepts related to Certificates of Occupancy (C.O.'s) which need to be understood:

1. The law states that the "certificate of occupancy shall certify." This does not mean that the construction official or subcode officials are certifying that the structure complies. Rather, those officials issue or approve the issuance of the C.O. based on the applicant's certification that the work complies and their own inspections which are intended to check on, rather than substitute for, the owner's certification. The certification is called for at N.J.A.C. 5:23-2.23(h)4. It should be a part of the application for a C.O.
2. The C.O. is to be issued only if the requirements of all other applicable laws and ordinances are met. An example would tie conditions imposed by a municipal planning board as a part of site plan approval. It is important to understand that the authority to decide whether or not the requirements of other laws and ordinances have been met rests with the construction official and no one else. If the other law or ordinance is enforced by some other municipal, county, or state official, then the Construction Official will ordinarily rely on the advice of that other official as to whether or not the other law or ordinance has been complied with. Final decision-making authority, however, rests with the Construction Official. Similarly, the authority to issue a Temporary Certificate of Occupancy (T.C.O.) when work required under some other law or ordinance is not fully complete rests with the Construction Official. The Construction Official should use the guidelines for TCO's established in the regulations at N.J.A. C. 5:23-2.23(g).
3. The Certificate of Occupancy constitutes permission to occupy a building for a specific use - and no more. The requirement for a C.O. was established because some control on when the use of a new building or the changed use of an existing one may legally commence. This permission is granted by the Construction Official and it can be withdrawn by the Construction Official because the C.O. is conditional. There are conditions which have to be met in order for a building to qualify for a certificate of occupancy. They are listed in the regulations at N.J.A.C. 5:23-2.24. There are also conditions which have to be met in order for a building to keep its certificate of occupancy. They are set forth at N.J.A.C. 5:23-2.23(i). The regulations provide that a C.O. may be revoked if the condition for obtaining it or the conditions for keeping it are no longer met. For example, if it is found that a serious violation of the code is present which was not picked up during construction or if it is found that a required system such as a fire alarm is no longer operable, then the C.O. can be revoked. The revocation of a C.O. is a serious matter since the owner loses use of the building. It is a remedy which should not be invoked lightly, but it is important to understand that it is there.

There is one final principal related to Certificate of Occupancy which is important. It is quite common for Temporary Certificates of Occupancy (T.C.O.) to be issued. These T.C.O.'s should only be issued for a fixed period of time. It is expected that any remaining work will be completed before the T.C.O. expires. A T.C.O. can, of course, be extended for good cause. If a T.C.O. expires without all remaining work being done, then the building is being occupied without a C.O. in violation of the code. The construction official is obliged to assess penalties and take any other step as may be necessary to terminate the illegal occupancy. This holds true whether the remaining work is required by the code or required by one of the other laws or ordinances referred to by law.

The certificate of occupancy is not a certification, but a powerful enforcement tool which is there for the Construction Official to use to compel compliance with the law.

Source: William M. Connolly, AIA (*Retired*)  
Director, Division of Codes and Standards

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