

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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The 32nd Building Safety Conference of New Jersey “Rebuilding New Jersey-Together”

The 32nd Annual Building Safety Conference was held May 1st through 3rd at Bally’s Atlantic City. The focus was on Rebuilding New Jersey- Together. With that in mind, a special training opportunity - Superstorm Sandy, Lessons Learned - was held. We had a very successful conference this year with about 600 people in attendance to attend classes and to honor the inspectors and technical assistant of the year.

The kickoff event for the Conference was the “Crackerbarrel.” This event gives the attendees the opportunity to hear presentations of a variety of topics in a short format that focuses on new codes and standards and items of particular interest to the code enforcement community. The topics this year ranged from several topics concerning the rebuilding effort in New Jersey to a preview, given by Steve Jones, International Code Council (ICC) Vice President, of the upcoming ICC Conference later this year in Atlantic City.

The centerpiece of the Conference was the recognition and honoring of those selected by their associations as Inspectors of the Year and as the Technical Assistant of the Year. Division of Codes and Standards’ Director Edward Smith and the Presidents of the respective

See Building Safety Conference- page 3

Subcode References in the Rehabilitation Subcode



As you may have noticed, rule proposals and adoptions have slowed to a somewhat glacial pace. This is something out of the Department’s hands, and unfortunately creates some issues when companion changes are required throughout the Uniform Construction Code (UCC) when a model code is updated. This is a particular problem in the Rehabilitation Subcode, N.J.A.C. 5:23-6, as it is filled with cross references to other subcodes of the UCC. Please note that this is not the first time this subject has been tackled in the *Construction Code Communicator* (see Fall 2009 and Fall 2010 editions). This is the most recent word on this subject.

Normally, when a newer edition of a model code is adopted through amendment to Subchapter 3, a proposal is presented to update the Rehabilitation Subcode. So the question arises, what does the code user do when a newer edition of a model code is adopted, but the companion change has not yet occurred in the Rehabilitation Subcode? Which edition of the model code is supposed to be used in existing buildings undergoing a construction project? The short answer is that the most recently-adopted model code may be used, but only for sections that existed

See Rehab Subcode - page 4

In This Issue

32 nd Building Safety Conference	1	HVACR Contractors License Update  	5
Air Barrier –What is it? 	5	Prototypes and the EXTENDED Permit Extension Act	3
Arc Fault Circuit Protection for PV Systems 	3	Retaining Walls in Series, or Not 	6
Fire Protection Equipment Contractor, NJ Division of Fire Safety Permit/Cert. Nos. 	7	Subcode References in the Rehabilitation Subcode       	1

Building Safety Conference

continued from page 1

associations made the award presentations this year at the annual luncheon.

The following awards were presented:

Building Officials Association of New Jersey
Building Inspector of the Year- Thomas J. Pinand

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year- Anthony F. Gargani, Jr.

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year- Paul Allen

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year- Ernest J. Sisco

New Jersey Association of Technical Assistants
Technical Assistant of the Year- Valerie A. Figueiredo

Congratulations to all for your hard work and dedication to the betterment of code enforcement here in New Jersey!

The Building Safety Conference is a terrific opportunity not only to broaden your knowledge of cutting edge code enforcement and building construction techniques, but also to meet with officials from throughout the state to share ideas and promote collegiality among our community. We hope to see you all next year at Bally's Atlantic City May 7th through 9th, 2014. Please save the date!

Source: John Delesandro
Bureau of Code Services



Above, NJPIA's 2013 honoree Anthony F. Gargani, Jr. (left), accompanied by NJPIA President Michael G. Baker (right).



Above, NJFP&PA's 2013 honoree Paul Allen (center), accompanied by NJFP&PA President Stanley Sickels (right), and Codes and Standards Director Edward M. Smith (left).



Above, BOANJ's 2013 honoree Thomas J. Pinand (left), accompanied by BOANJ President James Zaconie (right).



Above, MEIA's 2013 honoree Ernest J. Sisco (left), accompanied by MEIA President Ed Reed (right).



Above, NJATA's 2013 honoree Valerie A. Figueiredo (left), accompanied by NJATA President Linda Aiello (right).



Above, Director Smith and all 2013 honorees.

Arc-Fault Circuit Protection for PV Systems –Limited Availability! What do I do?

Section 690.11 of the 2011 National Electrical Code (NEC), titled "Arc-Fault Circuit Protection (Direct Current)," requires photovoltaic systems with dc circuits, dc output circuits, or both, on or penetrating a building operating at a PV system maximum system voltage of 80 volts or greater, to be protected by a listed (dc) arc-fault circuit interpreter, PV type, or other system components listed to provide equivalent protection. The problem is this requirement and the technology are so new that very few inverter manufacturers have even started manufacturing inverters with arc fault protection inside them. So, as the electrical subcode official responsible for enforcing these provisions, what do you do?

Section 90.4 of the 2011 NEC, titled "Enforcement," acknowledges that the NEC may require new products, constructions or materials that may not be available at the time of the NEC publication. In such event, the authority having jurisdiction (AHJ) is authorized to allow the use of the products, constructions or materials that comply with the most recent previous Code edition.

Because the NEC is on the cutting edge of technology, it is difficult to establish a viable future effective date within each section of the NEC because the time needed to change existing products and standards, as well as to develop new materials and test methods. This information usually is not known at the time the Code is adopted. In this case, manufacturers have been slow to have products meeting the requirements developed. That's why this section exists. The Department is advising electrical subcode officials to waive new requirements of Section 690.11 from the 2011 NEC and use the 2008 provisions while products that meet the new requirements are developed, manufactured and become commercially available.

Should a variation be issued? No, a variation is not required since Section 90.4 allows the AHJ to approve the PV-DC system without arc fault protection. However, a written record should be kept with the inspection file.

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

Source: Ken Verbos
Office of Regulatory Affairs

Prototypes and the EXTENDED Permits Extension Act

(Essentially a reprint of the Spring 2011 article, but with new dates)

Prototype releases that might otherwise have expired are still valid. Why? As you may recall, the Permit Extension Act (PEA) extends all permits that were open and valid as of January 1, 2007. This Act overrides the rules of the Uniform Construction Code (at N.J.A.C. 5:23-2.16(b)) regarding the suspension of a construction permit. (As a reminder, the UCC provides that a permit lapses if (1) no work is done for a year or (2) work, having been started, is discontinued for six months.) However, every beginning must have an ending and the PEA ends December 31, 2014, with exceptions that may allow the permit to continue to June 30, 2015.

In general, the PEA provided that a UCC permit issued before January 1, 2007 would be valid for an additional six months beyond December 31, 2014 or for the time

See Prototypes- page 4



Rehab Subcode

Continued from page 1

previously and were included by reference in the Rehabilitation Subcode (even if sections moved).

Sections deleted from the State’s adoption of the model code as part of the amendments made in N.J.A.C. 5:23-3.14 through 3.22 would not be cited under the rehab subcode. Similarly, sections of the model code not picked up as part of the rehab subcode (see N.J.A.C. 6.8, Materials and methods) should not be cited. These sections were deliberately identified as being outside the scope of the rehab subcode. This remains true when moving to a newer edition. The section numbers may have changed; code officials should match the content. Brand new sections included in a model code (content that did not exist in the previous edition) should not be cited under the rehab subcode until and unless the Department has acted on them through a rule proposal and adoption.

The best way to explain this is through an example. In the electrical subcode, Section 406.3 is currently referenced in the repair, renovation, alteration and reconstruction sections of the Rehabilitation Subcode. This reference is to the 2008 edition and previous editions of the National Electrical Code (NEC). With the adoption of the NEC/2011, this text was moved to Section 406.4. Section 406.4 of the NEC/2011 may be referenced in place of Section 406.3 of the NEC/2008. To further explain, tamper resistant receptacles in dwelling units was Section 406.11, which was the last requirement in Section 406 for 2008; it is now Section 406.12. As you will see, the sections have moved, but the text is, for the most part, the same. Section 406.12 added one hyphenated word for clarity and provided exceptions. It would be acceptable to use the exceptions in this case. However, the new sections that follow, Tamper Resistant Receptacles in Guest Rooms (406.13) and Child Care Facilities (406.14) should not be cited because no rule has been published to include these new requirements as part of the Rehabilitation Subcode.

In a perfect world, the references would be updated automatically the day the NEC/2011 was adopted as the Electrical Subcode. However, we live in an imperfect world. That being said, the day that the NEC/2011 was adopted as the electrical subcode, May 7, 2012, the NEC/2011 became the effective referenced code, even without the 2008 code references having been specifically updated. Therefore, while an update of the code references in the Rehabilitation Subcode is pending, the 2008 references within the Rehabilitation Subcode may be treated as 2011 references as discussed above. Yes, this does mean you will occasionally have to check to be sure that a referenced section has not been changed, but diligence ensures that we stay aware of the changes to the most recently-adopted national model codes.

See Rehab Subcode at right

Prototypes

Continued from page 3

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, 2014) would be valid until June 30, 2015 (six months beyond the end of the extension period,) or until the date when it would have expired if the PEA had not been passed, whichever is longer.

The Department has provided guidance on this issue (September 23, 2008, January 25, 2010 and December 10, 2012 correspondence to code officials, most recent located at:

http://www.nj.gov/dca/divisions/codes/alerts/pdfs/PEA_of_2012a.pdf

However, another question has arisen: How does the PEA affect prototype plans? The answer is: If a prototype plan release was valid on January 1, 2007, it remains valid until June 30, 2015. The reasoning is provided below: The PEA stopped the clock for releases that were in place on January 1, 2007. It also extended the “useful life” of any releases issued between January 1, 2007 and December 31, 2014. This means that the adoption of subsequent editions of the model codes, and the end of their associated grace periods, does not affect the validity of prototype releases issued during timeframe delineated in the PEA. All of these prototype releases remain valid until June 30, 2015.

NOTE: Prototype plan releases based on the 2012 editions of the national model codes (yet to be adopted) will remain valid until the end of the grace period following the adoption of a subsequent edition(s) of the model code(s). Remember that the PEA says June 30, 2015 *or the date when the release would otherwise expire*, whichever is longer.

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

Source: John N. Terry
Manager, Construction Code Enforcement



Rehab Subcode

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In short, when you see a reference to a subcode, you may use the corresponding section of the most currently adopted model code. This also applies to the grace period, meaning that if a subcode is in a grace period time, so is the Rehabilitation Subcode.

Questions should be addressed to the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Heating, Ventilating, Air Conditioning and Refrigeration (HVACR) Contractors License Update

This article is an update to the HVACR license. On December 20, 2007, legislation was signed into law establishing a new State Board of Examiners of Heating, Ventilating, Air Conditioning and Refrigeration (HVACR) Contractors and requiring licensure to work in New Jersey as a Master HVACR contractor.

At N.J.S.A. 45:16A-26, the law includes a “grandfather” provision, which authorizes the Board to issue a Master HVACR license based on experience without examination for a limited time.

A six-month “Grandfather” period, during which individuals currently practicing as HVACR contractors may obtain licensure without meeting education or examination requirements, will begin to run on the effective date of regulations to be adopted by the State HVACR Contractors Board. The regulations will prescribe the application procedure and application fee.

The adoption date was April 15, 2013 with an effective date of October 15, 2013. In the July 1, 2013 *New Jersey Register* (NJR), the effective date was extended from October 15, 2013 to January 1, 2014. This extension will give the Board sufficient time to develop its licensing examination prior to implementing the license. January 1, 2014 the Board will begin to accept applications for the HVACR license. January 1, 2014 will start the “grandfather” period. The applications will be able to be filed online only.

Further information concerning licensure of HVACR contractors, including the application process, will be posted on the Board’s website at:

www.nj.gov/lps/ca/HVACR/

as it becomes available.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Air Barrier, What Is It?

The term “air barrier” is used in the energy subcode for limiting air infiltration of the building thermal envelope in accordance with Section 402.4.1 of the International Energy Conservation Code/2009 (IECC/2009). It is defined as “Material(s) assembled and joined together to provide a barrier to air leakage through the building envelope. An air barrier may be a single material or a combination of materials.” For those of you that think this

See Air Barrier at right

Air Barrier

Continued from left

definition needs work, especially in determining what materials may be used...well, it doesn’t get better in the IECC/2012.

When reviewing the commercial side of the energy subcode, the ASHRAE Standard 90.1-2007 did not offer much help either. However, unlike the IECC/2012, ASHRAE 90.1- 2010 does offer help! The ASHRAE 90.1-2010 is not yet adopted, but is being proposed as part of the 2012 national model code proposal. Therefore, in an attempt to provide some guidance, Section 5.4.3.1.3, Acceptable Materials and assemblies, of ASHRAE Standard 90.1-2010 is provided below:

5.4.3.1.3 Acceptable Materials and Assemblies.

Continuous air barrier materials and assemblies for the opaque building envelope shall comply with one of the following requirements:

a. Materials that have an air permeance not exceeding 0.004 cfm/ft² under a pressure differential of 0.3” w.g. (1.57psf) when tested in accordance with ASTM E 2178. The following materials meet the requirements of 5.4.3.1.3 a:

1. Plywood—minimum 3/8 in.
2. Oriented strand board—minimum 3/8 in.
3. Extruded polystyrene insulation board—minimum 1/2 in.
4. Foil-faced urethane insulation board—minimum 1/2in.
5. Exterior gypsum sheathing or interior gypsum board—minimum 1/2 in.
6. Cement board—minimum 1/2 in.
7. Built up roofing membrane
8. Modified bituminous roof membrane
9. Fully adhered single-ply roof membrane
10. A Portland cement/sand parge, stucco, or gypsum plaster minimum 1/2 in. thick
11. Cast-in-place and precast concrete.
12. Sheet metal.
13. Closed cell 2 lb/ft³ nominal density spray polyurethane foam—minimum 1 in.

b. Assemblies of materials and components (sealants, tapes, etc.) that have an average air leakage not to exceed 0.04 cfm/ft² under a pressure differential of 0.3” w.g. (1.57psf) when tested in accordance with ASTM E 2357 ASTM E 1677, ASTM E 1680 or ASTM E283; The following assemblies meet the requirements of 5.4.3.1.3 b.

1. Concrete masonry walls that are:
 - i. Fully grouted, or
 - ii. Painted to fill the pores.

Although this is not yet adopted as part of the Uniform Construction Code (UCC), it does provide clear guidance on what the intended reference to what an air barrier may be composed of.

Source: Rob Austin
Code Assistance Unit

Retaining Walls in Series, or Not

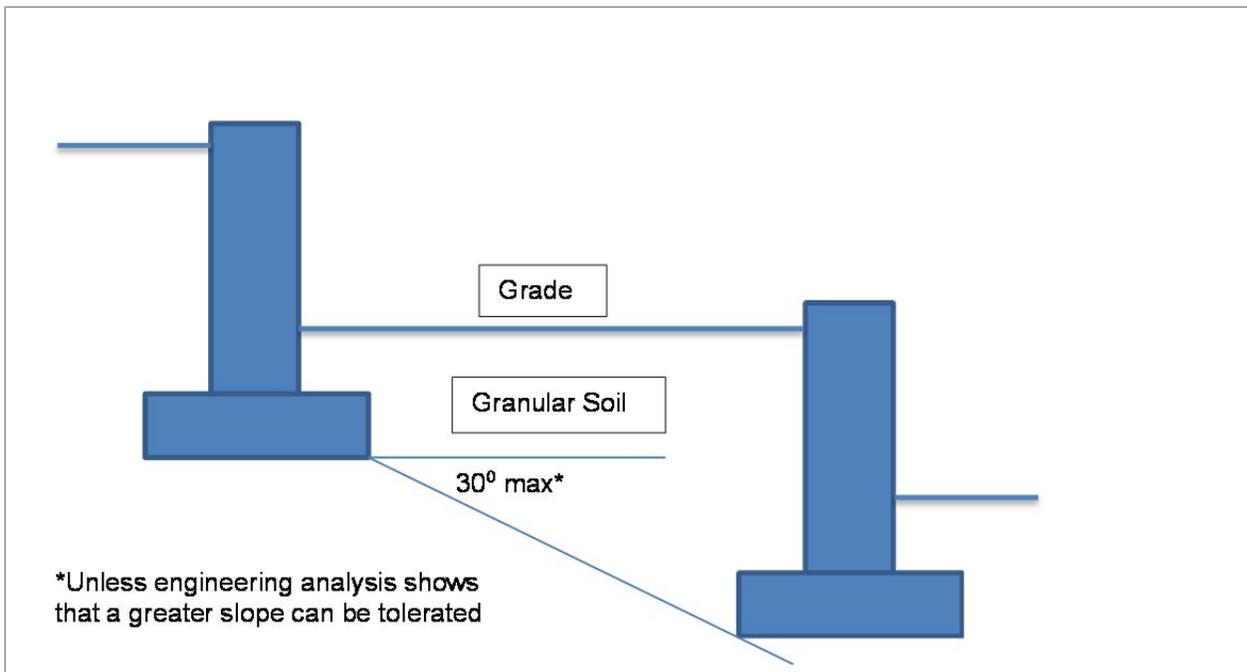


Recently, the Department has received a number of inquiries regarding retaining walls that are in series that measure a total height of 4 feet or greater. More specifically, the question asked is: At what horizontal distance can a series of retaining walls no longer be considered in series? That is, what horizontal distance between the walls 2 feet, 5 feet, 10 feet, 25 feet, etc. is no longer to be considered in series?

The Uniform Construction Code (UCC) does not provide an exact number. N.J.A.C. 5:23-2.14(g) states that no person shall construct, enlarge, alter, reconstruct, or demolish a retaining wall or series of retaining walls having a total height four feet or greater, or a retaining wall less than four feet having a negative impact on a foundation, without first obtaining a construction permit. The height of a retaining wall shall be the sum of the heights of all retaining walls on the same slope.

In order to determine where the upper retaining wall no longer has a negative impact on a lower retaining wall, one must start by measuring a 30 degree angle from the horizontal plane at the bottom of the upper foundation of the retaining wall to the bottom of the foundation of the lower retaining wall. If the line clears the lower retaining wall footing, then the upper retaining wall has no influence on the lower. Therefore, for analysis purposes, the walls are not considered in series.

See below:



If you have any questions on this, please direct your calls to me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Fire Protection Equipment Contractor, NJ Division of Fire Safety Permit/Certification Numbers

It has come to the attention of the Department that some Fire Protection Subcode Officials are not verifying the New Jersey Division of Fire Safety (DFS) fire protection business permit contractor number being used on the Fire Protection Subcode Technical Form F140. These numbers must be verified to ensure the contractor performing the work is a valid contractor. The simple solution to this issue is to have the contractor supply a copy of their business permit when they submit form F140. When a licensed electrical contractor or licensed alarm contractor is installing fire alarms a copy of the identification card for licensed fire alarm contractor or a sealed application from a licensed electrical contractor must be provided.

N.J.A.C. 5:23-2.15(b)5. When the work involves fire protection equipment, any contractor performing such work shall have the appropriate business permit and certification issued pursuant to N.J.S.A. 52:27D-25q et seq and N.J.A.C. 5:74-2.1 Business permits. The business permit number of the contractor shall appear on the permit application. This law and rule requires that all fire protection contractors obtain a business permit from the New Jersey Division of Fire Safety.

There are some exceptions to these provisions and they are as follows;

- i. Certification shall not be required for licensed electrical contractors or for licensed alarm contractors installing fire alarms.
- ii. Certification shall not be required for homeowners performing work within their residences.
- iii. Certification shall not be required for in-house employees performing routine maintenance work such as monthly, weekly or

daily inspections, or testing of fire protection equipment.
iv. Certification shall not be required for contractors who install water supply lines outside a building.

When you think that a false copy of a business permit has been submitted, the contractor number can be verified by going to the NJ Division of Fire Safety website at:

http://www.nj.gov/dca/divisions/dfs/pdf/fpe_contractor_list.pdf

The Contractor Certification Unit issues permits to businesses and certifies individuals involved in the installation, service, repair, inspection or maintenance of fire protection equipment. The above website lists the six certification categories as follows; ALL=All Fire Protection Equipment Contractor, FS=Fire Sprinkler System Contractor, SH=Special Hazard Fire Suppression System Contractor, FA=Fire Alarm System Contractor, PF=Portable Fire Extinguisher Contractor and KF=Kitchen Fire Suppression System Contractor. When contractors are not listed call/email the Contractor Certification Unit, Chris Michallis, Phone (609) 984-7860, Chris.Michallis@dca.state.nj.us.

When a contractor falsifies an application with an improper number or business name, the DFS contractor certification unit will investigate those individuals. The construction official may also issue a penalty pursuant to N.J.A.C. 5:23-2.31(e)4. for falsifying the permit application.

If you have any questions, please feel free to call me at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit



See DFS Permit/Certification Numbers at right

The Construction Code Communicator is an online publication of the New Jersey Department of Community Affairs' Division of Codes and Standards. It is 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.

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