Construction Code Communicator

NEW JERSEY UNIFORM CONSTRUCTION CODE

State of New Jersey
Jon S. Corzine, Governor

Department of Community Affairs
Charles A. Richman, Acting Commissioner

Volume 21, Number 1 **Spring/Summer 2009**

2009 Building Safety Conference

"Building a Safer Tomorrow"

The 28th annual New Jersey Building Safety Conference was held this year from May 6 through May 8 at the Trump Taj Mahal in Atlantic City. As our theme above aptly suggests, the focus of this year's conference was on meeting the current challenges faced throughout our industry while assuring that we are ready for the many innovations and new techniques that the future will bring, making sure that our tomorrow is, indeed, safer.

The "Crackerbarrel" on the first evening had a record setting 46 tables covering varying topics of interest ranging from floodplain management to an opportunity to speak with our Director, Cynthia Wilk, about the many hot topics the Division is working on to meet the needs of our local inspectors and officials. There were 13 seminars held each training day running across the spectrum from electrical code updates to swimming pool and spa safety.

One of the major events at the Conference, as always, is the opportunity to honor those whose commitment and dedication over the past year is recognized by their associations- the Inspectors and Technical Assistant of the Year. This year was

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CPVC Fire Sprinkler System Drop Installations

It has come to the attention of the Department that some fire sprinkler systems utilizing Chlorinated Polyvinyl Chloride (CPVC) pipe are being installed incorrectly. In one city, where 13 high rise buildings were being constructed, an observant Fire Subcode Inspector noticed the sprinkler contactor installing the sprinkler head drops incorrectly. The inspector asked that a random sample of heads be removed to check for obstructions. The problem is that the sprinkler heads are being installed in the drops before the drops are installed onto the branch lines. When the drop is installed the adhesive drips down through the drop and seals the sprinkler head cap in place causing a blockage.

The manufacturer's installation specification has requirements on how to install these drops. The requirements clearly state that the heads are not to be installed until the adhesive has had time to cure. The cure time could be as long as 48 hours or as short as 15 minutes before a test could be conducted on the pipe. The NFPA referenced standard has no installation information about these types of drops. The manufacturer's specifications strongly recommend that the contractors attend an installation class before they start installing the product and attend an update class every two years thereafter.

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particularly notable for the Division, as our own Tom Pitcherello was selected as Plumbing Inspector of the Year, and also, a member of the Building Safety Committee, Martin Vogt, was selected as the Building Inspector of the Year. Congratulations to all for your hard work and well deserved awards! Director Wilk, along with the association presidents presented the following awards:

New Jersey Association of Technical Assistants
Technical Assistant of the Year
Catherine Booth

Building Officials Association of New Jersey
Building Inspector of the Year
Martin Vogt

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year
Thomas Pitcherello

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year
Joseph Moschello

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year
Charles Hood



Above, BOANJ's 2009 honoree Martin Vogt accepts his award. He is accompanied by President Salvatore DeSimone and Director Wilk.

To the right and holding his award, MEIA's 2009 honoree Charles Hood is accompanied by Southern Chapter President Joseph Freeman.



Above, NJATA's 2009 honoree Catherine Booth is accompanied by President Rosalind Bosserdet.

Conferences of this sort provide a valuable opportunity not only for educational pursuits, but to allow for a chance to share ideas and experiences, fostering fellowship among our peers. The reception to honor the awardees gives us all a chance to offer congratulations to the award recipients and to share some great food and entertainment, as well. The Fabulous Greaseband returned again this year providing great music and fun for all, so far being a conference favorite. The inspector and technical assistant associations were of particular help this year, providing assistance in making our awards reception memorable- a special thanks to all involved!

The Building Safety Conference is nice break from the normal routine and provides the chance to enhance your educational opportunities and receive information on important and cutting edge topics. We are looking forward to seeing everyone again next year when we meet again at the Taj Mahal on April 28-30th. Hope to see you there!

Source: John Delasandro
Licensing Unit, Bureau of Code Services







Above left, NJPIA's 2009 honoree Thomas Pitcherello accompanied by NJPIA President Thomas McGonigle. And to the right, NJFP&PA's 2009 honoree Joseph Moscello accompanied by NJFP&PA President Stanley Sickels.

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The New Jersey State Permit Surcharge (Training) Fee: Charge or No Charge?

It seems that the recent addition of N.J.A.C. 5:23-4.19(b)6, i.e., "The minimum permit surcharge fee shall be $1.00," has caused confusion in understanding 5:23-4.19(b)1through 5. Therefore, to clarify:

1. ***No*** permit surcharge fee shall be collected for pre-engineered systems of commercial farm buildings.
2. ***No*** permit surcharge fee shall be collected for permits to perform asbestos abatement or lead abatement.
3. ***No*** permit surcharge fee shall be collected for permits for the construction or rehabilitation of residential units that are to be legally restricted to occupancy by households of low- or moderate-income.
4. ***No*** permit surcharge fee shall be collected for demolition of buildings or structures.
5. ***No*** permit surcharge fee shall be collected for work consequential to a natural disaster when the local code enforcement agency is waiving its fee.

Further, where the Uniform Construction Code ***Act*** itself specifies that no training fee or permit surcharge fee shall be charged, ***no*** permit surcharge fee shall be charged. Those instances are:

6. The issuance of a Construction Permit for the installation or alteration of solar energy heating or cooling systems.
7. The issuance of a Construction Permit for the construction, reconstruction, alteration or improvement designed and undertaken solely to promote accessibility by disabled persons.

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8. The issuance of a Construction Permit for the construction or alteration of any public building by county or municipal government or by a school board.

However, ***in all other instances that would normally result in the calculation and collection of the permit surcharge fee***, if the calculation results in any amount that is less than one dollar, the minimum permit surcharge fee of $1.00 shall be collected.

Source: Berit Osworth
Division of Codes and Standards

Which IFC do I use?

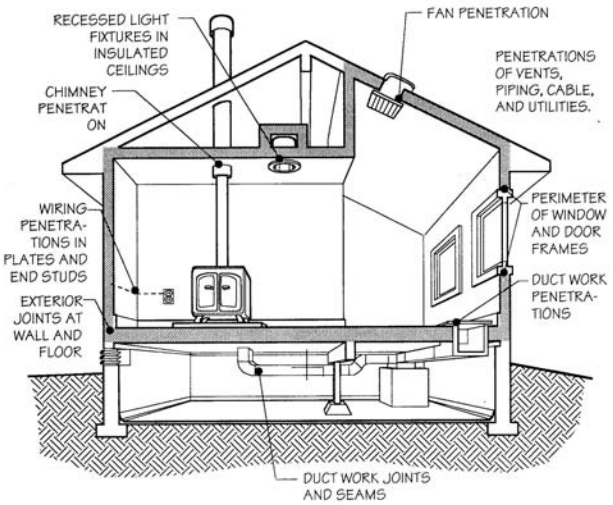
Many questions have been coming in recently about the use of the new International Fire Code (IFC)/ 2006 New Jersey edition. There have been no changes in the rules for projects being constructed in accordance with the New Jersey Uniform Construction Code (UCC). The IFC is not adopted as part of the UCC. Therefore, when the International Building Code (IBC) requires installation in accordance with the IFC, the un-amended edition of the IFC must be used. The IFC/2006, New Jersey edition is used only for maintenance inspections by the Fire Official or Fire Inspector.

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

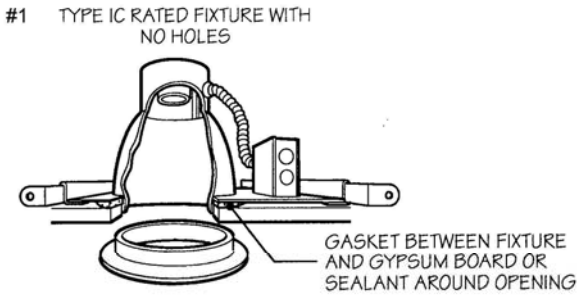
Source: Michael E. Whalen
Code Assistance Unit

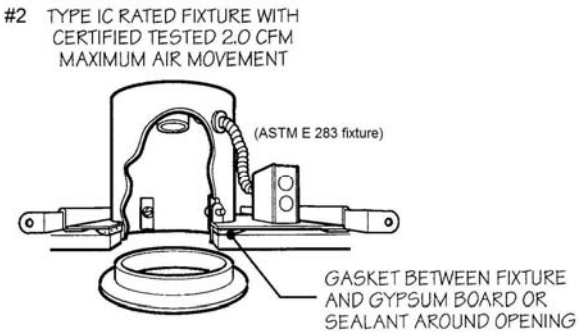
Air Leakage

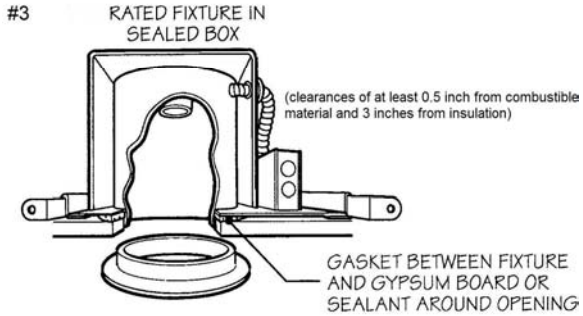
Since everyone tends to like pictures to explain code provisions, here are two that should make the requirements clear in relation to air leakage from Section 402.4 of the International Energy Conservation Code/2006 (IECC/2006).



In short, the items shown above are required to be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material to limit infiltration. The complete list of items can be found at Section 402.4.1 of the IECC/2006. Furthermore, the IECC/2006 specifically calls out recessed lighting at Section 402.4.3 to limit air leakage between conditioned and unconditioned spaces with three methods; they are as follows:







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

Source: Rob Austin
Code Assistance Unit

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The Foundation of Good Partnerships

All partnerships that work well have one thing in common. Whether it's a two man beach volleyball team, a doubles tennis team, or a couple on *Dancing with the Stars*, partnerships are most successful when the partners coordinate what they are doing. In order for them to do this they need to either have worked together in the past or communicate well with each other. The same need to coordinate applies on many construction projects, especially modular projects where the installation instructions for the modular building are prepared by the manufacturer while the foundation is designed by someone else. If the partners are not in sync, the dancing can get pretty ugly.

There are a couple of areas in modular homes where the dancers often step on each other's toes. The first is the center support where two modules are placed on the foundation. This can be treated in one of two ways. One way is to provide continuous support under the edge of each module that runs down the center of the foundation. The other is to design the band boards (essentially rim joists) to act as a girder with intermediate supports. The first option is relatively straight forward; the second requires some coordination. For the second option to be used, the foundation designer needs to determine how the two band boards need to be fastened and where the supports need to be located. The location of the supports is dictated by a number of factors, including the band board material, the load, and the location of the band board splices (if any). That's where the coordination comes in. The foundation engineer must coordinate the submitted foundation plan with the way that the modules were constructed.

A second place where the dancing can go awry is the lateral support provided for the first floor joists that run parallel to the foundation wall. Foundation walls, for the most part, rely on the first floor joists for support of the top of the foundation wall against lateral pressure from the soil on the outside (unbalanced fill). For joists that run perpendicular to the foundation wall, the bracing is provided by the joist itself. For joists that run parallel to the foundation, the support must be provided by blocking between joists so that the force on the foundation wall is transferred to the floor assembly rather than just to the rim joist. This is discussed in Section R404, Foundations and Retaining Walls, of the

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The local officials need to keep a close watch on these installations to make sure that the contractors are following the manufacturer's specifications. If these drops are being installed incorrectly, a random sample of the heads should be pulled in each area affected to check for any blockage. If blockage is found, all the heads should be replaced.

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

Source: Michael E. Whalen
Code Assistance Unit

ALERT! Changes are Coming to the *CCC*

Nearly two years ago, the *Construction Code Communicator* was moved from a printed newsletter to one that is posted on the Division's web site. In addition, it was reduced from four issues each year to three. This year, it is changing again.

The *Construction Code Communicator* will continue to be posted on the Division's web site. It will be posted three times this year in spring/summer, fall, and winter/2009 issues. Next year (2010), it will be posted twice a year, in spring/summer and fall/winter issues. It will be posted in the Department's document library, so that, when it is posted, each registered user will automatically receive an e-mail notification.

In addition to posting the *Communicator*, the Department will use its document library to post other documents that are important to code enforcement. We will also publish short alerts and updates in an "Alerts" or "Hot Topics" section of the web site.

It has become faster and more efficient to communicate through the web site and document library, so:

- If we do not have your municipal e-mail address, please contact Sue Lydon at ORA@dca.state.nj.us.
- If you have not registered to use the document library, please contact the division at codesandstandards@dca.state.nj.us for an authorization code.

Please let me know if you have any questions. I can be reached at (609) 984-7609.

Source: Emily W. Templeton
Division of Codes and Standards

Garden-Type Utility Sheds and Similar Structures – Clarification 

On April 20, 2009, the Department repealed N.J.A.C. 5:23-9.9, Foundation systems for garden type utility sheds and similar structures. The provisions of this section were moved within the applicable chapters of the building and one-and two-family dwelling subcodes. Therefore, the exceptions in Section 1805.2 of the International Building Code/2006 (IBC/2006) and Section R403.1.4 of the International Residential Code/2006 (IRC/2006) have been modified to reflect old N.J.A.C. 5:23-9.9. Both the IBC/2006 and IRC/2006 allow free standing storage-type buildings to be built without a foundation to frost-depth as long as the building meets the following three conditions:

1) The building presents a low hazard to human life in the event of failure; these include, but are not limited to, agricultural buildings, temporary buildings, and minor storage facilities;
2) The building has an area of 600 square feet or less for light framed construction (LFC), or 400 square feet or less for other than light-framed construction (OTLFC); and
3) The building has an eave height of 10 feet or less. However, unlike old N.J.A.C. 5:23-9.9, footings were required in all cases to be at least 12 inches in depth. A brief summary follows (all 10 feet or less in height):
   - 100 ft^2 or less – footings of 12 inches deep not required provided the structures do not contain utility connections and are of sufficient weight to remain in place or be anchored to the ground (like old N.J.A.C. 5:23-9.9(a))
   - More than 100 ft^2 up to 200 ft^2 – footings of 12 inches deep not required provided the structures are dimensionally stable without the foundation system and do not contain utility connections. A structure shall be considered dimensionally stable if it is provided with a floor system that is tied to the walls of the structure such that it reacts to loads as a unit. These structures shall be of sufficient weight to remain in place or shall be anchored to the ground (like old N.J.A.C. 5:23-9.9(b))
   - Buildings of more than 200 ft^2 up to 600 ft^2 LFC or 400 ft^2 OTLFC – Footings of 12 inches deep required
   - Buildings of more than 600 ft^2 LFC or 400 ft^2 OTLFC – Footings to frost required

Garden-type utility sheds require a construction permit for building work unless the structure is 100 square feet or less in area, and 10 feet or less in height, and accessory to buildings of Group R-2, R-3, R-4, or R-5, and does not contain a water, gas, oil or sewer connection. A construction permit for electrical work shall be required, when applicable (N.J.A.C. 5:23-2.14(b)8).

For commercial farm buildings, the permit requirements are slightly different. As per N.J.A.C. 5:23-3.2(d)6, Garden-type utility sheds and similar structures are exempt from permit requirements provided the structure is 200 square feet or less in area, 10 feet or less in height, has no utility (water, gas, oil, sewer or electric) connections and the shed is dimensionally stable without the foundation system. A shed is to be considered dimensionally stable if it is provided with a floor system that is tied to the walls of the structure such that it reacts to loads as a unit. Also, as per N.J.A.C. 5:23-3.4(b)5, a three-sided turn-out shed used to shelter livestock is exempt from permit requirements provided there is no permanent foundation or floor and provided the structure is 250 square feet or less in area, and 14 feet or less in height, and has no utility (water, gas, oil, sewer or electric) connections. In both cases, the structure has to be of sufficient weight to remain in place or has to be anchored to the ground (concrete is not be required for anchoring).

Source: Rob Austin
Code Assistance Unit

Certification to Perform Services on Unregulated Underground Heating Oil Tank Systems 

This article is to alert code officials that, on November 3, 2008, the Department of Environment Protection (DEP) adopted rules which require that a contractor who provides services on an unregulated underground heating oil tank system pass a proficiency test in each area for which certification is being sought. The certification will not be required for an aboveground heating oil tank system.

I was told from DEP that a notice regarding the effective date will be published in the *New Jersey Register* sometime in October or November as this rule takes effect.

This article is to alert code officials that when the official notice of the effective date of the adoption is published, any contractor providing services on any unregulated underground heating oil tank system and applying for a permit from the local municipality to perform this work will be required to provide proof of

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New Jersey One- and Two-Family Dwelling Subcode. The blocking method is dependant on the soils and the amount of unbalanced fill and must be included in the submittal for the permit.

The building subcode official has to play the role of judge and while he doesn't necessarily need to identify which dancer is at fault, he does need to make sure that all the dance steps are there and match. There are two places where the building subcode official can look to make sure that these items have been addressed. They are the foundation plan and the installation instructions from the modular manufacturer. The installation instructions are required to be submitted as part of the permit application according to Section 6 of Part IV of the Uniform Administrative Procedures which are referenced in the Uniform Construction Code. While the Uniform Administrative Procedures give general guidance on what should be provided in the installation instructions (Section 3 of Part IX of the Uniform Administrative Procedures), they do not cover the interplay between the foundation engineer and the manufacturer completely. They only require that there be "connection details of the industrialized/modular building and the foundation." This will not necessarily address the blocking issue or the centerline support of the modules within the foundation walls. The detail provided in the installation instructions varies from manufacturer to manufacturer, so it cannot be assumed that the details will always be found on the installation instructions. For example, one manufacturer may call out the blocking to be provided for lateral support as "done by others" while another manufacturer may not mention it at all. The building subcode official should be aware that lateral support may be needed, and if there is none provided, the official should raise the issue with the foundation designer.

The task for the building subcode official is to ensure that all of the details needed are provided and that there are not conflicts between what was submitted by the foundation engineer and the manufacturer's installation instructions. In other words, when it comes to blocking for lateral bracing and center support locations pay attention to the footwork of the dancers.

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

Source: Michael Baier
Chief, Bureau of Code Services

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certification. Again, this does not apply to aboveground heating oil tanks.

As soon as this Department receives any additional information, we will keep you up to date.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Owners doing work in their own homes

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

Shared Services

As today's economy continues to shrink and municipal building departments are faced with deficits, the possibility of staff reductions, shared service agreements, privatizing one or more subcodes, and State takeover, is becoming a reality. There are a few actions as Construction Officials you can take to minimize the effect of the national recession on your office:

1. Review your fee schedule

Many municipalities have not updated their fee schedules in years. If your fee schedule is out-dated and inconsistent with many of the surrounding municipalities' fee schedules, it should be reviewed and updated to cover today's costs of running a building department. If you cannot obtain a copy of the current fee schedules from adjacent municipalities, the Office of Regulatory Affairs might have them. Just give us a call. Absent an adjacent municipality's fee schedule, you could consider using the State fee schedule as a guide to reasonable fees.

2. Review your work load

Just because your revenues are down, does not mean that you do not have a lot of existing open active permits for projects that need to be inspected. Determine what permits are open and estimate how many inspections will be needed to properly service these open permits. Also, check what projects are coming through your planning board. If there are several large projects that are almost through the planning board process, they will not only impact your staffing needs, they will also impact future revenues. Submit a report to the governing body with evidence that a reduction in staff at this time is not warranted. This is not to say that a reduction might not happen moving forward, but you could buy yourself some valuable time.

3. Ask for a staffing review

As most of you know, the Office of Regulatory Affairs performs staffing reviews. These reviews basically follow the procedures outlined above to determine the building department's needs. We move very quickly and, in a matter of days, we provide a reliable staffing report that you could submit to your municipality.

4. Know your rights

As a civil service employee working under Title 11A, or as a subcode and/or construction official in a non-civil service municipality with tenure, you may have certain employment rights.

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We've Got the Power!

The ever-increasing need to relieve the utility power grid system from its everyday demand has resulted in the development of alternate power sources, i.e. solar photovoltaic systems and wind turbine generators to name two of the more common ones. As with other electrical installations, alternate power sources are required to comply with the subcodes of the New Jersey Uniform Construction Code (UCC).

The installation of solar photovoltaic systems is covered by the National Electrical Code (NEC)/2008, as adopted by the State; however, there are other alternate power sources for which the NEC/2008 does not have a specific article that applies to their installation. Not surprisingly, the Department is receiving questions regarding the applicability of the other articles in the NEC to these new installations.

Listing and Labeling: Most recently, the Department has received questions regarding the installation of wind turbine generators. Listing and labeling requirements cause the most questions. NEC/2008, Section 705.4, Equipment Approval, requires that all equipment must be approved for the intended use. Section 705.4 refers to Section 110.3, Examination, Identification, Installation, and Use of Equipment, which, in turn, states that when evaluating equipment, the installation and use must be in conformity with applicable provisions of NEC/2008. [Section 110.3(A) and 110.3(A)(1)].

Most electrical equipment is listed and labeled as required by Section 110.3(B). When the equipment is listed and labeled, approval of its installation and use is a "no brainer". However, when there is no listing or labeling, the solution is less clear. Fortunately, the UCC covers this situation.

Alternative Materials: At N.J.A.C. 5:23-3.7, Municipal approvals of alternative materials, equipment, or methods of construction, the UCC gives the appropriate subcode official the authority to approve equipment that does not have the standard listing and labeling. In addition, N.J.A.C. 5:23-3.7 spells out what kind of documentation is acceptable. Acceptable documentation includes: 1) An engineer's report; or 2) A field evaluation label and report or letter issued by a nationally recognized testing laboratory; or 3) Reports of engineering findings issued by a nationally recognized evaluation service program; or 4) Research reports from authoritative sources.

Permits Required: Utility companies are not required to obtain UCC permits for their installations.

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For example, if you are a tenured employee and the town is reducing hours, they cannot simply replace you with another licensed person. You should ask for a hearing; this is your right under the Uniform Construction Code Act.

If you are in a civil service municipality and a town is reducing your hours, check with the Civil Service Commission to see what rights you have.

A municipality's decision to outsource or privatize some or all of the subcodes usually breaks civil service or tenure status. However, you may be entitled to be placed on a reemployment list. You should check with the Civil Service Commission or get some legal assistance.

5. Shared services

There are three different scenarios with a shared service contract which are as follows:

Title 11A town becoming the host over another Title 11A town.

- The town must have an approved Employment Reconciliation Plan (ERP) that includes who, if anyone, is being transferred. The Civil Service Commission has 45 days from receipt to approve, deny, or require changes to the ERP.
- The Civil Service Commission will create an implementation plan to transfer employees with current status in current title, unless reclassified.
- Displaced permanent civil service employees may be placed on a reemployment list for Civil Service employers within that county. This list remains active without a termination date.
- Displaced personnel from the providing (non-host) local unit shall be entitled to one month's base salary for every 5 years of employment.

Title 11A town becoming the host over a non Title 11A town.

- The host town decides who will – and who will not-- be retained.
- Any employee who is retained by the host town and has at least one year of service will be given permanent civil service status in a title that reflects the duties of the new position, and not necessarily those of a previously held title.

Non Title 11A town becoming the host over a Title 11A town.

- Employees who are transferred receive tenure status.
- Once transferred, the employee is subject to the terms and conditions of the existing contract.

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Lowest floor level in flood-resistant construction

Question: How does R300 of the International Residential Code/2006 (IRC/2006) apply to the lowest floor level of a home to be constructed in a flood zone that has vehicle parking only on the first level, two levels of living space above and a habitable attic above that?

Background: Section R324.1.4 of the IRC/2006 states that the lowest floor is the floor of the lowest enclosed area, including basement, but excluding any unfinished flood-resistant enclosure that is usable solely for vehicle parking, building access, or limited storage.

Answer: If the 1st level is truly an unfinished flood-resistant enclosure that is usable solely for vehicle parking, building access, or limited storage, then, as per Section R324.1.4 of the IRC/2006, that level does not count as a story. Therefore, Section R300 may still be used to design this residence. Remember that when the design is VB construction without a sprinkler system, the height limitation of 35 feet of Section R300 still applies. However, if a higher height were desired, 40 feet is allowable by using VA construction (Section R300.3) or 55 feet can be obtained by using VB construction in conjunction with a sprinkler system (Section R300.1).

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

Source: Rob Austin
Code Assistance Unit

New Jersey Register Adoptions

February 2, 2009:

The following adoptions were published in *New Jersey Register on* February 2, 2009.

N.J.A.C. 5:23-2.15 -- Mirror Images; Abandoned Plans: N.J.A.C. 5:23-2.15(f)2i(1) allows a mirror-image plan to be covered by the initial prototype release as long as the design professional submits a signed and sealed letter stating that, aside from being reversed, the mirror-image design is identical to the original prototype. N.J.A.C. 5:23-2.15(f)4i(5) allows the Department of Community Affairs to declare plans abandoned and to purge them after 12 months.

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- Displaced Title 11A employees should check with the Civil Service Commission for further employment rights.

6. Things to avoid when faced with possible staff reduction

Do not reduce the quality of plan reviews and inspections.

Do not purposely slow down plan reviews and inspections. This kind of reaction harms and antagonizes the general public; in addition, it makes you look bad.

7. What to do when faced with possible staff reduction

Always do your job to the best of your ability with integrity and professionalism.

Should you have any questions, I can be reached at 609-984-7672.

Source: Louis Mraw
Supervisor
Office of Regulatory Affairs

Green Buildings: An Introduction

Green Building design and construction has become a multi-billion dollar industry with a significant role in the future of architectural design and construction. As the market for green buildings grows in New Jersey, all involved in code enforcement are likely find it helpful to have an understanding of current green building systems, technologies, and materials. This article is the first of a series intended to provide a basic overview of green building principles and methodologies and to increase familiarity with terms used and perspectives held by practitioners.

Green building design is intended to be efficient; it is also intended to result in structures that are lower maintenance structures and that have the added benefit of being constructed with a minimal impact on the natural environment. It is helpful to recognize that green building design and construction is not a single generic style limited to a specific list of requirements and materials; it is a process that is organized to consider the total impact of design decisions on the consumer and the environment. The purpose of this process, called "Integrated Design," is to help to define goals and building strategies for creating healthy built environments while simultaneously protecting, restoring, and regenerating the natural environment.

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Update on the National Standard Plumbing Code Hearings

The public hearing for the 2009 edition of the National Standard Plumbing Code (NSPC) was held in Atlantic City last August. It was a very successful and well-attended public hearing. I think that everyone who attended found the NSPC code process very interesting.

In the past, the code change cycle for the NSPC was on a one year (annual) basis. Starting with the 2009 NSPC, the code change cycle has been changed to an 18-month cycle.

Proposed changes to the 2009 NSPC for the next edition (NSPC/2012) are due by Thursday, October 22, 2009. For a copy of the code change form, visit www.phccweb.org under "Contractor Resources-Code and Technical Support". The NSPC code change committee is scheduled to meet at the headquarters office of the Plumbing Heating and Cooling Contractors (PHCC) in Falls Church, VA on December 11-12, 2009. Now is the time to propose any code changes you would like to make.

The 2009 NSPC books are now available. Copies can be purchased from NJ PHCC, which can be reached at (609) 499-8070.

The next NSPC public hearing on the code changes is scheduled for Thursday, March 25, 2010. The hearing will again be held in Atlantic City.

New Jersey is proposing to adopt the NSPC/2009; we anticipate adoption early in 2010.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

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All other installations of wind turbines are subject to the building subcode (for structural stability) and the electrical subcode (for electrical work) and those permits are required.

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

Source: Suzanne Borek
Code Assistance Unit

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N.J.A.C. 5:23-2.18, 3.5, 3.14, 3.15, 3.18, 3.21, 4.20, and 5.20 -- Inspections; Model Codes:

N.J.A.C. 5:23-2.18(b) fixes an inconsistency in the application of the framing checklist by requiring low-rise residential buildings (Groups R-2, R-3, R-4, and R-5) of wood-framed construction (Type V) to comply with the framing checklist. Also, changes were made to modify the 2006 International Building Code (IBC), the 2006 International Energy Conservation Code (IECC), and the 2006 International Residential Code (IRC), New Jersey editions, and the 2006 National Standard Plumbing Code (NSPC) to fix misspellings, reference numbers, and cross-references.

At **N.J.A.C. 5:23-3.14(b)9xliii**, the original text of the IBC/2000 was inserted to allow flush-type fire department connections where there is an issue with the connection extending beyond the property line or into the public way. Section 906.5 of the IBC/2000 was inadvertently omitted from the IBC/2006 and is needed to ensure that a safe walking area is provided in front of buildings where the above conditions exist. Also, Section 912.8 was added for situations where the fire department connection projects beyond the property line or into the public way; it requires that a flush-type fire department connection be provided.

At **N.J.A.C. 5:23-3.21(c)18ix**, the vehicle impact protection section of the Fuel Gas Subcode was added to the fuel gas section of the One- and Two-Family Dwelling Subcode.

N.J.A.C. 5:23-3.2, 3.4, and 7.15 -- Matters Covered; Responsibilities; Enforcement: At N.J.A.C. 5:23-3.2(d), which concerns commercial farm buildings, the cross-references from the previous editions of the Building Subcode (the 1996 Building Officials and Code Administrators National Building Code and the IBC/2000) were updated to the IBC/2006. At N.J.A.C. 5:23-3.4(a)1, which concerns the plan review and inspection responsibilities of Chapter 9 of the Building Subcode (IBC/2006) – which are assigned to the fire protection subcode official/inspector--, the electrical subcode official is added to Section 910.4.4 of Chapter 9, because this section deals with the wiring of the mechanical smoke exhaust. Lastly, cross-references are also updated at N.J.A.C. 5:23-7.15, concerning Barrier Free Subcode responsibilities.

February 17, 2009:

The following adoption was published in *New Jersey Register on* February 19, 2009.

N.J.A.C. 5:23-7.2, 7.5, 7.6, 7.10, 7.11, and 7.12 -- Barrier Free Subcode: The provision from the Federal Fair Housing Amendments Act that exempts balconies and patios from the requirement to be served by an accessible route was adopted as part of the Barrier Free Subcode. In addition, the provision from the Federal Fair Housing Amendments Act which requires that when, due to a steeply sloped site, a development is exempted from the accessible entrance requirement, nonetheless 20 percent of the entrances must be accessible. Finally, to eliminate a conflict within the Barrier Free Subcode, a table in ICC/ANSI A117.1-2003, which provides the number of required accessible seats in assembly buildings, was deleted; the Barrier Free Subcode table, which can be found at N.J.A.C. 5:23-7.11(a)3, was retained.

March 2, 2009:

The following adoption was published in the *New Jersey Register* on March 2, 2009.

N.J.A.C. 5:23-4.19, 4.20, 5.21, 5.22, 8.9, 8.10, 8.11, 12.5, and 12.6 – Departmental Fees, Uniform Construction Code: Permit fees have been increased for code enforcement, licensing, and asbestos regulation performed by the Department of Community Affairs under the State Uniform Construction Code Act; the State permit surcharge fee has also been increased and a minimum amount of one dollar is established for the permit surcharge fee.

March 16, 2009:

The following bulletin was published in the Uniform Construction Code on March 16, 2009.

Bulletin No. 09-1 – Permit Requirements for LP-Gas Systems: Bulletin No. 09-1 was issued to promote uniformity in the permit requirements applicable to propane cylinders. The included tables address what types of permits are required for what types of work.

April 6, 2009:

The following adoption was published in *New Jersey Register on* April 6, 2009.

N.J.A.C. 5:23-2.18C and 3.16 -- Electrical Subcode: At N.J.A.C. 5:23-2.18C, an outdated cross reference was corrected. At N.J.A.C. 5:23-3.16, the National Electrical Code (NEC)/2008 was adopted as the electrical subcode with modifications retaining various portions of the 2005 NEC's text. No modifications were made to Article 210.12 - Arc-

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Fault Circuit Interrupters, Article 708 - Critical Operations Power Systems, Articles 406.8(A) and (B) - Weather-Resistant Receptacles, Article 406.11 - Tamper-Resistant Receptacles and Article 518.4 - Wiring Methods.

April 20, 2009:

The following adoptions were published in *New Jersey Register on* April 20, 2009.

N.J.A.C. 5:23-2.14, 2.18, 3.2, 3.14, 3.21 and 9.9 -- Garden-type utility sheds and similar structures: N.J.A.C. 5:23-2.14 provides that garden-type utility sheds, which are otherwise exempt from building permits, would not be exempt if there are water, gas, oil or sewer connections. N.J.A.C. 5:23-2.18 deletes the cross-reference to N.J.A.C. 5:23-9.9 because the garden-type utility shed provisions have been moved to the building subcode and one- and two-family dwelling subcode. N.J.A.C. 5:23-3.2(d) adds an exemption from the building permit requirement for turn-out or livestock sheds. A similar exemption was added for garden-type utility sheds.

N.J.A.C. 5:23-6.1, 6.4 through 6.8, 6.12 through 6.27, 6.28 through 6.29, 6.31 and 6.32 -- Rehabilitation subcode: These amendments are the product of the Department's annual review to update the provisions of the Rehabilitation Subcode. Changes throughout include updating "smoke detector" to "smoke alarm," insulating newly constructed framing that is part of the thermal envelope, and changes correlating with recent changes made in the Uniform Fire Code (UFC), N.J.A.C. 5:70-4, regarding exhaust systems. Other changes include adding the one-and two-family dwelling subcode cross reference when only the building subcode was referenced (i.e. safety glazing), adding provisions in the new building elements section to prohibit the use of an existing exit enclosure for purposes other than a means of egress and deleting the reference in the residential materials and methods to M1301.1.1 because it cross-references R324 which has always been deleted. Further changes update the change of use section with regard to fire separation assemblies (fire barrier and horizontal assembly), revise the text to correspond with the International Building Code/2006 for separation purposes and change the reference to Table 508.3.3 to Table 706.3.9. Finally, ventilation and fire suppression system requirements for commercial cooking operations are clarified in the change of use section and changes in terminology are made in order to be consistent with the UFC, N.J.A.C. 5:70, with regard to automatic fire suppression systems.

N.J.A.C. 5:23-9.6 -- Construction requirements for new and existing casinos: The formal code interpretation regarding construction requirements for new and existing casinos was amended to retain Section 1017.4.1.3 of the BOCA National Building Code/1996 which allows special locking arrangements in new and existing casinos where, in the event of emergency, a person could still egress from the special locked area(s).

N.J.A.C. 5:23-2.7, 2.17A, 6.8, 6.9, 12.1, 12.2, 12.3, 12.4, 12.8, and 12.12, Elevator Safety Subcode – Adoption of ASME Standards; Alterations to Elevators: With the adoption of the 2006 International Building Code, the referenced elevator standards were updated. Also, the Rehabilitation Subcode (N.J.A.C. 5:23-6) and the Elevator Safety Subcode (N.J.A.C. 5:23-12) were updated.

May 18, 2009

The following adoptions were published in *New Jersey Register on* May 18, 2009.

N.J.A.C. 5:23-2.15 -- Construction Permit Applications, Plan Review: This amendment allows plan review to proceed, even though required State, county or local prior approvals may not have been granted, provided that the application for a permit is otherwise complete and the plan review fee has been paid. However, no permit would be allowed to be issued until all required State, county and local approvals were in place. An exception would be made for permit applicants applying for plan review of individual owner-occupied one- or two-family home addition or alteration projects, who would be required to have zoning approval in place before plan review could proceed.

N.J.A.C. 5:23-2.23 -- Certificate Requirements, Temporary Certificate of Occupancy: This amendment deletes the requirement that a temporary certificate of occupancy (TCO) be issued for a period of not less than 60 days. While issuance of a TCO for a period of at least 60 days generally makes good administrative sense, both in order to allow sufficient time for work not affecting health and safety to be completed and to avoid the need for excessive paperwork, there have been instances when the inflexibility that it establishes has hampered the ability of code officials to get issues resolved expeditiously.

Source: Emily W. Templeton
Division of Codes and Standards

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The following five guiding principles offer an overview of how the design and construction of a green building is approached:

1. Optimize Energy Efficiency

One of the goals of the green building movement is to optimize energy efficiency. This means that reducing the amount of energy necessary for a building to function efficiently without compromising comfort is a fundamental goal of green building design. The combination of solar orientation, tighter construction, renewable energy sources, as well as energy efficient heating and cooling equipment, appliances and lighting can lower operating costs by as much as half while also reducing the effects of power generation pollution. Energy efficiency and environmental performance are becoming vital considerations of both building design and purchasing criteria. They are evaluated using a "systems" and "return on investment" approach during the entire "use-phase", or life, of a building.

2. Relating the Building to the Natural Environment

A second goal of the green building initiative is to relate the building to the natural environment. This means that the planning**,** designing, and constructing a building is integrated to a specific site to require the most efficient use of limited natural resources and even, where applicable, to help preserve plants, animals, endangered species, and natural habitats**.** Close attention to maintaining the site's integrity during and after construction, using appropriate landscaping, and envisioning buildings as an extension of the environment are key green building principals.

3. Natural Resource Conservation

A third goal of green building design is the conservation of natural resources. The use of the broad spectrum of natural, recycled, reclaimed and/or engineered building materials reduces the overall quantity of non-renewable material consumption and waste ordinarily attributed to conventional construction practices. Utilizing Optimum Value Engineering (framing 24 inches on center as opposed to 16 inches), where possible, for example, reduces the amount of lumber needed to achieve the same structural integrity as conventional framing and increases energy efficiency due to the elimination of areas of thermal bridging. This technique reduces the amount of construction waste and thus eases the burden on landfills, transportation costs, and pollution. Installing water efficient appliances, fixtures, and irrigation systems saves water, thereby reducing energy consumption. Implementing a waste management plan at the onset can be an excellent tool for monitoring and managing waste and, by extension, conserving resources.

4. Constructing Healthy, Durable, Long-lasting Buildings

Constructing healthy, durable, long-lasting buildings is a fourth goal of green building technology. Utilizing highly durable non-toxic materials as well as providing a healthy indoor air environment for building occupants increases the building's value while reducing future costs and deconstruction waste. Utilizing longer-lasting, high quality building materials, paying close attention to properly detailing the foundation, roof and windows for optimal water management, implementing proper ventilation techniques, and specifying products that do not off-gas harmful chemicals all contribute to achieving this goal.

5. Community Development

The fifth goal when constructing a green building is community development or community impact. While an individual green building is often discussed in terms of its own merits, its most sustainable attribute is its location in relation to its community, including public transportation and local services, such as supermarkets, hospitals, recreation facilities, and employment opportunities. Green buildings reflect an awareness of the local culture and blend into the existing architecture. They rely on existing public works infrastructure, and implement strategic design features to include both private, secure areas for occupants and common space to promote the interaction between owners and the community at large.

Future articles will delve into more details on the matters summarized above; additionally, we will provide information on the multitude of available green building programs, incentives, and policies. Most importantly, we will look at the interface between green building, construction codes, and fire safety.

Questions on the green building initiative may be addressed to the Code Assistance Unit at (609) 984-7609.

Source: Darren Port
Code Assistance Unit

New Jersey Department of Community Affairs
Division of Codes and Standards
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Volume 21, Number 2 **Fall/Winter 2009**

Special Inspections

Earlier in my career when I wrote newsletter articles, I liked to write technical articles that were also comedies. I thought it would help people remember the article if there were some humor attached to it. However, this article starts not with a comedy, but with a tragedy.

Those in the Atlantic City area will probably recall an event in October 2003 that took the lives of four construction workers. The Tropicana Parking Garage Collapse that day was the subject of the largest construction lawsuit settlement in history. Because the suit was settled, the theories about the collapse were not fully sorted out, but the Department's own investigation uncovered some serious concerns about how the construction was being monitored.

Since the 1990's, the code has recognized that the spot checks afforded by the municipal building inspector are not sufficient for larger buildings with detailed masonry, concrete, welding, and bolting details. The code official simply cannot be on the site to oversee every critical concrete pour, structural weld or the torque on every bolt. The concept of special

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Attention Electrical Subcode Officials – New FPN Bulletin on Web

Following the adoption of the National Electrical Code (NEC)/2008, the Fine Print Note (FPN) bulletin has been updated. Bulletin 09-2 was published on the Division's web site in October 2009; it will be sent to all UCC subscribers with the next update.

In the meantime, as with all UCC bulletins, Bulletin 09-2 can be viewed, printed, and downloaded from the Division's web site: www.nj.gov/dca/codes. The specific link to bulletins can be found in the middle column under the title "View the…" The list is alphabetical and bulletins may be found under "UCC Extras."

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

Source: Suzanne Borek
Code Specialist

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inspections was incorporated in to the Uniform Construction Code (UCC) to overcome this. Essentially, special inspections are inspections that are performed by a third party who is responsible for dedicating the time necessary to keep an eye on what's going on while the building is being built.

The need for special inspections was in the UCC when the Tropicana Garage was built. The good news is that there were inspections being done. The bad news is that the reports lacked sufficient detail and frequency. In addition, those completing the reports had minimal construction experience. The arrangement was the equivalent of having someone who took a CPR course oversee open heart surgery.

To ensure that special inspectors were properly qualified, the Department developed a certification program for special inspectors that became effective on November 6, 2008. The one-year anniversary of the adoption of the rule is an opportune time to remind everyone of the special inspection process and the fact that those performing special inspections must be certified.

The Special Inspection Process includes the following:

- Any Class 1 building that will use any of the construction techniques listed in Chapter 17 of the Building Subcode requires a special inspection.
- The applicant is required to give the construction official a list of special inspections that will be needed at the time of the permit application. The list is to be prepared by the design professional for the project.
- Before work begins, the applicant must supply the names and certification numbers of the people who will be performing the special inspection.
- The names and certification numbers can be verified by checking the DCA website (www.nj.gov/dca/codes).
- In addition, the certified special inspectors are issued wallet cards by the Department. The building subcode official can ask the special inspector to produce the wallet card.
- If the special inspector changes during the job, a permit update must be completed.
- The special inspector is required to prepare periodic reports during the progress of work and submit them to the building subcode official for review.
- At the completion of the job, the special inspector(s) is/are required to submit a final report to the construction official.

These requirements have been in place for a year, and should be enforced uniformly across the State.

If you have any questions about the implementation of the rule, please call me at (609) 984–7974.

Source: Michael Baier, Acting Chief
Bureau of Code Services

** CORRECTED VERSION **

Rehab and the 2008 NEC

(02-03-10)

The Rehabilitation Subcode (N.J.A.C. 5:23-6) is in the process of being updated to reflect the changes from the 2005 National Electrical Code (NEC) to the 2008 NEC. Until the Rehabilitation Subcode is updated, the NEC/2005 continues to apply to work in existing buildings. However, the permit applicant may elect to use the NEC/2008 for a rehabilitation project. The following guidance is specifically related to the installation of tamper-resistant receptacles (Section 406.11) and arc-fault circuit-interrupters (Section 210.12).

N.J.A.C. 5:23-6.8(d)5 will include new Section 406.11 of the 2008 NEC. This will require replacement and newly installed receptacles to be tamper-resistant in the locations listed in Section 210.52 for dwellings. However, replacement receptacles will not require a permit because N.J.A.C. 5:23-2.7(c)3i already allows for the replacement of any receptacle, including those with ground-fault circuit-interrupter protection (Section 210.8 of the 2008 NEC).

Example: A standard receptacle is to be replaced in a bedroom. This replacement receptacle would be required to be a tamper-resistant type and would not require a permit.

N.J.A.C. 5:23-6.8(d)3 already exempts the requirements for branch circuits (Section 210.11 of the 2008 NEC). We intend to exempt arc-fault circuit-interrupter protection (Section 210.12 of the 2008 NEC) at this section of the Rehabilitation Subcode.

Example: A conductor is to be replaced with a new one that contains loads that do not exceed the original branch circuit. The existing branch circuit does not need to be replaced with one that has arc-fault circuit-interrupter protection. However, if a new branch circuit is installed and serves a bedroom, then arc-fault circuit-interrupter protection is required.

Until the Rehabilitation Subcode is updated to reflect the NEC/2008, the NEC/2005 continues to apply. This guidance should be used only if the applicant chooses to use the NEC/2008.

If you have any questions about this matter, please contact us at (609) 984-7609.

Source: Suzanne Borek and Rob Austin
Code Specialists

Clarification Regarding the Recent Amendment to the State Uniform Construction Code Act Concerning Technical Assistants

On August 18, 2009, Governor Jon S. Corzine signed P.L. 2009, c.119 into law. This act amends section 8 of the State Uniform Construction Code Act, N.J.S.A. 52:27D-126, so as to recognize the position and duties of a technical assistant to the construction code official and subcode official and to codify current educational requirements for that position. The amendment adds references to technical assistants in three sentences in section 8, as follows:

*The appointing authority of any municipality shall appoint a construction official **[**and**]**, any necessary subcode officials and technical assistants to assist such officials to administer and enforce the code.*

*The commissioner shall, after consultation with the code advisory board, provide for educational programs designed to train and assist construction officials **[**and**]**, subcode officials, and technical assistants to these officials in carrying out their responsibilities.*

*The commissioner, after consultation with the code advisory board, may periodically require that each construction official **[**and**]**, subcode official, and technical assistant demonstrate a working knowledge of innovations in construction technology and materials, recent changes in and additions to the relevant portions of the State Uniform Construction Code, and current standards of professional ethics and legal responsibility; or, in the alternative, the commissioner, after consultation with the code advisory board, may accept successful completion of appropriate programs of training as proof of such working knowledge*.

While it is indeed the case that the Department has long recognized the authority of local enforcing agencies to appoint technical assistants, has authorized and recognized educational programs for technical assistants, and recognizes completion of such programs as evidence of qualification to serve as a technical assistant, the amendment has the effect of giving recognition to technical assistants by incorporating those administrative actions into the statutory law. This is clear from the bill statement to A1351, the bill that was enacted into law as P.L. 2009, c. 119, which provides as follows:

This bill codifies the position of technical assistant to the construction code official and subcode official, who may be appointed by a municipality to administer the Uniform Construction Code. Under the bill, a technical assistant must demonstrate an understanding of the Uniform Construction Code and the applicable regulations promulgated by the Commissioner of Community Affairs. Recently the department created a certificate program for the position of technical assistant. The bill codifies the educational requirements of the current practice, and recognizes the position and duties of the technical assistant to the construction code and subcode officials.

The question has arisen, however, as to whether the first amendatory sentence is to be understood as *requiring* a municipality that does not currently have a technical assistant to hire one. While recognizing that the amendatory language to the first sentence quoted above could be written in a less ambiguous manner, it is the position of the Department that the word "necessary" applies to technical assistants, as well as to subcode officials, and that it would be incorrect to read the sentence as imposing a legislative mandate that municipalities and local enforcing agencies that do not currently employ technical assistants must hire them, whether they are needed or not.

Support for the Department's position may be found in the above bill statement, where the Legislature referred to the "technical assistant….who ***may*** be appointed by a municipality." When the language of a statute is ambiguous, as is the case here, it is a canon of statutory construction that the court is to look to the legislative history, of which the best evidence is the bill statement, since it says what the sponsor(s) and the committees that held hearings on the bill intended to accomplish, and thought they were accomplishing, with the legislation. Had there been any intention to impose

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a new requirement that municipalities hire technical assistants, the bill statement would presumably have said so.

We would also note that it would make no sense to give municipalities discretion to determine if subcode officials are "necessary," but not to make the same determination with regard to technical assistants, and that the Legislature is presumed to act logically and reasonably. Furthermore, a requirement to hire technical assistants where none are now employed would be an unconstitutional unfunded State mandate, and the Legislature should not be presumed to have acted in violation of the New Jersey Constitution when an alternative construction of the language of the legislation would avoid such a conclusion.

Source: Michael L. Ticktin, Esq.
Chief, Legislative Analysis

Solar Photovoltaic Systems – How to Calculate the Fee for the Permit Application

The article "How Much is that Panel on the Roof?" in the Winter, 2004 *Construction Code Communicator* (Volume 16, Number 3) explained the fee for Solar Photo-Voltaic (PV) Systems. Because the electrical subcode technical section, F120, does not have a line item for PV systems, this article replaces the earlier one and provides additional clarification.

There are two commonly asked questions about how to record these systems on the electrical subcode technical section:

(1) How are fees for PV systems charged?
(2) Where are the work and fees recorded on the technical section?

(1) How are fees for PV systems charged?

- The Department has addressed this issue in its fee schedule at N.J.A.C. 5:23- 4.20(c)2iii(13), Department Fees. This section provides that, when determining charges for the PV systems, the panels themselves should not be listed; the number of arrays that the panels make must be listed. For example, when there are 32 solar panels that make two arrays totaling 10 Kw, the fee is based on the total Kw rating of the PV system.

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2006 IECC, 2% Better than Code and REScheck

Since February 20, 2007, the State of New Jersey has been using the International Energy Conservation Code (IECC)/2006, as modified per N.J.A.C. 5:23-3.18. As part of that adoption, N.J.A.C. 5:23-2.15(f)1vi(1)(A) requires that when documenting compliance using REScheck, users must exceed the IECC/2003 by two percent or more; where needed, the user should consult Bulletin 07-2 for further guidance.

It has recently come to the attention of the Department that Pacific Northwest National Laboratories (PNNL), the publishers of REScheck, has modified the program so that the Certificate of Compliance states only "Passes." It no longer prints the percentage better than code. This creates a small problem, but it is easily fixable. The percentage better than code can still be easily calculated manually using a simple formula based on the "Max Ua" and "Your Ua" (shown in the "compliance" section of the REScheck Compliance Certificate). In short, the calculation is this:

$$\left[1 - \frac{\text{Your Ua}}{\text{Max Ua}}\right] \times 100 = \%\ \text{better than code}$$

An example from REScheck compliance certificate illustrates this calculation:

Compliance: **Passes**

Compliance: Maximum UA: **351** Your UA: **336**

[1 – (336/351)]x100 = 4.3% better than code

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

Source: Rob Austin
Code Assistance Unit

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The certification is not-- and will not be-- required for an aboveground heating oil tank system.

For further information about the Unregulated Heating Oil Tank program can be found at http://www.nj.gov/dep/srp/srp/unregulatedtanks/.

Should you have any questions on this matter, you may contact Gary Sanderson, Program Coordinator at (609) 633-0544 or me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Accessible Parking at Health Care Centers and Offices where People with Mobility Impairments Receive Health Care Services 

It has come to the Department's attention that the regulations concerning accessible parking at health care centers and offices that serve people with mobility impairments have been difficult to apply for some facilities.

The requirements for accessible buildings and accessible parking for buildings constructed in New Jersey are contained in the Barrier Free Subcode (BFSC), N.J.A.C. 5:23-7. The accessible parking requirements can be found at N.J.A.C. 5:23-7.10. At N.J.A.C. 5:23-7.10(c), accessible parking requirements are established in a table that requires that approximately 1 in every 25 parking spaces be accessible. This table applies generally to publicly used buildings, except for those addressed separately at N.J.A.C. 5:23-7.10(e), medical outpatient facilities and medical facilities where specialists treat or where services are provided to people with mobility impairments; in those cases, a larger number of accessible parking spaces is required. In the case of medical outpatient facilities, 10% of the parking spaces must be accessible; in the case of medical facilities where specialists treat people with mobility impairments, 20% of the parking spaces must be accessible.

The application of these requirements is straightforward for a single use building. An example could be helpful. A building that contains only physical therapy services is clearly a building that houses specialists in the treatment of people with mobility impairments and, therefore, 20% of its parking spaces must be accessible.

Multiuse buildings, such as those where some of the space is used for offices and some of the space is used for physical therapy, are more complex. Generally speaking, accessible parking spaces serve accessible building entrances and the required accessible parking spaces are clustered near each accessible entrance. When a building has more than one accessible entrance, accessible parking spaces are distributed to ensure that each accessible entrance has accessible parking. When a portion of the building is used for the treatment of people with mobility impairments, 20% of the parking provided must be accessible. If the portion of the building that serves people with mobility impairments has its own accessible entrance, 20% of the parking spaces that serve that entrance must be accessible.

To apply the 20% accessible parking requirement to only the use that warrants it, there must be a reasonable basis for estimating the number of parking spaces that are required for that use. The number of patients that can be served in the portion of the building used for the treatment of people with mobility impairments is a reasonable basis. For example, if the physical therapy space accommodates 50 patients, then 50 parking spaces could be designated as serving that space. Of the 50 parking spaces, 20%, or 10 parking spaces, would be required to be accessible. Determining the number of parking spaces that serve a specific use should not require a variation.

Once the number of parking spaces serving the portion of the building used for the treatment of people with mobility impairments has been established, the number of required accessible parking spaces among the remaining required parking spaces is determined according to the table at N.J.A.C. 5:23-10(c). Those accessible parking spaces are then distributed among the remaining accessible entrances.

As a reminder, accessible parking spaces must be the closest parking spaces on the shortest accessible route to the accessible entrance (N.J.A.C. 5:23-7.10(a)). When accessible parking is provided, one in every eight accessible parking spaces must be van accessible (N.J.A.C. 5:23-7.10(a)2).

In sum:

- Where parking is provided, buildings with accessible entrances must have accessible parking. (N.J.A.C. 5:23-7.10(a))
- The number of required accessible parking spaces is based on the total number of spaces provided. (N.J.A.C. 5:23-7.10(c))
- There is a separate requirement for additional accessible parking spaces (10%) at medical outpatient facilities. (N.J.A.C. 5:23-7.10(e))
- Still more accessible parking spaces (20%) are required at facilities that provide services for people with mobility impairments. (N.J.A.C. 5:23-7.10(e))
- For a multi-use building, where part of the building is used to provide services for people with mobility impairments, the parking spaces allocated to that use or, should that not be available, the occupancy of the space used to

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provide services for people with mobility impairments could be used to determine the number of parking spaces that are subject to the 20% accessible requirement.

- Similarly, where part of the space is used for outpatient medical facilities, the spaces allocated to that use or, should that not be available, the occupancy of the space used to provide services for people with mobility impairments could be used to determine the number of parking spaces that are subject to the 10% accessible requirement.
- The balance of the required accessible parking spaces would then be provided in numbers that comply with the Table at N.J.A.C. 5:23-7.10(c).

If you have any questions about the requirements for accessible parking spaces, please do not hesitate to contact me at (609) 984-7609.

Source: Emily W. Templeton
Division of Codes and Standards

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(2) Where are the work and fees recorded on the technical section?

- The work and fees are recorded on the blank line on the lower portion of the electrical technical section; the PV system is listed as one 10 Kw PV system.
- In addition, disconnects, the back-fed breaker, or panels for these system are recorded on the technical section line as "AMP Subpanels /Disconnects;" the fee is based on the ampacity rating of the device.
- Also, inverters for these systems are based on an ampacity rating and are recorded on the technical section line as "AMP Motor Control Center/Inverter." The term "inverter" after this line item indicates another form of control means for the system.
- Finally, the “Estimated Cost of Electrical Work” line should record only the electrical work costs without the framing and mounting. This amount is used to determine the fee for the DCA surcharge.

Now that we have the electrical portion figured out – let’s try the building subcode technical section!! The building subcode technical section should be completed as an alteration to an existing building. The fee should be computed as a unit rate per $1,000.00 of the estimated cost of work. This is stated in UCC at N.J.A.C. 5:23-4.18(c)1i, Standards for Municipal Fees. The only amounts that are included in the cost of work

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on the building subcode technical section are the material and labor for mounting the PV system. Neither electrical material nor labor is included in cost of work on the building subcode technical section.

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

Source: Suzanne Borek
Code Assistance Unit

Certification to Perform Services on Unregulated Underground Heating Oil Tank Systems

This article is to alert code officials that, on November 3, 2008, the Department of Environmental Protection (DEP) adopted rules that require a contractor who provides services on unregulated underground heating oil tank systems to pass a proficiency test in each area for which certification is being sought. Any contractor who provides services on any unregulated underground heating oil tank systems and applies for a permit from a municipality to perform this work will be required to provide proof of certification.

The Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10B-21, has been amended to require all contractors performing work on unregulated tanks to be certified. In accordance with N.J.A.C. 7:14B-16.1, NJDEP has given notification in the New Jersey Register and on NJDEP’s website that NJDEP has established a testing program for obtaining certification under this subchapter for individuals or business firms providing services for unregulated underground heating oil tanks.

On January 15, 2010, NJDEP will begin enforcing the provisions of N.J.A.C.7:14B-16, which will require all individuals and firms performing work on unregulated tanks to hold a certification. At the time a permit is applied for from the local municipality, a proof of certification would be required for all work performed on unregulated underground heating oil tanks as defined in N.J.A.C. 7:14B-1.6.

An individual or business firm certified in one or more classifications of regulated underground storage tank system services in accordance with N.J.A.C. 7:14B-13 is also certified for those same classifications for unregulated underground storage tank system services.

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Site Remediation Reform Act
A Prior Approval Alert

Under a new law, known as the Site Remediation Reform Act, a number of the reviews and enforcement actions currently undertaken by the Department of Environmental Protection (DEP) are being transferred to private environmental consultants licensed by DEP. Many code officials have a working familiarity with DEP's regulatory programs where DEP approvals constitute prior approvals needed for the issuance of a construction permit or of a certificate of occupancy under the UCC. Most recently, code officials have had to obtain proof of the issuance of a No Further Action (NFA) letter before allowing occupancy of a new school or child care center on a site with known or suspected contamination. The Site Remediation Reform Act represents a major change in the way that the clean up of contaminated sites is handled. The approvals formerly issued directly by DEP will come from a private consultant. The following is a brief summary of the new regulatory scheme. The Department will continue to share information on these new environmental approvals as it becomes available.

The Governor signed the Site Remediation Reform Act into law on May 7, 2009. It calls for environmental consultants to be licensed and then places regulation of the clean up of contaminated sites in the hands of these licensed consultants. The newly licensed consultants will be known as Licensed Site Remediation Professionals (LSRPs.) The LSRPs will be individuals, not firms.

There will be no more approval of Remedial Action Work Plans by DEP; instead the Remedial Action Work Plan will be certified by an LSRP. And there will be no more NFA's. The NFA will be replaced by a Response Action Outcome (RAO) issued by an LSRP. There will be a whole new environmental "alphabet soup."

Implementation of this new law has already started. Some of the major provisions of the new law and steps to be undertaken by DEP include:

- The creation of a licensing board modeled on the PE licensing board. This board will be responsible for rulemaking and for licensing and regulating the LSRPs. To jump start implementation of this law, DEP is issuing temporary licenses. **As of November 4, 2009, all new cases of contaminated sites that are not already in the pipeline at DEP have to have an LSRP.** Existing, open cases may "opt in" to the new system. The temporary licenses will be good until the time of the first exam for LSRPs offered by the licensing board. The full transition to this new system is supposed to be completed in three years.
- The law creates an affirmative obligation to perform remediation and has mandatory timeframes for the completion of remediation. DEP will be tracking remediation projects to ensure that the mandatory timeframes are met.
- A permit that stays with the property will be issued for ongoing engineering controls. These permits are to be transferred to future owners. This is to replace deed notices. Existing deed notices/deed restrictions are to be recorded in new permits. This is modeled on the system currently used by DEP for New Jersey Pollutant Discharge Elimination System (NJPDES) permits.
- For child care centers, schools and residential uses, DEP will have the ability to disapprove a proposed remedy and to establish "presumptive remedies."
- Development on landfills will be restricted. There will be no single family dwellings constructed on landfills. The law also restricts the construction of child care centers and schools on landfills.
- A ranking system for contaminated sites will be created and DEP will have the ability to move those high on the list under its direct oversight. The DEP will also issue guidance to LSRPs on Immediate Environmental Concerns (IECs.) The LSRPs will have an obligation to notify DEP whenever an IEC is discovered.
- Technical assistance grants will be made available to community groups so that they can hire their own LSRPs.
- Unregulated Heating Oil Tanks will continue to be handled by subsurface evaluators and will not be impacted by this legislation. Those with low priority underground storage tank cases in DEP should have been informed that they are no longer under DEP's jurisdiction.
- DEP plans to create an electronic library with dated documents, including all DEP guidance and rules.

DEP is adopting interim rules through the emergency rule process. These rules will be published in the New Jersey Register on December 7, 2009 and became effective when they were filed on November 4. For those interested in more

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information, including a copy of the interim rules and a list of those temporarily licensed, a link to the information on the DEP website follows: http://www.state.nj.us/dep/srp/srra/ Any firm supplying a Response Action Outcome or other documentation should be holding a temporary license and on DEP's list.

Source: Amy Fenwick Frank
Division of Codes and Standards

COAH and You

As construction officials and technical assistants, you may find a municipal official across the desk from you asking questions about building permits and certificates of occupancy. Don't be alarmed. They are affordable housing planners, who either work directly for your locality or as private consultants hired to help your municipality expand housing opportunities.

The New Jersey State Supreme Court says every locality has a constitutional obligation to provide its fair share of affordable housing. The landmark cases behind this ruling involved Mount Laurel Township in Burlington County. Sometimes these affordable developments are called "Mount Laurel" housing, despite being located throughout the State. The housing can vary. It can be for the elderly, people with special needs, or family households. The housing units can be apartments for rent or condominiums for sale. All the dwellings have deed restrictions, limiting their price to those with low or moderate income. The agency created to write affordable housing rules for "Mount Laurel" development is the Council on Affordable Housing, or COAH. It determines how much affordable housing each locality must have.

This is where you come in. Building permits and certificates are one of the few sources of information available from every town, every month. Data from these records are used by a variety of people: planners, economists, demographers, market analysts who want to know what, where, and when something is built. COAH rules assign affordable housing need based on the number of dwellings and the square feet of nonresidential space from certificates of occupancy reported by your office.

Summary statistics are published each month by the Department of Community Affairs (DCA) and appear on our website at:

http://www.state.nj.us/dca/codes/cr/conrep.shtml

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Limited Use Limited Application Elevators and the Barrier Free Subcode

Recently, the Department has received multiple questions about the requirements of the Barrier Free Subcode (N.J.A.C. 5:23-7) for the installation of Limited Use Limited Application Elevators (LULA). The following provides guidance on this issue.

New Construction: At N.J.A.C. 5:23-7.4, the Barrier Free Subcode allows the use of a LULA to serve as a vertical accessible route only in specified applications in large buildings (buildings of 10,000 square feet total gross enclosed floor area). They are:

- Floors or mezzanines that are less than 3000 square feet: These floors are not required to be served by a vertical accessible route. If a vertical accessible route is required (see the note that follows) or is provided, a LULA may be used.

  NOTE: It is important to remember that facilities for employees, including rest rooms, lunch rooms, and lockers, and public facilities, must be accessible. Therefore, they must either be provided on an accessible level or, if they are provided on a floor or mezzanine of less than 3,000 square feet, a vertical accessible route must be provided. A LULA may be installed to provide accessibility to such floor or mezzanine.

- Floors with only mechanical equipment: These floors are not required to be served by an accessible route.
- It is important to remember that a floor that is 3,000 square feet or more is required to have an accessible route. A vertical accessible route to these floors must be provided by a commercial elevator; the use of a LULA is not permitted.

Existing Facilities: At N.J.A.C. 5:23-7.13, the Barrier Free Subcode lists the applications where a LULA is allowed to provide a vertical accessible route in existing buildings. They are:

- In small buildings (less than 10,000 square feet total gross enclosed floor area);
- In individual tenancies of less than 10,000 square feet in buildings of 10,000 square feet or more;
- To serve floors or mezzanines of less than 3,000 square feet; and
- In places of religious worship, Groups A-3, or E of any size.

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This is what COAH looks at when it measures growth. If you go to this website, you will find tables on the dollar amount of construction and the number of dwellings, and square feet of nonresidential space for every municipality in New Jersey. The tables are updated monthly. There is a special webpage with yearly totals for every municipality.

COAH is interested in housing units and square feet of nonresidential space. They focus on certificates of occupancy. But, similar indicators appear for building permits and measure development underway. Because there usually is a lag between when a project begins and ends, if you make a mistake on the permit and catch it in time, we should be able to correct the error before you issue the certificate. But, you need to follow the process for fixing mistakes. As you work with affordable housing planners, keep in mind several things:

1. We all make mistakes. The construction data set is very big. In a good year, it measures activity from over 400,000 records, from alteration permits for small repairs, to new construction permits for large high rises. Data sets this big don't exist without mistakes. I make them. You do, too. Some are typos, an extra zero added to the area of a building, making it 1,600,000 square feet, instead of 160,000. Some are training issues. For example, someone reports the number of hotel rooms in an R-1 building as dwellings. Hotel rooms are not housing units and shouldn't be counted as such. Some are computer bugs. One recent example was flawed software that repeated indicators every time a temporary certificate of occupancy (TCO) was issued. **Don't be defensive about errors. They happen. Everyone makes them, but there is a process you need to follow to fix them.**

2. Remember the firewall. When you make a mistake, and you will, it won't be fixed simply by making a change at your end. You have to notify either Charlie Pierson, Jr. or myself at the DCA. Otherwise, the permit on our end will be wrong, even if you fixed it. The reason for this is a firewall between the DCA and construction offices. Once a permit is transmitted to us, we don't let you change it simply by editing it at your end. The firewall prevents this. It allows a permit update, because this is not an edit; it is additional information on an existing permit. Corrections are not updates and don't reach us. **Once a permit is transmitted to the DCA, a firewall prevents**

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Residential Swimming Pools and the Plumbing Subcode: UPDATE

I wrote an article on "Residential Swimming Pools and the Plumbing Subcode" that was published in the Winter, 2008, Volume 20, Number 3 edition of the *Construction Code Communicator*. That article stated that when a residential swimming pool has two main submerged suctions (bottom drains), they must be three feet apart and must also have some type of atmospheric safety vacuum release system (SVRS) provided at the pump or pumps to protect against suction entrapment.

The National Standard Plumbing Code/2006 required a SVRS, unless there were no submerged suction outlets (bottom drains) in the pool.

In the proposal for the adoption of the 2009 model codes, which includes the National Standard Plumbing Code/2009, ANSI/APSP-7 2006, "American National Standard for Suction Entrapment in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins," is referenced for suction entrapment. Please note the following change:

- ANSI/APSP-7 2006 does not require a SVRS if the swimming pool has two bottom main drains spaced at least three (3) feet apart. If only one bottom main drain is installed, including a single side wall outlet drain, then a SVRS is required.

Because adoption of the 2009 model codes is pending, the Department recommends that if a residential swimming pool has two main drains at the bottom or two submerged side wall suction outlets both spaced at least three feet apart, and that the SVRS not be required and a variation be granted.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

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In existing buildings, in all other applications where a commercial passenger elevator cannot be installed because it is technically infeasible, a LULA elevator may be installed provided that a variation has been approved.

If you have any questions, please call Emily Templeton at (609) 984-7609 or me at (609) 984-7833.

Source: Paulina Caploon
Elevator Safety Unit

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municipalities from changing what was sent. To edit a record that was transmitted, building officials and technical assistants must notify the Department of such changes for the correction to appear on the website.

3. COAH uses the construction data on the website. Website data show building permit and certificate activity for every municipality going back to 1996. There also are monthly tables. COAH uses annual certificate data to measure growth. If there is a discrepancy between what we say and what you think occurred, tell either Charlie Pierson, Jr. or me. We will work with you to track down any differences. Just because a figure appears on the website, does not mean it's right. If we report 20 new houses and you say they are sheds, something is wrong. If we catch a mistake before a permit becomes a certificate and is published in our annual tables, we will fix it. But, we don't revise historical, annual data once published. Does this mean your town is bound by a mistake in the annual tally? Of course not. The important thing is accurate data. If there is a discrepancy in what we report, we need to hear from you to understand what happened and make sure it does not happen again. You need to get an email from either Charlie or me discussing what went wrong. **These emails are suitable documentation for COAH to justify adjustments to annual figures on the website. Without such documentation, however, COAH will assume what's on the website is right.**

4. Certificates vs. permits. The website has data from both building permits and certificates, but COAH only views certificates. The first time a certificate of any kind, temporary or otherwise is issued, the status of the record changes from a permit to a certificate. Building permits are important measures of activity in progress. They are useful economic indicators. Both the DCA and the U.S. Census Bureau publish permit data monthly to measure the performance of the construction industry. Certificates of occupancy and temporary certificates of occupancy have important measure, as well. They tell a story about completed work. **Construction officials and technical assistants should review the building permit as well as certificate data on the website to make sure what we report is what you intended and both are accurate. If you make a mistake on a permit, there usually is time to correct it before the certificate is issued.**

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5. Don't forget demolitions. COAH measures growth by looking at new houses and square feet of nonresidential space reported on certificates. It also considers houses and commercial space lost by demolitions. If you issued certificates of occupancy for 20 new houses one year, but tore down 30, your town did not grow. Demolitions are important. The website shows the number of dwellings lost. It also reports the number of demolition permits issued for nonresidential buildings. Unfortunately, demolition permits for commercial structures do not show the size of the buildings torn down. **The website only has the number of nonresidential demolitions, not the sizes of these buildings. If you have this information, it will be helpful to affordable housing planners. Otherwise, you have to direct them to some other source, like local tax rolls.**

6. Read the tea leaves. Construction data paint a picture of development patterns with broad brush strokes. These data need to be skillfully interpreted. The construction official, technical assistant, and planner must work together to interpret building permit and certificate data. You know what and how much is being built in your community. Your help is needed to make sense of the numbers and accurately measure growth. Let the planner know if a new development in your community has income limits. New deed-restricted housing does not generate more growth under the COAH rules. **Work with planners to improve the quality of the reported data and help them understand the settlement patterns in your community.**

If you have questions, call me, at 609-292-7898 or email me at jlago@dca.state.nj.us.

Source: John Lago
Division of Codes and Standards

New Jersey Register
Adoptions

August 17, 2009:

N.J.A.C. 5:23-3.14 and 12.2 -- Building Subcode and Elevator Subcode

The American Society of Mechanical Engineers (ASME) A17.1/2004-2005, which was adopted by

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reference with the 2006 International Building Code (IBC/2006), contains expanded maintenance requirements (retrofit provisions and some maintenance planning provisions) that were not included in prior ASME A17.1 standards. These amendments return maintenance requirements for elevators and escalators to those of ASME A17.1/1996-1998, the requirements in effect prior to adoption of the ASME A17.1/2004-2005 standard.

N.J.A.C. 5:23-7.2 and 7.5 -- Barrier Free Subcode
At N.J.A.C. 5:23-7.2, Accessibility standard, an amendment is adopted in the technical standard for accessible design, the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-2003, to make it clear that accessible reach ranges and clear floor space are required for an electrical panelboard that is installed in a newly constructed accessible dwelling unit, but that the other requirements of this section of ICC/ANSI A117.1, which provide that the operating mechanisms allow no twisting, pinching, or turning the wrist, do not apply to electrical panelboards.

The correction of the cross reference in N.J.A.C. 5:23-7.5, Residential buildings other than buildings of Group R-1, ensures that the cross reference for assisted living facilities leads the code user to N.J.A.C. 5:23-7.11, Requirements applicable to nonresidential Groups and Group R-1, to find the requirements for assisted living facilities and the requirements for accessible parking at N.J.A.C. 5:23-7.10.

September 8, 2009:

N.J.A.C. 5:23-2.23(l) -- Certificate of Compliance for Backflow Preventers:
The amendment requires backflow preventers that are designed to be tested and used to isolate sources of contamination, as defined in the plumbing subcode, to be tested at least once every 12 months in order to receive a certificate of compliance. The only exception is testable backflow preventers that are installed on water supplies in one- or two-family dwellings that are not connected to a high hazard irrigation system. This change would be consistent with section 10.5.6 of the plumbing subcode.

Amendments to the Uniform Construction Code Act (N.J.S.A. 52:27D-119 et seq.)

N.J.S.A. 52:27D-122.2 and 123 – The Act was amended, by P.L. 2009, c. 106, to authorize the Department to adopt energy conservation requirements that go beyond those contained in the national model

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code provided that the added cost of each enhanced energy conservation construction requirement may be recovered over a period of not more than seven years.

N.J.S.A. 52:27D-126 – The Act was amended, by P.L. 2009, c. 119, to recognize the position and duties of a technical assistant to the construction code official and subcode official, who may be appointed by a municipality to administer the Uniform Construction Code; this amendment also codifies current educational requirements.

May 18, 2009:

N.J.A.C. 5:23-2.15 -- Construction Permit Applications, Plan Review
This amendment allows plan review to proceed, even though required State, county or local prior approvals may not have been granted, provided that the application for a permit is otherwise complete and the plan review fee has been paid. However, the permit may not be issued until all required State, county and local approvals are in place. An exception to this plan review provision is made for individual owner-occupied one- or two family home addition or rehabilitation projects, which are required to have zoning approval in place before plan review may proceed.

N.J.A.C. 5:23-2.23 -- Certificate Requirements, Temporary Certificate of Occupancy
This amendment to N.J.A.C. 5:23-2.23(g) deletes the requirement that a temporary certificate of occupancy (TCO) be issued for a period of not fewer than 60 days. While the issuance of a TCO for a period of at least 60 days generally makes good administrative sense, both in order to allow sufficient time for work not affecting health and safety to be completed and to avoid the need for excessive paperwork, there have been instances in which the inflexibility that this provision established hampered the ability of code officials to get issues resolved expeditiously.

July 7, 2009:

N.J.A.C. 5:23-3.11A -- Public School Facility Plan Review and Inspections; Uniform Construction Code Enhancements in Public School Facilities
The Department of Community Affairs discovered an error at N.J.A.C. 5:23-3.11A(c)2. The following phrase in the paragraph's first sentence, "and other exterior exits that are required to serve 50 or more persons," appeared in the UCC omitting the word "exterior." A notice of administrative correction was published restoring the word "exterior."

Source: Rob Austin
Code Assistance Unit

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Children's Plumbing Fixture Requirements in Code

The Department has been receiving multiple questions about the use of child-sized toilet fixtures. In both the National Standard Plumbing Code/2006 (NSPC/2006) and the ICC/ANSI A117.1-2003 (ICC/ANSI-2003) standard, the provisions for the installation of adult-sized plumbing fixtures satisfy the requirements for fixtures to be used by children. The design professional may adjust the dimensions of the fixtures for children's use; to this end, both the NSPC/2006 and the ICC/ANSI A117.1-2003 contain standards for child-sized fixtures. NOTE: At N.J.A.C. 6A:26-6.3(h)4i2, schools that are under the jurisdiction of the New Jersey Department of Education (DOE) are required to use child-sized fixtures.

Modifications to General Plumbing Fixtures for Children, NSPC/2006 (and NSPC/2009)

Section 7.4.3, Contour of Bowls, states that the water closet shall have an elongated bowl and an open-front seat.

Child-sized Fixture: Exception 4 provides an exception for water closets installed in pre-schools and kindergartens; these installations are not required to have open-front seats.

Section 7.4.4, Bowl Height, states that the height of water closet bowls shall be a minimum of 13 ½ inches from the floor to the top of the rim.

Child-sized fixture: Exception 1 provides that bowls intended for children's use (5 years and younger) are allowed to be 9 ½ inches - 10 ½ inches high measured to the top of the rim; and those intended for juvenile use (6-12 years) are allowed to be 10 ½ inches - 13 ½ inches high measured to the top of the rim.

Modifications to Accessible Plumbing Fixtures for Children, ICC/ANSI-2003

Section 106.5 defines "children's use" as spaces and elements specifically designed for use primarily by people 12 years old and younger.

Section 602.2, Clear Floor Space (for Drinking Fountains)

Child-sized drinking fountain: Exception 2 states that drinking fountains intended primarily for children's use may be provided. The spout must be 30 inches maximum above the floor, and a parallel approach complying with Section 305, must be provided and must be centered on the drinking fountain.

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Section 604.1, General (Water Closets and Toilet Compartment)

Child-sized water closet and toilet compartment: An exception is provided that allows water closets and toilet compartments primarily for children's use to comply with Section 604.10 as applicable. (See below.)

Section 604.8.2, Size (of Wheelchair Accessible Toilet Compartments)

Child-sized wheelchair accessible toilet compartment: A child-sized wheelchair accessible toilet compartment that is intended primarily for children's use shall be 60 inches minimum in width measured perpendicular to the side wall, and 59 inches minimum in depth for both wall hung and floor mounted water closets measured perpendicular to the rear wall.

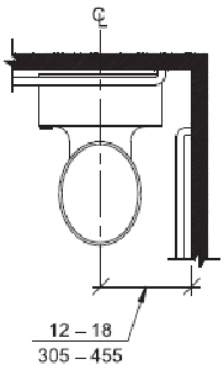
Section 604.8.5, Toe Clearance (for Wheelchair Accessible Compartments)

Child-sized Toe Clearance in Wheelchair Accessible Toilet Compartments: Exception 1 permits that, in a compartment primarily for children's use that is greater than 65 inches in depth, toe clearance at the front partition is not required.

Section 604.10, Water Closets and Toilet Compartments for Children's Use

Child-sized Water Closets and Toilet Compartments: Subsection 604.10.2, Location, states that the water closet shall be located with a wall or partition to the rear and to one side. Also, the centerline of the water closet shall be 12 inches minimum to 18 inches maximum from the side wall or partition. Lastly, water closets located in ambulatory accessible toilet compartments specified in Section 604.9 shall be located as specified in Section 604.2.

Fig. 604.10.2
Children's Water Closet Location



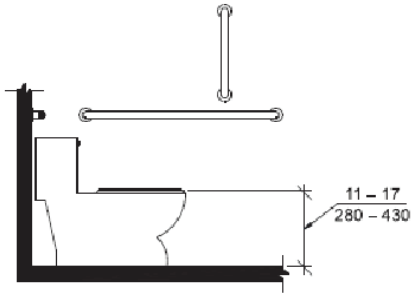
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Subsection 604.10.3, Clearance, states that a clearance around a water closet complying with Section 604.3 shall be provided.

Subsection 604.10.4, Height, states that the height of water closet seats shall be 11 inches minimum and 17 inches maximum above the floor, measured to the top of the seat. Also, seats shall not be sprung to return to a lifted position.

Fig. 604.10.4
Children's Water Closet Height



Subsection 604.10.5, Grab Bars, states that grab bars for water closets shall comply with Section 604.5.

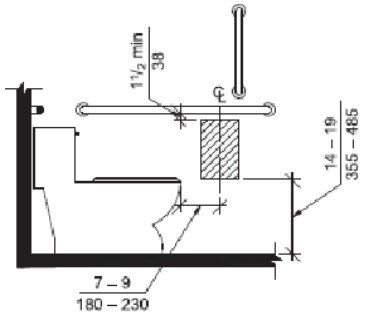
Subsection 604.10.6, Flush Controls, states that flush controls shall be hand operated or automatic. It also states hand operated flush controls shall comply with Sections 309.2 and 309.4 and shall be installed 36 inches maximum above the floor. Flush controls shall be located on the open side of the water closet. However, the exception states that ambulatory accessible compartments complying with Section 604.9 may have flush controls located on either side of the water closet.

Subsection 604.10.7, Dispensers, states that toilet paper dispensers shall comply with Section 309.4 and shall be 7 inches minimum and 9 inches maximum in front of the water closet measured to the center line of the dispenser. It also states that the outlet of the dispenser shall be 14 inches minimum and 19 inches maximum above the floor. Furthermore, there shall be a clearance of 1½ inches minimum below the grab bar. Lastly, dispensers shall not be of a type that control delivery or do not allow continuous paper flow.

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Fig. 604.10.7
Children's Dispenser Location



Subsection 604.10.8, Toilet Compartments, states that toilet compartments shall comply with Sections 604.8 and 604.9, as applicable.

Section 606.2, Clear Floor Space (for Lavatories and Sinks), states as per exception 3, a knee clearance of 24 inches minimum above the floor shall

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Kidde Recalls Dual Sensor Smoke Alarms; Can Fail to Warn of a Fire

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, has announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed.

Name of Product: Kidde Model PI2000 Dual Sensor Smoke Alarms

Units: About 94,000

Manufacturer: Walter Kidde Portable Equipment Inc., of Mebane, N.C.

Hazard: An electrostatic discharge can damage the unit, causing it not to warn consumers of a fire.

Incidents/Injuries: The firm has received two reported incidents of smoke alarm malfunctions involving electrostatic discharge during installation. No injuries have been reported.

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Residential and Commercial Building Duct Insulation – There is a Difference!

Low-rise residential buildings

Section 403.2.1, Insulation, of the International Energy Conservation Code/2006, requires supply and return ducts that are not within the thermal envelope to be insulated to a minimum of R-8 with the exception of ducts in floor trusses, which must be insulated to a minimum of R-6. This applies to all new one- and two-family detached dwellings and multiple family dwellings that are three stories or less in height.

All other buildings

Section 6.4.4.1.2, Duct and Plenum Insulation, of the ASHRAE Standard 90.1-2004 requires all supply and return ducts and plenums installed as part of an HVAC air distribution system, and that are not within the thermal envelope, to be thermally insulated in accordance with Tables 6.8.2A and 6.8.2B (condensed tables are provided below). These requirements vary by climate zone. At N.J.A.C. 5:23-3.18(b)5i, climate zones for "all other buildings" are Zone 4, except for Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex and Warren Counties, which are Zone 5.

TABLE 6.8.2A Minimum Duct Insulation R-Value[a], Cooling and Heating Only Supply Ducts and Return Ducts

Climate Zone	Duct Location						
	Exterior	Ventilated Attic	Unvented Attic Above Insulated Ceiling	Unvented Attic with Roof Insulation[a]	Unconditioned Space[b]	Indirectly Conditioned Space[c]	Buried
Heating Ducts Only							
4	R-3.5	none	none	none	none	none	none
5	R-6	R-3.5	none	none	none	none	R-3.5
Cooling Only Ducts							
4	R-3.5	R-3.5	R-6	R-1.9	R-1.9	none	none
5, 6	R-3.5	R-1.9	R-3.5	R-1.9	R-1.9	none	none
Return Ducts							
1 to 8	R-3.5	R-3.5	R-3.5	none	none	none	none

a Insulation R-values, measured in (h·ft^2·°F)/Btu, are for the insulation as installed and do not include film resistance. The required minimum thicknesses do not consider water vapor transmission and possible surface condensation. Where exterior walls are used as plenum walls, wall insulation shall be as required by the most restrictive condition of 6.4.4.2 or Section 5. Insulation resistance measured on a horizontal plane in accordance with ASTM C518 at a mean temperature of 75°F at the installed thickness.
b Includes crawl spaces, both ventilated and nonventilated.
c Includes return air plenums with or without exposed roofs above.

TABLE 6.8.2B Minimum Duct Insulation R-Value[a], Combined Heating and Cooling Supply Ducts and Return Ducts

Climate Zone	Duct Location						
	Exterior	Ventilated Attic	Unvented Attic Above Insulated Ceiling	Unvented Attic w/ Roof Insulation[a]	Unconditioned Space[b]	Indirectly Conditioned Space[c]	Buried
Supply Ducts							
4	R-6	R-6	R-6	R-3.5	R-3.5	none	R-3.5
5	R-6	R-6	R-6	R-1.9	R-3.5	none	R-3.5
Return Ducts							
1 to 8	R-3.5	R-3.5	R-3.5	none	none	none	none

a Insulation R-values, measured in (h·ft^2·°F)/Btu, are for the insulation as installed and do not include film resistance. The required minimum thicknesses do not consider water vapor transmission and possible surface condensation. Where exterior walls are used as plenum walls, wall insulation shall be as required by the most restrictive condition of 6.4.4.2 or Section 5. Insulation resistance measured on a horizontal plane in accordance with ASTM C518 at a mean temperature of 75°F at the installed thickness.
b Includes crawl spaces, both ventilated and non-ventilated.
c Includes return air plenums with or without exposed roofs above.

Source: Rob Austin
Code Assistance Unit

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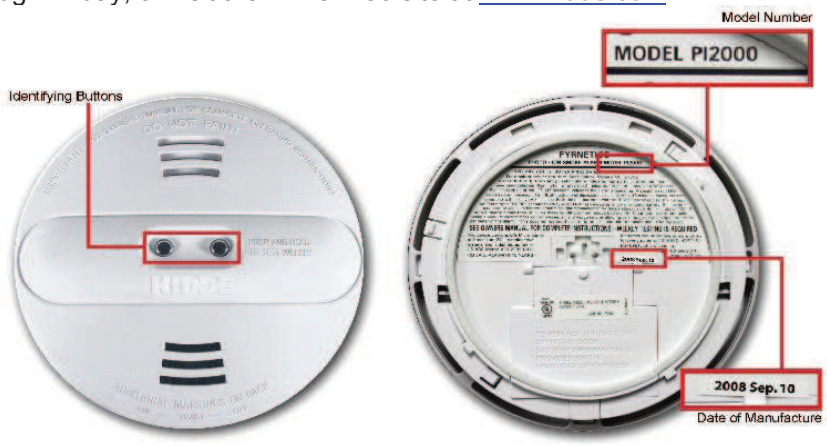
Description: This recall involves Kidde dual sensor smoke alarms model PI2000. The alarms can be identified by two buttons, "HUSH" and "PUSH AND HOLD TO TEST WEEKLY," which are located on the front/center of the alarm. The model number and date code are on the back of the smoke alarm. Only date codes 2008 Aug.01 through 2009 May 04 are included in this recall.

Sold at: Retail, department, and hardware stores and through electrical distributors nationwide from August 2008 through May 2009 for between $30 and $40.

Manufactured in: China

Remedy: Consumers should contact Kidde immediately to receive a free replacement smoke alarm.

Consumer Contact: For additional information, contact Kidde toll-free at (877) 524-2086 between 8 a.m. and 5 p.m. ET Monday through Friday, or visit the firm's Web site at www.kidde.com



Please make sure your fire officials are aware of this voluntary recall so the units can be identified upon inspections for resale or re-occupancy. When performing routine inspe4ctions, dwelling unit alarms should also be checked in all R and I Group occupancies. If any of these alarms were installed, the consumers need to contact Kidde for a free replacement.

Source: Michael E. Whalen
Code Assistance Unit

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be permitted at lavatories and sinks used primarily by children ages 6 through 12 where the rim or counter surface is 31 inches maximum above the floor. And, as per exception 4, a parallel approach complying with Section 305 shall be permitted at lavatories and sinks used primarily by children ages 5 and younger.

Section 609.4, Position of Grab Bars, states that water closets primarily for children's use complying with Section 604.10, grab bars shall be installed in a horizontal position 18 inches minimum to 27 inches maximum above the floor measured to the top of the gripping surface.

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If you have any questions, I may be reached at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

New Jersey Department of Community Affairs
Division of Codes and Standards
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Volume 20 Number 1

Spring 2008

AAVs: Permitted or Not Permitted?

Does the Plumbing Subcode, the 2006 National Standard Plumbing Code (NSPC/2006), allow the installation of air-admittance valves (AAVs)?

The answer to this question may be found by referring to NSPC/2006, Appendix E, "Special Design Plumbing Systems," Section E.8, "Air-Admittance Valves." This section specifies that the installation of AAVs are allowed only when the special design plumbing system is designed by a registered design professional who is licensed to practice in the particular jurisdiction. Therefore, if AAVs are used, the system must be designed by a New Jersey Registered Architect or New Jersey Licensed Engineer.

Under a rehabilitation project, the code official may allow the installation of an AAV by considering a variation based on hardship caused by existing conditions. This is a judgment to be made by the code official. The code official may consider and may issue, but is not required to accept and approve, the variation.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Accessible Controls and Operable Parts

It has come to the Department of Community Affairs' attention that there is some confusion about whether controls and operable parts are required to be accessible — and if they are, what that means.

In the technical standard adopted in the Barrier Free Subcode, the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-2003, Section 309 requires that operable parts be within the established reach ranges, 15 inches to 48 inches above the finished floor. This is the general rule; as always, there are specific questions that require additional thought.

- **Q:** If a light switch is mounted at 48 inches, but the toggle is at 48 1/8 inches when it is up, does that meet the reach ranges?
  A: Yes.
- **Q:** If an outlet receptacle is mounted at 48 inches to the center line of the outlet, is it acceptable that one of the outlets is higher than 48 inches or lower than 15 inches?
  A: Yes.
- **Q:** If there is a dedicated outlet for a single appliance and the appliance is permanently installed, or installed to be used without removal, may the outlet serving that specific appliance or device be installed outside the required reach ranges?

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A: Yes. Examples of this include outlets for a microwave oven that is permanently installed in a dwelling unit, the outlet for a refrigerator, and the outlet for office equipment that is installed for — and is not removed by — an employee.

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

Source: Emily W. Templeton
Code Development Unit

Conflict-of-Interest Update

Effective May 7, 2007, *N.J.A.C.* 5:23-4.5(j)l, Conflict of Interest, was expanded to include the project of any public official or employee having direct or indirect control over the funding or operations of the enforcing agency and any close relative or household member of any such public official or employee, where said person has an economic interest. A "close relative" is further defined as a parent, grandparent, son, daughter, brother, sister, or spouse of the public official or employee.

This new requirement needs a little explanation. If a project of a public official or employee, or any close relative or household member, is brought to the attention of the enforcing agency, the enforcing agency must make arrangements with another municipality to perform the required construction code enforcement. A written record concerning which municipality performed the construction code enforcement on the project should be kept.

These requirements are further explained in a rule proposal published in the *New Jersey Register* on June 2, 2008. This rule proposal provides that an official must not "knowingly" carry out any enforcement procedure designated to be a conflict situation under *N.J.A.C.* 5:23-4.5(j)1. Under the rule proposal, "the public official or employee having any direct or indirect control over the operation of the enforcing agency" part of the regulation is limited to the official himself and any household member, rather than a close relative as the regulation currently reads.

In a companion change, this rule proposal also amends *N.J.A.C.* 5:23-5.25(c) by including a Department of Community Affairs' finding of a violation of *N.J.A.C.* 5:23-4.5(j)2 (the traditional conflict-of-interest regulation) as constituting grounds for revocation of an official's construction code licenses.

If you have any further questions, contact Robert Hilzer or William Ferguson at (609) 984-7768.

Source: Robert Hilzer
Office of Regulatory Affairs

NSPC Public Hearing to be Held in New Jersey

The National Standard Plumbing Code (NSPC) Committee is meeting in New Jersey! The NSPC Committee will consider proposed changes to the NSPC at a public hearing scheduled for **Thursday, August 21, 2008. The hearing will begin at 8:00 a.m. EST at the Sheraton Atlantic City Convention Center Hotel in Atlantic City, New Jersey.** The public is invited.

Proposed code changes were due April 24th. The code changes approved by the Committee at the public hearing, and the changes that were approved and included in the 2007 and 2008 Supplements, will be included in the 2009 edition of the NSPC, scheduled for publication in early 2009.

Our request that a public hearing be held in New Jersey has been granted. Now, **we must have a good showing** at this hearing. Please **mark your calendar for August 21**, Sheraton Atlantic City Convention Center Hotel, 8:00 a.m. and support having the NSPC public code change hearings in New Jersey.

The submitted proposed code changes will be considered and voted on at this public hearing. They will be available on the Plumbing-Heating-Cooling Contractors-National Association web site for your review. Visit http://www.phccweb.org under "*Contractor Resources — Code and Technical Support.*" For more information, contact Julie Turner at (800) 533-7694 or turner@naphcc.org.

Source: Thomas C. Pitcherello
Code Assistance Unit

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Fire-Suppression Systems for Balconies and Decks in Residential Construction

As per Section 903.3.1.2.1 of the 2006 International Building Code (IBC/2006), sprinkler protection is required to be provided for exterior balconies, decks, and ground-floor patios of dwelling units where the building is of Type V construction. The code section also contains technical requirements for the installation of sidewall sprinkler heads in these locations. Because there are no sidewall sprinkler heads listed for installation under open wood joists, the purpose of this article is to clarify the Department of Community Affairs' position on this matter.

As a reminder, there is an established hierarchy concerning the relative importance of regulations, codes, and technical standards, including listings, to determine whether a requirement that is outside a specific category is acceptable and enforceable. At the top of the hierarchy of construction codes is the statute. Following that are the regulation, the model code itself, a technical standard, and at the bottom of the hierarchy is the listing. Listings are limited to those aspects of a device that have been tested. Tests are conducted in response to specific requests and contracts. Because the listing does not extend to all aspects or applications of a device does not necessarily mean that the device would not perform well in other applications; it may mean that the tests that would demonstrate effectiveness have not been requested or conducted.

With this hierarchy in mind, and based on the fact that the IBC/2006 clearly contemplates the installation of sidewall heads for exposed wood decking and describes installation techniques, it is the Department's opinion that the listing, or lack thereof, of sprinkler heads for this application is superseded by its inclusion in the code. The IBC/2006, which is the adopted Building Subcode, clearly specifies the installation details for sidewall heads in this application, so that a head listed for this type of protection is not required.

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

Source: John N. Terry
Supervisor, Code Assistance Unit

List of Registered Builders

In the past, the Bureau of Homeowner Protection periodically mailed a list of revoked or suspended new home builders to the local construction official. Because Internet access is virtually universal and because none of us needs more paper, this list will no longer be mailed. A list of registered builders is available on the Division of Codes and Standards' web site at:
http://www.nj.gov/dca/codes/newhome_warranty/pdf/brlist.pdf
Please consult this list to ensure that any new home builder applying for a permit to build a new house currently is registered and has given a valid registration number.

Should you have any questions about the status of a builder, please call the New Home Warranty Builder Registration Section at (609) 984-7910.

Source: Bureau of Homeowner Protection

Gravel or Stone on Roofs

Section 1504.8 of the 2006 International Building Code (IBC/2006) does not allow gravel or stone to be used on the roof of a building located in a hurricane-prone region, or on any other building with a mean roof height exceeding that which is allowed by Table 1504.8, based on the exposure category and basic wind speed at the building site.

So, how does this pertain to the State of New Jersey? Well, a "hurricane-prone region" is defined as an area vulnerable to hurricanes, such as the United States Atlantic Ocean coast, where the basic wind speed is greater than 90 miles per hour. Therefore, gravel or stone is not allowed on new roofs in the portions of New Jersey east of the 90-mph line (see map at right, excerpted from Bulletin No. 03-4). And, for those portions of New Jersey on the 90-mph line and west where gravel or stone is allowed, there are still constraints (maximum mean roof height and exposure category) based on the roof design from Table 1504.8.

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

Source: Rob Austin
Code Assistance Unit



Hard-Wired, Interconnected Smoke Alarms vs. Low-Voltage Smoke-Detection Systems

The discussion that will follow is best begun by repeating the code sections that have been generating so many questions:

Section R313.1 of the 2006 New Jersey International Residential Code (IRC/2006) states, "All smoke alarms shall be listed in accordance with UL 217, and installed in accordance with the provisions of this code and the household fire-warning equipment provisions of NFPA 72. Household fire-alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire-alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms in the event the fire-alarm panel is removed or the system is not connected to a central station."

Section 907.2.10 of the 2006 New Jersey International Building Code (IBC/2006) states, "Listed single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with the provisions of this code and the household fire-warning equipment provisions of NFPA 72. Household fire-alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire-alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms in the

event the fire-alarm panel is removed or the system is not connected to a central station."

So, what are the requirements of these sections?

- First, smoke alarms are required to be listed in accordance with UL 217.
- Second, the smoke alarms must be installed in accordance with the household fire-warning equipment provisions of National Fire Protection Association (NFPA) Standard 72 and the applicable code – IRC/2006 or IBC/2006.
- Third, low-voltage detection systems are permitted when they are installed in accordance with these code sections and the requirements of NFPA 72, household fire-alarm systems. When low-voltage systems are installed, they must provide the same level of protection as the smoke-alarm system if the fire-alarm panel is removed or the system is not connected to a central station.

Section R313.1 of the IRC/2006 and Section 907.2.10 of the IBC/2006 prohibit the use of low-voltage smoke-detection systems in lieu of hard-wired smoke alarms. Hard-wired, interconnected smoke alarms are required to be installed in all cases, unless the dwelling is large enough to require more than 12 smoke alarms.

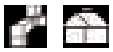
NFPA 72 prohibits more than 12 hard-wired, interconnected smoke alarms from being installed. In the case where a dwelling requires more than 12 smoke alarms to be installed, the Department of Community Affairs recommends that the fire subcode official require permit applicants to apply for a variation for the installation of a low-voltage smoke-detector system. A variation should not be granted on the basis that the owner or occupant *chooses* to install more than 12 smoke alarms; the fire subcode official should grant the variation only when the design of the building is such that it *requires* more than 12 smoke alarms.

Here is an example: A contractor is constructing a new two-story home with a basement and ten bedrooms. The contractor will need to apply for a variation for the installation of a low-voltage smoke-detection system. A house of this size will require 13 smoke alarms, at a minimum.

NOTE: Other alarm devices, such as heat detectors, audible notification devices, and carbon-monoxide alarms, shall not be counted into the total number of smoke-alarm devices to be installed. NFPA 72 allows up to 18 devices, but limits smoke alarms to 12 devices.

The Department is preparing a bulletin to provide guidance to code officials on when to grant a variation for the installation of a low-voltage smoke-detection system. Please check our web site for the bulletin.

Source: Michael E. Whalen
Code Assistance Unit

Impact Protection for Appliances Located in Private Garages 

What is the proper protection from motor vehicle impact for appliances located in a private garage? The 2006 International Residential Code (IRC/2006), Section G2408.3 contains an exception that directly addresses this question.

IRC/2006 Section G2408.3, Private Garages, states: "Appliances located in private garages shall be installed with a minimum clearance of 6 feet above the floor." The exception then states: "The requirements of the section shall not apply where the appliances are protected from motor vehicle impact and installed in accordance with Section G2408.2." Section G2408.2 requires that equipment and appliances that have an ignition source must be elevated to ensure the source of ignition is not less than 18 inches above the floor.

Therefore, if the equipment or appliance is located in a private garage, and the ignition source is elevated at least 18 inches above the floor and is protected from motor vehicle impact, the equipment or appliance does not have to be elevated a minimum of 6 feet above the floor.

Now for the larger question: What type of motor vehicle impact protection is required? The IRC is silent on this.

Although the IRC Commentary is not adopted for use in New Jersey, it can contain helpful information and guidance. In this case, the IRC Commentary recommends four ways to provide a means of protection. They are as follows:

1. Protected by walls of a room that extend from floor to ceiling;
2. Protected by guards made of concrete steel posts set in the floor, or flanged and bolted to the floor;
3. Protected by a platform or pad equivalent to vehicle "curb-stop" height; or
4. Protected by a concrete curb stop that is held in place with steel dowels.

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The code requires some type of protection to ensure that the protective device is hit before the equipment or appliance.

Because there is no cross-reference in the IRC to the 2006 International Fire Code Section 312, which addresses impact protection, it is recommended that any one of the four items listed above be used as a means to provide motor vehicle protection in a private garage.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Licensed Professional Contractors

The Division of Codes and Standards has had several meetings with the New Jersey State League of Master Plumbers, Inc. concerning the enforcement of plumbing licenses and all the professional licensed trades. The League has asked us to provide guidance to code officials concerning unlicensed individuals working under the Uniform Construction Code. This occurs more often than not, specifically relating to homeowners doing their own work. Many homeowners are persuaded by an unskilled handyman that it would be too costly to hire a licensed professional.

The reality is that the handyman has no formal training, has not passed tests, and does not attend code update seminars. He may not have insurance and, generally speaking, does not provide the homeowner with a contract. If the homeowner has a problem with the handyman (who, once on the job, may not be very handy), there is no State agency to turn to for assistance.

Hiring a licensed professional protects the homeowner and, in the long run, may save money because the quality of work is superior.

Now, can homeowners be helped when confronting this situation?

- If a homeowner states that he is going to do his own plumbing and/or electrical work, make sure he understands he must actually perform the work and may not simply supervise it.
- Make sure that the homeowner signs and dates the certification. Explain that the homeowner is accepting full responsibility for any violation that may be uncovered, but that hiring a licensed professional shifts that responsibility onto the contractor.

What's the next step? What if we discover unlicensed contractors working on a construction site?

- Issue a Stop Work Order. This is our tool to gain compliance. Once the job is stopped, the general contractor or homeowner will be sure to have a licensed professional on the job site.
- Report the unlicensed contractor to the appropriate Division of Consumer Affairs' licensing board. Make sure the complaint is in writing. Do not just pick up the telephone and call; action will not be taken based on just a phone call.

Finally, once a year, every building department should request a copy of the current license from each contractor. This will not only prevent issuing permits to a contractor whose license has expired, it will also help to curb the use of false documents, including falsified raised seals.

If you have any questions, please contact me at (609) 984-7672.

Source: Louis J. Mraw
Supervisor, Office of Regulatory Affairs

Mixed Occupancies – How to Separate per IBC/2006



For those of you looking for the occupancy separation table from the 2000 International Building Code (IBC) in Chapter 3, it is now is Chapter 5 of the IBC/2006, specifically Section 508.3.3.

Mixed occupancies are covered in Section 508.3 of the IBC/2006 where it states, "Each portion of a building shall be individually classified in accordance with Section 302.1. Where a building contains more than one occupancy group, the building or portion thereof shall comply with Sections 508.3.1 (accessory occupancies), 508.3.2 (non-separated occupancies), 508.3.3 (separated occupancies), or a combination of these sections." Since the criteria really hasn't changed for accessory occupancies and non-separated occupancies, this article will focus only on the separated occupancies. For starters, please take a look at Table 508.3.3 below; you'll notice the letter "N" for no separation requirement. You may be scratching your head as to why, because this is not the same application as the IBC/2000; yes, the IBC/2006 is different!

TABLE 508.3.3
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

OCCUPANCY	A[a], E		I		R[d]		F-2, S-2[c,d], U[d]		B[b], F-1, M[b], S-1		H-1		H-2		H-3, H-4, H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A[a], E[e]	N	N	1	2	1	2	N	1	1	2	NP	NP	3	4	2	3[a]
I	—	—	N	N	1	NP	1	2	1	2	NP	NP	3	NP	2	NP
R[d]	—	—	—	—	N	N	1	2	1	2	NP	NP	3	NP	2	NP
F-2, S-2[c,d], U[d]	—	—	—	—	—	—	N	N	1	2	NP	NP	3	4	2	3[a]
B[b], F-1, M[b], S-1	—	—	—	—	—	—	—	—	N	N	NP	NP	2	3	1	2[a]
H-1	—	—	—	—	—	—	—	—	—	—	N	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	—	—	—	—	—	—	N	NP	1	NP
H-3, H-4, H-5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	N	NP

For SI: 1 square foot = 0.0929 m^2.
S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
N = No separation requirement.
NP = Not permitted.
a. For Group H-5 occupancies, see Section 903.2.4.2.
b. Occupancy separation need not be provided for storage areas within Groups B and M if the:
   1. Area is less than 10 percent of the floor area;
   2. Area is equipped with an automatic fire-extinguishing system and is less than 3,000 square feet; or
   3. Area is less than 1,000 square feet.
c. Areas used only for private or pleasure vehicles shall be allowed to reduce separation by 1 hour.
d. See Section 406.1.4.
e. Commercial kitchens need not be separated from the restaurant seating areas that they serve.

Step 1 – Occupancy Classification: Classify each occupancy in accordance with Section 302.1. Please keep in mind that the ***fire area**** of each occupancy is to comply with the IBC/2006 based on the classification of that portion of the building.

*Fire Area - The aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls, or fire-resistance-rated horizontal assemblies of a building.

Step 2 – Allowable Area: For each story, perform a simple calculation of areas to be such that the sum of the ratios of the actual floor area of each occupancy, divided by the allowable area of each occupancy, shall not exceed one.

$$\frac{\text{Actual Area A}}{\text{Allowable Area A}} + \frac{\text{Actual Area B}}{\text{Allowable Area B}} = 1 \text{ or less}$$

Step 3 – Allowable Height: The height limitations for each occupancy shall not exceed Table 503, based on the type of construction of the building. The height, in both feet and stories, of each ***fire area**** shall be measured from grade plane; this measurement shall include the height, in both feet and stories, of intervening fire areas.

Step 4 – Separation: Occupancies are to be separated from adjacent occupancies, in accordance with Table 508.3.3.

Step 5 – Construction: If a rated separation(s) is required, the separation(s) shall be a fire barrier(s) constructed in accordance with Section 706, or horizontal assemblies constructed in accordance with Section 711, or both, so as to completely separate adjacent occupancies.

You will have noticed that the references to “fire area” are bolded, italicized, and defined above. This is to call attention to the fact that Section/Table 508.3.3 may not be the only reason for a separation. For example, automatic suppression systems (from Section 903) rely on fire area as trigger for their installation. Therefore, with the possibility of a fire barrier/horizontal assembly no longer required, this could increase your fire area and, in turn, require an automatic sprinkler system.

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An example applying Section 508.3.3 might help: Consider a one-story (with basement), Type VA construction building of moderate hazard storage of 4,651 square feet (basement) and office space of 9,967 square feet (1st floor), for a building total of 14,618 square feet.

Step 1: Moderate hazard storage – Group S-1; Office Space – Group B

Step 2: Table 503 for VA construction = S-1 – 14,000 s.f.; B – 18,000 s.f.

$$\frac{4,651}{14,000} + \frac{9,967}{18,000} = 0.886$$

Step 3: (Height not given for example.)

Step 4: Since the calculation from Step 2 is less than one, and Table 508.3.3 requires no separation (when one or less), Step 5 for the construction of a fire barrier is not required. However, it is important to note that you must apply the most restrictive provisions of each occupancy; the fire area is now 14,618 square feet without a separation and Section 903.2.8 (Group S-1) of the IBC/2006 would require an automatic sprinkler system throughout the building (fire area over 12,000 square feet).

Lastly, if the above example was a low-hazard storage (Group S-2), then a separation would be required by Table 508.3.3 regardless of calculations (non-separated occupancies would still be an option).

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

Source: Rob Austin
Code Assistance Unit

Multiple Permits for Multiple Dwellings Means Multiple Mistakes

There's an old adage that says, "Believe none of what you hear and half of what you see." It also might say, "Question what you read." Not long ago, the Census Bureau said a New Jersey municipality issued building permits for over 1,500 new houses. Let's call this place Anytown Township. The real number was considerably less, not even one-tenth of the amount reported by the Federal agency.

What happened? The construction official made a mistake that others have made. He issued multiple permits for multiple dwellings and, in the process, made multiple mistakes. Don't do what Anytown did.

The official wanted to authorize permits for three new apartment buildings, each with 24 units. Instead of three permits (one for each building), he issued 72 permits (one for each apartment). Each unit got its own building permit with its own permit number. The construction cost of each building, its area, volume, and related fees were split among 72 permits. The construction official was meticulous. He divided almost everything to get the correct figures for each permit. Almost everything. His only mistake was to repeat the total number of units in each building (24) on every permit. Instead of 72 new dwellings, he reported 1,728. The Census Bureau thinks there is a housing boom in Anytown. So does anyone who uses this data.

The real mistake was to divide the buildings into parts in the first place. Anytown should have issued three building permits (one for each building), not 72 permits (one for each unit). Other towns make this same mistake every month.

These mistakes are onerous because they are hard to detect. They divide an error into multiple, usually smaller, parts. It takes time for these small parts to reach critical mass for detection. Further, when such mistakes occur, they are difficult to fix because each permit must be corrected, both by the office that issued them and by the Department of Community Affairs where this information is sent. It is a lot easier to fix three permits than to fix 72.

What happened in Anytown is not an isolated case. Over one-fourth of the State's population lives in multiple dwellings. In 1997, about 15 percent of the housing units authorized by permits were in buildings with three or more units. In 2007, the proportion is about 45 percent.

Why do construction officials issue multiple permits for multiple units? Some do it for record-keeping purposes: to track what needs to be done, where, and when. Separate permits are issued to provide a record of what is inspected — the plumbing code violations in apartment 3D or the

electrical violations in 12B.

A more common reason cited for condominiums and other for-sale dwellings is that new home warranty companies and banks require them to do so. Banks and warranty companies are reluctant to insure or finance the sale of condominiums without a Certificate of Occupancy (CO) for each unit in a multifamily building. Today's multifamily buildings are complex. They are built over long periods of time and occupied in phases over months, even years. An easy way to generate these COs is with a separate permit for each unit.

Some construction offices issue separate permits for the common area of multifamily buildings, as well as permits for each dwelling in these buildings. They take great pains to divide the building into distinct parts. Despite this effort, mistakes occur. Because these buildings are built over time, construction offices forget they reported one or more units on the permit for the common area and then report them again on the permits for the individual dwellings. This overstates the number of authorized dwellings in the municipality, a critical construction indicator -- one that is used to determine affordable housing obligations.

The Uniform Construction Code is clear about permits for multifamily buildings. These buildings may be built and occupied in phases, as life-safety requirements of the code are met. *N.J.A.C.* 5:23-2.23 allows for occupancy in a multifamily building as long as the dwelling units in that building and the common area that serves those dwellings are safe prior to the entire building's completion. Banks and warranty companies must realize that people can move into and live in buildings that are not finished. The best way to report such buildings is to issue one permit for the entire structure. Temporary Certificates of Occupancy (TCOs) follow, as dwellings in the building are completed and ready for occupancy. These units are reported on the TCOs as they are issued, usually in phases, as the dwellings are completed. Take care not to repeat or over-count important features of the building on the TCOs, like the number of units, its construction costs, or area. Don't issue multiple permits for multiple dwellings. It often leads to multiple mistakes.

Source: John Lago
Division of Codes and Standards

Oil-Burner Safety Devices and Controls

Recently, the Department of Community Affairs has received some questions on whether there are requirements for a means to manually stop the flow of oil to the burner.

N.J.A.C. 5:23-3.20(b)3.iii, Section 301.16 of the International Mechanical Code, and *N.J.A.C.* 5:23-3.21(c)10.i, Section M1307.5 of the International Residential Code, require safety devices and controls for oil burners. These sections require that a means of manually stopping the flow of oil to the burner be provided. The device or devices are required to be placed in a readily accessible location that is a minimum of ten feet from the burner. Where there is electrically driven equipment, an identified switch in the burner supply circuit is required to be provided at the entrance to the room or area where the appliance is located. For equipment that is located in basements, the switch is required to be located at the top of the stairs that lead to the basement.

These code sections also state that an identifiable valve in the oil-supply line that is operable from a minimum of ten feet from the burner must be used for other than electrically driven or controlled equipment.

In short:

- If the burner is electrically driven, an identifiable switch is required and an identifiable valve is not required.
- For nonelectrically driven equipment, an identifiable valve must be installed and must be located a minimum of ten feet from the burner.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Precast Foundation Wall Panel

It has come to the Department of Community Affairs' attention that construction plans for precast foundation wall panel construction are being submitted without being signed and sealed by a design professional, and the construction plans are not drawn to any scale.

N.J.A.C. 5:23-4.26 deals with the certification of building elements. The requirements are as follows:

(a) Building elements shall be certified in accordance with the following provisions:

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1. Building elements such as fire walls, fire-separation walls, **wall panels**, prestressed/ prefabricated floor or roof panels, and pre-engineered structural frames, built in accordance with the New Jersey Uniform Construction Code, may be approved by any of the following options:

   i. *Approval for both design and construction by a nationally recognized laboratory or a product certification agency* The municipal subcode official has the authority to accept such approvals based on the evidence, test, and/or documentation presented to him or her.

   ii. *Approval for both design and construction by a professional engineer licensed either in the State of New Jersey or in the state of manufacture* The municipal subcode official has the authority to accept such approvals based on the evidence, of test and/or documentation, presented to him or her.

N.J.A.C. 5:23-2.15(f) requires that the application for the permit must be accompanied by no fewer than two copies of specifications and of plans **drawn to scale**, with sufficient clarity and detail dimensions to show the nature and character of the work to be performed. Plans submitted shall be required to show only such detail and include only such information as shall be necessary to demonstrate compliance with the requirements of the code and these regulations, or to facilitate inspections for code conformity. When quality of materials is essential for conformity to the regulations, specific information shall be given to establish such quality. In addition, this code shall not be cited, or the term "legal" or its equivalent be used, as a substitute for specific information.

Therefore, as per *N.J.A.C.* 5:23-2.15(f), all construction documents submitted for review must be drawn to scale. Furthermore, as per *N.J.A.C.* 5:23-4.26, the owner or his representative can submit evidence, testing, or documentation for both design and construction by a nationally recognized laboratory, a product certification agency, or a professional engineer licensed either in the State of New Jersey or in the state of manufacture. Examples of product certification are the International Code Council Evaluation Service Reports: ESR 1553 and ESR 1662.

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

Source: Marcel Iglesias
Code Assistance Unit

Price Increases for UCC

Please be advised that increased production costs have made it necessary to raise the price for new Uniform Construction Code books to $55 (formerly $40). In addition, the subscription service price will be going up to $50 (previously $35).

These price increases will be effective with the new fiscal year, which begins July 1, 2008. Thank you for your understanding.

Source: Mary Ellen Handelman
Office of Planning and Operations

Public and Common Area Visible Alarms

Some questions have been coming in recently about where visible alarm devices are required to be installed. Visible alarms must be installed in accordance with the 2006 International Building Code (IBC/2006), New Jersey edition. Section 907.9.1 requires that visible alarms comply with Section 907.9.1.1, Public and Common Areas, which simply states that alarms are required in public and common areas.

Now to address the area of confusion: What is considered a public or common area? Section 1102.1 of the IBC/2006, Definitions, has a very good definition of "Public Use Areas." Public Use Areas is defined as interior or exterior rooms or spaces that are made available to the general public. This definition should be used to determine the required location of visible alarm devices in accordance with the Building Subcode, specifically with IBC/2006, Section 907.9.1.1. Some examples of spaces available to the general public are: conference rooms, lobbies, restrooms outside an individual private office space, and classrooms. Public and common spaces are located in both publicly and privately owned buildings, so Section 907.9.1.1 must be applied in both.

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

Source: Michael E. Whalen
Code Assistance Unit

Ramps in the IRC/2006

The 2006 International Residential Code (IRC/2006) was adopted February 20, 2007 at *N.J.A.C.* 5:23-3.21. Upon adoption, the maximum slope requirement for a ramp (Section R311.6.1) was inadvertently deleted from the IRC/2006. Subsequently, because one- and two-family dwellings are not covered by the Barrier Free Subcode, it was discovered that the code had a gap — there was no scoping for ramps installed at one- and two-family dwellings or townhouses. This was not the Department of Community Affairs' intent. The Department has corrected this error: effective April 7, 2008, the deletion was deleted and Section R311.6.1 was adopted. For your convenience, the language follows:

> **Section R311.6.1, Maximum Slope:** Ramps shall have a maximum slope of 1 unit vertical in 12 units horizontal (8.3 percent slope).
>
> **Exception:** Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of 1 unit vertical in 8 units horizontal (12.5 percent slope).

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

Source: Rob Austin
Code Assistance Unit

Requirements for Supplemental Smoke Detector or Heat Detector Installations for International Residential Code Dwellings

The Department of Community Affairs has received calls from contractors and code officials concerning permit requirements and inspection responsibilities for the installation of non-required, supplemental burglar-/fire-alarm systems.

Some questions that have been asked are: What type of permit is required? What code requirements apply to the installation? Can one device be installed to cover the entire dwelling and what type of device can be installed? What is the appropriate code reference in the Uniform Construction Code (UCC)?

A contractor installing supplemental equipment in a dwelling that already has a required system installed must comply with *N.J.S.A.* 45:5A-18 et seq. This is more specifically spelled out at *N.J.A.C.* 5:23-2.15(b)7. The license number of the contractor must be on the permit application. This section requires a certification permit from the Division of Fire Safety, an Individual Alarm Installer's License issued by the Board of Examiners of Electrical Contractors, or a New Jersey licensed electrical contractor. The applicant must apply for a permit for electrical work only. Remember, this is a supplemental system for a dwelling being constructed under the International Residential Code, not a required system. When a system is being installed in an International Building Code structure, the system would need to follow the requirements of Section 901.2. This section requires that only the work being performed needs to comply with the provisions of the code.

National Fire Protection Association (NFPA) Standard 72, the Household Fire-Alarm Systems standard, and the manufacturer's installation instructions must be followed for the location and wiring of the detector(s). Section 760 of the 2005 National Electrical Code (NEC/2005) must also be followed for the installation of the wiring and the circuit supplying power.

Just because someone wishes to install a supplemental system doesn't mean they need to install a complete system throughout the dwelling. If the applicant is voluntarily installing a low-voltage system and wishes to install one detector on each floor or one detector on the main floor, there are no code requirements to install them anywhere other than where they wish to install them.

The UCC at *N.J.A.C.* 5:23-6.6(i) requires that materials and methods meet code requirements. *N.J.A.C.* 5:23-6.8(d)8 requires that all of Chapter 7 of the NEC/2005 be followed, specifically in this case Article 760, Fire-Alarm Systems. This article references the 2002 edition of NFPA 72 for installation.

So, in short, an electrical permit is required; a fire permit is not required. The contractor/homeowner can test all the equipment installed in the presence of the electrical inspector. The installer can install any devices, as long as they are installed in accordance with the above-referenced codes and the manufacturer's installation instructions. Remember, this is not a required system; it is supplemental.

Source: Michael E. Whalen
Code Assistance Unit

Seismic Design Requirements for Fire-Protection Systems

There have been numerous inquiries as to the applicability of the seismic requirements with respect to fire-protection systems. The fire-protection system is considered a nonstructural component as per Chapter 16, Structural Design, of the 2006 International Building Code (IBC/2006).

Specifically, Section 1613, Earthquake Loads, addresses earthquake loads as follows: "All components that are permanently attached to structures and their supports and attachments shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7," which is adopted by reference in Chapter 35.

Chapter 13 of ASCE 7, Seismic Design Requirements for Nonstructural Components, establishes the minimum criteria for nonstructural components that are permanently attached to structures, and the minimum criteria for their supports and attachments. Nonstructural components are architectural, mechanical, and electrical components. A fire-suppression system's piping is considered a mechanical component.

Section 13.1.4 of ASCE 7, Exceptions, provides a list of the nonstructural components that are exempt from the seismic requirements. The exemptions are based on seismic design category and importance factor.

All mechanical components in Seismic Design Categories A and B are exempt. There are other components that are exempt in Seismic Design Categories C, D, E, and F, but there are additional criteria that must be met. Examples of additional criteria are: importance factor, flexible connections, component weight, and the height at which the components are mounted.

The requirements for Seismic Design Category C for fire-protection systems are found in Section 13.6.8.2 of ASCE 7. This section references National Fire Protection Association (NFPA) Standard 13 (2002 edition) for the design of the fire-protection sprinkler system's lateral supports.

The requirements for Seismic Design Categories D, E, and F for fire-protection systems are found in Section 13.6.8.3 of ASCE 7. Structures assigned to Seismic Design Categories D, E, or F must comply with the following requirements:

1. The hangers and sway bracing of the fire-protection systems must be deemed to meet the requirements of this section when both of the following requirements are satisfied:
   a. The hanger and sway bracing are designed and constructed in accordance with NFPA 13, and
   b. The force and displacement requirements of Section 13.3.1 and 13.3.2 are satisfied.
2. The fire-protection system piping itself must meet the force and displacement requirements of Section 13.3.1 and 13.3.2.
3. The design strength of the fire-protection system piping for seismic loads, in combination with other service loads and appropriate environmental effects, must be based on the following material properties:
   a. For piping and components constructed with ductile materials (e.g., steel, aluminum, or copper), 90 percent of the minimum specified yield strength.
   b. For threaded connections in components constructed with ductile materials, 70 percent of the minimum specified yield strength.
   c. For piping and components constructed with non-ductile materials (e.g., plastic, cast iron, or ceramics), 10 percent of the material minimum specified tensile strength.

When performing plan review, the code official is responsible for verifying that the seismic design category of a building is indicated on the construction documents submitted for review. The seismic design category indicated on the construction documents submitted by the design professional responsible for the fire-protection system must be identical to the one submitted by the design professional responsible for the design of the building. The fire-protection system must then be designed to the building's seismic design category.

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

Source: Marcel Iglesias
Code Assistance Unit

Sunrooms and the Energy Subcode

The 2006 International Energy Conservation Code (IECC/2006) recognizes that sunrooms are difficult when it comes to compliance, especially when a sunroom is an addition (i.e., not calculated into the original home's overall thermal design of the building envelope). Therefore, the IECC/2006 prescribes ways to make a "thermally isolated sunroom."

The IECC/2006 defines a "sunroom" as: "A one-story structure attached to a dwelling with a glazing area in excess of 40 percent of the gross area of the structure's exterior walls and roof." It then defines "thermal isolation" as: "Physical and space conditioning separation from conditioned space(s). The conditioned space(s) shall be controlled as a separate zone for heating and cooling, or conditioned by separate equipment."

Moving past the definitions, Section 402.2.10 of the IECC/2006, Thermally Isolated Sunroom Insulation, states: "The minimum ceiling insulation R-values shall be R-19 in HDD 4500-5499 and R-24 in HDD 5500-6499. The minimum wall R-value shall be R-13 in all zones. A new wall(s) separating a sunroom from conditioned space shall meet the building thermal envelope requirements." Section 402.3.5, Thermally Isolated Sunroom U-Factor, states: "The maximum fenestration U-factor shall be 0.50 and the maximum skylight U-factor shall be 0.75. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements." Following is the breakdown of the referenced sections:

- **Ceiling Insulation**
  - HDD 4500-5499 -- R-19
  - HDD 5500-6499 -- R-24
- **Fenestration U-Factor**
  - All HDD 0.50
- **Wall Insulation**
  - All HDD R-13
- **Skylight U-Factor**
  - All HDD 0.75

Note that this is truly an exception for sunrooms that would be traditionally open to the rest of the home.

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

Source: Rob Austin
Code Assistance Unit

The Type III Construction Question

Section 602.3 of the 2006 International Building Code (IBC/2006), as modified by *N.J.A.C.* 5:23-3.14(b)7.ii, states: "Type III construction is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of any material permitted by this code."

Formal Technical Opinion 14 (FTO-14) further explains the intent of Section 602.3. Type III construction requires exterior walls to have similar structural properties to concrete (cast in place or precast) and concrete masonry units such as brick, stone, or glass block. (NOTE: FTO-14 was updated as recently as October 2007 – please visit our web site at http://www.nj.gov/dca/codes for the latest version.)

However, if you are still having difficulties, a further breakdown follows: If all masonry exterior walls (load bearing or non-load bearing) are used, the building is Type III construction. The rest of the building may be constructed of any material allowed by the IBC/2006.

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

Source: Rob Austin
Code Assistance Unit

New Jersey Register Adoptions

Date: December 17, 2007
Adoption: 39 *NJR* 5211(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-1.4 corrects cross-references.

The adopted amendment at *N.J.A.C.* 5:23-3.14 revises Table 307.1(2) of the Building Subcode, entitled "Maximum Allowable Quantity per Control Area of Hazardous Materials Posing a Health Hazard," to insert quantities for storage, use-closed systems, and use-open systems for radioactive materials.

The adopted amendment at *N.J.A.C.* 5:23-3.16 adds accessory buildings or structures of one- and two-family dwellings to the uses allowed for Type NM, Type NMC, and Type NMA cables.

The adopted amendment at *N.J.A.C.* 5:23-3.21 revises Section M2201.2 of the One- and Two-Family Dwelling Subcode, entitled "Above-Ground Tanks," to eliminate the 660-gallon restriction on the amount of fuel oil that can be stored outside of a building.

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The adopted amendment at *N.J.A.C.* 5:23-4.3A provides that Class 2 agencies shall be allowed to perform plan review for Group R-4 occupancies (therapeutic residences). The adopted amendment at *N.J.A.C.* 5:23-1.4 includes companion changes to update cross-references in the definitions of "Class I Structure," "Class II Structure," and "Class III Structure."

The adopted amendment at *N.J.A.C.* 5:23-4.20 changes the Department of Community Affairs' flat fee for electrical inspection of a private swimming pool, spa, hot tub, or fountain from $46 to $55.

The adopted amendment at *N.J.A.C.* 5:23-5.5 applies the three-year prohibition period before reapplication for licensure that currently applies, as per *N.J.A.C.* 5:23-5.21(g)1 in cases where there has been a revocation, to cases in which an application was previously denied for a reason that would justify revocation.

The adopted amendment at *N.J.A.C.* 5:23-7.11 requires a bathroom on each accessible route in occupancies of Group R-1 containing six or more guest rooms. In addition, the adopted amendment at *N.J.A.C.* 5:23-7.12 specifies that, where multiple examination rooms serve a common medical office area, five percent of medical examination rooms shall be accessible, but not less than one. Finally, the adopted amendment at *N.J.A.C.* 5:23-7.13 corrects a reference to Group A-4, changing it to Group A-3.

Date: March 3, 2008
Adoption: 40 *NJR* 1084(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.15 and 5:23-3.14, and adopted new rule at *N.J.A.C.* 5:23-2.34 provide protection to the owners and occupants of structures that adjoin properties on which construction is being undertaken.

Date: May 5, 2008
Adoption: 40 *NJR* 2229(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.4 update – and in some instances revise – the assignment of enforcement responsibilities for the Building, Plumbing, Energy, Mechanical, One- and Two-Family Dwelling, and Fuel Gas Subcodes of the Uniform Construction Code. In addition, the adopted amendments assign enforcement responsibilities for new code sections in the subcodes.

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State of New Jersey
Jon S. Corzine, Governor

Department of Community Affairs
Joseph V. Doria, Jr., Commissioner

Volume 20 Number 2

Summer/Fall 2008

Statewide Nonresidential Development Fee Act

On July 17, 2008, Governor Jon Corzine signed into law the Statewide Nonresidential Development Fee Act, which impacts all construction permits issued under the Uniform Construction Code for nonresidential new construction or improvements where the work type is "new" or "addition" and the group designation is other than a residential group.

The Act, which took effect immediately upon signing, establishes a new statewide nonresidential development fee to be charged by all municipalities for nonresidential new construction or additions. The fee of 2.5 percent of the equalized assessed value of nonresidential development is determined by the tax assessor and must be paid by the developer prior to the issuance of a Certificate of Occupancy. The Act provides for limited exemptions from the 2.5 percent fee.

Under this Act, the following categories of buildings are exempt from the nonresidential development fee: 1) all nonresidential construction of buildings or structures on property used by churches, synagogues, mosques, and other houses of worship; 2) property used for nonprofit educational purposes; 3) parking lots and parking structures; 4) any nonresidential development which is an amenity to be made available to the public, including but not limited to recreational facilities, community centers, and senior centers; 5) nonresidential construction resulting from a relocation of, or an onsite improvement to, a nonprofit hospital or a nursing-home facility; 6) projects located within transit hubs; 7) transit hub-light rail projects; and 8) projects consistent with transit village plans.

The Act allows a municipality under the jurisdiction of the Council on Affordable Housing (COAH) pursuant to the Fair Housing Act to retain the nonresidential development fees collected in accordance with COAH's regulations and the law for deposit into the municipality's Affordable Housing Trust Fund. In all other municipalities that are not under COAH's jurisdiction, the fees are to be paid to the State of New Jersey. A list of municipalities under COAH's jurisdiction may be found on COAH's website at:

http://www.state.nj.us/dca/coah/legislation.shtml

Note: **Where payment is to be made to the State of New Jersey, it must now be made through the Department of the Treasury, Division of Revenue's website at http://www.state.nj.us/njbgs/nrdf.htm. Payment may be made by electronic check or by credit card. A convenience fee applies for all payments made by credit card. Once payment is made, a Certificate of Payment of Nonresidential Fee will be generated as proof of payment. A developer must present a construction official with the proof of payment in order to receive a Certificate of Occupancy. If a developer is eligible for a reduced fee or is claiming a credit, payment must be made to the Department of Community**

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BUILDING SAFETY CONFERENCE
Another Adventure, New Venue

The New Jersey Building Safety Conference was held this year from April 30 through May 2 at the Trump Taj Mahal in Atlantic City. It was like meeting an old friend! Many of you remember that the Building Safety Conferences were held at the Taj Mahal in the early 1990s. The Taj has many large and spacious training rooms, and VERY long hallways. We had 12 seminars on the first day and 14 on the second. All were very well received by our inspectors. The Crackerbarrel on the evening of the first night had 43 tables with varied topics of interest.

Our theme this year was "Building Safety: Where You Live, Work, and Play." Special guests at the Inspector of the Year luncheon were the Commissioner of the Department of Community Affairs, Joseph V. Doria, Jr., and the Director of the Division of Codes and Standards, Cynthia A. Wilk. Together, they, along with the organization presidents, presented awards. Those who were honored for their accomplishments were:

Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year
Michael Jahn

New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year
Richard M. Barbarise

New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year
William D. Olinger

Building Officials Association of New Jersey
Building Inspector of the Year
Robert B. LaCosta

New Jersey Association of Technical Assistants
Technical Assistant of the Year
Rosalind Bosserdet

Conferences like this provide a chance for networking; they also foster fellowship among our peers. The reception to honor the awardees gives all inspectors a chance to offer their congratulations to the awardees. The gathering had good food and very lively entertainment! The Fabulous Greaseband provided music from the '60s and '70s. The evening concluded with a new feature — a dessert bar.

The Building Safety Week Conference is a nice break from our normal routine and gives us a chance to be brought up to date by taking advantage of educational opportunities. Now we are looking forward to next year. We will meet again at the Taj Mahal, May 6-8. Plan to attend!

Source: Susan McLaughlin (Retired)

NOTE: This is Susan McLaughlin's last article for the Construction Code Communicator. *Susan retired effective August 1. Thank you, Susan, for all your work managing the Education Unit and ensuring top-notch continuing education for New Jersey's code officials. Enjoy your retirement, Susan; you've earned it!*

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Left to right: Cynthia A. Wilk, Director; Victor Timpanaro, Municipal Electrical Inspectors Association of New Jersey; Michael Jahn, Electrical Inspector of the Year; Joseph V. Doria, Jr., Commissioner



Left to right: Cynthia A. Wilk, Director; Francis X. Donovan, Past President and founding member of the New Jersey Fire Prevention and Protection Association; Art Londensky, President of the New Jersey Fire Prevention and Protection Association; Richard Barbarise, Fire Protection Inspector of the Year; Joseph V. Doria, Jr., Commissioner

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Left to right: Cynthia A. Wilk, Director; Thomas McGonigle, New Jersey State Plumbing Inspectors Association; William Olinger, Plumbing Inspector of the Year; Joseph V. Doria, Jr., Commissioner



Left to right: Cynthia A. Wilk, Director; Martin Vogt, Building Officials Association of New Jersey; Robert LaCosta, Building Inspector of the Year; Joseph V. Doria, Jr., Commissioner



Left to right: Cynthia A. Wilk, Director; Brenda Sirkis, New Jersey Association of Technical Assistants; Rosalind Bosserdet, Technical Assistant of the Year; Joseph V. Doria, Jr., Commissioner

New Jersey Licensed Master Plumbers and Home Improvement Contractor Registrations

Is a New Jersey Licensed Master Plumber required to have a Home Improvement Contractor Registration to install gas piping, hydronic heating piping, boilers, and warm-air heaters?

Based on the minutes from two public meetings held at the New Jersey State Board of Examiners of Master Plumbers on July 26 and September 27, 2007, and on communication between the Department of Community Affairs and the Division of Consumer Affairs, the Board of Master Plumbers has determined that a New Jersey Licensed Master Plumber can perform this work without also possessing a Home Improvement Contractor Registration.

Therefore, if a New Jersey Licensed Master Plumber applies for a permit to install any of the above items, a permit shall be issued to the plumbing contractor without possessing a Home Improvement Contractor Registration.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Numeric or Roman, It All Has To Do With Class!

The Code Assistance Unit has received a multitude of questions regarding the classification of a building/structure . . . not occupancy group, not construction type, but the building classification. Two sections should be reviewed when the Uniform Construction Code refers to a building classification of Class 1 (I), Class 2 (II), or Class 3 (III): *N.J.A.C.* 5:23-2.15(f)1.vii, Plans; and *N.J.A.C.* 5:23-4.3A(d), Enforcing Agency Classification.

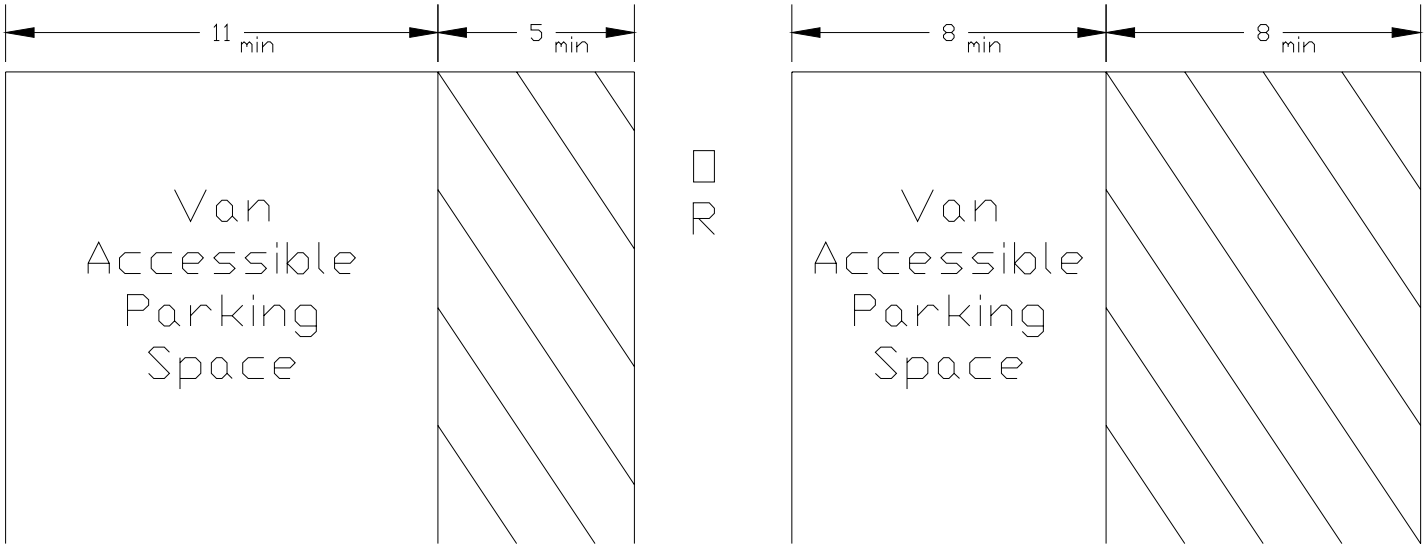
Both of these sections must be consulted when submitting plans. *N.J.A.C.* 5:23-2.15(f)1.vii requires all engineering plans and computations to bear the seal and signature of the licensed engineer or registered architect responsible for the design. However, there are three exceptions to this rule [*N.J.A.C.* 5:23-2.15(f)1.vii(1)]:

1. Plumbing plans for Class III structures may be prepared by persons licensed pursuant to the Master Plumber Licensing Act (The State Plumbing Licensing Law of 1968, *N.J.S.A.* 45:14C-1 et seq.);
2. Electrical plans for Class III structures may be prepared by persons licensed pursuant to The Electrical Contractors Licensing Act of 1962, *N.J.S.A.* 45:5A-1 et seq.;
3. Mechanical plans for Class III structures may be prepared by mechanical contractors.

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Van-Accessible Parking Space Dimensions

As we all know, *N.J.A.C.* 5:23-7.10(a)2 requires that, for every eight accessible parking spaces or fraction thereof, at least one must be a van-accessible parking space. The dimensions of accessible parking spaces are provided at Section 502.2 of the International Code Council/American National Standards Institute (ICC/ANSI) Standard A117.1-2003. Please note that the configuration of the accessible van spaces has changed with the adoption of ICC/ANSI A117.1-2003. The standard configuration for a van space is now 11-feet wide (132 inches), with a 5-foot (60-inch) -wide access aisle. The 8-foot-wide (96-inch) space with an 8-foot (96-inch) -wide access aisle is also allowed. A design professional may specify either of the two van space configurations and the code official must accept the one specified.



Note: When garage parking is subject to *N.J.A.C.* 5:23-7.10(a)2, a minimum vertical clearance of 98 inches is required for vans per Section 502.6 of ICC/ANSI A117.1-2003.

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

Source: Rob Austin
Code Assistance Unit

Residential In-Ground Pools

In Appendix G of the 2006 International Residential Code (IRC) and in Section 3109.2 of the 2006 International Building Code (IBC), a swimming pool is defined as "any structure intended for swimming or recreational bathing that can hold water over 24 inches deep." Residential in-ground pools are required to comply with the National Spa and Pool Institute's (NSPI's) Standard 5. This article will address some of the questions that have arisen from this reference.

What is a "residential pool?" A residential pool is defined in NSPI-1, which is referenced by NSPI-5, as "any pool that is intended for noncommercial use as a swimming pool by three families or less and their guests." For practical purposes, then, NSPI-5 applies to one- or two-family dwellings. However, if a three-family dwelling, a three-unit apartment/condominium, or three townhouses have an agreement (e.g., a homeowner's association) to share and maintain the pool, then it could still be categorized as a residential pool. Otherwise, once the number of families using the pool becomes four or more, it is then a "commercial/public pool" as per NSPI-1 and is required to be constructed as such.

What are the minimum water envelope dimensions? Because the diving dimensions are no longer published in the Building Subcode or the One- and Two-Family Dwelling Subcode, the table is being provided in this article along with a diagram (not to scale) demonstrating the dimensions. The deep-end wall starts at "W" and the shallow-end wall ends at "E"; the width

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Affairs and the check must be made payable to: "Treasurer, State of New Jersey."

Since the passage of the Act, the Department has received numerous questions on the implementation of the law. The following is a list of some frequently asked questions that are intended to provide code officials with guidance:

1. How does the Statewide Nonresidential Development Fee Act apply to new multi-tenant commercial buildings?

   Answer: If a permit applicant applies for a construction permit and constructs a spec office building (Group B) or a spec retail building (Group M), a Certificate of Occupancy would be issued once the building is complete. The nonresidential development fee would be based on the equalized assessed value of the land and improvement (building). The fee must be collected before the Certificate of Occupancy is issued. Any "fit-up" work performed in a tenant space after the Certificate of Occupancy is issued is not considered new construction or an addition to an existing structure. Therefore, the work completed under the permit for the tenant space would not be subject to the nonresidential development fee. In any case, the amount of the nonresidential development fee is determined by the local tax assessor. The construction official's sole responsibility is to confirm that the fee has been paid prior to issuing a Certificate of Occupancy.

2. Are new State-owned buildings or additions to existing State-owned buildings exempt from the nonresidential development fee?

   Answer: Yes.

3. Are new municipal buildings or additions to existing municipal buildings exempt from the nonresidential development fee?

   Answer: Yes.

4. Are public schools exempt from the nonresidential development fee?

   Answer: Yes.

5. Are commercial farm buildings exempt from the nonresidential development fee?

   Answer: Yes.

If you have questions concerning implementation of the Act, you may contact the Code Assistance Unit in the Division of Codes and Standards at (609) 984-7609.

Source: Megan Sullivan Czyz
Division of Codes and Standards

Backflow Preventers – What Type is Required?

The Department of Community Affairs has become aware of questions concerning the type of backflow preventer that is required by water utilities or authorities to be installed on a water service that serves either a combination domestic and fire-protection system or a dedicated fire-protection system.

Some water utilities are requiring, at a minimum, a reduced pressure zone backflow preventer on the water services supplying water to any fire-protection system when the system is supplied from a public water main. This brings up two questions: First, what does the Plumbing Subcode require? Second, can a water utility or authority be more stringent than the Plumbing Subcode?

What does the Plumbing Subcode require? The 2006 National Standard Plumbing Code (NSPC) requires a reduced pressure zone backflow preventer on any fire-protection system that has a fire-department siamese connection. This is a change from NSPC/2003, which allowed a minimum of a double check-valve assembly if the system were both supplied from a potable water source and located more than 1700 feet from a non-potable water supply. On July 6, 2008, an amendment to *N.J.A.C.* 5:23-3.15 that would revert to the language in the NSPC/2003 was proposed in the *New Jersey Register*. By the time you read this article, it is likely to have been adopted.

Can a water utility or authority be more stringent than the Plumbing Subcode? This requires a lengthy response because there are two laws that apply. The adopted Plumbing Subcode states the type of backflow preventer required and the location. But, the Safe Drinking Water Act regulates water utilities and authorities, and requires them to protect the potable water from any backflow into the public water supply.

N.J.A.C. 5:23-3.15(b)10.iii amends Section 10.4.3 of the NSPC/2006 as follows: "Section 10.4.3 is amended to read: "potable water supplies shall be protected in accordance with the provisions of this code *and, where applicable,* the Safe Drinking Water Regulations (*N.J.A.C.* 7:10). The requirements of this code shall establish requirements for individual outlet protection. The requirements of the Safe Drinking Water Act shall establish the requirements for containment." (Emphasis added.)

So, the answer to the second question is: Yes, the water utility or authority can be more stringent than the Plumbing Subcode. Therefore, as stated in the amendment to the Plumbing Subcode, the containment backflow preventer on the incoming water service is regulated by the water utility or authority, which would have

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the final decision as to what type of backflow preventer is required.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Defining Occupant Load

Table 1004.1.1 of the 2006 International Building Code (IBC), Maximum Floor Area Allowances per Occupant, is to be used when calculating the occupant load. However, there appears to be some confusion as to what spaces/areas are to be counted within the calculation. Within Table 1004.1.1 of the IBC/2006, two very important terms are used: "gross" and "net." These terms are defined in Section 1002, Definitions, of the IBC/2006. I have included them below:

- FLOOR AREA, GROSS The floor area within the inside perimeter of the exterior walls of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, closets, the thickness of interior walls, columns, or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.
- FLOOR AREA, NET The actual occupied area, not including unoccupied accessory areas such as corridors, stairways, toilet rooms, mechanical rooms, and closets.

As you can see, the definitions include/exclude certain portions of the building dependent on whether the "function of space" per Table 1004.1.1 of the IBC/2006 is gross or net.

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

Source: Rob Austin
Code Assistance Unit

Manual J Referenced in the IRC/2006

In the 2006 International Residential Code (IRC), Section M1401.3, Sizing, requires heating and cooling equipment to be sized based on building loads calculated in accordance with Air-Conditioning Contractors of America (ACCA) Manual J, Residential Load Calculation, or other approved heating and cooling calculation methodologies. As per *N.J.A.C.* 5:23-2.15(f)1.v and vii, these calculations are required to be submitted for all new one- and two-family dwellings and townhouses that are three stories or less in height.

OVERVIEW:

Manual J produces equipment sizing loads for single-family, detached homes, small multi-unit structures, condominiums, town houses, and manufactured homes. It provides quick supplemental details and advanced topics, as well as supporting reference tables and appendices. Manual J also accommodates homes that have exceptional architectural features and lifestyle accessories, such as:

- Dwellings that have limited exposure or no exposure diversity
- Homes with large south-facing glass area or rooms with unusually large glass area
- A thermally isolated solarium
- Customized internal load estimates

Manual J is sensitive to an increased variety of issues related to construction materials and methods, including:

- Fenestration loads for glass rated by the National Fenestration Rating Council
- Improved duct load models
- Improved methods for estimating the effect of internal and external shading devices, including insect screens
- Infiltration estimated based on blower door test
- Sensitivity to latitude and altitude
- Sensitivity to skylight glazing material, curb construction, and light shaft construction
- Heat-gain sensitivity to roofing material, roof color, and the use of radiant barrier
- Heat loss and gain for log walls; structural foam panels; aerated, autoclaved concrete block; insulated-form concrete panels; brick walls; concrete walls; wood foundation walls; and any other types of walls and insulation options.

Manual J references correlating manuals which are

also published by ACCA including Manual S, Residential Equipment Selection; Manual T, Air Distribution Basics; and Manual D, Residential Duct Systems. These are important because they aid the designer in picking the proper equipment for the loads established by Manual J, distribute the appropriate conditioned air to spaces throughout the home, and use ductwork that applies to the distribution and loads associated with Manual J.

Manual J is obtainable from http://www.acca.org, or by calling (703) 575-4477. If you have any questions, you may contact me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Update Fees

(reprinted from the Construction Code Communicator*, Volume 11, Number 4, Winter 1999)*

You just got an application to update an open permit -- now what do you do with it? If your municipality is like most, the only uniformity you have is your own way of handling it.

An update is an extension of the original permit. Therefore, you need to check the update to see if it still conforms with prior approvals and uses. A plan review may be (but is not always) needed. Now the big question to ask yourself is: "If the change had been on the original application, would it have changed the fee?" If your answer is no, distribute the paperwork just like any permit and file the rest. Generally, when a subcode official or technical assistant is given a filled-out technical form, their first response is to "price" it. However, there are times when no additional fee is required for a permit update. Two pricing examples follow.

The first example deals with a new building for which the fee is based on volume. If, during construction, the owner decides to add offices in an open space, there is no additional fee because the volume of the building has not changed.

The second example is electrical. If the electrician needs to add seven devices that were not on the original application, the electrical subcode official must review the original technical section to determine if an additional fee is required. The electrical fees are determined by unit rate, as indicated in the Uniform Construction Code at *N.J.A.C.* 5:23-4.18(c)3. The original permit and the update application are combined into one application; they are not regarded as separate permits. To be more specific, suppose the original application included 46 devices and the updated application added seven devices. Using the State fee schedule, $36 would have been paid on the original permit. Therefore, the updated fee would be $6 for the three devices over 50. If a fee were allowed to be charged for additional devices independent of the total number of devices, the total fee for the update would come to $36, an overcharge of $30.

The comment I often receive from code officials is, "But I have to do another inspection!" This may be true, depending on when the update occurs. Sometimes you have to do additional inspections without an update application. This may occur, for example, on a house that is being remodeled in phases because the owners are living in it; also, a large building requires numerous inspections.

Why complete an update application at all if there is no fee involved? Well, the owner may need it for insurance purposes, or the contractor may need it to get paid or to provide evidence of having completed the job. But, more importantly for code enforcement, the update ensures correct records. Accurate records allow all code officials to know what permitted work has been done in that building.

NOTE: The principal in this article applies even when the fees used in the examples change.

Source: Ken Verbos
Bureau of Regulatory Affairs

Loading Requirements for Handrails and Guards

The 2006 International Building Code (IBC) makes it really easy to figure out the minimum loading requirements for handrails and guards. Section 1012.1 (Handrails – Where Required) and Section 1013.1 (Guards – Where Required) both reference Section 1607.7, Minimum Uniformly Distributed Live Loads and Minimum Concentrated Live Loads, for adequate strength and attachment.

However, moving to the 2006 International Residential Code (IRC), Sections R311.5.6 (Handrails for Stairs), R311.6.3 (Handrails for Ramps), and R312 (Guards) are not so clear when it comes to loading requirements. This is because the IRC/2006 places minimum uniformly distributed live loads within Table R301.5 (Minimum Uniformly Distributed Live Loads). For your convenience, and as a quick reference, the loads specified in Table R301.5 for handrails and guards in the IRC/2006 are provided below.

MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS	
Use	**Load (psf)**
Guardrails and handrails[d]	200[i]
Guardrails in-fill components[f]	50[i]

Note d – A single, concentrated load applied in any direction at any point along the top.

Note f – Guard in-fill components (all those except the handrail), balusters, and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to one square foot. This load need not be assumed to act concurrently with any other live load requirement.

Note i – Glazing used in handrail assemblies and guards shall be designed with a safety factor of 4. The safety factor shall be applied to each of the concentrated loads applied to the top of the rail and to the load on the in-fill components. These loads shall be determined independent of one another and loads are assumed not to occur with any other live load.

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

Source: Rob Austin
Code Assistance Unit

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At *N.J.A.C.* 5:23-1.4, Definitions, the class of a structure is defined and *N.J.A.C.* 5:23-4.3A is referenced. So, when figuring out which "class" applies, consult *N.J.A.C.* 5:23-4.3A(d), which is summarized below. And, yes, Class I, II, and III of *N.J.A.C.* 5:23-2.15(f)1.vii are the same as Class 1, 2, and 3 of *N.J.A.C.* 5:23-4.3A(d). Because the exceptions to *N.J.A.C.* 5:23-2.15(f)1.vii only apply to Class III (Class 3), we'll only take a look there --

Class 3 agencies may perform plan review for the following buildings [*N.J.A.C.* 5:23-4.3A(d)1]:

- Business Group B less than 7,200 square feet, two stories, 40 feet high;
- Mercantile Group M less than 4,800 square feet, one story, 40 feet high;
- Storage Group S-1 less than 4,200 square feet, one story, 40 feet high;
- Storage Group S-2 less than 7,200 square feet, two stories, 40 feet high;
- Residential Group R-3, as permitted in the Building Subcode, including accessory private garages, radio and television antennas, and swimming pools; and
- Residential Group R-5, as permitted in the Building Subcode, including accessory private garages, radio and television antennas, and swimming pools.

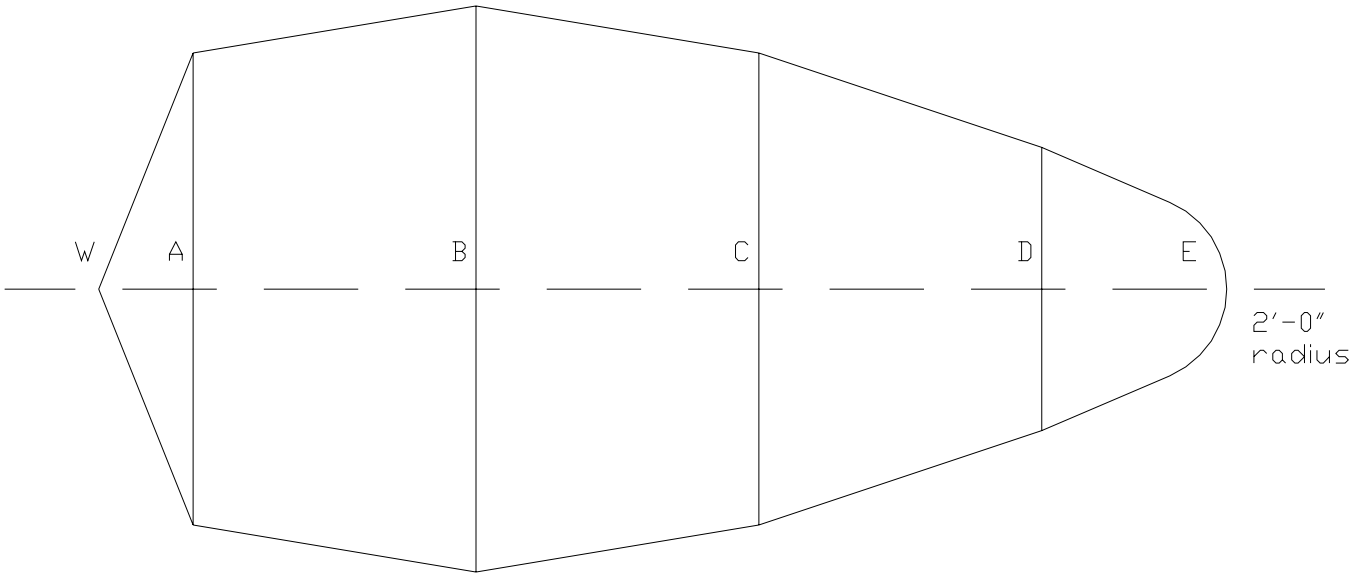
Therefore, if the project you are reviewing is a Class III/3 structure (which means it can be reviewed by a Class III/3 agency), then the plumbing plans, electrical plans, and mechanical plans may be submitted by a licensed master plumber, licensed electrical contractor, or mechanical contractor, respectively, as per *N.J.A.C.* 5:23-2.15(f)1.vii(1). Class II/2 and Class I/1 buildings/structures must be designed by registered architects or licensed professional engineers.

Source: Rob Austin
Code Assistance Unit

(continued from page 6)

dimensions are the total width; the width is expected to be symmetrical.

Pool Type	Minimum Depth at point				Minimum widths at point				Minimum lengths between points					
	A	B	C	D	A	B	C	D	WA	AB	BC	CD*	DE	WE
O	Manufactured diving equipment is prohibited													
I	6'-0"	7'-6"	5'-0"	2'-9"	10'-0"	12'-0"	10'-0"	8'-0"	1'-6"	7'-0"	7'-6"	Varies	6'-0"	28'-9"
II	6'-0"	7'-6"	5'-0"	2'-9"	12'-0"	15'-0"	12'-0"	8'-0"	1'-6"	7'-0"	7'-6"	Varies	6'-0"	28'-9"
III	6'-10"	8'-0"	5'-0"	2'-9"	12'-0"	15'-0"	12'-0"	8'-0"	2'-0"	7'-6"	9'-0"	Varies	6'-0"	31'-3"
IV	7'-8"	8'-6"	5'-0"	2'-9"	15'-0"	18'-0"	15'-0"	9'-0"	2'-6"	8'-0"	10'-6"	Varies	6'-0"	33'-9"
V	8'-6"	9'-0"	5'-0"	2'-9"	15'-0"	18'-0"	15'-0"	9'-0"	3'-0"	9'-0"	12'-0"	Varies	6'-0"	36'-9"
	* Minimum length between points may vary based upon water depth at point D and the slope between C & D.													



Are handrails required for pool stairs? NSPI-5 requires pool stairs to have a minimum unobstructed tread depth of 10 inches and a minimum unobstructed surface area of 240 square inches. However, the exception to this rule is to provide a handrail when tread depth is less than 10 inches, but no smaller than 8 inches. In short, tread depth ≥10 inches, no handrail required; tread depth <10 inches but ≥8 inches, handrail required.

Are decks/walking surfaces required? NSPI-5 does not require a deck or walking surface to be provided around an in-ground pool. However, if provided, NSPI-5 contains requirements for their installation (drainage, materials, etc.).

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

Source: Rob Austin
Code Assistance Unit

What is a Commercial Farm Building?

At *N.J.A.C.* 5:23-3.2(d), the Uniform Construction Code (UCC) has regulations that apply to commercial farm buildings. At *N.J.A.C.* 5:23-3.2(d)1, a commercial farm building is defined as "any building located on a commercial farm which produces not less than $2,500 worth of agricultural or horticultural products annually, which building's main use or intended use is related to the production of agricultural or horticultural products produced on that farm."

Commercial farm buildings do not fit into any group pursuant to the Building Subcode; they are themselves a classification. At *N.J.A.C.* 5:23-3.2(d)2, the UCC states buildings that meet the definition of commercial farm building "shall be classified as commercial farm buildings." The UCC further states, "For those provisions not covered by this section, commercial farm buildings shall comply with the construction code provisions applicable to Group S-2." The UCC does not say that commercial farm buildings are designated as Group S-2. It says that, with certain specific exceptions, commercial farm buildings meet the requirements for Group S-2.

To ensure that the classification of commercial farm buildings is well understood, the UCC contains exceptions for specific aspects of commercial farm buildings. These include provisions for pre-engineered grain bins and other storage equipment used on the farm [*N.J.A.C.* 5:23-3.2(d)3], and temporary greenhouses, also called "hoophouses" [*N.J.A.C.* 5:23-3.2(d)4]. In addition, the UCC provides standards for the amount of hazardous materials that may be stored in a commercial farm building [*N.J.A.C.* 5:23-3.2(d)5] and sets limitations on the use of commercial farm buildings as places of public assembly [*N.J.A.C.* 5:23-3.2(d)6].

If you have questions about commercial farm buildings, their classification, or specific exceptions, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development Unit

Three-Second Gust vs. Fastest-Mile Wind Speed

There seems to be a misunderstanding in the application of Table R301.2.1.3, Equivalent Basic Wind Speeds, of the 2006 International Residential Code (IRC). Prior to the publication of American Society of Civil Engineers Standard No. 7-95, most wind-related code provisions were based on the fastest-mile wind speed. Because there are documents referenced in the IRC/2006 that refer to the fastest-mile wind speed, Table R301.2.1.3 provides the conversion of the three-second gust to fastest-mile wind speed. The IRC/2006 is based on the three-second gust. All wind speeds referenced in the IRC/2006 are measured by the three-second gust, not the fastest mile.

EXAMPLE:

1. Section R301.2.1.1., Design Criteria, refers to a wind speed of 100 miles per hour or greater. This is the three-second-gust wind speed.
2. Section R301.2.1.1 refers to standards for the design of buildings with a wind speed equal to or greater than 100 mph. In the referenced standard SSTD-10 (Southern Building Code Congress International, Standard for Hurricane-Resistant Residential Construction), wind speeds are based on the fastest mile. Therefore, when using Table R301.2.1.3, you must change the wind speed from the three-second gust to the fastest mile in order to use SSTD-10.

The wind speeds obtained from Figures R301.2(4) are in three-second gust and this is the wind speed that must be used. In the standards that reference the fastest-mile wind speeds, you must change the three-second-gust wind speed obtained from Figure R301.2(4) and use Table R301.2.1.3 to convert to the fastest-mile wind speed.

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

Source: Marcel Iglesias
Code Assistance Unit

Windows 

How can you decide if the windows being installed in a house are code compliant? Windows are part of the building exterior and, like the exterior walls, must be rated for wind pressure.

How do you decide if the window that is rated for a wind pressure is the right window for a particular location? The design professional should provide documentation to indicate compliance with the 2006 International Residential Code (IRC).

Verification of code compliance is obtained by using the following table, figure, and sections of the IRC/2006: Table R301.2(2), Seismic Design Categories — Site Class D, in conjunction with Figure R301.1(7), Wall Zone 4 and 5, provided that the wind pressure the building exterior must be designed to (including windows and doors) complies with Section R613.3, Performance, as described below.

Section R613.3 of the IRC/2006 requires that exterior windows and doors be designed to resist the design wind loads specified in Table R301.2(2), adjusted for height and exposure per Table R301.2(3), Weathering Probability Map for Concrete. The IRC/2006 further requires, as per Section R613.4, Testing and Labeling, that exterior windows and sliding doors must be tested by an approved, independent laboratory, and must bear a label identifying manufacturer, performance characteristics, and approved inspection agency to indicate compliance with American Architectural Manufacturers Association/ Window & Door Manufacturers Association/Canadian Standards Association (AAMA/WDMA/CSA)101/I.S.2/A440, Standard/Specification for Windows, Doors, and Unit Skylights. Exterior, side-hinged doors are required to be tested and labeled as conforming to AAMA/WDMA/CSA101/I.S.2/A440. As an alternative, the exterior, side-hinged doors must comply with Section R613.6, Other Exterior Window and Door Assemblies.

If the windows in question meet or exceed the requirements of Section R613.3 and Table R301.2(2), and have been tested and labeled as per Section R613.4 for location, then the windows can be installed, except in wind-borne-debris regions. If a window is to be installed in a wind-borne-debris region, it must also comply with Section R301.2.1.2, Wind-Borne-Debris Protection Fastening Schedule for Wood Structural Panels, of the IRC/2006.

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

Source: Marcel Iglesias
Code Assistance Unit

New Jersey Register Adoptions

Date: July 7, 2008
Adoption: 40 *N.J.R.* 3990(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-3.14 retains the original text of the 2006 International Building Code (Section 903.3.1.2.1), and requires sprinkler protection for exterior balconies, decks, and ground-floor patios of dwelling units where the building is of Type V construction in Residential Group R buildings.

Date: July 21, 2008
Adoption: 40 *N.J.R.* 4314(b)
Summary: The adopted amendment at *N.J.A.C.* 5:23-2.18 requires that, in addition to the location, the height of the finished foundation be documented in order to identify any potential zoning violation with regard to the height of a new building before the building is constructed. The adopted amendments at *N.J.A.C.* 5:23-2.23 and 2.35 make corrections to a previous adoption to ensure that the correct technical provisions applicable to both nonresidential and residential construction are clearly identified when local code enforcement agencies are addressing problems reported by homeowners after issuance of a Certificate of Occupancy.

Date: August 4, 2008
Adoption: 40 *N.J.R.* 4523(b)
Summary: The adopted amendments at *N.J.A.C.* 5:23-1.1, 1.4, 2.22, 3.16, 4B.1, 4B.3, 4B.10, and 9.3 and adopted new rule at *N.J.A.C.* 5:23-4D establish requirements for recreational park trailers, and adopt American National Standards Institute Standard A119.5, 2005 edition, with amendments as the Recreational Park Trailer Subcode.

Date: September 15, 2008
Adoption: 40 *N.J.R.* 5195(b)
Summary: The requirement for all swimming pools to be equipped with main drain suction outlets in the lowest sections of the swimming pools was previously incorporated into the Plumbing Subcode for consistency with *N.J.A.C.* 8:26, Public Recreational Bathing. However, the requirements of *N.J.A.C.* 8:26 do not apply to swimming pools at one- and two-family residences. And because above-ground and in-ground residential swimming pools typically do not have main drain suction outlets, this amendment to *N.J.A.C.* 5:23-3.15 eliminates the requirement for main drain suction outlets for swimming pools at one- and two-family dwellings.

Date: September 15, 2008
Adoption: 40 *N.J.R.* 5195(c)
Summary: In order to clarify, and make more precise, rules concerning conflict of interest for code officials and

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inspectors, the Department of Community Affairs has made the following amendments:

N.J.A.C. 5:23-4.5(j)2 now makes it clear that a code official cannot be engaged in ownership, employment, or contracting to provide goods and services with any business furnishing labor, materials, products, or services for construction, alteration, or demolition of structures within the municipality in which he is employed or in any adjacent municipality, regardless of the location where the activity occurred.

N.J.A.C. 5:23-4.5(j)1 revises the text so as to prohibit any person employed by an enforcing agency as a construction or subcode official or as an inspector from knowingly carrying out any inspection or enforcement procedure with respect to any property or business in which he or she, or any close relative or household member, or his or her superior within the enforcing agency, or any close relative or household member of any such superior, or any other public official or employee having any direct or indirect control over the funding or operations of the enforcing agency, or any household member of any such public official or employee has an economic interest. Thus amended, the rule is consistent with the conflict-of-interest provisions of the Local Government Ethics Law.

N.J.A.C. 5:23-5.25(c) now makes it clear a determination by the Department that a licensee has engaged in conduct constituting a conflict of interest under *N.J.A.C.* 5:23-4.5(j)2 constitutes grounds for revocation of a license and that suspension is not an adequate sanction in any such case, or in any case in which a licensee is convicted either of a crime or of an offense in connection with performance as a code official or inspector.

Source: Mary Ellen Handelman
Office of Planning and Operations

NOTES



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Construction Code Communicator

State of New Jersey
Jon S. Corzine, Governor

Department of Community Affairs
Joseph V. Doria, Jr., Commissioner

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Special Alert: UCC Information and Special Alerts to be Published in the DCA Document Library

Over the years, the Department of Community Affairs has provided code clarification, subject-specific instruction, and other important information to New Jersey's licensed construction code community by way of a mass U.S. Postal Service mailing.

Be advised the Department will seize the opportunity afforded by its new UCC Information Document Library and, beginning in the very near future, will use this Document Library with e-mail alerts to provide such clarification, instruction, or otherwise important information; it will also cease its use of the traditional U.S. Postal Service mass-mailing technique.

For this reason, you *must* subscribe to the Document Library following the instructions provided in the article entitled, "Coming Soon . . . the New UCC Information Folder in the MyNewJersey Document Library: Codes and Standards' Online Reference Room," which appears elsewhere in this newsletter. Please do so at your earliest opportunity to avoid missing out on important information from the Department.

Source: Susan Woidill
Division of Codes and Standards

Residential Swimming Pools and the Plumbing Subcode

There has been some confusion regarding the latest pool and spa requirements and the new suction entrapment prevention language that is referenced in the Uniform Construction Code. In the 2006 International Residential Code (IRC/2006), Appendix G (Swimming Pools, Spas, and Hot Tubs) addresses requirements for constructing new residential swimming pools. When the IRC/2006 was adopted as the One- and Two-Family Dwelling Subcode, Section AG106, "Entrapment Protection for Swimming Pool and Spa Suction Outlets," was deleted, and was replaced with a reference to the Plumbing Subcode, *N.J.A.C.* 5:23-3.15(b)8.vi. This has resulted in confusion with regard to enforcement during the permitting and inspection process for new residential swimming pools. There has also been confusion with the way that swimming pool installers are interpreting the new requirements.

There are two key areas that should be highlighted. Residential swimming pools that are constructed with submerged suction (bottom drains) must now have two suction outlets that are at least three feet apart. These outlets must have American Society of Mechanical Engineers (ASME) -approved type covers. The pool must also have some type of atmospheric safety vacuum release system provided at the pump or pumps. The atmospheric safety vacuum release system must conform to ASME A112.19.17. To date, there

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Coming Soon . . . the New UCC Information Folder in the MyNewJersey Document Library: Codes and Standards' Online Reference Room

We will be adding a new folder to the myNewJersey Document Library, entitled "UCC Information."

What is it? The Document Library is a restricted channel on the State's myNewJersey portal; the portal is simply the platform through which the State of New Jersey provides a variety of e-government services and online information. Access to the Document Library through the portal allows us to take advantage of a technology platform that is easy to use, efficient, and most importantly secure. The UCC Information folder is a new online reference room for Uniform Construction Code (UCC) -related issues.

What will I find there? The Document Library contains folders that you have authorization to view. The new UCC Information folder will contain information about New Jersey construction code enforcement in general. It will contain current and back issues of the *Construction Code Communicator*, formal technical opinions, bulletins, and special alerts to construction code enforcement staff throughout New Jersey. And, over time, it will contain so much more.

How do I get in? These three keys will open the UCC Information folder to you: 1) you must have Internet access; 2) you must be a registered myNewJersey portal user; and 3) you must be an authorized user to access the UCC Information folder within the myNewJersey Document Library.

To request authorization to the UCC Information Document Library, please follow the instructions for the description that best fits your current employment. You will receive an e-mail invitation and instructions on how to use the system.

Working licensed officials: If you have not already provided your information through the Mutual Aid Survey, please e-mail Susan Lydon in the Office of Regulatory Affairs at slydon@dca.state.nj.us. Provide your full name, license number, e-mail address, the position(s) you currently hold, and the municipality or municipalities in which you are employed.

Licensed individuals not currently employed in code enforcement: Please e-mail the Bureau of Code Services Licensing Unit at codeslicensing@dca.state.nj.us. Provide your full name, license number, and e-mail address.

Nonlicensed individuals: Please e-mail codesandstandards@dca.state.nj.us, and provide your full name, e-mail address, and interest in UCC Information.

Note: If you are already a *PermitsNJ* user, you have access to the myNewJersey Portal and the myNewJersey Document Library, but you must obtain an authorization code to gain access to the UCC Information folder. You do not need to request this authorization code. We will be sending an authorization code to all current *PermitsNJ* users when the new UCC Information folder is available.

Source: Susan Woidill
Division of Codes and Standards

Final Payment – Contractual Matter

In response to a multitude of calls regarding the reference to *N.J.A.C.* 13:45A-16.2(a)10.ii on the back of Uniform Construction Code (UCC) Form F180, Construction Permit Notice, the following is the actual wording of the regulation from the New Jersey Department of Law and Public Safety, Division of Consumer Affairs:

> Where midpoint or final inspections are required under State laws or local ordinances, copies of inspection certificates shall be furnished to the buyer by the seller when construction is completed and before final payment is due, or the signing of a completion slip is requested of the buyer.

Final payment is a contractual matter. The notice simply advises the owner that final payment is not required until the job has passed final inspection.

If you have questions regarding the UCC requirements, you may contact me at (609) 984-7609. If you have questions regarding Consumer Affairs' requirements, you may contact them at (888) 656-6225 or (973) 504-6370.

Source: Rob Austin
Code Assistance Unit

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are a number a different types of devices that are approved. If the residential swimming pool is constructed without submerged suction outlets, it is not required to be equipped with an atmospheric safety vacuum release system.

An exception to *N.J.A.C.* 5:23-3.15(b)8.vi of the Plumbing Subcode, paragraph 7.23.4.1 of the National Standard Plumbing Code (which was adopted on September 15, 2008) states: "Swimming pools installed in or on the lots of one- or two-family dwellings" are not required to be equipped with main-drain suction outlets in the lowest point of the swimming pool floor.

A permit application for a residential swimming pool with bottom suction drains must include plumbing, building, and electrical technical sections. The plumbing inspector is responsible for the inspection of the bottom suction drains, the vacuum release system, and the pool heater (if one is being installed). If there are no bottom drains and no vacuum release system or pool heater, then a plumbing technical section is not required.

I hope that this article clears up some of the confusion with these new pool requirements.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Clothes Dryers -- Residential (Type 1) Combustion Air

The 2006 International Residential Code (IRC/2006), Section G2407.1, General, and the 2006 International Fuel Gas Code (IFGC/2006), Section 304.1, General, require air for combustion, ventilation, and dilution of flue gases for appliances installed in buildings.

In the IRC/2006 and IFGC/2006, an exception was added for Type 1 clothes dryers that are provided with make-up air in accordance with Section G2439.4 (IRC), Make-Up Air, and Section 614.5 (IFGC), Make-Up Air. Section 614.5 (IFGC/2006) states: "Installations exhausting more than 200 cfm shall be provided with make-up air. Where a closet is designed to allow for the installation of a clothes dryer, an opening having an area of not less than 100 square inches for make-up air shall be provided in the closet enclosure, or make-up air shall be provided by other approved means."

Because the exception for Type 1 clothes dryers requires only make-up air, the requirement for two openings in a wall for combustion air does not apply. The exception recognizes that clothes dryers receive the required combustion air from the make-up air that compensates for the exhaust air from the appliance.

Therefore, if a clothes dryer is located in a closet or room where there is no other gas- (or oil-) fired appliances or equipment, only one opening of not less than 100 square inches is required. A louvered door with a minimum opening of not less than 100 square inches meets the requirements for combustion air and make-up air.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Hot Topics

In this technological age, we are becoming more and more dependent on the Internet. The Division of Codes and Standards is also relying more and more on the Internet to get pertinent information out to the public, especially our licensed code officials and inspectors.

Information regarding hot topics that affect the Uniform Construction Code (UCC) have been placed on the Division's website and I invite you to take a look at them. A brief explanation of some of the hot topics is provided below. However, please visit http://www.nj.gov/dca/codes to view all the information.

SPECIAL INSPECTOR CERTIFICATION

On November 6, 2006, the Department of Community Affairs adopted rules establishing requirements for the certification of special inspectors. The effective date of the rules is November 6, 2008. [See *N.J.A.C.* 5:23-5.4(f).] These requirements are now in effect. No permit may be issued for any project requiring special inspections unless the names and certifications of those performing the special inspections are provided.

The website listed above includes the letter to construction officials (November 2008), the special inspector rules, the provisional certification application, the special inspector information booklet, the special inspector application, and a list of certified special inspectors.

OUTDOOR WOOD BOILERS

Some issues have arisen with regard to outdoor wood boilers. For instance, county health departments,

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CSST Bonding Follow-Up

Since there appears to be continued confusion on bonding of gas piping, specifically Corrugated, Stainless-Steel Tubing (CSST), this article expands upon the Winter 2007 *Construction Code Communicator* article, "CSST Bonding – What is Required?" and Section 250.104(B), Other Metal Piping, of the 2005 National Electrical Code (NEC/2005).

Section G2411.1 of the 2006 International Residential Code (IRC/2006), Gas Pipe Bonding, which applies to Group R-5 occupancies, and Section 310.1 of the 2006 International Fuel Gas Code (IFGC/2006), Gas Pipe Bonding, which applies to all occupancies other than Group R-5, state the following:

> Each above-ground portion of a gas piping system that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. Gas piping shall be considered to be bonded when it is connected to appliances that are connected to the equipment grounding conductor of the circuit supplying that appliance.

Referenced model codes supersede the manufacturer's recommendations. Therefore, contrary to some manufacturers' installation recommendations, the above sections prevail. No additional bonding is required where there is electrical connection to any gas appliance; the grounding conductor serves as the bonding means of a gas piping system. If the installation meets the manufacturer's recommendations for bonding, this would be considered above code requirements and acceptable.

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

Source: Rob Austin and Suzanne Borek
Code Specialists

Gas Water Heaters Recalled

In an April 3, 2008 release, the United States Consumer Product Safety Commission (CPSC), in cooperation with A. O. Smith and State, water heater manufacturers, has announced a voluntary recall of approximately fifteen hundred 75-gallon natural and propane gas water heaters. The flue gas temperatures on these water heaters can exceed safe limits and produce excessive temperature in the venting unit, which poses a fire hazard. Also, the exhaust from the water heater can leak into the surrounding room, which poses a carbon-monoxide hazard.

The recalled water heaters involve A. O. Smith Model No. FCG-75 300 and FCG-75 301, Serial Numbers L07A071460 through L07A144966, and State Model No. GS6 75 XRR S and GS6 75 CRR S, Serial Numbers M07A009387 through M07A072884. Model and serial numbers are printed on the water heater's rating plate. The recalled water heaters were sold by independent contractors and plumbers nationwide from November 2007 through January 2008.

The CPSC recommends that consumers immediately stop using the recalled water heaters and contact the manufacturer at (866) 880-4661, or visit the firm's website at http://www.hotwater.com, to arrange for a free repair.

This notice is just to inform code officials that if, for example, they are inspecting a furnace or boiler replacement, they may take notice of the existing water heater and, if any of the recalled water heaters are installed, advise the building owner that there is a recall on these heaters, and provide the owner with information on how to contact the company for a free repair. Of course, this is voluntary on your part.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

The U.S. Census Bureau's Monthly Building Permits Survey: A Leading Economic Indicator of the Construction Industry

To monitor the health of our nation's economy, one of the most watched statistics is the Index of Leading Economic Indicators, published by The Conference Board. There are ten data series that are used to compile this index, one of which is building permits authorized for new privately-owned, residential construction.

The data provided to the Census Bureau, either through paper reports or electronic data submissions, are essential to the calculation of accurate estimates of new residential construction. In addition, these data are used to calculate local population estimates between censuses and are used by many others for a variety of purposes, such as companies deciding where to build their next plant or store, academic researchers, etc.

We would like to express our deep gratitude to the municipalities in New Jersey in providing these data.

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acting under the authority of the New Jersey Department of Environmental Protection (DEP), have ordered residents with existing outdoor wood boilers to remove them. This is because the DEP issued a compliance advisory regarding outdoor wood boilers and concern with the smoke emission provisions of DEP's rules at *N.J.A.C.* 7:27-3. The Division is reaching out to the DEP to get some clarification and guidance for those who have or who want to install outdoor wood boilers.

Please visit the website for the letter to construction officials (November 2008) regarding the rules and regulations for outdoor wood boilers. We will be updating/adding information as it comes to us.

PERMIT EXTENSION ACT OF 2008

On September 6, 2008, Governor Jon S. Corzine signed the "Permit Extension Act of 2008," P.L. 2008, c. 78. This law, like a similar law passed in 1992, was passed in response to the economic downturn, which has slowed construction. The law extends the period in which UCC permits and approvals are valid. In short, the Permit Extension Act stops the clock on the expiration of approvals during the "extension period," which is defined as January 1, 2007 through July 1, 2010. This means that any UCC permit that was valid as of January 1, 2007 will still be valid on July 1, 2010. However, the Act does have exclusions.

Please visit the website for the information sent to construction officials in September 2008. For example, the information contains examples of the Act's application to UCC permits, lists the types of permits/projects that are included and those that are excluded, and further clarifies the definition of "environmentally sensitive area."

PARK MODEL GUIDANCE

The Recreational Park Trailer Subcode (*N.J.A.C.* 5:23–4D) was adopted on August 4, 2008 and addresses the construction requirements for recreational park trailers. Please visit the website for the guidance document that provides information about permit applications, field inspections, additions, existing units, existing additions, and removal of a recreational park trailer.

Again, the Division's website address is http://www.nj.gov/dca/codes. Typically, the most recent information is in the first column under the heading "Announcements."

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

Source: Rob Austin
Code Assistance Unit

With Every New Holiday, Kiosks are Aplenty!

Kiosks tend to sprout up all over enclosed mall buildings with every change of a holiday season. Please keep in mind, as per the Uniform Construction Code (UCC), permanent kiosks are required to meet the requirements of Section 402.10, Kiosks, of the 2006 International Building Code. Temporary kiosks are required to meet these requirements when the kiosk (1) covers an area 120 square feet or more, including all connecting areas or spaces with a common means of egress or entrance; and (2) remains in place for 180 days or more [*N.J.A.C.* 5:23-2.14(b)4.i]. If the temporary kiosk does not meet the two criteria above, then it is subject to the Uniform Fire Code (UFC).

Kiosks that are subject to the UCC must be reviewed and inspected per *N.J.A.C.* 5:23-3.4(a)1, Responsibilities; plan review is performed by building and fire subcode officials, and inspections are performed by the building subcode official. Kiosks that are subject to the UFC are to be reviewed and inspected by the local fire official.

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

Source: Rob Austin
Code Assistance Unit

Photoluminescent Exit Signs -- Revisited



This is a follow-up article to one written in the *Construction Code Communicator*, Winter 2004, Volume 16, Number 3. In this article, the analysis and advice are updated.

The 2000 edition of the International Building Code (IBC/2000) contained requirements for the installation of externally illuminated exit signs. Section 1003.2.10.4 of the IBC/2000, entitled "Exit Sign Illumination," stated that exit signs must be internally or externally illuminated. This code section went on to require that the face of an exit sign must be illuminated from an external source and must have an intensity of illumination of not less than five foot-candles. Next, Section 1003.2.10.5 of the IBC/2000, entitled "Power Source," required exit signs to be illuminated at all times. To ensure this, the exit sign illumination source was required to be connected to an emergency electrical system provided from storage batteries, unit equipment, or an on-site generator; this would ensure continued illumination for not less than 90 minutes in the event of primary power loss. However, there was an exception to this requirement: approved, self-

(continued on page 8)

Type 1 Hoods and Fire-Suppression Systems

It is stated in both the International Mechanical Code (IMC) and International Fire Code (IFC) that Type 1 hoods and associated fire-suppression systems are required above all cooking appliances that are used for ***commercial purposes***, and that produce grease-laden vapors. These requirements can be found in the IMC/2006, Section 507.2 and the IFC/2006, Section 609.2.

So what does this mean? There is no question that cooking operations are inherently hazardous and increase the chance of fires. However, we must balance the need for Type 1 hoods and fire-suppression systems with the purpose of the cooking operation.

Recently, there have been several inquiries regarding residential ranges being installed in educational institutions and special-needs training facilities to teach students/clients how to cook in the home setting. This operation **would not** require a Type 1 hood and associated fire-suppression system.

However, if commercial cooking equipment is being installed or residential cooking equipment is being installed with the intent of being utilized for a commercial purpose, then the code is clear, and a Type 1 hood and associated fire-suppression system should be installed.

Source: Carmine Giangeruso
Construction Official
Office of Regulatory Affairs

Protection of Adjoining Property

N.J.A.C. 5:23-2.15(f)1.i(1) and *N.J.A.C.* 5:23-2.34 require that, when a building or structure is built or rehabilitated, the adjacent building or structure must be protected from possible damage caused by the work on the other building or structure. Here is some guidance on how to proceed.

1. **How do we protect the existing adjacent footing from the new footing?**
   Adjoining footings are addressed in the 2006 International Residential Code (IRC/2006) and 2006 International Building Code (IBC/2006). Section R301.1.3 of the IRC/2006 allows for design in accordance with engineering practice or the IBC/2006 where a building contains structural elements not conforming to the IRC/2006. Section 1805.2.2 of the IBC/2006 addresses adjoining footings.

(continued from page 4)

Your State is using cutting-edge technology by capturing most of this information electronically and transmitting it to the Census Bureau.

Our loss of personal contact with each local permit office is a down-side to electronic data collection. Ordinarily, questions we have about a completed survey form are asked directly of the person submitting that form. With a large electronic system, that is not so easy.

We want to bring to your attention a reporting issue that can adversely affect this data. Many local jurisdictions (not just in New Jersey) are issuing individual permits for each housing unit in a multifamily building. When each permit is reported separately, units are often incorrectly classified as single family. More significantly, the total units in the structure are occasionally reported each time another unit is authorized, creating a very large overestimate in the multifamily category.

This has been acknowledged in the *Construction Code Communicator* (Volume 20, Number 1), where it was observed in the article, "Multiple Permits for Multiple Dwellings Means Multiple Mistakes," that this practice "overstates the number of authorized dwellings in the municipality, a critical construction indicator — one that is used to determine affordable housing obligations."

In order to publish accurate building permit data, when the initial building permit is authorized, we need to know the total number of units that will be in a multifamily building. These same units should not be counted again.

If you need assistance in reporting these data, please contact John Lago, Division of Codes and Standards, Department of Community Affairs at (609) 292-7898.

Source: Dan Sansbury
Assistant Division Chief
Construction Indicator Programs
U.S. Census Bureau

and

Annetta M. Titus
Survey Statistician
Residential Construction Branch
U.S. Census Bureau

(continued on page 9)

National Certification of Construction Code Professionals Now Available from IAPMO

On December 31, 2008, the six-year-long agreement between the National Certification Program for Construction Code Inspectors (NCPCCI) and the International Code Council (ICC) expires. This means that the ICC will accept only results from ICC examinations and will no longer accept NCPCCI score reports for issuing ICC certificates for code enforcement professionals.

However, those who take code enforcement examinations through NCPCCI may obtain national certificates through the International Association of Plumbing and Mechanical Officials (IAPMO). Code enforcement professionals do not need to be members of IAPMO to obtain their national certification.

The chart below will assist in determining the NCPCCI examination required for each IAPMO certification.

Commercial Inspection	NCPCCI Exam	Inspection	NCPCCI Exam	Code Official	NCPCCI Exam
☐ Commercial Building Inspector	1B, 3B	☐ Building Inspector	1A, 1B, 3B	☐ Building Code Official	1A, 1B, 3B, 1C, 3C, CBO
☐ Commercial Electrical Inspector	2B	☐ Electrical Inspector	2A, 2B	☐ Electrical Code Official	2A, 2B, 2C, CBO
☐ Commercial Mechanical Inspector	4B	☐ Mechanical Inspector	4A, 4B	☐ Mechanical Code Official	4A, 4B, 4C, CBO
☐ Commercial Plumbing Inspector	5B	☐ Plumbing Inspector	5A, 5B	☐ Plumbing Code Official	5A, 5B, 5C, CBO
☐ Commercial Combination Inspector	1B, 2B, 3B, 4B, 5B	☐ Combination Inspector	1A, 2A, 4A, 5A, 1B, 2B, 3B, 4B, 5B	Score reports documenting eligibility must be less than 3 years old. IAPMO certifications issued under this program are based on the International Codes, as well as other applicable codes. Complete an application for IAPMO Personnel Certification based on NCPCCI examinations, and submit it along with a copy of your passing score report and the applicable fee. Receive an IAPMO certificate and wallet card after completing the certification application process. Additional information is available for the NCPCCI exams at http://www.prometric.com/ncpcci and for IAPMO certifications based on the Uniform Codes at http://www.iapmo.org/Pages/GetCertified.aspx.	
☐ Elevator Inspector	6B				
Residential Inspection		**General Plans Examination**			
☐ Residential Building Inspector	1A	☐ Building Plans Examiner	1B, 1C, 3B, 3C		
☐ Residential Electrical Inspector	2A	☐ Electrical Plans Examiner	2B, 2C		
☐ Residential Mechanical Inspector	4A	☐ Mechanical Plans Examiner	4B, 4C		
☐ Residential Plumbing Inspector	5A	☐ Plumbing Plans Examiner	5B, 5C		
☐ Residential Combination Inspector	1A, 2A, 4A, 5A	☐ Combination Plans Examiner	1C, 2C, 3C, 4C, 5C		

Those code enforcement professionals who would like to obtain a national certificate issued by IAPMO may contact Kathy Maka, Personnel Certification Program Manager, at kathy.maka@iapmo.org.

Source: Emily W. Templeton
Code Development Unit

Nonmetallic-Sheathed Cable Installations

The Division of Codes and Standards is still receiving many questions regarding the installation requirements of nonmetallic-sheathed cable in Article 334 of the 2005 National Electrical Code (NEC). The confusion lies between the NEC/1999 and the NEC/2002. Here, a change was made in the "uses permitted" section eliminating the height limitation in the NEC/1999, and associating the installation with building occupancy and construction types in the NEC/2002. (This remains true for the NEC/2005 and NEC/2008.) With the exception of one- and two-family dwellings of any construction type, all buildings are required to be Type III, IV, or V construction provided the nonmetallic-sheathed cable is concealed in multifamily dwellings, or is provided with a thermal barrier that has at least a 15-minute finish rating (e.g., typical Sheetrock) for all other buildings.

The question that remains is what are Types III, IV, and V construction? Type III is masonry exterior walls, Type IV is heavy timber, and Type V is conventional wood-framed lumber.

In short, since the adoption of the NEC/2002 (May 5, 2003), buildings of any size or shape have been permitted to have nonmetallic-sheathed cable installed as long as they are Type III, IV, or V construction.

Note: For the specifics on uses permitted and uses not permitted for nonmetallic-sheathed cable, please visit Sections 334.10 and 334.12, respectively, as amended by *N.J.A.C.* 5:23-3.16.

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

Source: Rob Austin and Suzanne Borek
Code Assistance Unit

(continued from page 5)

luminous exit signs that provided continuous illumination independent of external power sources for no less than 90-minutes in case of primary power loss were acceptable.

The IBC/2006 contains similar code requirements that allow the installation of externally illuminated exit signs. Section 1011.5 of the IBC/2006, entitled "Externally Illuminated Exit Signs," states that externally illuminated exit signs must comply with the requirements of 1011.5.1 through 1011.5.3. Section 1011.5.1, entitled "Graphics," contains requirements for the lettering on the sign; Section 1011.5.2, entitled "Exit Sign Illumination," requires that five foot-candles of light be present at the face of the sign; and Section 1011.5.3, entitled "Power Source," requires that the sign be illuminated at all times and at least 90 minutes after primary power failure. Section 1011.5.3 requires the power supply for the sign to be connected to an emergency power supply. As in the 2000 code, there is an exception for self-luminous signs that provide continuous illumination independent of the external power source. Photoluminescent exit signs will glow for up to 65 hours after an external power source failure; thus, this exception allows the use of photoluminescent signs.

The manufacturers of photoluminescent exit signs specify that these signs require exposure to a minimum of five foot-candles of light for an hour to become fully operational. The signs require an unfiltered fluorescent light with the intensity of five foot-candles be present, 24 hours a day, seven days a week. The external illumination power source must be reliable and not on a circuit controlled by an automatic timer. The photoluminescent exit signs should only be installed inside and should not be exposed to direct sunlight, moisture, or temperatures outside the range of 50 to 104 degrees F. The manufacturers' installation instructions include information about periodic inspections. Uniform Construction Code officials are not responsible for these periodic inspections because maintenance inspections are performed by Uniform Fire Code officials.

These signs are permitted provided the installation meets all of the code requirements and the manufacturer's installation instructions.

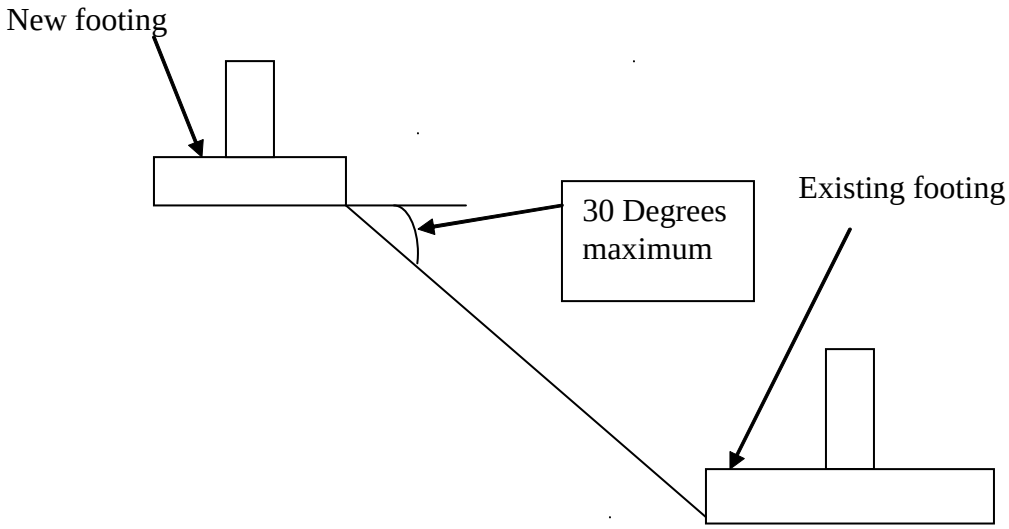
Should you have any questions, you may contact either of us at (609) 984-7609.

Source: Suzanne Borek and Michael Whalen
Code Assistance Unit

(continued from page 6)

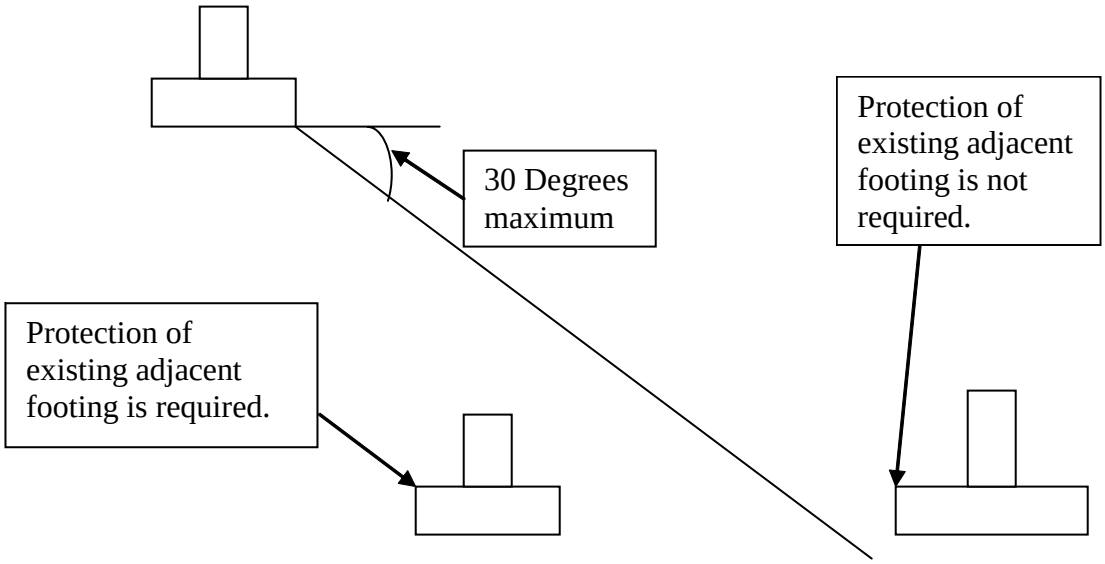
Compliance with *N.J.A.C.* 5:23-2.15(f)1.i(1) can be accomplished with the placement of the new foundation at a strategic place. If you draw a line between the lower edges of the adjoining footing, the slope cannot be steeper than 30 degrees with the horizontal. See Sketch A below:

A.



When the slope is less than 30 degrees, you do not need to protect the adjacent footing. Otherwise, protection is required. See Sketch B below:

B.



2. How do we protect existing buildings with a lower roof from drifting snow off a new, taller building?

Drift snow is addressed in the IRC/2006 and IBC/2006. Section R301.1.1 of the IRC/2006 allows for alternative design in compliance with engineering practice or with the IBC/2006. The IRC/2006 does not directly address drift snow. Therefore, engineering practice or the IBC/2006 requirements for drift snow are applicable to all buildings. Section 1608 of the IBC/2006 references Chapter 7 of American Society of Civil Engineers (ASCE) Standard 7 – 2005 for snow loads. Section 7.7 of ASCE 7 – 2005 addresses drift snow on lower roofs.

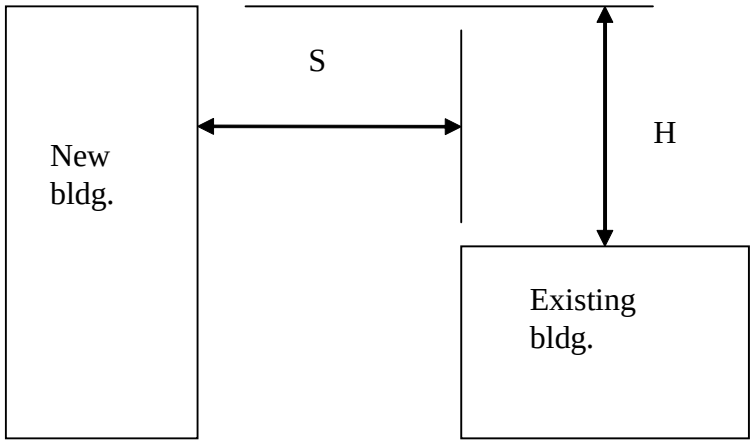
The designer can set the buildings' exterior walls 20 feet or greater apart, so that drifting snow will not impact the adjacent building's structural system and components, regardless of differential height. For those buildings that are

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within 20 feet of each other, the designer has options on how to analyze and design for snow drift loads. 1) The designer can analyze the existing building for the additional loads due to snow drift, and reinforce the structural system and components as required. Or, 2) the designer can use the relationship of separation distance and differential height of the buildings. Using this option of separation distance and differential height, one can draw the following conclusion. When the differential height of the taller, new building to the shorter, existing building is equal to or less than the separation distance, then snow drift need not be considered. Otherwise, drift snow impacts the structural system and components of the existing building. The structural system and components of the existing building must be analyzed, and corrective measures taken if necessary. See Sketch C below:

C.



If S = H or > H, snow drift need not be considered.

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

Source: Marcel Iglesias
Code Assistance Unit

Swimming-Pool Barriers Revisited

Many of you may remember the confusion created when the 1993 Building Officials and Code Administrators National Building Code was amended to include requirements for swimming-pool barriers. There have been many telephone calls made, letters written, and *Construction Code Communicator* articles published on this topic.

After hours of debate, this article is intended to clarify one of the more contentious issues that has arisen: "Is it permissible to share a swimming-pool barrier with my neighbor?"

The opinion of the Department is "Yes." It is permissible to share a swimming-pool barrier, provided the local authority having jurisdiction grants a variation to do so. The variation should include a statement from the fence owner acknowledging use of his fence as a swimming-pool barrier and a statement from the pool owner acknowledging his responsibility to install a compliant barrier should the neighbor remove his fence for any reason. The barrier should not be climbable, as per code, from the side away from the swimming pool; and if there is a swimming pool on both sides of the barrier, the barrier should not be climbable from either side.

This should solve many of the problems before us as code officials on the subject. We believe this solution is reasonable and protects the public at the same time. Should you have any questions on this article, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Sound Transmission

Section 1207 of the 2006 International Building Code (IBC/2006) contains sound transmission requirements. The Code Assistance Unit has received many telephone calls as to where these requirements are located within the 2006 International Residential Code (IRC/2006). When in doubt, check the appendices! Just as the swimming-pool barrier requirements are in Appendix G, the sound transmission requirements are in Appendix K of the IRC/2006. The sound transmission section/appendix from both codes is essentially the same. Here's a quick synopsis:

- Common interior walls, partitions, and floor/ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public areas such as halls, corridors, stairs, or service areas are to meet a specified Sound Transmission Class (STC) and Impact Insulation Class (IIC).
- Air-borne sound: IBC/2006 requires an STC rating of not less than 50 (45 if field tested) when tested in accordance with American Society for Testing and Materials (ASTM) Standard E90; IRC/2006 requires an STC rating of not less than 45.
  - → More specifically, the STC rating is to be maintained at penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating, or exhaust ducts are to be sealed, lined, insulated, or otherwise treated. (This requirement does not apply to dwelling unit entrance doors; however, such doors are to be tight fitting to the frame and sill.)
- Structure-borne sound: IBC/2006 requires an IIC rating of not less than 50 (45 if field tested) when tested in accordance with ASTM E492; IRC/2006 requires an IIC rating of not less than 45.

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

Source: Rob Austin
Code Assistance Unit

New Jersey Register Adoptions

Date: November 3, 2008
Adoption: 40 *N.J.R.* 6437(b)
Summary: The adopted amendments at *N.J.A.C.* 5:23-5.3, 5.19G, and 5.23B establish new categories of special inspectors who will be required to perform field inspections for structural welding, structural steel and bolting, concrete placement, reinforced concrete, and prestressed concrete, and the applicable sections of the Building Subcode for which each special inspector is responsible. In addition, this rule change establishes the required education, experience, and certifications that will be required.

Date: November 3, 2008
Adoption: 40 *N.J.R.* 6439(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-5.25 addresses the revocation of licenses and alternative sanctions. Since there was not an intermediate penalty between the 60-day suspension period and the revocation of a license for a construction official, a subcode official, or an inspector, the 60-day limitation was eliminated so that an appropriate suspension period could be imposed. This rule change also requires that any conduct for which the Department of Community Affairs seeks to impose sanctions must have occurred within the past ten years.

Date: November 17, 2008
Adoption: 40 *N.J.R.* 6540(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-3.15 addresses fire department (Siamese) connections in the Plumbing Subcode. The Plumbing Subcode was changed to revert to the language in the 2003 National Standard Plumbing Code to permit the installation of a double check valve assembly on a fire-protection system, which includes a fire department (Siamese) connection, where the system is supplied from a potable water system and is located more than 1,700 feet from a non-potable water supply; it also requires a reduced pressure zone (RPZ) backflow preventer on a system where a non-potable water supply system is located within 1,700 feet of a non-potable water supply. Lastly, minor changes were made to update the edition of an American Society of Mechanical Engineers (ASME) and American Society of Heating, Refrigerating, and Air-Conditioning Engineers referenced standard.

Date: December 15, 2008
Adoption: 40 *N.J.R.* 6958(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.7, 2.17A, 6.8, 6.9, 12.1, 12.2, 12.3, 12.4, 12.8, and 12.12 address the adoption of ASME standards and alterations to elevators in the Elevator Safety Subcode. With the adoption of the 2006 International Building Code, the referenced elevator standards were updated. Also, the Rehabilitation Subcode (*N.J.A.C.* 5:23-6) and the Elevator Safety Subcode (*N.J.A.C.* 5:23-12) were updated.



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Spring 2007

Air Leakage and the Building Envelope

There are many sources of air leakage in a building thermal envelope. Typically, people think of recessed luminaires in a ceiling assembly below an attic space (conditioned space vs. unconditioned space), which is addressed specifically in Section 502.4.7 of the International Energy Conservation Code (IECC) 2006. However, there are many other locations in a building envelope that are considered an air leakage problem. Section 402.4.3 of the IECC/2006 follows, for your convenience:

402.4.3 Recessed Lighting
Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces by being:

1. IC-rated and labeled with enclosures that are sealed or gasketed to prevent air leakage to the ceiling cavity or unconditioned space; or
2. IC-rated and labeled as meeting American Society for Testing and Materials Standard E283 when tested at 1.57 psi (75 Pa) pressure differential with no more than 2.0 cfm (0.944 L/s) of air movement from the conditioned space to the ceiling cavity; or
3. Located inside, and labeled for an airtight sealed box with clearances of at least 0.5 inch (12.7 mm) from combustible material and 3 inches (76 mm) from insulation.

Air leakage in a building envelope can be minimized in many ways. Openings and penetrations are required to be sealed with caulking materials, or closed with a gasketing system compatible with the construction materials. Joints and seams are required to be sealed in the same manner, or taped or covered with moisture vapor-permeable wrapping material. Keep in mind, sealing materials spanning joints should allow for expansion and contraction.

Here's an example of when air leakage needs to be minimized: The exterior wall of a house is insulated to create a portion of the building envelope. This wall is covered with a moisture vapor-permeable house wrap on the exterior for joints and seams. The batt insulation used has a moisture vapor retarder, as per Section R318 of the International Residential Code 2006, installed against the interior drywall. However, there are some receptacles and light switches installed in the interior of this wall. Where the backing of the insulation or moisture vapor retarder is penetrated by the device box, a gasketed cover is required. (Typically, this is an exterior wall issue; however, an example of an interior wall where this would apply is an interior wall between a conditioned house and an unconditioned garage.)

Note: For projects under the previous Energy Subcode, Section 502.3.3 of the Council of American Building Officials Model Energy Code 1995 would apply in the same manner.

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

Source: Rob Austin
Code Assistance Unit

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Use of a Backflow Preventer in Boiler Applications 

The Department of Community Affairs (DCA) has been receiving many calls pertaining to the requirement for a check valve in the domestic water supply for the boiler water makeup, in addition to the backflow preventer as required by the Plumbing Subcode. The check valve violation is being issued by an insurance company's inspector or by an inspector from the New Jersey Department of Labor and Workforce Development, Bureau of Boiler and Pressure Vessel Compliance (BB&PVC.)

A check valve and stop valve or cock are required by the American Society of Mechanical Engineers (ASME) standard, which is referenced through *N.J.A.C.* 12:90, Boilers, Pressure Vessels, and Refrigeration Compliance Regulations. ASME Section IV, HG-705(a) and (b), states that a check valve must be installed in the boiler water makeup system supply line. Also, a stop valve or cock must be installed between the check valve and the boiler. The ASME standard is enforced by the BB&PVC.

The BB&PVC has determined that a standard backflow preventer, as required by the Plumbing Subcode, would not prevent the backflow of water from a boiler into the potable water system due to the fact that the seats on the backflow preventer check valves would not be able to withstand the high-temperature hot water from the boiler should there be a break in the water supply system which would cause a back siphonage from the boiler into the potable water system. Typically, backflow preventers are rated at 140 degrees to 180 degrees Fahrenheit. Check valves are rated at 250 degrees Fahrenheit. The ratings of the backflow preventers and check valves were verified through the manufacturer of the devices.

Also, with the use of a reduced-pressure backflow preventer assembly, should the check valve in the backflow preventer fail due to the high-temperature water backflow from the boiler, the backflow would discharge through the relief vent, which puts the boiler at risk for a dry-firing condition and could result in a catastrophic failure or a boiler explosion. This would also apply to a double check valve assembly should the assembly check valves fail due to the high-temperature water which would backflow into the potable water supply.

DCA-licensed plumbing subcode officials are to ensure that the proper required backflow preventer is installed on the potable water supply for a boiler water makeup, per the Plumbing Subcode. The plumbing subcode official should not approve the installation unless the proper additional check valve and stop valve or cock are installed in the boiler water makeup supply, as required by *N.J.A.C.* 12:90 through ASME, which is enforced by the BB&PVC. During the plan review stage and during your inspection of a boiler which would be regulated by the BB&PVC, you should bring to the attention of the contractor that an additional check valve and stop valve or cock will be required per the *N.J.A.C.* 12:90 regulations in order to pass the BB&PVC inspection.

If you notice any problems, please report them to Milton Washington, Chief of the BB&PVC, at (609) 292-2921.

To help DCA inspectors, the following is the text of the scope of the BB&PVC regulations, which are found at *N.J.A.C.* 12:90-4:

N.J.A.C. 12:90-4.1(b) This subchapter shall not apply to:

1. Steam boilers having adequate relief devices set to discharge at a pressure not greater than 15 psig when such boilers serve buildings of less than six dwelling units or other dwellings with accommodations for less than 25 persons;
2. Hot-water boilers having relief devices set to discharge at a pressure not greater than 160 psig and hot-water boilers limited to temperatures not exceeding 250 degrees Fahrenheit when such boilers serve buildings of less than six dwelling units or other dwellings with accommodations for less than 25 persons;
3. Any steam or hot-water boiler having less than 10 square feet of surface;
4. Any steam or hot-water boiler having a heat input of less than 10 kilowatts or less than 40,000 BTU per hour;
5. Any steam or hot-water boiler under the jurisdiction and control of the United States Government when actively regulated by a federal agency; and
6. Any steam or hot-water boiler used solely for the propulsion of a motor vehicle regulated by the Motor Vehicle Act, Title 39 of the Revised Statutes.

The *Construction Code Communicator* is published three times a year by the New Jersey Department of Community Affairs. Editor: Emily Templeton. Layout and design: Mary Ellen Handelman. Address: Division of Codes and Standards, New Jersey Department of Community Affairs, 101 South Broad Street, Post Office Box 802, Trenton, New Jersey 08625-0802. Address changes and subscription requests may be directed to the *Publications Unit*. Comments and suggestions should be sent to the attention of the *Code Development Unit*.

As stated above, these regulations do not apply to boilers in buildings with fewer than six dwelling units.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Determining the Fixture Count

Determining the population for the plumbing fixture requirement is one of the most frequently asked questions the Code Assistance Unit receives from architects, engineers, and code officials. This article is an effort to try to clear up some of the confusion there seems to be with determining the population count and the number of plumbing fixtures required by the National Standard Plumbing Code (NSPC). [NOTE: See accompanying article on "use group" designations in the NSPC 2006 and the International Building Code (IBC) 2006.]

- NSPC 2006, Section 7.21.2, Occupant Load, states that "The minimum number of plumbing fixtures shall be based on the number of persons to be served by the fixtures, as determined by the person responsible for the design of the plumbing system."

This section makes it clear that the design professional is responsible for determining the number of persons to be served by the fixtures. If the design professional knows the actual number of persons that will occupy the building, that number can be used to determine the number of plumbing fixtures.

- NSPC 2006, Section 7.21.2.b states that "Where the occupant load is not established and is based on the egress requirements of a building code, the number of occupants for plumbing purposes shall be permitted to be reduced to two-thirds of that for fire- or life-safety purposes."

Paragraph b states that, if the occupant load is based on the building code egress calculations of the number of persons per square foot permitted for that use, the egress number can be reduced by two-thirds for the purpose of determining the plumbing fixture count.

- NSPC 2006, Section 7.21.2.c states that "Whenever both sexes are present in approximately equal numbers, the total occupant load shall be multiplied by 50 percent (changed from 60 percent in the 2003 NSPC) to determine the number of persons of each sex to be provided for, unless specific information concerning the percentage of male and female occupants is available."

As paragraph c states, if the percentage of male and female occupants is NOT known, the 50 percent rule applies.

- NSPC 2006, Section 7.21.4, Separate Facilities, includes Exceptions (2), (3), and (4). Exception (2) states that "In occupancies serving 15 or fewer people (changed from 10 in the 2003 NSPC), one toilet facility, designed for use by no more than one person at a time, shall be permitted for use by both sexes." Exception (3) states that "In business occupancies with a total floor area of 1500 square feet or less, one toilet facility, designed for use by no more than one person at a time, shall satisfy the requirements for servicing customers and employees of both sexes." Exception (4) is the same as Exception (3) and applies to mercantile occupancies.

Exception (2) is very clear. If you have 15 or fewer people, one unisex toilet facility is permitted. Questions remain pertaining to Exceptions (3) and (4). If you have a business use that is more than 1500 square feet and the known population 15 or fewer employees or customers, can you provide only one unisex toilet facility? The answer is YES. This is because the population complies with Exception (2) – there are 15 or fewer people. However, when the actual population is not known, and the occupancy is based on the building code egress calculations and the occupant load and exceeds 15 people, after the two-thirds reduction, then separate toilet facilities for each sex are required.

Another frequently asked question is how to perform the calculations when the male/female ratio is not known. When the population calculations are based on the building code egress, the total egress population is permitted to be reduced by two-thirds, and that population is then multiplied by 50 percent to determine the male/female population numbers for purposes of determining the fixture count. There has been some confusion that the two-thirds reduction and the 50 percent ratio could not be used together. They must be used together to correctly calculate the fixture requirement using the building code egress calculations. Refer to NSPC, Section 7.21.2.b and c.

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EXAMPLE

Use Group: Business
Floor Area: 2575 square feet, single story
Population: Based on building egress calculations (IBC/2006, Table 1004.1.1, Business Use; 100 square feet per occupant, gross floor area)

2575 ÷ 100 = 25.75, rounded to 26 persons
26 persons x .67 (two-thirds reduction) = 17.42, rounded to 18 persons total

Because there are more than 15 persons, separate male and female toilet facilities are required (based on the 18-person total).

NEXT: To determine the male/female fixture requirement:

18 x .5 (50%) = 9 male and 9 female

Plumbing fixtures required are based on NSPC 2006, Table 7.21.1, Business Use. Therefore, the fixtures required are:

Male: 1 water closet and 1 lavatory
Female: 1 water closet and 1 lavatory
NOTE: 1 drinking water facility and 1 service sink are also required.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Energy Requirements Now in Rehab Subcode

Previously, the Rehabilitation Subcode, *N.J.A.C.* 5:23-6, did not reference any requirements from the Energy Subcode other than the underlying notion that one could not reduce the level of existing energy conservation. Now, in times of higher fuel prices, the following two new provisions have been added to *N.J.A.C.* 5:23-6 for repair, renovation, alteration, and reconstruction projects.

1. When the work exposes the entire framing of any wall, floor, ceiling, or roof assembly that is part of the building thermal envelope (encloses conditioned space) and there is no insulation in the cavities, insulation that meets an R-value shall be installed that fills the cavities of the framed assembly.
   i. If only a small amount of interior finish remains on the framed assembly, the installation of insulation applies; or
   ii. If high-efficiency equipment is installed as per the Energy Subcode, the above requirement for installation of insulation does not apply to the basement.
2. When window assemblies are replaced, the U-factor (thermal transmittance) cannot exceed 0.5 or the U-factor of the window assembly being replaced, whichever is lower.

To put this in perspective, an example might help: Picture a 1920's home. Typically, these homes were not initially built with wall insulation. So, if the owner of this home decides to tear down the old plaster and expose the entire wall, or nearly, to put up sheetrock in its place, the first above requirement would require insulation to be installed where there was none before.

Since different insulation manufacturers make R-value insulation in many different shapes and sizes, it is safe to say the insulation R-value a code official should look for in a 2x4 wall is an R-13; 2x6 walls should be R-19. Of course, if a greater R-value is used and properly fits in the wall with no or minimal compression, this is also acceptable.

With regard to the windows of the same 1920's home, it is very possible that there are some old single-pane windows. So again, if the owner decides to replace the old windows, the new replacement windows should have a U-factor of 0.50 or lower (the lower the number, the better in this case). If for some reason, this home already has a window better than 0.50, say 0.33 U-factor for a triple-pane window, then the 0.33 should be maintained if they decide to replace this specific window also.

Please note that the compliance documentation of *N.J.A.C.* 5:23-2.15(e)1.vi does not apply to rehabilitation projects; this specific documentation applies to new construction and additions only.

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

Source: Rob Austin
Code Assistance Unit

Efficiency Upgrades in ASHRAE Standard 90.1-2004

Based on recent federal energy requirements, minimum equipment energy efficiencies have changed, and the following tables of your American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2004 need to be updated. Because ASHRAE does not print updated editions of its standards, but instead provides "addenda," the ASHRAE tables that contain the changes to minimum efficiency requirements in ASHRAE 90.1 are being provided here for the convenience of code users. The usefulness of the tables is that they provide all the changes to minimum efficiency requirements that have been made since the last published edition. By using these tables, code users can determine whether their edition, including addenda, contains the most up-to-date information. It is important to note that these tables contain only the portions of each table that have been changed; the remainder of each table remains unchanged:

TABLE 6.8.1A – Electrically Operated Unitary Air Conditioners and Condensing Units

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[b]	Test Procedure[a]
Air conditioners, air cooled	<65,000 Btu/h[c]	All	Split system	10.0 SEER (before 1/23/2006) ~~12.0 SEER~~ 13.0 SEER (as of 1/23/2006)	ARI 210/240
			Single package	9.7 SEER (before 1/23/2006) ~~12.0 SEER~~ 13.0 SEER (as of 1/23/2006)	
Small duct high velocity, air cooled	< 65,000 Btu/h[c]	All	Split system	10 SEER	

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Fire Sprinklers and Half Ceilings

It has come to the Department of Community Affairs' attention that designers are designing half ceilings (which are also called "clouds") without providing protection for the area above the half ceiling (clouds).

Some engineers believe sprinklers are only required at the ceiling of the lowest area, and not in the concealed space between a full ceiling and half ceiling. That is not correct. In National Fire Protection Association (NFPA) Standard 13, Section 5-13.23, Spaces Above Non-Storage Areas, requires the installation of sprinklers in the concealed spaces. The requirement is more clearly stated in the NFPA 13/2002 edition, where a language change specifies "any concealed ceiling area."

Source: Gerry Grayce
Office of Regulatory Affairs

Fire Sprinklers and Elevator Shafts

The installation of fire sprinklers in elevator shafts has once again caused a lot of questions.

National Fire Protection Association (NFPA) Standard 13, Section 5-13.6.1 exempts fire sprinklers at the bottom of elevator shafts if the shaft does not contain combustible hydraulic fluids. Section 5-13.6.3 exempts the shaft from sprinklers when the elevator car enclosure material meets requirements of American Society of Mechanical Engineers (ASME) A17.1, Safety Code for Elevators and Escalators. The fire subcode official has jurisdiction with regard to fire sprinkler requirements.

NOTE: NFPA 13/2002, the referenced standard in the recently adopted International Building Code 2006, has the same requirement as above.

Source: Gerry Grayce
Office of Regulatory Affairs

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TABLE 6.8.1A -- Electrically Operated Unitary Air Conditioners and Condensing Units (continued)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[a]	Test Procedure[b]
Air conditioners, air cooled	≥65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	Split system and single package	10.3 EER (before 1/1/2010) 11.2 EER (as of 1/1/2010)	ARI 340/360
		All other	Split system and single package	10.1 EER (before 1/1/2010) 11.0 EER (as of 1/1/2010)	
	≥135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	Split system and single package	9.7 EER (before 1/1/2010) 11.0 EER (as of 1/1/2010)	
		All other	Split system and single package	9.5 EER (before 1/1/2010) 10.8 EER (as of 1/1/2010)	
	≥240,000 Btu/h and <760,000 Btu/h	Electric resistance (or none)	Split system and single package	9.5 EER (before 1/1/2010) 10.0 EER (as of 1/1/2010) 9.7 IPLV	
		All other	Split system and single package	9.3 EER (before 1/1/2010) 9.8 EER (as of 1/1/2010) 9.5 IPLV	
	≥760,000 Btu/h	Electric resistance (or none)	Split system and single package	9.2 EER (before 1/1/2010) 9.7 EER (as of 1/1/2010) 9.4 IPLV	
		All other	Split system and single package	9.0 EER (before 1/1/2010) 9.5 EER (as of 1/1/2010) 9.2 IPLV	

GFCI Receptacles to be Ordinary Maintenance

On February 5, 2007, the Department of Community Affairs published in the *New Jersey Register* an adoption of a rule providing that the replacement of standard receptacles with those that are required to be Ground-Fault Circuit Interrupter (GFCI) -protected (in accordance with Section 210.8 of the Electrical Subcode) is ordinary electrical maintenance. Therefore, no permit is required. This rule was adopted with an "operative" date. That means that this requirement will not be effective until July 1, 2007. At that time, you will receive this amendment with your Uniform Construction Code subscription service. Why the two dates, you ask? Well, industry has recently introduced a "fail-safe" type GFCI receptacle and the operative date allows these new devices to become readily available. Therefore, the rule treating the replacement of outlets with GFCI receptacles as ordinary maintenance is as follows:

***N.J.A.C.* 5:23-2.7(c)3.i – Prior to July 1, 2007:**
Ordinary electrical maintenance shall include the

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TABLE 6.8.1B – Electrically Operated Unitary and Applied Heat Pumps

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[b]	Test Procedure[a]
Air cooled, (cooling mode)	<65,000 Btu/h[c]	All	Split system	10.0 SEER (before 1/23/2006) ~~12.0~~ 13.0 SEER (as of 1/23/2006)	ARI 210/240
			Single package	9.7 SEER (before 1/23/2006) ~~12.0~~ 13.0 SEER (as of 1/23/2006)	
Small duct high velocity (air cooled, cooling mode)	< 65,000 Btu/h[c]	All	Split system	10 SEER	
Air cooled, (heating mode)	<65,000 Btu/h[c] (cooling capacity)	-	Split system	6.8 HSPF (before 1/23/2006) ~~7.4~~ 7.7 HSPF as of 1/23/2006)	
			Single package	6.6 HSPF (before 1/23/2006) ~~7.4~~ 7.7 HSPF as of 1/23/2006)	
Small duct high velocity (air cooled, heating mode)	< 65,000 Btu/h[c] (cooling capacity)	-	Split system	6.8 HSPF	

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Discount on ASHRAE Standards

We are happy to inform you that the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) has agreed to continue the "Code Official's Discount" when purchasing any of the ASHRAE standards.

In order to receive the discount, "CODE OFFICIAL DISCOUNT" must be indicated clearly on the order form. All orders must be submitted on letterhead imprinted with the name of the municipality and title. A government purchase order and government check must be included.

Please mail your order to:

ASHRAE
1791 Tullie Circle, NE
Atlanta, Georgia 30329
Attention: Customer Service Manager

Don't forget to indicate "CODE OFFICIAL DISCOUNT" on the order form!

Should you need to contact ASHRAE, the telephone number is (800) 527-4723. Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

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TABLE 6.8.1B -- Electrically Operated Unitary and Applied Heat Pumps (continued)

Equipment Type	Size Category	Heating Section Type	Sub-Category or Rating Condition	Minimum Efficiency[a]	Test Procedure[b]
Air cooled (cooling mode)	≥65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	Split system and single package	10.1 EER (before 1/1/2010) 11.0 EER (as of 1/1/2010)	ARI 340/360
		All other	Split system and single package	9.9 EER (before 1/1/2010) 10.8 EER (as of 1/1/2010)	
	≥135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	Split system and single package	9.3 EER (before 1/1/2010) 10.6 EER (as of 1/1/2010)	
		All other	Split system and single package	9.1 EER (before 1/1/2010) 10.4 EER (as of 1/1/2010)	
	≥240,000 Btu/h	Electric resistance (or none)	Split system and single package	9.0 EER (before 1/1/2010) 9.5 EER (as of 1/1/2010) 9.2 IPLV	
		All other	Split system and single package	8.8 EER (before 1/1/2010) 9.3 EER (as of 1/1/2010) 9.0 IPLV	
Air cooled (heating mode)	≥65,000 Btu/h and <135,000 Btu/h (cooling capacity)	–	47°F db/43°F wb outdoor air	3.2 COP (before 1/1/2010) 3.3 COP (as of 1/1/2010)	ARI 340/360
			17°F db/15°F wb outdoor air	2.2 COP	
	≥135,000 Btu/h (cooling capacity)	–	47°F db/43°F wb outdoor air	3.1 COP (before 1/1/2010) 3.2 COP (as of 1/1/2010)	
			17°F db/15°F wb outdoor air	2.0 COP	

Residential Fire Sprinklers

Hurray, my job just got easier. I've already done two articles explaining the exceptions to the fire sprinkler requirements of the International Building Code (IBC) for Group R-2 occupancies and explaining why a two-story R-2 is not required to have fire sprinklers, while the same building with a basement does require fire sprinklers. Now I do not ever have to do another one.

Why, you ask? Because the IBC/2006, New Jersey Edition, Section 903.2.7 now requires automatic fire sprinklers to be installed throughout all buildings with a Group R fire area. There are no longer any exceptions.

If you have any questions, and you shouldn't, you can call me at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

TABLE 6.8.1D – Electrically Operated Packaged Terminal Air Conditioners, Packaged Terminal Heat Pumps, Single-Package Vertical Air Conditioners, Single-Package Vertical Heat Pumps, Room Air Conditioners, and Room Air-Conditioner Heat Pumps

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
SPVAC (Cooling Mode)	~~All Capacities~~ <65,000 Btu/h	95°F db/ 75°F wb Outdoor Air	~~8.6 EER~~ 9.0 EER	ARI 390
	>=65,000 Btu/h and <135,000 Btu/h	95°F db/ 75°F wb Outdoor Air	8.9 EER	
	>=135,000 Btu/h and <240,000 Btu/h	95°F db/ 75°F wb Outdoor Air	8.6 EER	
SPVHP (Cooling Mode)	~~All Capacities~~ <65,000 Btu/h	95°F db/ 75°F wb Outdoor Air	~~8.6 EER~~ 9.0 EER	
	>=65,000 Btu/h and <135,000 Btu/h	95°F db/ 75°F wb Outdoor Air	8.9 EER	
	>=135,000 Btu/h and <240,000 Btu/h	95°F db/ 75°F wb Outdoor Air	8.6 EER	
SPVHP (Heating Mode)	~~All Capacities~~ <65,000 Btu/h	47°F db/ 43°F wb Outdoor Air	~~2.7 COP~~ 3.0 COP	
	>=65,000 Btu/h and <135,000 Btu/h	47°F db/ 43°F wb Outdoor Air	3.0 COP	
	>=135,000 Btu/h and <240,000 Btu/h	47°F db/ 43°F wb Outdoor Air	2.9 COP	

In reference to the equipment above, add the following definitions:

Single-Package Vertical Air Conditioner (SPVAC) is a type of air-cooled, small or large commercial package air-conditioning and heating equipment; factory assembled as a single package, having its major components arranged vertically, which is an encased combination of cooling and optional heating components; is intended for exterior mounting on, adjacent interior to, or through an outside wall; and is powered by single or three-phase current. It may contain separate indoor grille(s), outdoor louvers, various ventilation options, indoor free air discharge, ductwork, wall plenum, or sleeve. Heating components may include electrical resistance, steam, hot water, gas, or no heat, but may not include reverse cycle refrigeration as a heating means.

Single-Package Vertical Heat Pump (SPVHP) is an SPVAC that utilizes reverse cycle refrigeration as its primary heat source, with secondary supplemental heating by means of electrical resistance, steam, hot water, or gas.

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replacement of any receptacle, switch, or lighting fixture, rated at 20 amps or less and operating at less than 150 volts to ground, with a like or similar item. Replacement of receptacles in locations where GFCI protection is required by the Electrical Subcode shall not be considered ordinary maintenance.

***N.J.A.C.* 5:23-2.7(c)3.i – On and after July 1, 2007:** Ordinary electrical maintenance shall include the replacement of any receptacle, switch, or lighting fixture rated at 20 amps or less and operating at less than 150 volts to ground with a like or similar item, including receptacles in locations where GFCI protection is required.

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

Source: Rob Austin
Code Assistance Unit

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TABLE 6.8.1F – Gas- and Oil-Fired Boilers

Equipment Type[a]	Size Category (Input)	Subcategory or Rating Condition	Minimum Efficiency [b]	Test Procedure [c]
Boilers, Gas-Fired	300,000 Btu/h	Hot Water	80% AFUE	DOE 10 CFR Part 430
		Steam	75% AFUE	
	300,000 Btu/h and ≤2,500,000 Btu/h	Maximum Capacity [d]	75% E_t[b] **and** **80% E_c**	~~**H.I. Htg Boiler Std.**~~ **DOE 10 CFR Part 431**
	>2,500,000 Btu/h [a]	Hot Water	80% E_c	
	>2,500,000 Btu/h [a]	Steam	80% E_c	
Boilers, Oil-Fired	300,000 Btu/h		80% AFUE	DOE 10 CFR Part 430
	300,000 Btu/h and ≤2,500,000 Btu/h	Maximum Capacity[d]	78% E_t[b] **and** **83% E_c**	~~**H.I. Htg Boiler Std.**~~ **DOE 10 CFR Part 431**
	>2,500,000 Btu/h [a]	Hot Water	83% E_c	
	>2,500,000 Btu/h[a]	Steam	83% E_c	
Boilers, Oil-Fired (Residual)	300,000 Btu/h and ≤2,500,000 Btu/h	Maximum Capacity[d]	78% E_t[b] **and** **83% E_c**	~~**H.I. Htg Boiler Std.**~~ **DOE 10 CFR Part 431**
	>2,500,000 Btu/h[a]	Hot Water	83% E_c	
	>2,500,000 Btu/h[a]	Steam	83% E_c	

A These requirements apply to boilers with rated input of 8,000,000 Btu/h or less that are not packaged boilers, and to all packaged boilers. Minimum efficiency requirements for boilers cover all capacities of packaged boilers

B E_t = thermal efficiency. E_c = combustion efficiency. See reference document for detailed information.

C Section 12 contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.

D Minimum and maximum ratings as provided for and allowed by the unit's controls.

These changes (in I-P units) and others (such as S1 units) can be found at http://www.ashrae.org under the "Standards Addenda" link.

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

Source: Rob Austin
Code Assistance Unit

Home Improvement Contractors

Home improvement contractors who had applied for registration prior to the December 31, 2005 deadline, but had not yet received their registrations from the Division of Consumer Affairs, were allowed to sign a certification indicating that they had applied prior to the deadline and that the application had not been denied. This was done by the Division of Consumer Affairs by rule so that contractors could continue to obtain permits while their applications were pending, since there were so many applications filed just prior to the deadline.

This rule is still in place. However, more than a year later, there should be few, if any, contractors who applied before the deadline and have not received registrations. To try to identify and resolve any outstanding issues with the remaining few, the Division of Consumer Affairs has asked that code officials take the following additional steps. If a contractor applies for a permit with the certification that application was made before the December 31, 2005 deadline, then please check the Division of Consumer Affairs web site for the contractor's name. The web site is:

http://www.njconsumeraffairs.com/contractor

Please note that there are two lists to check: the list of registered home improvement contractors and the list of home improvement contractor applications denied or withdrawn. (There are only about 30 names on the second list.) If you do not find the name on the web site and the contractor is still trying to use the 2005 certification to pull permits, please e-mail Veronica Hursthouse at the Division of Consumer Affairs with the contractor's name, date of application, and business address. Her e-mail address is Hursthousev@dca.lps.state.nj.us. She will review what has happened with the application and advise you as to how to proceed.

Thank you for your continuing cooperation in the enforcement of this (relatively) new law.

Source: Amy Fenwick Frank
Division of Codes and Standards

New Jersey Register Adoptions

Date: January 2, 2007
Adoption: 39 *NJR* 28(b)
Summary: The adopted amendments to *N.J.A.C.* 5:23-6.3, 6.22; 5:70-1.5, 4.3, and 4.7 require the installation of automatic sprinkler protection throughout all existing nursing homes. This retrofit requirement is in the Uniform Fire Code (UFC). The amendments in the Uniform Construction Code (UCC) apply to projects subject to the Rehabilitation Subcode. The adopted amendments eliminate the exception for nursing homes of noncombustible construction.

Date: January 16, 2007
Adoption: 39 *NJR* 370(b)
Summary: The adopted amendments to *N.J.A.C.* 5:23-2.18, 2.31, and 4.5 permit a construction official to issue and enforce a stop construction order for an entire residential development upon a written, documented finding of a pattern or practice of similar violations affecting framing, fire safety, or structural safety in most or all of the units.

Date: February 5, 2007
Adoption: 39 *NJR* 370(a)
Summary: The adopted amendment to *N.J.A.C.* 5:23-2.7 designates as "electrical ordinary maintenance" the replacement of a receptacle in a location that requires ground-fault circuit-interrupter protection, and eliminates the permit and inspection requirements under the UCC. NOTE: The operative date of this rule is July 2007. Please take note of the companion article in this *Construction Code Communicator*.

Date: February 5, 2007
Adoption: 39 *NJR* 363(b)
Summary: The adopted amendments at *N.J.A.C.* 5:10-27.1 and 27.4 delete the requirement that the bars of window guards have a dimension of one-half inch. The requirement that window guards allow for natural light and ventilation has been retained. The adopted amendments provide for the acceptance of window guards that meet the American Society for Testing and Materials standards as complying with the requirements of the Regulations for Maintenance of Hotels and Multiple Dwellings (*N.J.A.C.* 5:10).

Date: February 5, 2007
Adoption: 39 *NJR* 371(a)
Summary: The adopted amendments to *N.J.A.C.* 5:23-3.14, 6.13, 6.13A, 6.31; 5:70-1.5, 4.3, 4.7, 4.9, and 4.11 adopt more stringent requirements for nightclub occupancies under the UFC and the UCC. The adopted amendments define "nightclub." The adopted amendments require an automatic fire-suppression system in nightclubs, or portions thereof, with an occupant load of 300 or more. The adopted amendments require the installation of an automatic fire-alarm system in nightclubs, or portions thereof, with an occupant load of 100 or more that are not otherwise required to have an automatic fire-suppression system. The adopted amendments require that nightclubs, or portions thereof, with an occupant load of more than 300, have a main entrance with an egress capacity of at least two-thirds of the total occupant load.

Date: February 5, 2007
Adoption: 39 *NJR* 376(a)
Summary: The adopted new rule at *N.J.A.C.* 5:23-9.3 is an interpretation which clarifies that recreational park trailers are subject to the adopted subcodes of the UCC. Additionally, as part of this interpretation, the Department of Community Affairs will be withdrawing UCC Bulletin Nos. 93-6 and 90-2.

Grill Safety Information Available

Spring is a time when many of us return to the outdoors to grill. Nationally, there are about 600 grill accidents a year. The Liquefied Petroleum Gas Education and Safety Board and the Department of Community Affairs are trying to educate consumers on measures to take to grill more safely. A brochure on grilling safety tips, which can be used as a counter document, is available on the Department's web site. It's available in pdf format and can be downloaded at www.nj.gov/dca/codes/.

Source: Michael Baier
Bureau of Code Services

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Permits Not Required

As we all know, the list for when a Uniform Construction Code (UCC) permit is not required is a lot smaller than the list for when a permit is required. This list can be found at *N.J.A.C.* 5:23-2.14. This section is entitled "Construction Permits — When Required" and the following are the exceptions, or when a permit is not required.

1. A permit is not required for ordinary maintenance, as defined in *N.J.A.C.* 5:23-2.7. There is no requirement to provide notice to the enforcing agency. Sections 2.7(c)1 through (c)6 contain specific maintenance items that are considered ordinary maintenance for the building, plumbing, electrical, fire protection, mechanical, and elevator subcodes, respectively.

2. A permit is not required for temporary structures (excluding tents, tensioned-membrane structures, canopies, and greenhouses) covering an area less than 120 square feet, including all connecting areas or spaces with a common means of egress or entrance that remain in place for less than 180 days.

3. Although the tents, tensioned-membrane structures, and canopies that meet all of the criteria below do not require a UCC permit, they are subject to the permitting requirements of the Uniform Fire Code (UFC) (*N.J.A.C.* 5:70-2.7).

   - ☞ The tent, tensioned-membrane structure, or canopy is 140 feet or less in any dimension and 16,800 square feet or less in area, whether it is one unit or is composed of multiple units;
   - ☞ The tent, tensioned-membrane structure, or canopy remains in place or will remain in place for fewer than 180 days;
   - ☞ The tent, tensioned-membrane structure, or canopy is used or occupied only between April 1 and November 30;
   - ☞ The tent, tensioned-membrane structure, or canopy does not have a permanent anchoring system or foundation; and
   - ☞ The tent, tensioned-membrane structure, or canopy does not contain platforms or bleachers greater than 11 feet in height.

4. A permit is not required for a temporary greenhouse, also called a "hoophouse" or "polyhouse," that meets the criteria of *N.J.A.C.* 5:23-3.2(d).

   NOTE for #3 and #4: Regardless of whether the structure of the tent, tensioned-membrane structure, canopy, or greenhouse requires a permit, a permit is required for any electrical equipment, electrical wiring, or mechanical

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Peer Review Activities

Another year, another article, another busy year for Peer Review and the Office of Regulatory Affairs. This is the third consecutive year I have written this article with the hope of helping code officials understand that they are accountable for their actions and that their peers believe in high ethical standards. In 2006, the Office of Regulatory Affairs brought 19 individuals before Peer Review. In addition, 3 individuals surrendered their licenses and 42 received another sanction, including a Letter of Warning or a Letter of Reprimand. Following are brief synopses of several cases and the recommended sanctions:

The Office of Regulatory Affairs proposed a revocation of all the Uniform Construction Code (UCC) licenses held by a working official for submitting a false test result, which certified that he passed the Mechanical Test when he had failed the test. The Plumbing Peer Review Committee affirmed the Office of Regulatory Affairs' recommendation.

The Office of Regulatory Affairs proposed a 10-day suspension of all UCC licenses held by an individual who submitted inconsistent statements in an application for licensure. The Building Peer Review Committee recommended a $500 penalty and a Letter of Reprimand. The Penalty and Order issued were consistent with the Peer Review recommendation.

The Office of Regulatory Affairs proposed a 60-day suspension of all UCC licenses and a $5,500 penalty for performing 70 inspections in one day, and for building code deficiencies subsequently uncovered. The Building Peer Review Committee recommended revocation of the Building Subcode Official and Building Inspector licenses, and a $5,000 penalty. The Order to Revoke and Order to Pay Penalty issued were consistent with the Peer Review Committee's recommendation.

The Office of Regulatory Affairs proposed revocation of all UCC licenses held by an individual who, while performing inspections on a project, obtained trusses from the developer at a discounted price. The Building Peer Review Committee affirmed the Office of Regulatory Affairs' recommendation. The individual subsequently surrendered the licenses prior to a Revocation Order being issued.

The Office of Regulatory Affairs proposed revocation of all UCC licenses of an individual who provided architectural services in adjacent municipalities while working as a construction official, a clear violation of the Conflict-of-Interest provisions. The Building Peer Review Committee affirmed the Office of Regulatory Affairs' proposal. The Order to Revoke was issued and the case is currently awaiting a trial date.

We would like to remind you, if any official is not sure what to do in a certain situation, to please give us a call. We will attempt to help resolve any ambiguities. We also provide recommendations to ensure that the issues you face do not escalate into problems that could result in sanctions.

If you have any questions, please call the Office of Regulatory Affairs at (609) 984-7672.

Source: Louis Mraw
Office of Regulatory Affairs

Required Permits for Mechanical Equipment in R-3 or R-5 Dwellings

Back in 1994, Michael Baier wrote an article in the *Construction Code Communicator* entitled "How Many Permits Do I Need." I am now writing a follow-up article since the question regarding the replacement of furnaces, boilers, heating/air-conditioning equipment, and domestic water heaters in Group R-3 or R-5 dwellings is still popular.

In the 1990s, the Department of Community Affairs established a mechanical subcode inspector for the mechanical work in Group R-3 and R-5 dwellings. It was thought that a municipality would use the mechanical subcode official to review and inspect the mechanical work, and would require only one mechanical technical section, excluding the required electrical or plumbing technical sections, if applicable. Unfortunately, having a mechanical subcode official is voluntary and it never took off. Therefore, if a municipality did not use the mechanical subcode official, three or four technical sections were required for a simple furnace or boiler replacement.

The Department receives many calls complaining about the high cost of permit fees for a replacement because municipalities have set a minimum fee for each required technical section. Some municipal fees accumulate to over $200 for a furnace replacement. It is hard for a homeowner to comprehend such an excessive permit fee for such a simple job.

N.J.A.C. 5:23-3.4(d) states:

"Any mechanical inspector employed by the Department or by a municipality, and so assigned by the construction official, shall have the responsibility for enforcement of the provisions of the code, except electrical, relating to the installation of mechanical equipment, such as refrigeration, air conditioning or ventilating

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equipment that would otherwise require a permit.

5. A gas utility company is not required to obtain a permit, or give notice to the enforcing agency, for moving a meter (and related appurtenances) from the interior to the exterior of a building when that meter is owned by the gas utility company.

6. A permit is not required for a sign that meets all of the following conditions; however, the construction official has the authority to require the removal of any sign that creates an unsafe condition, or otherwise to require correction of any such condition:

   - ☞ It is supported by uprights or braces in or upon the ground surface;
   - ☞ It is not served by an electrical circuit directly connected to the sign;
   - ☞ It is not greater than 25 square feet in surface area (one side); and
   - ☞ It is not more than 6 feet above the ground (mounted height).

7. A permit is not required for lead abatement work performed on a steel structure or other superstructure, or in a commercial building.

8. A permit is not required for garden-type utility sheds and similar structures that are 100 square feet or less in area; 10 feet or less in height; and accessory to buildings of Group R-2, R-3, R-4, or R-5. Such garden-type utility sheds and similar structures are required to comply with the requirements at *N.J.A.C.* 5:23-9.9.

9. A permit is not required for fences 6 feet or less in height. This exception does not apply to barriers surrounding public or private swimming pools.

10. A construction permit is not required for an outdoor maze unless it is 6 feet or greater in height, or contains any electrical equipment. However, outdoor mazes that do not require a UCC permit are subject to the permitting requirements of the UFC (*N.J.A.C.* 5:70-2.7).

The above are exceptions from a UCC permit altogether. There are some instances where a UCC permit is required, but work may begin before the permit is obtained. These are:

1. Minor work, as defined by *N.J.A.C.* 5:23-2.17A, requires a permit. However, work may proceed, upon notice to the enforcing agency, before the permit is issued.

2. Emergency work that does not involve lead abatement requires a permit; the permit application may be provided as soon after the work begins as is practicable, but not later than 72 hours thereafter.

Anything not mentioned above must follow the normal UCC permit process to construct, enlarge, repair, renovate, alter, reconstruct, or demolish a structure; or to change the use of a building or structure, or portion thereof; or to install or alter any equipment for which provision is made, or the installation of which is regulated, by the UCC; or to undertake a project involving lead abatement in accordance with *N.J.A.C.* 5:17.

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

Source: Rob Austin
Code Assistance Unit

Use Group Classifications: Building Subcode and Plumbing Subcode

The following is based on the 2006 edition of the National Standard Plumbing Code (NSPC), New Jersey's adopted Plumbing Subcode.

First, let's touch base on the issue of the proper group classification. In the Spring 2005 *Construction Code Communicator*, I wrote an article addressing the different group classifications in the International Building Code (IBC) and the NSPC. The Department of Community Affairs is still receiving many calls from architects, engineers, and code officials as to the proper group to use for determining the required number of plumbing fixtures. A couple of examples might help: Restaurants are Group A-2 in the IBC, but are Group A-3 in the NSPC; higher-education facilities are Group B in the IBC, but are Group E in the NSPC.

I would like to emphasize that the descriptions of the building use (as set forth in the Building and Plumbing Subcodes), and NOT simply the group classification, must be used.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

(continued from page 14)

apparatus, gas piping or heating systems, in Group R-3, R-4, or R-5 structures.

1. When assigned by the construction official, a plumbing subcode official shall have the responsibility for the enforcement of the provisions of the code, except electrical, for the replacement of heating or cooling equipment or water heaters in Group R-3, R-4, or R-5 structures. A plumbing subcode official need not be a mechanical inspector to perform these inspections."

N.J.A.C. 5:23-4.18(c)5, Standards for Municipal Fees, clearly states: "The municipality shall set a flat fee for a mechanical inspection performed by a mechanical inspector or a plumbing inspector in a structure of Group R-3, R-4, or R-5. No separate fee shall be charged for gas, fuel-oil, or water piping connections, including the bonding conductor (jumper), associated with the mechanical equipment inspected."

In order to avoid discouraging individuals from obtaining permits for projects involving the simple replacement of equipment due to the high cost of the permit fees, the Department encourages municipalities that do not employ a mechanical inspector to assign to the plumbing inspector enforcement responsibility for the Mechanical Subcode for direct replacement heating or cooling equipment. Also, the municipality needs to set a flat fee for mechanical inspections. In addition to establishing a reasonable cost for the work performed, this would eliminate the need for a homeowner to have to stay home for multiple inspections that may occur on different days.

As a guide, the following technical items require inspection whether there is a mechanical inspector, or enforcement responsibility is assigned to the plumbing inspector for replacement heating or cooling equipment applicable to work in buildings of Groups R-3 and R-5.

- Gas-Fired Furnace (replacement): mechanical and electrical
- Direct-Vent, Gas-Fired Furnace (replacement): mechanical and electrical
- Gas-Fired, Hot-Water Boiler (replacement): mechanical and electrical; plumbing, if a backflow preventer is required to be replaced

The following requires inspection by a mechanical inspector where a mechanical inspector is assigned for the installation of new heating or cooling equipment:

- New Direct-Vent, Gas-Fired Furnace: mechanical and electrical
- New Gas-Fired, Hot-Water Boiler: mechanical and electrical; plumbing, if a backflow preventer is required to be installed

For new heating and/or cooling equipment work in a building of Group R-3 or R-5, the following technical items require inspection as indicated where a mechanical inspector is not assigned:

- Gas-Fired Furnace: plumbing, fire, electrical, and possibly building, depending on the chimney type
- Direct-Vent, Gas-Fired Furnace: plumbing, electrical, and fire
- Gas-Fired, Hot-Water Boiler: plumbing, fire, electrical, and possibly building, depending on the chimney type

This should be considered a guide to help determine what technical sections are required for some equipment installations. This is not a total list. Also, check *N.J.A.C.* 5:23-3.4, Responsibilities, to verify responsibility for plan review and inspections for Group R-3 and Group R-5.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Visible Alarm Notification – IBC/2000 and ICC/ANSI A117.1-1998: Clarification of the Winter 2005 *Communicator* Article

In the *Construction Code Communicator* published in the winter of 2005, there was an article concerning visible alarm notification appliances in Group R-2 buildings. This article stated that Section 907.9.1.3 of the International Building Code (IBC) 2000 requires occupancies of Group R-2 that are required to have a fire-alarm system as per Section *907.2.10.1.2* to be provided with the capability to support visible alarm notification appliances within all of the dwelling units. An error was made referencing Section 907.2.10.1.2 for R-2 fire-alarm systems. Section 907.2.10.1.2 is for single- or multiple-station smoke alarms in Groups R-2, R-3, R-4, and I-1. **The correct section is *907.2.9.* Section 907.9.1.3 changes to 907.9.1.4 in the International Code Council 2006 edition.**

Note: Section 907.2.10.1.2 requires Groups R-2, R-3, R-4, and I-1 to have single- or multiple-station smoke alarms installed and maintained, regardless of occupant load.

The device installation associated with the visible alarm notification appliance is an adaptable feature. This is similar to providing grab bars, which are an adaptable feature; the supportive blocking is installed in the wall and the actual grab bar is installed when needed by the occupant. Based on the same principle, the wiring for the notification appliance must be provided for the future installation of a visible alarm notification appliance.

Addition to this Article:

Some questions have arisen about number 1 of Section 907.2.9. This section requires manual alarms to be installed in buildings three or more stories above the lowest level of exit discharge. There is a question as to what is considered the lowest level of exit discharge. Any time this statement is used in the code, the floor count starts above the ground floor or the lowest level of exit discharge. In this case, a building with dwelling units or sleeping units four stories above grade must comply with this section and must be provided with the capability of supporting visible alarm notification appliances within all of the dwelling units.

Hopefully, this helps clarify this section. If you have questions, I may be reached at (609) 984-7609.

Source: Michael E. Whalen
Code Assistance Unit

NFPA 13R -- When It's Appropriate/When It's Not

In both the International Building Code (IBC) and in the National Fire Protection Association (NFPA) standards itself, the scoping for an NFPA 13R sprinkler system limits the use of a 13R system to residential occupancies up to and including four stories in height (above grade). 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 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.

In the IBC, Section 903.3.1.2 (IBC/2000 and IBC/2006) limits an NFPA 13R system to Group R 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 based on the fact that the total building does not exceed four stories in height.

Example #2: A grade-level, nonresidential space is appropriately separated 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 based on the fact that 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. 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.

In the IBC, Sections 508.2 (IBC/2000) and 509.2 (IBC/2006) permit a Group S-2 enclosed parking garage to be separated in accordance with the provisions of the section, and to be considered a separate building from the occupancy above. Because the total building 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 me at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

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NEW JERSEY UNIFORM CONSTRUCTION CODE

State of New Jersey
Jon S. Corzine, Governor

Department of Community Affairs
Charles A. Richman, Acting Commissioner

Volume 19 Number 2

Summer/Fall 2007

Liquefied Petroleum Gas Regulations Available

The Uniform Construction Code (UCC) enforcement agency and the Department of Community Affairs (which uses the Liquefied Petroleum Gas Regulations, *N.J.A.C.* 5:18) have joint responsibility for the inspection of Liquefied Petroleum Gas (LPG) systems. The UCC enforcement agency covers vapor systems 2000 gallons and under, while the Department is responsible for liquid withdrawal systems (primarily systems used to fill barbecue cylinders) and for vapor systems over 2000 gallons. The bulk of the technical requirements is the same because both sets of rules are based on National Fire Protection Association Standard 58. However, *N.J.A.C.* 5:18 also contains requirements for marking tanks and cylinders, provisions for licensing LPG marketers, and rules that restrict marketers from removing each other's tanks. For further explanation, please consult Bulletin No. 04-1, Liquefied Petroleum Gas Inspections.

Anyone interested may receive a copy of the regulations by writing to the following address:

Liquefied Petroleum Gas Safety Unit
Post Office Box 816
Trenton, New Jersey 08625-0816
Attention: Melinda Fields

Barrier-Free Electrical Items in Multifamily Dwellings

What items in the Electrical Subcode also have Barrier Free Subcode requirements in buildings of four or more dwelling units? For reference, see Section 1002.9, Operable Parts, of the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-2003. This section references Section 309, Operable Parts, which in turn references Section 308, Reach Ranges.

Section 1002.9 of ANSI/2003, as amended by *N.J.A.C.* 5:23-7.2(b)23, states that lighting controls, electrical switches and receptacles, environmental controls, appliance controls, operating hardware for operable windows, plumbing fixture controls, and user controls for security or intercom systems shall comply with Section 309, with the following exceptions: 1) receptacle outlets serving a dedicated use; 2) (*exception deleted*); 3) floor receptacle outlets; 4) HVAC diffusers; 5) controls mounted on ceiling fans; and 6) where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to be accessible.

Section 309.3 of ANSI/2003 states that the height of the operable part is required to be within one or more of the

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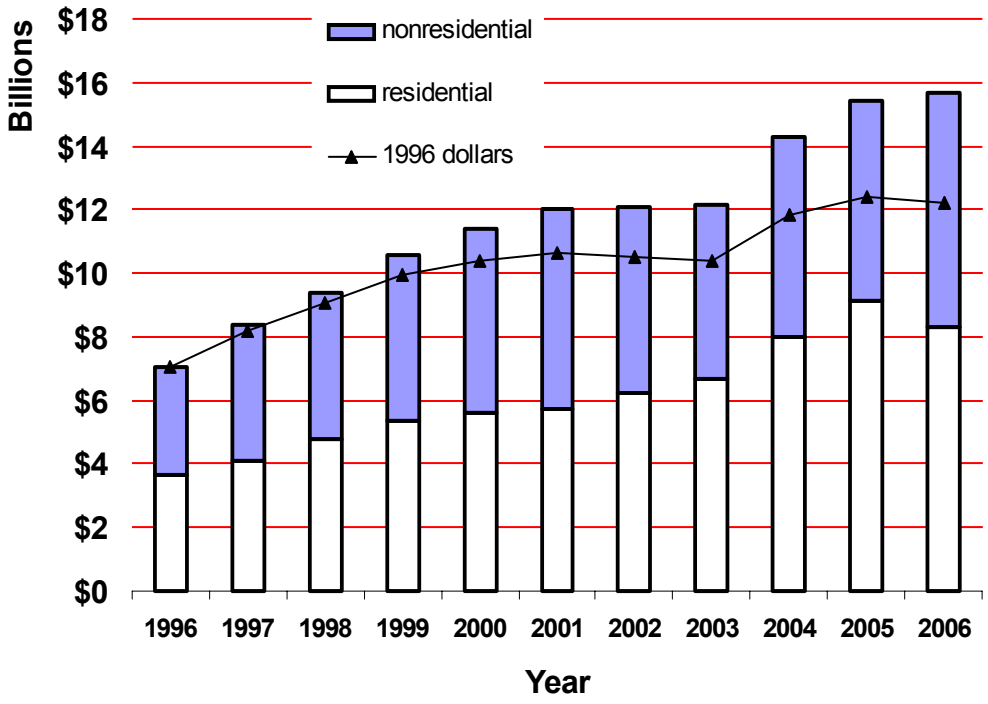
2006 Highlights of the *New Jersey Construction Reporter*

Below is a reprint of the Highlights article from the 2006 Annual issue of The New Jersey Construction Reporter*, a publication of the New Jersey Department of Community Affairs that examines construction statistics derived from building permits and certificates issued throughout the State. The* Reporter *can be viewed online at* http://www.nj.gov/dca/codes/cr/conrep.shtml. *If you have any questions about the information in this report, contact John Lago at (609) 984-7609.*

- Construction officials issued building permits for $15.675 billion in 2006. This was $277.6 million (1.8 percent) more than in 2005, which was a record high. In constant dollars, the amount of work in 2006 was 1.4 percent below 2005, based on an inflation rate of 3.2 percent.

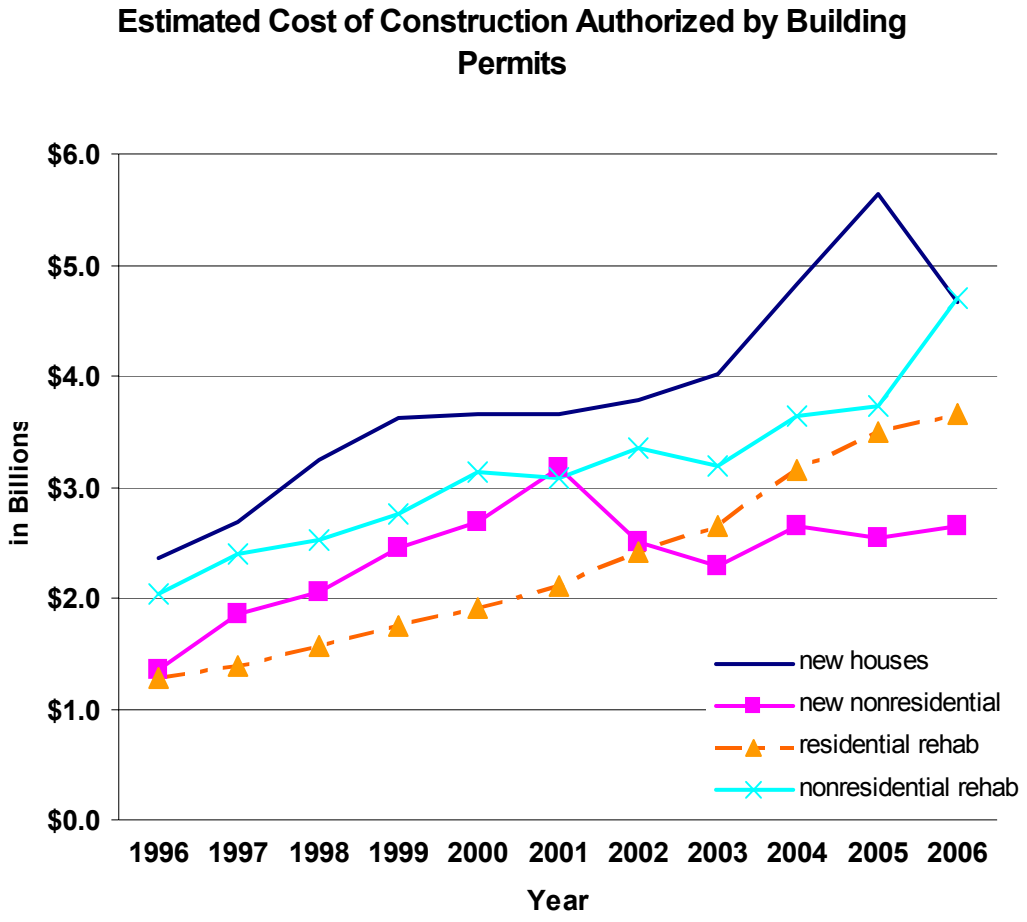
- Residential construction was $8.32 billion — 53.1 percent of all activity. Office, retail, and other nonresidential work totaled $7.354 billion — 46.9 percent.

Estimated Cost of Construction Authorized by Building Permits, 1996-2006



- While activity was about the same as in 2005, there was substantial change within the construction industry. Though still a major player, new home construction declined by nearly $1 billion in 2006; this was 17.3 percent below the 2005 level. New commercial construction grew by $110 million (4.3 percent) compared to 2005. Significant growth occurred in tenant fit-ups, and other additions and alterations to existing commercial buildings. Nonresidential additions and alterations increased by $973.8 million, or 26.1 percent, compared to 2005. So, even though the dollar amount of all work was about the same in 2006, there were significant shifts in the types of construction.

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- Authorized housing totaled 32,050 units; this was 7,638 dwellings less than in 2005, a decline of 19.2 percent.
- The amount of new office space was about the same as in 2005: 11.1 million square feet.
- New retail space declined by about 13.1 percent in 2006.

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New Jersey Construction Indicators				
	Estimated Construction Costs	**Authorized Housing Units**	**Authorized Office Space (square feet)**	**Authorized Retail Space (square feet)**
1996	$7,028,424,990	27,577	6,229,515	4,880,139
1997	$8,346,533,144	30,017	10,409,171	5,688,955
1998	$9,396,755,517	35,676	12,703,824	7,921,892
1999	$10,584,167,530	37,536	13,237,891	6,229,471
2000	$11,387,683,514	38,065	15,531,039	6,063,412
2001	$12,007,456,630	35,680	19,134,533	7,244,833
2002	$12,079,942,099	34,589	9,261,054	7,560,913
2003	$12,148,747,807	35,171	9,744,146	6,038,428
2004	$14,274,331,850	39,254	12,219,068	4,911,257
2005	$15,397,507,147	39,688	11,038,132	5,965,258
2006	$15,675,107,955	32,050	11,113,555	5,186,662
Change between 2005 and 2006				
2005-2006	$277,600,808	-7,638	75,423	-778,596
Percent Change	1.8%	-19.2%	0.7%	-13.1%
Source: N.J. Department of Community Affairs, 4/9/07				

- Northern New Jersey accounted for nearly $7 billion of construction — 44.6 percent. A total of 14,346 dwellings were authorized in northern communities, 44.8 percent of the 32,050 dwellings statewide.

- Central New Jersey had nearly $5 billion of construction (31.7 percent of all work) and accounted for 9,229 new dwellings — 28.8 percent of all the new homes authorized in the State. The central part of the State had 4.4 million square feet of new office space, or 39.3 percent of all new office space in 2006.

- Southern New Jersey had $3.4 billion of construction (21.4 percent of all reported work). A total of 8,473 new houses were authorized — 26.4 percent of all new houses statewide. The southern part of the State had the most new retail space in 2006: 1.7 million square feet. In comparison, northern New Jersey had 1.1 million square feet.

Major Construction Indicators by Region				
Region	**Estimated Cost of Construction**	**Authorized Housing Units**	**Authorized Office Space (square feet)**	**Authorized Retail Space (square feet)**
North	$6,988,637,770	14,346	4,303,558	1,128,090
Central	4,968,569,574	9,229	4,368,419	1,430,732
South	3,361,170,130	8,473	1,903,708	1,693,367
State Buildings	356,780,481	2	537,870	934,473*
New Jersey	**$15,675,107,955**	**32,050**	**11,113,555**	**5,186,662**
Percent Distribution by Region				
North	44.6%	44.8%	38.7%	21.7%
Central	31.7%	28.8%	39.3%	27.6%
South	21.4%	26.4%	17.1%	32.6%
State Buildings	2.3%	0.006%	4.8%	18.0%
New Jersey	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Source: N.J. Department of Community Affairs, 4/9/07				
Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties				
Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties				
Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties				
*Includes the Meadowlands Xanadu entertainment and sports complex in East Rutherford Borough, Bergen County.				

- For over five years, much of the construction in New Jersey cities was in the big cities. This trend continued in 2006. Atlantic City in Atlantic County led all localities with $614.9 million. Three large casino expansions accounted for much of this work: Harrah's Bayview Tower (975,000 square feet); the Borgata Hotel Casino and Spa expansion (841,000 square feet); and the Trump Taj Mahal expansion (725,000 square feet).

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Trump Taj Mahal expansion in Atlantic City. Photographed by Robert Brock, Department of Community Affairs.



Harrah's expansion in Atlantic City. Photographed by Robert Brock, Department of Community Affairs.



Borgata expansion in Atlantic City. Photographed by Robert Brock, Department of Community Affairs.

- The City of Newark in Essex County had $421.1 million of construction, ranking second among municipalities. New houses accounted for 40 percent of the work reported. Newark had 2,125 authorized houses in 2006. Only Jersey City in Hudson County had more. Big commercial developments during the year included a new sports arena and renovation of an existing office building on Raymond Boulevard.



Newark's new sports arena. Photographed by Ganga Sivakumar, Department of Labor and Workforce Development.

- Jersey City had $370.2 million of work. More than 61 percent of all authorized work was either to build new dwellings or fix up existing ones. The City had 2,578 new houses authorized for construction in 2006, top among municipalities.

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Authorized Housing in Newark and Jersey City, 2001-2006					
	Newark		Jersey City		All New Jersey
Year	Authorized Units	Rank	Authorized Units	Rank	Authorized Units
2001	1,066	2	2,009	1	35,680
2002	1,223	1	907	2	34,589
2003	1,730	1	969	2	35,171
2004	1,702	2	2,156	1	39,254
2005	2,611	2	3,778	1	39,688
2006	2,125	2	2,578	1	31,709
Source: N.J. Department of Community Affairs, 4/9/07					

- For six years, Newark or Jersey City have ranked either first or second with the most new houses. Since 2001, New Jersey communities had a total of 216,432 authorized dwellings. Newark and Jersey City accounted for 22,854. Better than one in ten new houses were in these two cities.

Construction Indicators Top New Jersey Municipalities					
Municipality	County	Estimated Cost of Construction (dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Atlantic City	Atlantic	$614,900,010	281	6,130	140,488
Newark City	Essex	421,116,901	2,125	102,215	9,241
Jersey City	Hudson	370,156,372	2,578	32,151	239,486
Woodbridge Township	Middlesex	226,944,804	48	11,965	28,160
Hoboken City	Hudson	225,012,224	995	27,480	0
Paramus Borough	Bergen	184,992,410	42	96,048	65,377
Camden City	Camden	161,339,497	270	105,000	1,525
Toms River Township	Ocean	155,546,121	254	230,770	14,800
West New York Town	Hudson	141,261,773	406	286	0
East Brunswick Township	Middlesex	137,340,651	23	0	0
Top Municipalities		2,638,610,763	7,022	612,045	499,077
New Jersey		**$15,675,107,955**	**32,050**	**11,113,555**	**5,186,662**
Top as Percent of New Jersey		16.8%	21.9%	5.5%	9.6%
Source: N.J. Department of Community Affairs, 4/9/07					

- Woodbridge Township in Middlesex County had $226.9 million of construction. Most of this was for a regional wastewater treatment plant. Another large project reported this year was for an addition to a high school.

- The City of Hoboken in Hudson County had $225 million of construction. Over 92¢ of every dollar of work was either to build new, or renovate existing, dwellings. Hoboken had 995 authorized dwellings in 2006, the third highest municipal total. One of the bigger housing developments this year was new condominiums on the site of the old Maxwell House Coffee factory.

- Paramus Borough in Bergen County had $185 million of construction in 2006. Two major school expansions and additions to the Westfield Garden State Plaza shopping mall were among the larger projects reported.

- The City of Camden in Camden County had $161.3 million of work in 2006 and much of this was for renovation of the Cooper University Hospital. Camden also had 270 new dwellings.

- The dollar amount of construction authorized for "State Buildings" was $356.7 million. The category, State Buildings, refers to building permits issued on behalf of State government agencies or instrumentalities of the State like the New Jersey Economic Development Authority, New Jersey Transit, or State universities. Some of the larger State buildings reported in 2006 were renovation and expansion of the Liberty Science Center in Jersey City; new campus buildings at Montclair State University and Kean University; the Greystone Park Psychiatric Hospital in Parsippany-Troy Hills Township, Morris County; and the Preakness Healthcare Center in Wayne Township, Passaic County.

New House Prices

Period	Number of New Houses	Median Sale Price	Percent Change in Sale Price
1996	20,903	$183,300	
1997	21,640	$190,000	3.7%
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
2001	23,372	$253,670	9.5%
2002	23,647	$274,705	8.3%
2003	22,226	$307,168	11.8%
2004	23,844	$349,900	13.9%
2005	24,571	$378,992	8.3%
2006	22,697	$413,825	9.2%
1st Quarter 2005	5,205	$367,900	
2nd Quarter 2005	6,564	$379,954	3.3%
3rd Quarter 2005	6,207	$378,554	-0.4%
4th Quarter 2005	6,595	$387,709	2.4%
1st Quarter 2006	5,220	$409,365	5.6%
2nd Quarter 2006	6,319	$425,000	3.8%
3rd Quarter 2006	6,207	$405,150	-4.7%
4th Quarter 2006	6,595	$413,500	2.1%

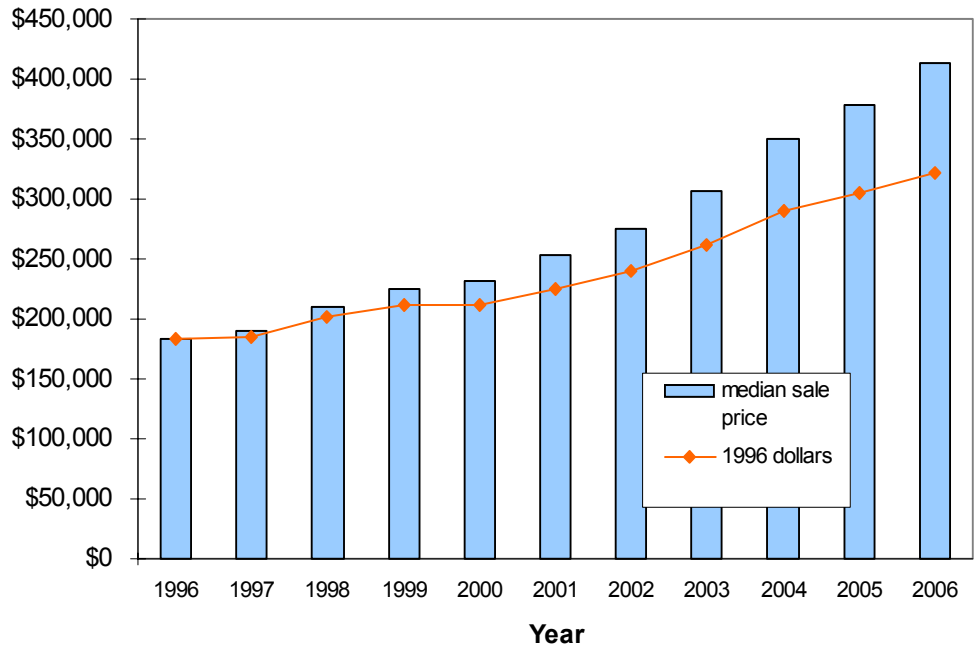
Source: N.J. Department of Community Affairs, 4/9/07

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- New home prices rose by 9.2 percent between 2005 and 2006. Half of the 22,697 new houses that started enrollment in a new home warranty program in 2006 cost more than $413,825. The most expensive new homes were in Hunterdon, Morris, and Bergen Counties.

Median Sale Price of a New NJ House



Lavatory Drain Pipe and Valve Protection Kits for Barrier-Free Compliance -- Are They Required to be Rated?

Yes, these pipe insulation kits are required to be rated. We have all seen the coverings on the pipes and valves under the sinks for barrier-free compliance; these are the materials that I'm talking about. It came to my attention recently that there are materials being installed that don't meet the code or standard.

The insulation kits are required to meet the flame-spread index and smoke-development index of Section 719.7 of the Building Subcode. The material used for the protection of exposed pipes under sinks, such as supply pipes and drain pipes, must comply with Section 719. Sections 719.1 and 719.7 clearly specify that insulation and covering materials used for pipe and tubing must have a fire-spread index of not more than 25 and a smoke-development index of not more than 450. The section further states that any materials used must meet the American Society for Testing and Materials E84 standard for flame-spread index or smoke-development index.

Source: Michael E. Whalen
Code Assistance Unit

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reach ranges specified in Section 308. The reach ranges are 15 inches minimum above the floor or ground in all cases, with all unobstructed high reach ranges at 48 inches maximum; obstructed high reach ranges are 44 inches maximum (forward reach) and 46 inches maximum (side reach).

Therefore, typical items of the Electrical Subcode such as light switches, receptacle outlets, and panelboards (topmost circuit) should be installed within the reach ranges listed above, as they are not adaptable features.

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

Source: Rob Austin
Code Assistance Unit

Code Assistance Welcomes Michael Whalen!

If you call the Code Assistance Unit with a fire protection question, you are likely to get an unfamiliar voice. That is because we have a new employee, Michael Whalen. Mike comes to us from the Township of South Brunswick, where he served as the Deputy Fire Marshal for over 15 years. Mike also has experience in fire protection, as he inspected and installed sprinkler systems in the private sector. He is currently licensed as a Construction Official, Subcode Official-Fire Protection, HHS Fire Protection Inspector, and Hotel and Multiple Dwelling Housing Code Official. He teaches Fire Official and Fire Inspector certification classes for several local community colleges.

Mike's broad-based experience will serve him well as he begins his career in the Code Assistance Unit.

Source: John Terry
Supervisor, Code Assistance Unit

Equipotential Bonding Grids -- All You Ever Needed to Know (Hopefully!)

As you know, the 2005 National Electrical Code (NEC) was adopted May 1, 2006 as the Electrical Subcode, *N.J.A.C.* 5:23-3.16. Since then, there has been much confusion about how to apply Section 680.26(C), Equipotential Bonding Grid, of the NEC/2005. The publishers of the NEC/2005, the National Fire Protection Association, realized this and published a Tentative Interim Amendment (TIA) to help clear things up; the adoption of the TIA by the Department of Community Affairs will be sometime this fall. However, there are still many questions, so further explanation is offered below.

The current text of Section 680.26(C) and (D) is below, with the TIA language in bold and underlined:

(C) Equipotential Bonding Grid. The parts specified in 680.26(B) shall be connected to an equipotential bonding grid with a solid copper conductor, insulated, covered, or bare, not smaller than 8 AWG or rigid metal conduit of brass or other identified corrosion-resistant metal conduit. Connection shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are of stainless steel, brass, copper, or copper alloy. The equipotential bonding grid shall **conform to the contours of the pool and shall** extend **within or** under paved walking surfaces for 1 m (3 ft.) horizontally beyond the inside walls of the pool and shall be permitted to be any of the following:

(1) Structural Reinforcing Steel. The structural reinforcing steel of a concrete pool **or deck** where the reinforcing rods are bonded together by the usual steel tie wires or the equivalent. **Where deck reinforcing steel is not an integral part of the pool, the deck reinforcing steel shall be bonded to other parts of the bonding grid using a minimum 8 AWG solid copper conductor. Connection shall be per 680.26(D).**

(2) Bolted or Welded Metal Pools. The wall of a bolted or welded metal pool.

(3) Alternate Means. This system shall be permitted to be constructed as specified in (a) through (c):

a. Materials and Connections. The grid shall be constructed of minimum 8 AWG bare solid copper conductors. Conductors shall be bonded to each other at all points of crossing. Connections shall be made as required by 680.26(D).

b. Grid Structure. The equipotential bonding grid shall cover the contour of the pool and the pool deck extending 1 m (3 ft.) horizontally from the inside walls of the pool. The equipotential bonding grid shall be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.).

c. Securing. The below-grade grid shall be secured within or under the pool and deck media.
Exception: The equipotential bonding grid shall not be required to be installed

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under the bottom of or vertically along the walls of vinyl lined polymer wall, fiberglass composite, or other pools constructed of nonconductive materials. Any metal parts of the pool, including metal structural supports, shall be bonded in accordance with 680.26(B). For the purposes of this section, poured concrete, pneumatically applied (sprayed) concrete, and concrete block, with painted or plastered coatings, shall be considered conductive material.

(D) Where structural reinforcing steel or the walls of bolted or welded metal pool structures are used as an equipotential bonding grid for nonelectrical parts, the connections shall be made in accordance with 250.8.

Now the questions remain, how does one apply the above requirements to the paved walking surfaces and what are the options? The key here is whether there is a "paved," conductive walking surface (including pavers) surrounding your pool, spa, or hot tub, located indoors or outdoors. If there is, you need to install an equipotential bonding grid. The proper installations are:

1. #8 AWG copper wire mesh, arranged in 12" x 12" sections (this is permitted to be in direct contact with the earth, directly under the paved surface); or
2. steel wire mesh, which is listed/labeled to be encased in concrete, is permitted and there is no specific size (this must be raised off the ground by "chairs" or other means to keep the mesh up to be encased).

   Note: It has been determined that the deck reinforcing steel (wire mesh) is acceptable to be utilized for the equipotential bonding grid as per the TIA and Section 547.10(B) of the NEC/2005, which requires the wire mesh to be bonded to the grid.

In all cases, interconnection of the wire mesh to the bonding grid must be with a listed clamp or connector. This connection of the #8 AWG copper wire is required to be installed by a New Jersey licensed electrical contractor, except for the case of a homeowner performing his or her own installation.

The above installations are typical for all paved walking surfaces. Pavers being used as walking surfaces around pools, etc. must follow one of the installations above; however, #2 requires the pavers to be placed on top of concrete slurry that encases steel wire mesh.

Please keep in mind that packaged spas or hot tubs that will be installed on conductive paved surfaces with a "walking" surface around the packaged unit must also have an equipotential bonding grid installed to the extent of the paved walking surface.

Where the packaged spa or hot tub is installed on an existing paved area that constitutes a paved walking surface, the equipotential bonding grid is required as per Sections 680.42 and 680.43 of the NEC/2005, and it is not exempted by the Rehabilitation Subcode.

For packaged spas or hot tubs installed on new or existing paved areas, a nonconductive mat or wood is also permitted; it should be installed three feet from the wall of the spa or hot tub, or to the extent of the paved walking surface from the packaged spa or hot tub. These materials are nonconductive, which negates the requirements for the equipotential bonding grid.

Remember: NO paved walking surface, NO bonding grid required.

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

Source: Suzanne Borek and Rob Austin
Code Specialists

Framing Checklist

The Department of Community Affairs has received a number of inquiries from builders and contractors as to whether they are required to complete a framing checklist. They claim that they have performed work in towns where the framing checklist was not required.

N.J.A.C. 5:23-2.18(b)2 requires that, prior to inspection, the responsible person in charge of work shall provide to the building inspector a signed framing checklist, which must be verified and initialed by the inspector. The framing checklist is then made part of the permit file.

To clarify, the framing checklist is required for new buildings and additions. It must be filled out by the person in charge of the work, and then verified and initialed by the inspector, after which it becomes part of the permit file as a record.

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

Source: Marcel Iglesias
Code Assistance Unit

Errata to the 2006 National Standard Plumbing Code

This article is to bring to your attention that the 2006 National Standard Plumbing Code (NSPC) has issued an errata sheet for both the non-illustrated and illustrated editions. The errata sheet pertains to Table 7.21.1, Assembly Use A-3, and corrects the entries under the Water Closets (Urinals) and Lavatories columns. The corrected chart is below.

Change Item No. 1 in Table 7.21.1 to read as follows

Table 7.21.1
MINIUM REQUIRED NUMBER OF PLUMBING FIXTURES - Sheet 1

No.	Classification	Use Group	Description	No. of Persons of each Sex	Water Closets (Urinals)		Lavatories		Drinking Water Facilities	Bath or Shower	Other
					Male	Female	Male	Female			
1	Assembly	A-3	a) Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, restuarants other than nightclubs, food courts.	1 - 50	1	1	1	1	1 per 1000 people		1 service sink/floor
				51 - 100	add 1	add 1	add 0	add 1			
				101 - 200	add 1	add 2	add 1	add 1			
				201 - 300	add 1	add 1	add 0	add 1			
			b) Places of worship and other religious services. Churches without assembly halls.	ea. add'l 300 over 300	add 1	add 2	add 1	add 2			
			See Notes 4, 6, 9, 12, 16								

Please note that the 2006 International Building Code (IBC), as did the 2000 IBC, lists restaurants as Assembly A-2. For the required plumbing fixture count in the NSPC, please use the description in Table 7.21.1 (A-3) for restaurants.

Also, referring to Figure 7.3.2, Minimum Fixture Clearances, "Water Closets or Bidets," "Water Closet Compartment," delete the "center line" reference. The clear dimension is 30" between partitions and not to the center of partitions.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Barrier Free Subcode and Balconies

When the International Code Council/American National Standards Institute Standard A117.1-2003 was adopted as the technical design standard for the Barrier Free Subcode on May 7, 2007, the reference to changes in level for access to balconies and patios should have been deleted. In an oversight, it was not. Consequently, at this time, the Barrier Free Subcode requires that a ramp be installed to bridge any level differential that exceeds one-half inch. This has not been required by previous editions of the Barrier Free Subcode and is not required by the applicable Federal law, the Federal Fair Housing Amendments Act. The Department of Community Affairs is in the process of correcting this oversight.

Because the Department is taking the required steps to amend the Barrier Free Subcode to match the Federal Fair Housing Act in this regard, a variation could be issued to allow for compliance with the Federal law and the pending change. The change will provide an exemption for an accessible route for balconies and patios that are not more than four inches below the entrance door.

Should a question arise, we are willing to write to any code official who would like to have that opinion in writing. Alternatively, code officials should feel free to use this article as justification for granting the variation from the requirement for an accessible route to a patio or balcony that is not more than four inches below the entrance door.

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

Source: Emily W. Templeton
Code Development Unit

New Jersey Building Safety Conference: May 2, 3, 4, 2007

The opinion polls tell it all! Overall good seminars, good fellowship, good food, and good weather -- all taking place by the ocean -- what more could we ask? Bally's, Atlantic City, again outdid themselves with the service and the staffing of our event. Our attendance remained constant at around 600. We had 22 seminars, offering continuing education credits. The Crackerbarrel, which is always well attended, reached a high of 370 attendees. The variety of tables seemed to accommodate everyone's interests, although we're always looking for more!

This year was a special year for our awardees because it is the 30th anniversary of the Uniform Construction Code. The Commissioner of the Department of Community Affairs, Susan Bass Levin, was with us and she, along with William Connolly, Director of the Division of Codes and Standards, presented awards. The Inspectors and the Technical Assistant of the Year also received recognition from their respective organizations.

Norman M. Russell, Jr. received the award for Fire Inspector of the Year. He works in Glen Ridge Borough Township and Verona Township, both in Essex County. Joseph Scaramuzzo, who works in Middletown Township in Monmouth County, received the award for Plumbing Inspector of the Year. Stephen D. Jones, who works in Florham Park Borough in Morris County and in Millburn Township in Essex County, received the award for Building Inspector of the Year. Joseph L. Freeman, who works in Salem City and Penns Grove Borough, both in Salem County, received the award for Electrical Inspector of the Year. The award for Technical Assistant of the Year went to Valerie Waricka, who works in Marlboro Township, Monmouth County.

The Technical Assistant Association of New Jersey marked its tenth anniversary this year (1997-2007). Each of the seven chapters prepared gift baskets for a raffle. Proceeds of over $1,000 from the raffle were donated to the Atlantic County Women's Center. What a nice way to recognize an anniversary! The organization also became an International Code Council chapter, and was awarded their plaque and banner at the luncheon.

An Awards reception was held on Thursday evening in the Ocean Ballroom to honor the recipients. Entertainment and music were provided by "The Party Dolls." It was an enjoyable evening.

Next year we will be meeting at the Trump Taj Mahal on April 30-May 2. We hope you will be able to join us!



From left to right: Joseph Albanese, President of the New Jersey Plumbing Inspectors Association; Joseph Scaramuzzo, Plumbing Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.



From left to right: Art Londensky, President of the Fire Prevention and Protection Association; Norman M. Russell, Jr., Fire Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.



From left to right: Linda Aiello, Vice-President of the New Jersey Association of Technical Assistants; Valerie Waricka, Technical Assistant of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

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New Jersey Code Adoptions -- Elevator Safety Subcode 

The following chart gives the adoption dates and the edition of the codes and standards used in connection with the Elevator Safety Subcode. *Note:* The grace period is covered at *N.J.A.C.* 5:23-1.6(a).

Edition Date for Building Subcode	Effective Date for Model Codes	BOCA Article Number for Elevators, Dumbwaiters, and Conveyor Equipment	ANSI A17 Safety Standard for Elevators and Escalators	ANSI A90.1 Safety Standard for Belt Manlifts	ASME A18.1 and A18.1a Safety Standard for Platform Lifts and Stairway Chairlifts
1975	01/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973	A90.1-1969	
1976/S	12/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1978	10/01/78	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1981	05/07/81	21	A17.1 - 1978	A90.1 - 1976	
1983/AS	02/22/83*	21	A17.1 - 1981	A90.1 - 1976	
1984	08/06/84	21	A17.1 - 1981; A17.1a - 1982	A90.1 - 1976	
1985/S	04/01/85	21	A17.1 - 1984	A90.1 - 1976	
1986/AS	09/22/86	21	A17.1 - 1984	A90.1 - 1976	
1987	04/01/87	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1988/S	06/20/88	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1989/AS	11/01/89	26	A17.1 - 1987	A90.1 - 1985	
1990	07/01/90	26	A17.1 - 1987	A90.1 - 1985	
1991/S	03/04/91	26	A17.1 - 1987		
1993	05/01/93	Chapter 30	A17.1 - 1990	A90.1 - 1985	
1996	07/06/98	Chapter 30	A17.1 - 1993 and 1994, 1995 Supplements	A90.1 - 1992	
IBC-2000 New Jersey Edition	05/05/03	Chapter 30	A17.1 - 1996 and 1997, 1998 Supplements	A90.1 - 1997	A18.1 - 1999 and A18.1a - 2001
IBC-2006 NJ Edition	02/20/07	Chapter 30	A17.1-(2004-2005), including A17.1.S-2005	A90.1-2003	A18.1-2003

1) Consult construction files to determine under which elevator or building code the permit was taken out.

2) If code information is not available for existing elevators, apply the previous code. For example, when performing cyclical inspections, if the permit — or installation — date precedes or is within the grace period, apply the code edition immediately preceding the adoption of the new subcode. Example: A permit was issued on May 15, 1987. If the construction file does not have the information about the edition of the standard used, then ANSI A17.1 - 1984

is enforced. If the permit was issued on November 16, 1987, the ANSI A17.1 - 1984 with the 1985 supplement applies.

S = Supplement
AS = Accumulative Supplement
A = Amendments
* = Operative date

If you have any questions about the Elevator Safety Subcode, you may reach the Elevator Safety Unit at (609) 984-7833.

Source: Paulina Caploon
Elevator Safety Unit

New Jersey Register Adoptions

Date: February 20, 2007
Adoption: 39 *NJR* 633(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.14, 3.15, 3.17, 3.18, 3.20, 3.21, and 3.22 update the Building, Plumbing, Mechanical, and Fuel Gas Subcodes of the Uniform Construction Code (UCC) to implement the most recent published standards of the 2006 editions of the International Building Code (IBC), International Residential Code (IRC), National Standard Plumbing Code (NSPC), International Mechanical Code (IMC), and International Fuel Gas Code (IFGC).

Date: May 7, 2007
Adoption: 39 *NJR* 1669(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.15(e) allow homeowners who draw their own plans to hire a builder to construct the home and require notification that plans need to be reviewed by the Department of Community Affairs, where that is the case, no more than three business days after submission to the local enforcing agency.

The adopted amendment at *N.J.A.C.* 5:23-2.16(a)2 requires the local enforcing agency to act on a completed permit application within five business days for any plan that has been reviewed and released by the Department.

The adopted amendments at *N.J.A.C.* 5:23-2.30 clarify the assignment of construction and subcode officials' roles pertaining to the issuance of violation notices, orders, and penalties, and ensure that the signatures required on Form F211 and F212 are accurately accounted for in the rules.

Date: May 7, 2007
Adoption: 39 *NJR* 1671(a)
Summary: The adopted new rule at *N.J.A.C.* 5:23-2.23A and the adopted amendments at *N.J.A.C.* 5:23-2.15, 2.23, and 4.18 establish a framework and outline the requirements for Temporary Certificates of Occupancy (TCOs) for individual tenant spaces in multi-tenant buildings.

At *N.J.A.C.* 5:23-2.23A, the adopted rule outlines the requirements for TCOs for individual tenant spaces in multi-tenant buildings. A TCO may be issued for each tenant space provided that: 1) it may be occupied safely, 2) a TCO or Certificate of Occupancy (CO) has been issued for the common area(s), and 3) the unfinished portions of the building for which TCOs or COs have not been issued do not present life-safety hazards. In addition, the adopted rule would provide that TCOs may be issued floor by floor or tenant space by tenant space.

At *N.J.A.C.* 5:23-4.18, the adopted amendment provides that fees for permit updates shall be based on the cost of the work (or cost of equipment installed for electrical, fire, and plumbing work) if they are not included in the original permit application.

Date: May 7, 2007
Adoption: 39 *NJR* 1672(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-4.5(j)1 adds public officials and employees having direct or indirect control over the funding or operations of an enforcing agency, as well as their close relatives and household members, to the list of people who must have their plans reviewed and inspected by another enforcing agency in order to avoid actual or perceived conflicts of interest.

The adopted amendment at *N.J.A.C.* 5:23-4.4(c) expands the hours in which inspections may ordinarily be

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conducted from the period of 9:00 a.m. to 5:00 p.m. on business days, to the period from 7:00 a.m. to 6:00 p.m. on business days.

The adopted amendment at *N.J.A.C.* 5:23-4.13(f) requires that records shall be maintained at each on-site inspection agency office where meetings with the public take place.

Date: May 7, 2007
Adoption: 39 *NJR* 1673(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-6.2, 6.4 through 6.9, 6.12, 6.13 through 6.28, and 6.30 through 6.33 update the provisions of the Rehabilitation Subcode, and are the product of the Department's annual review. Recommendations submitted to the Department are included along with the changes made necessary by the adoption of the IBC/2006, the NSPC/2006, the IMC/2006, the 2006 International Energy Conservation Code, the IFGC/2006, and the 2003 International Code Council/American National Standards Institute (ICC/ANSI) A117.1.

The adopted amendments to *N.J.A.C.* 5:23-6.4(e)8, 6.5(e)9, 6.6(e)15, and 6.7(e)11 add insulation requirements for framed wall, floor, ceiling, or roof assemblies of a building thermal envelope that are opened or exposed as part of the scope of the work and found to contain no insulation.

The amendments to *N.J.A.C.* 5:23-6.9(a)9, 6.12(a)2, 6.14(a)2.ii, 6.15(a)2.ii, 6.16(a)2.ii, 6.18(a)2, 6.20(b)4, 6.22(b)2, and 6.23(b)2 add requirements to prohibit the use of ladders in Assembly Group A buildings.

The adopted amendments at *N.J.A.C.* 5:23-6.4(e)9, 6.5(e)10, 6.6(e)16, and 6.7(e)12 add window assembly performance requirements. When window assemblies are replaced, the U-factor (thermal transmittance) shall not exceed 0.5 or the U-factor of the window assembly being replaced, whichever is lower.

The adopted amendment at *N.J.A.C.* 5:23-6.4(e)7 adds the fire-blocking section of the IRC/2006 for an R-5 residence to correlate with the IBC/2006 fire-blocking sections, if applicable to the project.

The adopted amendment at *N.J.A.C.* 5:23-6.8(d)2 adds the requirement for proper work space about electrical equipment over 600 volts, nominal when equipment is increased in voltage.

The adopted amendment at *N.J.A.C.* 5:23-6.8(f)6 adds that the requirements of the Fuel Gas Subcode apply only when replacement fuel-fired equipment creates a higher output to the common venting system than the original equipment.

The adopted amendment at *N.J.A.C.* 5:23-6.9(a)20 adds the installation requirements for a receptacle outlet from the Electrical Subcode for newly installed (i.e., not replacing an existing device) heating, air-conditioning, or refrigeration equipment that would require examination, adjustment, servicing, or maintenance. Also, a lighting outlet would be required if the newly installed heating, air-conditioning, or refrigeration equipment is in an attic, under-floor space, utility room, or basement.

The adopted amendment at *N.J.A.C.* 5:23-6.27(a) adds the reference for smoke detection in Group R-5 to the one- and two-family dwelling basic requirements. This would make Group R-5 of the One- and Two-Family Dwelling Subcode correspond to Group R-3 of the Building Subcode.

The adopted amendment at *N.J.A.C.* 5:23-6.27(c) adds the private garage separation section of the IRC/2006 for an R-5 residence to correspond to the IBC/2006 private garage separation section.

Date: May 7, 2007
Adoption: 39 *NJR* 1683(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-7.2, 7.3, 7.4, 7.5, 7.6, 7.9, 7.11, and 12.12 replace the adopted technical standard for accessible design, ICC/ANSI A117.1-1998, with the most recent edition of the same technical standard, ICC/ANSI A117.1-2003. The adopted amendments include changes that are required to bring the UCC into compliance with P.L. 2005, c. 350, which amended the UCC to require that townhouses be adaptable if municipal credit is sought under the New Jersey Council on Affordable Housing's fair-share requirements. The adopted amendments establish specific provisions for site impracticality in new section *N.J.A.C.* 5:23-7.6, including requirements for when accessible entrances are required on a steeply sloped site or in a flood plain. The adopted amendments reorganize several sections of the Barrier Free Subcode for clarity, without changing requirements.

Nonmetallic-Sheathed Cable and Garages -- UPDATE

The article published in the Summer/Fall 2006 *Construction Code Communicator* regarding nonmetallic-sheathed cable and garages was a literal interpretation of the 2005 National Electrical Code (NEC). The article was written to minimize confusion as to whether a 15-minute finish rating is required with the installation of nonmetallic-sheathed cable in a one- or two-family dwelling garage, attached or detached. Since then, the Department of Community Affairs has taken action which will make that article null and void.

In April 2007, the Uniform Construction Code Advisory Board approved a proposal to permit the installation of type NM, NMC, and NMS cables in buildings or structures accessory to one- and two-family dwellings. The proposal adds a change to the Electrical Subcode (NEC/2005), via *N.J.A.C.* 5:23-3.16, that states, "Item 1 of Section 334.10 is amended to add 'and accessory buildings or structures' after the word 'dwellings'." This is a pending adoption and the Department expects adoption before the year's end. In the meantime, if a permit applicant wishes to install the wiring methods discussed in an attached or detached garage for a one- or two-family dwelling, he or she must apply for a variation from the requirement to install a thermal barrier of a 15-minute finish rating, based on Item 1 of Section 336-4 in the NEC/1999.

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

Source: Rob Austin and Suzanne Borek
Code Assistance Unit

Projects Submitted in Order to Comply with Other Related Regulations

Tracking the many project applications that come across our desks can be an overwhelming task. Several retrofit regulations, including but not limited to the Uniform Fire Code (UFC) and the Hotel and Multiple Dwelling Law, mandate that work be undertaken in an existing structure. Some of this work requires a permit and compliance with the Uniform Construction Code (UCC). It is important to identify this type of work prior to completing plan review and/or issuing a permit to ensure that the work done results in correction of the violation cited.

Accomplishing this goal often requires a combined effort among the agency enforcing the regulation, the project applicant, and the UCC official reviewing the project application. A UCC official can do his/her part by requesting a copy of the Notice of Violation or regulation cited from the project applicant. With that information and the permit application in hand, the UCC official can determine what is required to abate the violation of the other code and whether the proposed work will actually abate that violation. This avoids the worst-case scenario of a well-intentioned project applicant ending up with (and paying for) a UCC permit and performing work that does not satisfy the underlying problem.

For example, the fire official cites the building owner for a UFC violation for a windowless story. The construction official needs to see a copy of the violation to determine the approved means of abating the violation. Under the UFC, there are three methods to abate this type of violation. Each method is based on the area of the windowless story. Without coordination between the fire official and the construction department on this matter, the owner could install a system that does not abate the UFC violation. It is for this reason that communication between the two offices is essential.

In addition, we should be reminded that *N.J.A.C.* 5:23-2.4(c) only requires that work mandated by any housing, property, or fire-safety code, standard, or regulation, or other State or local law, conforms to the requirements of that code, standard, law, or regulation and is not required to conform to the subcodes adopted by the UCC, unless so provided by that housing, property, or fire-safety code or regulation.

If you have any questions on this matter, please contact me at (609) 292-7898.

Source: Carmine Giangeruso
Construction Official/Emergency Coordinator
Division of Codes and Standards

Records Retention: Storing Documents

Over the past few weeks, the Department of Community Affairs has been asked several times whether there is any prohibition against storing documents that are required to be retained in an electronic or digital format. At *N.J.A.C.* 5:23-2.16A(a)1, the Uniform Construction Code (UCC) requires that "Copies of the following documents shall be retained . . . ." It does not limit the retention to paper copies and, therefore, retaining copies in a digitized or electronic format is permitted.

A companion question is whether UCC fees may be used for the conversion of paper records to an electronic or digital format. The answer to that is yes, UCC fees may be used to convert required UCC records. However, UCC fees may not be used to convert other, non-UCC municipal records and a separate fee may not be charged.

If you have questions about records retention, contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Emily W. Templeton
Code Development Unit

Requirement for Overflow Roof Drains

The Department of Community Affairs has been receiving many telephone calls asking where to find the requirement for overflow roof drains.

With the adoption of the 2006 National Standard Plumbing Code (NSPC) (and the previous editions of the NSPC dating back to the adoption of the NSPC/1996), Section 13.1.10.2, Secondary Roof Drainage, has been deleted in *N.J.A.C.* 5:23-3.15(b)13.iii.

Section 13.1.10.2, Secondary Roof Drainage, required an independent secondary roof drainage system. Despite the deletion of the section, some type of relief would still be required should the primary roof drains become blocked. To clarify, even with the deletion of the independent secondary roof drainage system requirement from the NSPC, a secondary relief system is still required.

The 2006 International Building Code, Section 1611, Rain Loads, requires that relief be provided should the primary roof drains become blocked. The building code also mentions a secondary drainage system.

Relief would be required where parapet walls or other construction extend above the roof where stormwater would become trapped. Relief could be scuppers or overflow drains. The overflow drains are permitted to be connected to the primary system. This may be considered a relief drainage system.

An independent secondary drainage system can be installed, but it would be a redundant system and is not required by code.

There are no code requirements that would prohibit the overflow drains from connecting to the primary roof drainage system.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Garden-Type Utility Sheds and Similar Structures

Section 1805.2.1 of the Building Subcode (*N.J.A.C.* 5:23-3.14) and Section R403.1.4.1 of the One- and Two-Family Dwelling Subcode (as amended by *N.J.A.C.* 5:23-3.21) contain an exception regarding frost protection for foundation systems. Tie downs are not included in frost to foundation. The exception is as follows:

Free-standing buildings meeting all of the following conditions shall not be required to be protected:

1. Buildings and other structures that represent a low hazard to human life in the event of failure, including but not limited to agricultural buildings, temporary buildings, and minor storage facilities;
2. Area of 600 square feet or less for light-framed construction, or 400 square feet or less for other than light-framed construction; and
3. Eave height of 10 feet (3048 mm) or less.

Typical buildings (this is not an all-inclusive list) that this exception applies to include a detached, garden-type utility shed; carport; deck; garage; gazebo; pavilion; playhouse . . . in short, a roofed-over, accessory structure (with the exception of a deck).

Note: This was previously covered in *N.J.A.C.* 5:23-9.9, and only applied to Groups R-2, R-3, R-4, and R-5. The requirements have changed and now apply to all building uses.

Lastly, as per *N.J.A.C.* 5:23-2.14(b)8, a building permit is not required for garden-type utility sheds and similar structures that are 100 square feet or less in area, 10 feet or less in height, and accessory to buildings of Group R-2, R-3, R-4, or R-5. Please note that if plumbing, electric, or gas is run to these structures, the applicable plumbing or electric permit would then be required.

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

Source: Rob Austin
Code Assistance Unit

Swimming Pools and the Energy Subcode

Sections 504.5 and 604.1.2.3 of the previous Energy Subcode (1995 Council of American Building Officials Model Energy Code) contained requirements for swimming pools for one- and two-family dwellings, and multiple-family dwellings with three stories or less, which included pool covers for heated pools and time clocks. However, with the adoption (on February 20, 2007) of the 2006 International Energy Conservation Code, those requirements no longer apply to these buildings. Typically, pools associated with these buildings are used four to five months of the year (i.e., open in May/June, closed in September) and it appears that, because of this, the requirements were removed in the newest national model energy conservation code.

Now, this does not mean that the Energy Subcode has gone completely soft on swimming pools; all buildings not described above still have requirements as per the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2004, the referenced standard for commercial buildings. The requirements for pool covers, time switches, etc. were in Section 7.2.5 of the ASHRAE Standard 90.1-1999 and are now in Section 7.4.5 of the ASHRAE Standard 90.1-2004.

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

Source: Rob Austin
Code Assistance Unit

The Flood Hit! Now What?

When flooding causes damage throughout your community, as a local Uniform Construction Code (UCC) enforcement agency, you may be called on to assist in the process of returning building occupants safely back into their homes or businesses. UCC enforcement agencies should provide property owners with the necessary support to evaluate conditions in identified damaged buildings. Depending on the extent of damage to the building, examples of tasks that your agency might be asked to complete are:

- Assessment by building inspectors of damage to foundation walls and inspection for signs of structural damage
- Evaluation by electrical inspectors of the damage to the property's electrical system, including the electrical service and whether reconnection can be made by the utility provider
- Evaluation by plumbing inspectors of the condition of the property's piping and fuel service, including recommending when it is safe to turn service back on
- Evaluation by fire-protection inspectors of the status of fire-protection systems within buildings

Completing these tasks may be overwhelming to your agency, depending on the extent of flood damage in your community. The Department of Community Affairs, Division of Codes and Standards is able to provide assistance to local enforcement agencies in helping a community complete the above tasks during a disaster.

A brochure, "Flooding Hazards: What You Need to Know," is available on the Department's web site at: http://www.nj.gov/dca/flood.pdf.

Please feel free to reach out to me with questions or comments. I can be reached at (609) 292-7898 or cgiangeruso@dca.state.nj.us.

Source: Carmine Giangeruso
Division of Codes and Standards
Construction Official/Emergency Coordinator

Welcome, Debra!

The Code Development Unit has a new code writer. Debra McLoughlin joined us last December, and is responsible for writing rules, performing research, and serving as the staff liaison to the Uniform Construction Code Advisory Board. In addition, Debra edits the *Construction Code Communicator*.

Before coming to the Department of Community Affairs, Debra was an editor for LexisNexis, the legal publisher. She wrote case summaries and conducted Internet research on legal issues. We will put her skills and experience to good use on code issues!

Source: Emily Templeton
Code Development Unit

William Connolly's Retirement

William Connolly has announced his retirement as the Department of Community Affairs' Director of the Division of Codes and Standards, effective on August 1, 2007.

Mr. Connolly began working for the State of New Jersey in 1973. In the ensuing decades, he was instrumental in the development of the Uniform Construction Code Act and regulations, the Rooming and Boarding House Act and regulations, the New Home Warranty and Builder's Registration Act and regulations, the Uniform Fire Safety Act and regulations, the Residential Site Improvement Act and regulations, the award-winning Rehabilitation Subcode, and the Carnival and Amusement Ride Safety regulations. Mr. Connolly pioneered improvements in accessibility including Council on Affordable Housing's low- and moderate-income housing accessibility, and recreation accessibility. During his extraordinary tenure in public service, Mr. Connolly has worked tirelessly to improve the safety and security of State residents, and the resulting accomplishments were often groundbreaking and always forward thinking. They have created a model for the future. In keeping with the adage that imitation is the sincerest form of flattery, other states have gone on to imitate the progress made in New Jersey.

During the course of his public service, Mr. Connolly also served as Director of New Jersey's Division of Housing and Development, leading the development of programs including neighborhood preservation, affordable housing, homelessness prevention, and rental assistance for low-income families. He also served two years in construction operations with the United States Army Corps of Engineers, including one year in the Republic of Vietnam.

At the June 8, 2007 Uniform Construction Code Advisory Board meeting, Board members commended Mr. Connolly's hard work, leadership, dedication, professionalism, and above all, his willingness to listen. In response, Mr. Connolly noted his grandfather's advice, "If you have to work, do the best possible job and be the best there is at it." Mr. Connolly added, "We are the best and we will continue to be."

Our ability to continue to be the best is Mr. Connolly's legacy. He didn't just lead; he listened, he connected, and he shared. As writer Tom Peters said, "Leaders don't create followers; they create more leaders." That is the benchmark of progress.

In the final moments of the Board meeting, Mr. Connolly said, "My father told me that saying goodbye means you won't see people again, so I will say "so long" because I'm sure we will see each other again. Thank you for your support."

Thank you, Bill. And so long.

Prior Use of Buildings/Properties Where Day-Care Centers Are Located

As you know, a letter was sent out from the Department of Community Affairs (DCA) on October 27, 2006 explaining that, in order to receive or renew licensure to operate a child-care center from the Department of Children and Families (DCF), an applicant must show the building was not previously used and is not presently being used for any type of industry or storage that might have created contamination.

On January 31, 2007, another letter was mailed stating that a bill was signed into law requiring environmental investigations under defined circumstances prior to the issuance of a permit or a Certificate of Occupancy for child-care centers.

Both letters included a request that the construction official provide a letter to the applicant of the day-care center stating, based on the records available, what the previous use(s) was. There seems to be difficulty in understanding what information DCF needs in the prior-use letter.

On the next page is a memorandum from Cynthia Wilk, Director of the Division of Codes and Standards, along with a template and sample letters to assist in issuing the prior-use letters.

If you have any questions, you may contact us as (609) 984-7609.

Source: Suzanne Borek
Code Specialist

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS
101 SOUTH BROAD STREET
PO BOX 802
TRENTON NJ 08625-0802

August 24, 2007

Dear Construction Official:

As part of the rules adopted following the discovery of mercury at Kiddie Kollege last summer, the Department of Children and Families has been requiring child care operators to submit a letter from the construction official regarding the prior uses of the building. This letter is required in connection with the license renewal for the child care center.

This is not a certification by the construction official. It is meant to be a letter stating what the construction official's records show on the past use(s) of the property. Because there have been some problems, the Department of Children and Families asked that a template be supplied for construction officials to use.

Attached please find sample letters for your use as a guide for issuing the letter to the child care center licensee; the letter is not required to go to the property owner.

If you have further questions, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Sincerely,

Cynthia A. Wilk
Director
Division of Codes and Standards

Enclosures

SAMPLE LETTER 1

Dear Child-Care Provider:

In response to your request, we have reviewed the files of the construction code enforcement agency of this municipality regarding the prior uses of the property located at [STREET ADDRESSS, BLOCK, LOT]. Our records reveal the following:

[LIST PRIOR USES, WITH DATES, IF POSSIBLE. THIS SHOULD INCLUDE THE GROUP DESIGNATION(S) AND A DESCRIPTION OR IDENTIFICATION OF THE BUSINESS OR USE, IF KNOWN. FOR EXAMPLE, GROUP M – CONVENIENCE STORE. IF THE BUILDING WAS USED FOR STORAGE, STATE WHAT WAS STORED, IF KNOWN. IF NO INFORMATION IS FOUND, STATE THAT.]

If you have any questions, please feel free to contact this office.

Sincerely,
Construction Official

SAMPLE LETTER 2

Dear Little Children School:

In response to your request, we have reviewed the files of the construction code enforcement agency of this municipality regarding the prior uses of the property located at 824 Nothing Ave., BLOCK 1, LOT 1.1. Our records reveal the following:

- Use Group M – Convenience Store 6/1981 to 3/1987
- Use Group B – Real Estate Office 6/1988 to 4/1999
- Use Group S – Storage of Documents for Attorney's Office 2/2000 to 5/2001
- Use Group E – Day Care Center 8/2004 to present

If you have any questions, please feel free to contact this office.

Sincerely,
Construction Official

SAMPLE LETTER 3

Dear Little Children School:

In response to your request, we have reviewed the files of the construction code enforcement agency of this municipality regarding the prior uses of the property located at 824 Nothing Ave., BLOCK 1, LOT 1.1.

Our records revealed that the property was not any of the following uses: factory/industrial (Group F), high hazard (Group H), storage (Group S), nail salon or dry cleaner (Group B), or gasoline station (Group M).

If you have any questions, please feel free to contact this office.

Sincerely,
Construction Official

(continued from page 15)



From left to right: Martin Vogt, President of the Building Officials Association of New Jersey; Stephen D. Jones, Building Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.



From left to right: Alan Wilkins, Municipal Electrical Inspectors Association; Joseph L. Freeman, Electrical Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

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Assembly Groups: Exceptions to be Business Groups

With the adoption of the International Building Code 2006 (IBC/2006), three new exceptions were added to Section 303.1, Assembly Group A. As you can see below, occupancy groups that would normally be considered Group A can now be classified as Group B, dependent on occupant load or area. Section 303.1 states:

> "Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social, or religious functions; recreation, food or drink consumption; or awaiting transportation.
>
> *Exceptions:*
>
> 1. A building *or tenant space** used for assembly purposes with an occupant load of less than 50 persons shall be classified as a Group B occupancy. (*first printing errata)
> 2. A room or space used for assembly purposes with an occupant load of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.
> 3. A room or space used for assembly purposes that is less than 750 square feet in area and is accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy."

Example of Exception #1: *A building or tenant space constructed to house only a karate institution with an occupant load of less than 50 persons.* In this situation, occupant load is to be analyzed as "Assembly Without Fixed Seats, Standing Space" from Table 1004.1.1 of the IBC/2006; and if less than 50 persons, the building may be classified as Group B.

Example of Exception #2: *A cafeteria/coffee shop with an occupant load of less than 50 persons constructed within an office building.* In this situation, occupant load is to be analyzed as "Assembly Without Fixed Seats, Unconcentrated (tables and chairs)" from Table 1004.1.1 of the IBC/2006; and if less than 50 persons, the space may be classified as part of the main Group B.

Example of Exception #3: *A conference room less than 750 square feet constructed within an office building.*

Note: Errata discussed in this article and other errata can be found at http://www.iccsafe.org/cs/codes/errata.html.

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

Source: Rob Austin
Code Assistance Unit

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Bulletin/FTO Update

Are your Uniform Construction Code (UCC) bulletins looking tattered and old? Do some of the code references look a little dated? Well, have I got good news for you! We have revised all UCC bulletins and formal technical opinions (FTOs). Each bulletin and FTO has been placed on the Internet, complete with up-to-date code references and new revised dates or updated code reference dates so you can tell what is old, what is new, or what was updated to reflect current model codes. So please, please, please . . . visit our web site at http://www.nj.gov/dca/codes and view, print, download, etc. the revised/updated bulletins and FTOs to update your UCC. The links to the bulletins and FTOs can be found in the middle column under the title "View the . . . ." Follow this column alphabetically until you hit the "UCC Extras" box.

NOTE: Bulletins and FTOs that have updated code references will not be republished and will be posted on our web site only. Bulletins and FTOs that needed extensive revisions will be mailed as part of your update package at a later date and then placed on our web site.

Source: Rob Austin
Code Assistance Unit

Service Sink – What Type is Permitted?



There has been some confusion as to the type of sink that is permitted to be used as a service sink and also the minimum waste outlet size.

Referring to the National Standard Plumbing Code 2006, Table 7.21.1, under the "Other" column, one service sink per floor is required. In order to determine what type of fixture is permitted to be used as a service sink, you must refer to the definition of a service sink in Chapter 1, Definitions, Section 1.2, Definition of Terms. A service sink is defined as: "A sink or receptor intended for custodial use that is capable of being used to fill and empty a janitor's bucket. Included are mop basins, laundry sinks, utility sinks, and similar fixtures."

Therefore, any of the sinks listed in the definition of a "service sink" is permitted to be used as a service sink.

Also, to clear up any confusion as to the minimum size waste outlet connection required, it would be based on the type of fixture used as a service sink. If a laundry sink is used, the waste outlet connection must be not less than 1½" nominal size. If a service sink or mop receptor is used, the waste outlet connection shall be not less than 2" nominal size.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

CCC Online

The Department of Community Affairs has decided that the *Construction Code Communicator* will become an online publication available only on the Division of Codes and Standards' web site (http://www.nj.gov/dca/codes). This article is to serve as an alert to all subscribers that this will be the last hard copy of the *Communicator*.

Any subscriber who would like to continue to receive a hard copy may exercise that option at an additional cost. However, the publication will be a simpler, black-and-white, stapled document -- not the familiar, two-color, professionally printed newsletter you now receive.

The Department will post new issues of the *Communicator* on our web site and will continue the initiative to post older copies, as well. We believe that this change will serve all code users more effectively and more efficiently.

Source: Emily W. Templeton
Division of Codes
and Standards

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Congratulations to New ICC Board of Directors Member, Steven Jones

Steven Jones, Construction Official in Millburn Township, Essex County was recently elected to serve a three-year term on the International Code Council (ICC) Board of Directors. It took four years, but now New Jersey will be represented on the Board of the ICC. The Department of Community Affairs would like to congratulate Steve, and all those that worked on his campaign, on this accomplishment.

Source: John Terry
Supervisor, Code Assistance Unit

CSST Bonding – What is Required?

There is confusion on what is going on with CSST, flexible gas piping, since the manufacturers have been sending out revised installation instructions with their material. The revisions were a result of a lawsuit in which the court stated that the manufacturers must provide a means to protect the CSST from lightning. The revised instructions are requiring that the CSST be bonded to the grounding electrode conductor.

The installation instruction requirements are not in compliance with the currently adopted codes. The code requires that CSST be bonded, not grounded or used as a grounding electrode. Section 250.104(B) of the 2005 National Electrical Code (NEC) states that the equipment grounding conductor is permitted to serve as the bonding means for the gas piping. Otherwise, bonding is required to be from the CSST connector coupling to the water piping. The size of the bonding conductor is based on the rating of the circuit likely to energize the piping system. Table 250.122 in the 2005 NEC provides the conductor size based on the ampacity of the circuit. For example, if there is a gas heater with no electric at all to it and the service to the dwelling is 200 amperes, Table 250.122 states that 6 AWG copper or 4 AWG aluminum is required for the bonding conductor.

The clamps installed on the water and CSST pipes must be listed and labeled in accordance with Section 250.8 of the 2005 NEC. The clamps may be a dissimilar metal, provided they are approved and listed for the use.

In conclusion, no additional bonding is required where there is electric to any gas appliance, since Section 250.104(B) of the 2005 NEC permits the equipment grounding conductor to serve as the bonding means for a gas piping system.

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

Source: Suzanne Borek
Code Assistance Unit

Energy Subcode Mandatory Requirements

The Energy Subcode allows for trade-offs in insulation R-values and window U-values. However, Section 403 of the 2006 International Energy Conservation Code (IECC/2006), reprinted below, contains requirements that are mandatory at all times no matter which compliance path is chosen. This means that, whether a permit applicant chooses to do hand calculations, use RES*check*, comply with NJ Energy Star Homes Program, or use a Prescriptive Package, this section will always be enforced as a minimum requirement (see Bulletin No. 07-2 for "low-rise residential" compliance options):

SECTION 403 -- SYSTEMS

403.1 *Controls*

At least one thermostat shall be provided for each separate heating and cooling system.

403.1.1 *Heat Pump Supplementary Heat*

Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.

403.2 *Ducts*

403.2.1 *Insulation*

Supply and return ducts shall be insulated to a minimum of R-8. Ducts in floor trusses shall be insulated to a minimum of R-6.

EXCEPTION: Ducts or portions thereof located completely inside the building thermal envelope

403.2.2 *Sealing*

All ducts, air handlers, filter boxes, and building cavities used as ducts shall be sealed. Joints and seams shall comply with Section M1601.3.1 of the International Residential Code (IRC) (e.g., tapes, mastics, gasketing, or other approved closure systems, typically UL 181 tapes).

403.2.3 *Building Cavities*

Building framing cavities shall not be used as supply ducts.

403.3 *Mechanical System Piping Insulation*

Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-2.

(continued on page 4)

(continued from page 3)

403.4 *Circulating Hot-Water Systems*
All circulating service hot-water piping shall be insulated to at least R-2. Circulating hot-water systems shall include an automatic or readily accessible manual switch that can turn off the hot water circulating pump when the system is not in use.

403.5 *Mechanical Ventilation*
Outdoor-air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

403.6 *Equipment Sizing*
Heating and cooling equipment shall be sized in accordance with Section M1401.3 of the IRC (e.g., ACCA Manual J).

*Please take note that Section 403.2.1 requires R-8 insulation on supply and return ducts outside the thermal envelope. This is especially important for those of you who rely on the RES*check *"inspection checklist" for assistance when doing plan review/inspections, as New Jersey uses a modified version of the software based on the 2003 code versus the adopted 2006 code. Here, the "Duct Insulation" category does not follow what the 2006 code states, as seen above.*

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

Source: Rob Austin
Code Assistance Unit

Foundation Drains – Where Applicable?

The application of the requirement for foundation drains has been a question of contention lately. Permit applicants have been asking whether the requirements for foundation drains apply to all foundations of one- or two-family homes, or to only certain foundations.

As per *N.J.A.C.* 5:23-3.21(c)4.v, Section 1807, Damproofing and Waterproofing, from the 2006 International Building Code, shall be used in place of Sections R405, Foundation Drainage, and R406, Foundation Waterproofing and Dampproofing, of the 2006 International Residential Code (IRC) when designing a one- or two-family home or townhouse.

To apply Sections R406.4.1 and R406.4.3 of IRC/2006, one has to visit Section R406.1, entitled "Where Required." Here it states in part, "Walls or portions thereof that retain earth, and enclose interior spaces and floors below grade, shall be waterproofed and dampproofed in accordance with this section." Both crawl spaces and basements retain earth, and enclose interior spaces. Therefore, as per Section R406.4, a drain is to be installed around the foundation perimeter. Slabs on grade typically do not retain earth, so no drain is required for a porch slab or garage slab, for example.

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

Source: Rob Austin
Code Assistance Unit

New Jersey Register Adoptions

Date: August 6, 2007
Adoption: 39 *N.J.R.* 3295(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-2.24(g) revises filing requirements for work involving certain liquefied petroleum gas (LPG) installations to conform to revisions in *N.J.A.C.* 5:18, the rules of the Department of Community Affairs' (DCA's) LPG regulatory program.

The adopted amendment at *N.J.A.C.* 5:23-4.20(c)2.iii(10) eliminates a cross-reference for fees for electrical work that involves the replacement of service entrance conductors or feeder conductors and replaces it with a restatement of the fees, thereby making it easier for users of the code to quickly determine what the fees are.

The adopted amendment at *N.J.A.C.* 5:23-4.20(c)2.iii(13) would establish fees for installation of photovoltaic equipment for which there are presently no fees.

The adopted amendments at *N.J.A.C.* 5:23-12.11 clarify reporting requirements in the event of elevator device malfunction.

The adopted amendment at *N.J.A.C.* 5:23-2.15(e) updates compliance documentation requirements to meet the newly adopted Energy Subcode, the 2006 International Energy Conservation Code for low-rise residential buildings, and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers Standard 90.1/2004 for all other buildings, thus allowing permit applicants to use a version of the software available free of charge from the United States Department of Energy to verify compliance with the requirements of the Energy Subcode (*N.J.A.C.* 5:23-3.18).

Date: October 1, 2007
Adoption: 39 *N.J.R.* 4113(b)
Summary: The adopted amendments revise the responsibilities section and the Radon Hazard Subcode

of the Uniform Construction Code (UCC) by designating the building subcode official as responsible for enforcement of the Radon Hazard Subcode. In addition, the adopted amendments update the Electrical Subcode with current National Electrical Code (NEC) numbering references and delete reference to the Nationally Recognized Testing Laboratory (NRTL) program to synchronize with its deletion from the NEC.

At *N.J.A.C.* 5:23-3.4(a), the proposed amendment specifies that the building subcode official would have sole enforcement responsibility of the Radon Hazard Subcode, except for the installation of an electrical receptacle, for which the electrical subcode official would have enforcement responsibility as provided at *N.J.A.C.* 5:23-10.4(b)14. An accompanying change at *N.J.A.C.* 5:23-10.3(b) would designate the electrical subcode official's responsibilities for electrical receptacles. At *N.J.A.C.* 5:23-3.8(d)2.i, the proposed amendment would update cross-references to the NEC. The proposed amendment would delete references to the NRTL program because it operates as an Occupational Safety and Health Administration testing program, and not as a construction industry testing program. The proposed amendment would also add language requiring testing laboratories to indicate on a product's markings that the product's approval is based upon applicable United States standards.

At *N.J.A.C.* 5:23-3.16(b)7.i, the proposed amendment would reflect the changes to Section 680.26(C) of the NEC, entitled "Equipotential Bonding Grid." The proposed amendment would add a requirement that equipotential bonding grids be required to conform to the contour of a pool. It would also add a provision to allow equipotential bonding grids to extend either within or under paved walking surfaces, supplanting the existing requirement that grids may extend only under paved walking areas. The proposed amendment would add an exception for pools constructed of nonconductive materials from the requirement that equipotential bonding grids be installed under the bottom of, or vertically along, the walls of all pools.

The adopted amendments revise the Electrical Subcode with changes made in the Tentative Interim Amendment of NFPA 70, NEC/2005 edition. These changes, which deal with equipotential bonding grids in swimming pools, increase protection against stray electrical current. At *N.J.A.C.* 5:23-3.16(b)7.ii, the proposed amendment would reflect the changes to Section 680.26(C)(1) of the NEC by adding bonding requirements for pool decks that are not integral parts of the pool.

The adopted amendments also add a provision to the standards for municipal fees section of the UCC allowing municipalities to establish an hourly fee for the review of substantial amendments or changes to plans that

HVACR Contractor Licensing

On December 20, 2007, new legislation was signed into law (P.L. 2007, c. 211), entitled "The State Heating, Ventilating, Air-Conditioning, and Refrigeration Contracting License Law." This law establishes a State Board of Examiners of Heating, Ventilating, Air-Conditioning, and Refrigeration Contractors that will operate under the purview of the New Jersey Department of Law and Public Safety's Division of Consumer Affairs. The Board will be comprised of nine members: two members of the public, one member from a State department (the Executive Branch of State Government), three members who are practicing Master Heating, Ventilating, Air-Conditioning, and Refrigeration (HVACR) contractors with at least ten years of experience, two members who are mechanical inspectors with at least ten years of experience, and one member who is an HVACR journeyman with at least ten years of experience. All of these members, with the exception of the individual from the Executive Branch, will be appointed by the Governor.

The Board must first be formed which will develop the rules for carrying out the purpose and intent of this new law. The rules will cover the process for applicant examination, the mechanism for evaluation, and the awarding of licenses to individuals who successfully qualify. A list will be published with the names and addresses of all persons statewide who are licensed under this Act. Then, when such rules have been adopted, the Uniform Construction Code (UCC) will be amended to state that a licensed HVACR contractor is required when a permit is issued to perform work covered under this law.

We will keep you apprised of the progress of the Board and notify you when the UCC is amended to incorporate this new requirement.

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

Source: Mary Ellen Handelman
Office of Planning and Operations

(continued on page 6)

(continued from page 5)

have already been released and repeal a provision concerning a determination by the DCA that a code official who works in multiple jurisdictions is not a bona fide municipal employee. At *N.J.A.C.* 5:23-4.5 and 4.12, the proposed amendment would delete paragraph (h)2 of *N.J.A.C.* 5:23-4.12, which provides that "a person shall not be deemed a bona fide municipal employee if he holds two or more jobs which are determined by the Department to be incompatible by reason of conflicting time requirements," and replace it with an amendment to *N.J.A.C.* 5:23-4.5 that would make it clear that a code official or inspector may not accept employment in more municipalities than he can properly serve. The reason for this change is that the relevant issue in any such case would be whether the official is enforcing the code properly in all jurisdictions in which he is employed and it is not necessary for the DCA to attempt to monitor the person's work schedule, which is the responsibility of the employing municipalities, in order to determine whether the code is being properly enforced.

Protected Openings vs. Construction

The Department of Community Affairs has received an increasing number of telephone calls regarding the maximum allowable area of openings in an exterior wall, Section 704.8 of the 2006 International Building Code (IBC/2006). The issue with this section is a misunderstanding of the word "protected" from Table 704.8 and how it applies to openings in an exterior wall; this is not the same type of protection referred to in the construction of the structure itself. Here's the breakdown:

1. Protected and Unprotected Construction: This refers to Chapter 6 of the IBC/2006, Construction Classification (i.e., structural components); this is not a reference to fire-protection systems. For all but Type I construction, "unprotected" construction types are those with zero ratings in Table 601 (i.e., the "B" column); "protected" construction types are those with varied ratings in Table 601 (i.e., the "A" column).

2. Protected and Unprotected Exterior Wall Openings: This refers to Section 704.8, Allowable Area of Openings, of the IBC/2006. This section regulates the maximum area of unprotected or protected openings permitted in an exterior wall in any story set forth in Table 704.8. "Protected" openings are those that meet Section 704.12 of the IBC/2006 (e.g., fire doors or shutters). This section provides an exception which allows openings not to be protected where the building is protected throughout by an automatic sprinkler system, installed in accordance with National Fire Protection Association Standard 13, and the exterior openings are protected by an approved water curtain using automatic sprinklers approved for that use.

To apply an example to this, let's say we have a Group R-2 building to be built at a distance of 3 feet, 1 inch to the property line. As specified in the "unprotected" row of Table 704.8, the exterior wall parallel to the lot line would not be permitted to have any openings based on a fire separation distance, measured in feet, of "greater than 3 to 5." However, in a building equipped throughout with an automatic sprinkler system, the code user may take advantage of the exception discussed above and apply the "protected" row in this column, allowing 15 percent of the wall to be open.

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

Source: Rob Austin
Code Assistance Unit

Q & A on the New Amendment to the UCC Act: Assignment of Inspectors for Reinspection of Single-Family Homes

What is P.L. 2007, c. 149?

On August 21, 2007, Governor Jon S. Corzine signed Assembly Bill 1323 into law as chapter 149 of the Laws of 2007. This law added the following paragraph d to the State Uniform Construction Code Act at *N.J.S.A.* 52:27D-132:

d. When an inspector or team of inspectors finds a violation of the provisions of a construction permit, the code, or other applicable laws and regulations at an owner-occupied, single-family residence, and issues a notice of violation and an order to terminate the violation, the enforcing agency shall require the same inspector or team of inspectors who found the violation to undertake any subsequent reinspection thereof at the premises. When the same inspector or team of inspectors cannot be assigned to undertake the reinspection, the enforcing agency may assign an available inspector, provided the scope of the reinspection shall be limited to the violation for which the reinspection is required. The requirements of this subsection shall not apply to violations of the Plumbing or Electrical Subcodes, or to fire-safety code violations, or to any

violation of any other subcode that the Department of Community Affairs determines to be a health or safety violation. Nothing in this subsection shall be construed to infringe upon the right of a property owner to request a different inspector, team of inspectors, or supervisor to perform any required reinspection.

What does this law apply to?

1. The law applies only to **owner-occupied, single-family dwellings**. There are no consequences for inspection of any other type of building or structure. Single-family dwellings that are being constructed are not affected, since they are not yet occupied.
2. The law applies only to **reinspections conducted after a violation has been cited.**

What does this law require?

1. **Whenever possible**, the enforcing agency **is required to assign the same inspector or team of inspectors who cited the violation**. The rationale here is that the inspector or inspectors who cited the violation would know what had been wrong and would therefore know whether or not it had been corrected.
2. If it is not possible to assign the same inspector or team of inspectors, another inspector may be assigned. However, that inspector is limited in the scope of his/her inspection to reinspection of the violation, **unless one of the exceptions applies**. (Note that this limitation applies **only if a new inspector is assigned.** If the enforcing agency assigns **the same inspector or team of inspectors**, the limitation does not apply.)

What are the exceptions?

1. **Plumbing, electrical, and fire-safety violations** are **never subject** to the limitations imposed by this law.
2. Violations of the **Building Subcode** (or any subcodes other than Plumbing, Electrical, and Fire Protection) are **not subject** to the limitations imposed by this law **if the Department determines the violation to be a health or safety violation.**

What about requests by homeowners for assignment of a different inspector?

1. The law preserves the right of a homeowner to ask that a different inspector be assigned, for whatever reason. It does not, however, require the enforcing agency to comply with that request.
2. Since any assignment of a new inspector in response to a homeowner's request would not involve a situation where the original inspector(s) ***cannot*** be assigned, the **limitation established by this law** on what the new inspector(s) may or may not cite **would not apply**.

What, in summary, are the practical consequences of this law?

1. Whenever possible, and unless one of the exceptions applies, the same inspector should be assigned to reinspect any violation that he/she previously cited at an owner-occupied, single-family home.
2. If it is necessary to assign a different inspector in a case where no exception applies, that inspector should report to the construction official any observed violations that were not previously cited and that appear to be health or safety violations. The construction official can then contact the Office of Regulatory Affairs to obtain a determination from the Department as to whether those violations can be cited under the exception for health or safety violations.
3. There are no consequences at all for enforcement of the Plumbing, Electrical, or Fire Safety Subcodes, or for any inspections of premises that are not owner-occupied, single-family homes.

Residential Sprinkler Requirements

N.J.A.C. 5:23-3.14 adopts the 2006 International Building Code (IBC/2006) as the Building Subcode for the design of all new buildings, except Residential Group R-5. *N.J.A.C.* 5:23-3.21 adopts the 2006 International Residential Code (IRC/2006) as the One- and Two-Family Dwelling Subcode for the design of all new Residential Group R-5 buildings. As you can see, there is a distinct line drawn here for the design of certain buildings. Because of this, all Residential Group R, except Group R-5, must meet Section 903.2.7 of the IBC/2006. This section requires that an automatic sprinkler system be installed, in accordance with Section 903.3, and provided throughout all buildings with a Group R fire area. The "Group R fire area" this section refers to is all Residential Group R, except Group R-5 because of the reason stated above. This is further backed by Section 310, Group R-5, which states that these structures are to be constructed in accordance with the One- and Two-Family Dwelling Subcode.

Note: As per *N.J.A.C.* 5:23-3.21(c)3.i, Section R300 of the IRC/2006 contains the only requirements for a sprinkler system when designing a One- or Two-Family Dwelling Subcode building with three stories.

Source: Rob Austin
Code Assistance Unit

Special Inspector Certifications

The Department of Community Affairs adopted regulations concerning the certification of special inspectors in November of 2006. The certifications were initially required as of November 6, 2007, but that requirement has been delayed until November 6, 2008 to allow the industry additional time to meet the requirements for certification. In the interim, construction officials should continue to ensure that special inspectors are qualified.

These certifications are required only for special inspections in Class 1 buildings and for the specific areas to be certified. The classifications of these certifications are as follows: concrete placement, reinforced concrete, prestressed concrete, structural steel and bolting, structural welding, exterior insulation finish systems (EIFS), structural masonry, and spray-applied fireproofing.

The requirements for the certifications vary in some ways, but all have an experience and examination requirement. New Jersey licensed Professional Engineers with relevant experience to any one specific certification may be certified upon application and documentation of that specific experience. Building and Fire Protection Inspectors HHS may qualify for the spray-applied fireproofing special inspector certification, provided they complete the required examination. Building Inspectors HHS may also qualify for the EIFS special inspector certification, provided they possess certification by either the Association of the Wall and Ceiling Industries or the Exterior Design Institute as an EIFS inspector. The other special inspector certifications require experience specific to the area of inspection and certification by examination in that specific area.

Specific information on the certifications can be obtained by contacting the Licensing Unit at (609) 984-7834 or by e-mail: codeslicensing@dca.state.nj.us.

Specific Safety Glazing Areas

This article is to address two specific "hazardous locations" in Section R308.4 of the 2006 International Residential Code and Section 2406.3 of the 2006 International Building Code that require safety glazing in accordance with Consumer Product Safety Commission regulations, 16 *CFR* 1201.

Item #6 requires safety glazing in individual, fixed or operable panels adjacent to a door, where the nearest vertical edge is within a 24-inch arc of the door in a closed position and the bottom edge of which is less than 60 inches above the floor or walking surface. The 24-inch arc is measured from both sides of a door (side-hinged or sliding).

Item #7 requires safety glazing in an individual, fixed or operable panel that 1) has an exposed area of an individual pane larger than 9 square feet, 2) has a bottom edge less than 18 inches above the floor, 3) has a top edge more than 36 inches above the floor, **and** 4) has one or more walking surfaces within 36 inches horizontally of the glazing. The key here is to apply all four criteria; if one is not met, then item #7 no longer applies.

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

Source: Rob Austin
Code Assistance Unit

Table 601 and Note C

Table 601 in the first printing of the 2006 International Building Code (IBC/2006), and the only printing of the New Jersey edition of the same code, have a note "C" in the Type IIB and IIIB columns for roof construction. However, the roof construction for Type IIB and IIIB is rated at zero hours. This, in turn, has made Note C confusing. The truth of the matter is that **Note C from Table 601 does not apply to Type IIB or Type IIIB construction,** as it is an error. The International Code Council has not yet issued an errata to the IBC/2006; however, subsequent printings of the document, including commentaries, do not include Note C in Type IIB and IIIB for roof construction. Please apply the code without Note C for Type IIB and Type IIIB for roof construction. All other errata can be viewed at:

http://www.iccsafe.org/cs/codes/errata.html

Source: Rob Austin
Code Assistance Unit

Useful Tools on the Division's Web Site

Have you been to the Department of Community Affairs, Division of Codes and Standards' web site recently? If not, you should take a look! The Division has been working diligently to update and add useful information and tools to its web site to better serve the public. The web site address is: http://www.nj.gov/dca/codes — bookmark it and please use it! Here's a brief overview of what the web site offers:

- Listing of current codes, including the adoption dates and where to purchase them
- Links to International Codes; NSPL Code; and American Society of Heating, Refrigerating, and Air-Conditioning Engineers Code (adopted by New Jersey for users to view and use the 2006 codes)
- Technical amendments (changes) to adopted codes
- Listing of previous codes and adoption dates
- Barrier Free Subcode (Subchapter 7)
- Listing of all municipal code officials throughout the State
- Radon Hazard Subcode (Subchapter 10) and the municipalities that are subject to its requirements
- Listing of registered home builders
- Rehabilitation Subcode (Subchapter 6)
- Recently proposed rules
- Recently adopted rules
- Bulletins and formal technical opinions (with updated code references)
- *Construction Code Communicator* articles (2002 to present)
- The entire Uniform Construction Code (updated four times a year)
- Wind speed maps for those questionable, 100-mph municipalities (re: IRC/2006)

These are just some examples of what the Division's web site contains. A few other key links of interest:

- Child-care center information (environmental requirements)
- Home improvement contractor information (current registration)
- Permit application forms (any municipality can accept these)

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

Source: Rob Austin
Code Assistance Unit

Yesterday's and Today's Model Codes

The chart on the following page displays all the codes the State of New Jersey has used since the introduction of the Uniform Construction Code on January 1, 1977. As you can see, 2007 was a big year for model code adoptions. This chart and other useful information can be viewed on our web site at http://www.nj.gov/dca/codes.

Source: Rob Austin
Code Specialist

(continued on page 10)

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New Jersey Model Code Adoptions

Building Subcode		Electrical Subcode	Energy Subcode				Fire Protection Subcode		Mechanical Subcode		Fuel Gas Subcode	Plumbing Subcode	1 & 2 Family Dwelling		Barrier Free (Sub 7)		Rehab (Sub 6)	Effective Date
BOCA	IBC	NEC	BOCA	CABO MEC	IECC	ASHRAE Std. 90.1	BOCA	IBC	BOCA	IMC	IFGC	NSPC	CABO	IRC	CABO/ ANSI A117.1	ICC/ ANSI A117.1	updated yearly since 1998	(date when six month grace period began)
1975		1975					1975					1975					"25/50 Rule"	01-01-77
1976/S							1976/S											12-01-77
1978		1978					1978					1978						10-01-78
1981		1981					1981					1980						05-07-81
1983/AS							1983/AS					1981/82/S						02-22-83
1984		1984					1984		1984			1983						08-06-84
1985/S							1985/S		1985/S									04-01-85
													1983					07-01-85
												1984/85/S						02-03-86
1986/AS							1986/AS		1986/AS									09-22-86
1987		1987					1987		1987									04-01-87
												1987	1986					09-21-87
1988/S							1988/S		1988/S									06-20-88
													1987/88/A					08-15-88
			1987															09-06-88
												1988/S						02-06-89
1989/AS							1989/AS		1989/AS			1989/S						11-01-89
													1989					05-21-90
1990		1990	1990				1990		1990			1990						07-01-90
1991/S							1991/S		1991/S									03-04-91
												1991/S	1990/91/A					05-20-91
1993		1993	1993				1993		1993			1993	1992					05-01-93
						1989									1992			07-01-95
																	1998 (updated yearly)	01-05-98
1996		1996	1993				1996		1993			1996	1995					07-06-98
		1999																02-07-00
										2000	2000							06-18-01
												2000						09-17-01
				1995		1999												01-16-02
																1998		11-04-02
	2000	2002						2000						2000				05-05-03
										2003	2003	2003						01-18-05
		2005																05-01-06
	2006				2006	2004		2006		2006	2006	2006		2006				02-20-07
																2003		05-07-07

S = Supplement AS = Accumulative Supplement A = Amendments

(Revised 5/7/07)

High-Intensity Discharge Luminaires

The letter below was mailed to local electrical subcode officials on January 17, 2008.

Dear Electrical Subcode Official:

The Department of Community Affairs is working in conjunction with the New Jersey Department of Environmental Protection (DEP) to publicize requirements for the protection of high-intensity discharge (HID) lamps for the safety of occupants in all buildings.

There are regulations contained in the Uniform Construction Code (UCC) that address the use of HID lamps, which are also called electric discharge lighting, when used in public schools. This includes mercury vapor, high-pressure sodium, and metal halide lamps. The requirements of *N.J.A.C.* 5:23-3.11A(c)3 state that all HID lamps are to be of the fail-safe type, which will permanently extinguish within 15 minutes after the outer glass of the bulb is broken, and that all lamps are to be provided with a glass or plastic lens to protect the bulb.

The 2005 National Electrical Code (NEC/2005) only addresses metal halide lamp containment. Section 410.73(F)(5) of the NEC/2005 states luminaires that use a metal halide lamp other than a thick-glass, parabolic reflector lamp (PAR) are to be provided with a containment barrier that encloses the lamp, or are to be provided with a physical means that only allows the use of a lamp that is Type O. For other types of HID lamps, the NEC relies on the manufacturer's installation instructions for the type, use, and protection of the lamps.

In addition to the rules described above that are part of the UCC, the DEP has rules which establish safety requirements for the indoor or outdoor use of mercury vapor or metal halide lamps (*N.J.A.C.* 7:28-41).

The DEP rules address the use of mercury vapor or metal halide lamps and protection from those lamps breaking, and from the harmful ultraviolet (UV) radiation that could be emitted.

There are two types of mercury vapor lamps which exist: the T-rated, self-extinguishing variety and the R-rated, non-extinguishing variety. T-rated bulbs self-extinguish within 15 minutes following breakage of the outer envelope of the bulb, thus limiting exposure to UV radiation. R-rated bulbs, on the other hand, do not self-extinguish upon fracture of the outer envelope. In fact, so long as the discharge tube remains intact, the lamp may continue to burn. R-rated bulbs can still be used if encased in a totally enclosed lighting fixture that absorbs UV radiation if the outer bulb is broken. However, a simple wire cage, as commonly seen around job sites, will not provide adequate shielding.

N.J.A.C. 7:28-41 permits only self-extinguishing lamps to be used in open, high-intensity or electric discharge lighting fixtures. The lamps, as well as the fixtures, are required by the NEC to be listed or labeled for the use. This means that the lamps for the fixture are required to be marked with the appropriate letter corresponding to the listed use. Self-extinguishing type lamps are marked with a "T." Lamps marked with an "O" must still be enclosed if they are not self-extinguishing. Likewise, lamps marked with "MP," "S," or "E" must be totally enclosed if they are not self-extinguishing. In summary, all types of lamps that are not self-extinguishing present a potential hazard and must be completely enclosed.

Please be sure to check the manufacturer's installation instructions, and make building owners and contractors aware of the DEP requirements. Should you need further assistance on this matter, please contact the Code Assistance Unit at (609) 984-7609.

Sincerely,

Cynthia A. Wilk
Director
Division of Codes and Standards



Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
PO Box 802
Trenton, NJ 08625

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Jon S. Corzine, Governor

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Susan Bass Levin, Commissioner

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Acceptance Testing – Single- and Multiple-Station Smoke Alarms

There have been several recent inquires regarding the proper method used to conduct an acceptance test on non-system type, single- and multiple-station smoke alarms installed in Groups R-1, R-2, R-3, R-4, R-5, and I-1. The Uniform Construction Code (UCC) at *N.J.A.C.* 5:23-3.4(d)2 identifies these field inspections as a responsibility of the fire protection inspector as a provision of Chapter 9, including Section 907.2.10.4 in the International Building Code (IBC) and Section R317 in the International Residential Code (IRC).

It is the intent of both the IBC and IRC that each alarm and, if applicable, each interconnection be tested in accordance with the household fire warning equipment provisions in Chapter 2 of National Fire Protection Association (NFPA) 72, "National Fire Alarm Code," 1996 edition. During an initial acceptance test, the fire protection inspector must witness a functional test of all the devices installed in order to approve the installation. NFPA 72, Table 7-2.2 gives specific test methods that are acceptable as functional tests for single-station smoke detectors. The functional test must ensure smoke entry into the sensing chamber and an alarm response. Two of the permitted test methods to accomplish this are testing with smoke or with a listed aerosol approved by the manufacturer. However, other methods approved by the manufacturer that ensure smoke entry into the sensing chamber are also permitted. A detector sensitivity test, which measures the sensitivity range of individual detectors, is not required as part of the acceptance test for single- and multiple-station smoke alarms.

If you have any questions, please feel free to contact me at (609) 292-7898.

Source: Carmine Giangeruso
Construction Official

Accessible Parking Signs: Referenced Standard

As per *N.J.A.C.* 5:23-7.9(g), each accessible parking space shall be marked with an R7-8 sign, centered and mounted at the head of each parking space. The sign shall be mounted approximately 60 inches above the parking lot or sidewalk surface when the sign is parallel to the sidewalk and approximately 72 inches above the parking lot or sidewalk surface when the sign is perpendicular to the sidewalk.

Section 7.9(g) references the *Manual on Uniform Traffic Control Devices* from the United States Department of Transportation, Federal Highway Administration, http://mutcd.fhwa.dot.gov/. As per Section 2B.40 of the *Manual*, the signs should have a green legend (i.e., words) and border on a white background. The sign shall also display the international symbol of accessibility (normally blue), as per Section 7.9(g).

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Lastly, each accessible parking space shall also be marked with a 12-inch high by 10-inch wide R7-8P penalty sign, with a black legend and border on a white background (dimensions and colors as per New Jersey Department of Transportation), beneath the R7-8P sign. The R7-8 sign shall contain the following language:

PENALTY
$250 FIRST OFFENSE
SUBSEQUENT OFFENSES
$250 MINIMUM AND/OR
UP TO 90 DAYS COMMUNITY SERVICE
TOW-AWAY ZONE

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

Source: Rob Austin
Code Specialist

Air Conditioners and Heat Pumps — New Standards

Recently, the United States Department of Energy (DOE) raised the energy efficiency standards to a 13.0 seasonal energy efficiency ratio (SEER), and a 7.7 heating seasonal performance factor (HSPF) for new central air conditioners and new central air-conditioning heat pumps, respectively. The standards apply to products manufactured for sale in the United States as of January 23, 2006.

As a result of the change in DOE standards, split-system air conditioners (the most common type of residential air-conditioning equipment) will see a 30 percent improvement in energy efficiency. For split-system heat pumps, the new standard will see a 30 percent improvement in cooling efficiency and a 13 percent improvement in heating efficiency. The standard will also increase the cooling efficiency of single-package air conditioners and single-package heat pumps by 34 percent, and the heating efficiency of single-package heat pumps by 17 percent.

The changes in the DOE standards affect the enforcement of the 1995 Council of American Building Officials Model Energy Code. Minimum performance of category "<65,000 Btu/h Cooling Capacity Heating Mode (Heat Pump)" in Table 503.3.2a (Standard Rating Conditions and Minimum Performance Heat Pumps — Air Cooled, Electrically-Operated, <135,000 Btu/h Cooling Capacity) is now 7.7 HSPF for both split systems and single packages. Minimum performance of category "<65,000 Btu/h Cooling Capacity Cooling Mode" in Table 503.3.5a (Standard Rating Conditions and Minimum Performance Unitary Air Conditioners and Heat Pumps — Air Cooled, Electrically Operated, <135,000 Btu/h Cooling Capacity — Except Packaged Terminal and Room Air Conditioners) is now 13.0 for both spilt systems and single packages.

> Note: New equipment with a rating less than 13.0 SEER or 7.7 HSPF manufactured before January 23, 2006 may still be sold and installed. For date verification, check the data nameplate attached to the equipment.

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

Source: Rob Austin
Code Specialist

Alarm Installers . . . What's Required

Recently, there have been several inquiries as to whether licensed electrical contractors are permitted to install alarms. The answer is a qualified "yes." Alarm installers need to submit one of the following in order to obtain a Uniform Construction Code (UCC) permit:

- Permit of Certification issued by the Division of Fire Safety (DFS); or
- Individual alarm installer license issued by the Board of Examiners of Electrical Contractors; or
- New Jersey electrical contractor license.

The Permit of Certification is a business permit issued by the DFS and is equivalent to the business license that will be issued in the future by the Division of Consumer Affairs.

Since business licenses for alarm contractor firms will be issued in the future, individual license holders from the Division of Consumer Affairs may apply for a UCC permit provided they complete the application with their individual license name/business name and the company address, along with providing a copy of their identification

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card. The individual license holder is required to sign the UCC permit application.

An individual who has a DFS certificate may obtain a UCC permit for alarm installation only if the certificate holder has been issued a Permit of Certification for a business by DFS.

Because the wiring of alarms is covered in the National Electrical Code, a New Jersey licensed electrical contractor already meets the certificate requirements for alarm installers (see bullet three above). This means that a New Jersey licensed electrical contractor can obtain a UCC permit for alarm installation.

From now on, when an applicant files for a UCC permit to install a fire alarm system, the installer must possess one of the three items listed above.

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

Source: Suzanne Borek
Code Assistance Unit

Bulletin No. 03-3 and OPRA

It has come to the Department of Community Affairs' attention that local enforcing agencies are citing Bulletin No. 03-3, Public Access to Building Plans, as the basis for denying requests for access to building plans and specifications made pursuant to the Open Public Records Act (OPRA), *N.J.S.A.* 47:1A-1 et seq.

Construction officials can and should continue to refer to Bulletin No. 03-3 for guidance on providing public access to plans. However, construction officials should cite OPRA and Governor McGreevey's Executive Order 21 as the legal basis for denying a request for access to building plans and specifications made under OPRA.

OPRA and executive orders with exemptions to disclosure may be downloaded from the Government Records Council's web site at www.nj.gov/grc/.

If you have questions regarding enforcement of the Uniform Construction Code, contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Megan Sullivan Czyz
Code Development Unit

Concrete-Encased Electrodes: Plans vs. Inspections



Situation: The approved plans show the utilization of concrete-encased electrodes. However, at the time of inspection, the foundation has been poured and the concrete-encased electrodes are no longer available for use as the grounding electrode. What should the inspector do?

N.J.A.C. 5:23-2.15(e)1 states, "Plans submitted shall be required to show only such detail and include only such information as shall be necessary to demonstrate compliance with the *requirements of the code* and these regulations, or to facilitate inspections for *code conformity* . . . ." *N.J.A.C.* 5:23-2.18(b) states, "The construction official and appropriate subcode officials shall carry out inspections during the progress of the work to ensure that work inspected conforms to the *requirements of the code* . . . ."

By now, you may be asking, "How do the above sections relate to the inspectors' duties regarding this situation?" The key here is that the sections above are looking for code compliance/conformity only. There are instances where code requirements can be met in various ways. As long as one option is properly met, it does not matter whether that method is the one shown on the plans. The inspector is to pass the inspection as long as the change complies with the Uniform Construction Code.

In the case described above, a grounding electrode can be established in seven ways, as per Section 250.52(A) of the National Electrical Code/2002. Therefore, if the concrete-encased electrode is no longer available to be used for grounding as shown on the plans and the installer has chosen another method from Section 250.52(A) at the time of inspection, that portion of the job should be passed. The inspector should then request a letter from the design professional stating that the change in method of compliance is acceptable.

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

Source: Rob Austin
Code Assistance Unit

Correction

In the Winter 2005 *Construction Code Communicator*, Volume 17, Number 3, there is a correction to the article entitled "ASHRAE Standard 90.1-1999: Energy Code Compliance." In the top paragraph of the second column on page 2, the heading "U-Factor (Thermal Resistance)" should actually read "U-Factor (Thermal **Transmittance**)."

We apologize for any inconvenience.

Examination Rooms – Barrier Free

Question: In the case of multiple examination rooms for a single practitioner (e.g., medical, dental, etc.), how many exam rooms are required to meet the Barrier Free Subcode?

Answer: The Barrier Free Subcode does not answer this question directly. However, referring to *N.J.A.C.* 5:23-7.11(a)1.i and (f)1 for guidance, the appropriate application of the Barrier Free Subcode for this instance would be five percent of the rooms, but no less than one, to be designed as accessible.

Note: The above-referenced sections deal with clustered toilet rooms serving a common medical office area or suite and customer service facilities, respectively.

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

Source: Rob Austin
Code Assistance Unit

Framing Inspection Checklist

As of February 21, 2006, new rules were adopted regarding the Framing Checklist to ensure that framing is done properly and is ready for inspections. *N.J.A.C.* 5:23-2.18(b)1.iv(1)(E) now states, "Prior to inspection, the responsible person in charge of work shall provide to the building inspector a signed Framing Checklist to be verified and initialed by the inspector, and then made part of the permit file."

What does this mean for you?

- **Responsible person in charge:** This is normally the builder, general contractor, or site supervisor. He or she should complete and sign the Framing Checklist prior to the framing inspection. The building inspector will be using the same checklist for verification purposes.
- **Building inspector:** The building inspector should arrive within three business days after a request for inspection. He or she should use the same checklist from the responsible person in charge. After verification, the building inspector will initial the checklist and file it in the construction office.

Note: As there will probably be no copiers on the construction site, it may be wise for the responsible person in charge to bring an extra copy of the Framing Checklist; two complete checklists can then be signed/initialed so that both parties may each have a copy for documentation purposes.

Lastly, the Framing Checklist has become Uniform Construction Code (UCC) Form F-390 and is listed at *N.J.A.C.* 5:23-4.5(b)2. A copy can be obtained at www.state.nj.us/dca/codes under the heading "UCC Construction Permit Application and Related Forms" as "Framing Checklist."

Source: Rob Austin
Code Specialist

Inspector Trainee Requirements

It has come to the Licensing Unit's attention that there is confusion regarding what is required to be a properly registered Inspector Trainee and what duties a registered Trainee may perform. Be aware that no individual may perform any of the duties of a Trainee without first being registered with the Licensing Unit. Additionally, any experience gained while performing work as an unregistered Trainee will not be accepted for the purpose of obtaining an Inspector license. Individuals who want to register as a Trainee may obtain the necessary forms from the Licensing Unit.

The following requirements are needed prior to becoming registered as a Trainee Inspector with the State:

1. Submission of a complete application, along with the required $20 non-refundable application fee.
2. Provision of documentation of at least one year of acceptable experience related to the subcode area of registration sought (building, electrical, fire protection, plumbing). Please note that there are only three types of acceptable experience: self-employment as a contractor, journeyman level experience in a trade related to a particular subcode, and inspector-type experience.

3. Sponsorship from the construction official and appropriate subcode official in the town where the Trainee will be employed.

The duties of a Trainee are limited and require constant supervision by an individual with a valid license in the same subcode area as the Trainee. Supervisors stay with Trainees throughout inspections. The Office of Regulatory Affairs has, from time to time, investigated the actions and conduct of Trainees. One recurring problem is that the Trainees are not renewing their registrations annually. Another problem is that Trainees are signing documents. Trainees *are not* to sign plan releases, stickers, or technical sections.

Trainees must be evaluated by their supervisors quarterly and only Trainees who receive a satisfactory performance evaluation can credit their experience towards their Inspector licenses. Trainees are required to renew their registrations annually; however, Trainees may only renew their registrations **one** time without taking the required entry-level Inspector course and passing the required National Inspector examinations appropriate to their subcode area. The role of a Trainee is limited to those duties referenced above. Please be careful not to exceed those limits. It is the subcode official's responsibility to ensure that the Trainee follows the regulations.

If you have any questions on this issue, please call Patrick Ryan at (609) 984-7834.

Source: Patrick Ryan, Licensing Unit
Gerry Grayce, Office of Regulatory Affairs

Manufactured Homes

The construction of manufactured homes, also referred to as mobile homes, is regulated by the Federal Manufactured Home Construction and Safety Standards (Part 3280). The foundation/stabilization (e.g., straps and anchors) system for a manufactured home, including its installation and assembly, is required to conform to the New Jersey Uniform Construction Code (UCC). Various issues related to this category of premanufactured construction have been the subject matter of past *Construction Code Communicator* articles. This article reinforces the following frequently raised issues:

1. The requirements for documents to be submitted with the construction permit application; and
2. The municipal enforcing agency's responsibilities with respect to inspection(s) and the issuance of a Certificate of Occupancy.

Question: What are the requirements for filing documents at the time of application for a construction permit for a manufactured home?

Response: The documents required at the time of application for a construction permit are:

1. A statement that the work to be performed is to include the installation of a labeled manufactured home. (The label is the Federal Manufactured Home Certification label per Part 3280). The statement is to be signed by the applicant or his agent.
2. The schematic floor plan layouts and typical elevations showing the arrangement and layout of the manufactured home. Such schematic floor plan layouts and typical elevations do not include sections; construction details; or structural, plumbing, mechanical, and electrical layouts. These schematic plans are not required to be prepared or sealed by an architect or engineer.
3. Detailed plans for any site-built construction (e.g., the foundation/stabilization system) related to the installation of the manufactured home. The design of the foundation/stabilization system is to be based on the manufacturer's recommended foundation design and the actual site-specific soil conditions. These plans shall be prepared, signed, sealed, and dated by a New Jersey licensed professional engineer or a registered architect, and shall meet the applicable requirements of the UCC.

   Note: A homeowner who has prepared the construction documents of a single-family home, which is to be used as his own principal residence, is not required to submit signed and sealed plans [*N.J.A.C.* 5:23-2.15(e)].
4. The manufacturer's installation instructions for the manufactured home.

Question: What are the municipal enforcing agency's responsibilities with respect to inspections and the issuance of a Certificate of Occupancy?

Response: This is covered in *N.J.A.C.* 5:23-2.22. Following is a summary of the requirements:

1. Verification/confirmation of an attached Certification Label [see sample Federal Department of Housing and Urban Development (HUD) Certification Label on page 6]. Per Section 3280.11, Certification Label, of the Federal Manufactured Home Construction and Safety Standards, "This label shall be approximately two inches by four inches in size and . . . shall be etched or stamped with a three-letter designation which

(continued on page 6)

(continued from page 5)

identifies the . . . inspection agency." Section 3280.11 additionally states, "The label shall be located at the taillight end of each transportable section of the manufactured home, approximately one foot up from the floor and one foot in from the road side, or as near that location on a permanent part of the exterior of the manufactured home unit . . . ."

2. Verification/confirmation of an attached Manufacturer's Data Plate (see sample on opposite page). The information (roof load zone, wind load zone, etc.) on the Data Plate (per Section 3280.5 of the Federal Manufactured Home Construction and Safety Standards) determines the suitability of the manufactured home for the particular location.
3. Inspection of the manufactured home unit(s) to ascertain any visible signs of damage and/or visible code violations. For this purpose, the code is the Federal Manufactured Home Construction and Safety Standards.
4. Inspection of the installation of the manufactured home unit(s) or assembly, and all work installed or completed on site (including but not limited to foundations, and the structural, mechanical, plumbing, and electrical connections) to determine compliance with the regulations, approved plans, and manufacturer's installation instructions.
5. Witness of performance of nondestructive tests (e.g., plumbing, electrical).
6. Issuance of a Certificate of Occupancy for the certified manufactured home(s) after it has been installed and properly inspected pursuant to *N.J.A.C.* 5:23-2.22, provided that any manufactured home unit(s) found not to comply with the plans filed with the permit shall be brought into compliance before such Certificate of Occupancy shall be issued.

When the local enforcement agency is making an inspection and finds that the factory-built portion of the manufactured home contains violations of the Federal Manufactured Home Construction and Safety Standards, it should report the details of such violations, in writing, to the Department of Community Affairs, Bureau of Code Services, Industrialized Buildings Unit, Post Office Box 816, Trenton, New Jersey 08625-0816, *Attention:* Paul Sachdeva. Where violations are hazardous to occupants, a Certificate of Occupancy should not be issued and the building should not be occupied before such hazards are corrected. If the violations are not hazardous, a Temporary Certificate of Occupancy shall be issued. It is suggested that the Certificate of Occupancy indicate "Manufactured Home" and list the "HUD Certification Label Number."

It is highly recommended that code officials, designers, builders, and installers familiarize themselves with the Federal Manufactured Home Construction and Safety Standards. The HUD regulations web site, which includes Part 3280 - Federal Manufactured Home Construction and Safety Standards, is http://www.hud.gov/offices/hsg/sfh/mhs/mhshome.cfm.

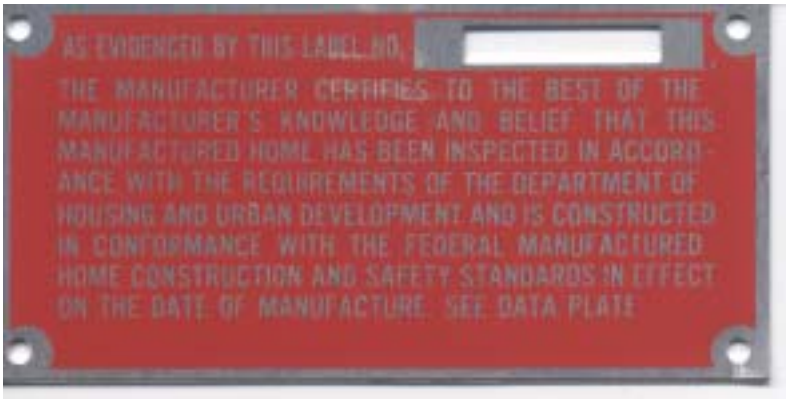
The following articles, which have appeared in previous editions of the *Communicator*, provide additional useful information related to this subject:

1. "Warranty Stories," Summer 1992
2. "Premanufactured Construction Fees," Fall 1995
3. "Manufactured Homes: Foundation and Support," Winter 1997
4. "Manufactured (HUD) Homes: Installation and Assembly," Summer 2001
5. "Manufactured Homes: Permanent Foundations," Winter 2002
6. "Manufactured Housing – Permanent Foundation Guide," Spring 2003
7. "Manufactured Homes Installation and Assembly: Common Instances of Nonconformance," Winter 2004

UCC Bulletin Nos. 80-6, Manufactured Homes, and 88-2, Manufactured Housing, provide additional information related to manufactured homes.

If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva, P.E.
Industrialized Buildings Unit
Bureau of Code Services



HUD Certification Label

MFG.

UNIT SER. #_____

MODEL #_____HUD SEAL #_____

"THIS MANUFACTURED HOME IS DESIGNED TO COMPLY WITH THE FEDERAL MANUFACTURERED HOME CONSTRUCTION AND SAFETY STANDARDS IN FORCE AT THE TIME OF MANUFACTURE"

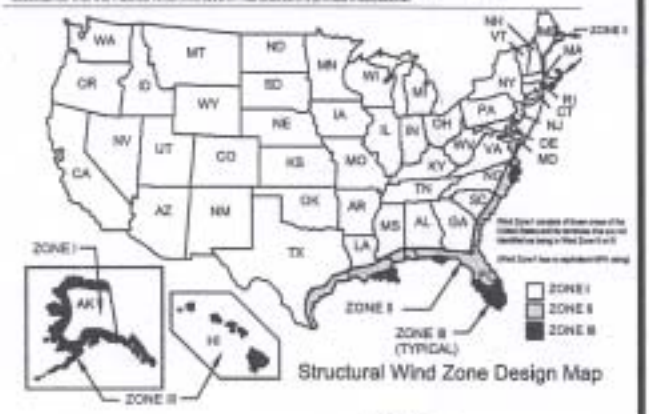
DATE OF MFG._____"DESIGN APPROVED BY

ITEMS	MANUFACTURER	MODEL NUMBER
Furnace		
Water Heater		
Range		
Refrigerator		
Washer		
Dryer		
Dishwasher		
Disposal		
Air Conditioner		
Fireplace		

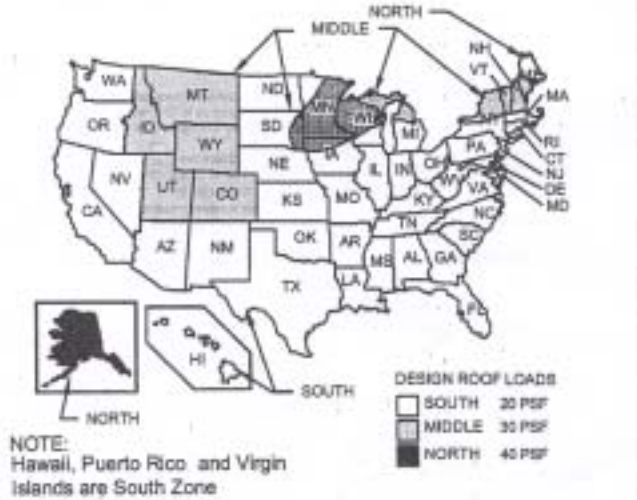
HOME CONSTRUCTION ☐ ZONE I ☐ ZONE II ☐ ZONE III

This home has not been designed for the higher wind pressure and anchoring provisions required for oceanic/coastal areas and should not be located within 1500' of the coastline in Wind Zones II and III, unless the home and its anchoring and foundation system have been designed for the increased requirements specified for Exposure D in ANSI/ASCE 7-88.

This home has ☐ has not ☐ been equipped with storm shutters or other protective coverings for windows and exterior door openings. For homes designed to be located in Wind Zones II and III, which have not been provided with shutters or equivalent covering devices, it is strongly recommended that the home be made ready to be equipped with these devices in accordance with the method recommended in manufacturers printed instructions.



Structural Wind Zone Design Map



NOTE:
Hawaii, Puerto Rico and Virgin Islands are South Zone

STRUCTURAL ROOF DESIGN MAP

COMFORT HEATING

This manufactured home has been thermally insulated to conform with the requirements of the federal manufactured home construction and safety standards for all locations within climate zone_____.
Heating equipment manufacturer and model (see list at left).
The above heating equipment has the capacity to maintain an average 70°F temperature in this home at outdoor temperatures of _____F.
To maximize furnace operating economy, and to conserve energy, it is recommended that this home be installed where the outdoor winter design temperature (99 ½%) is not higher than _____ degrees Fahrenheit.
The above information has been calculated assuming a maximum wind velocity of 15 MPH at standard atmospheric pressure.

COMFORT COOLING

☐ **Air conditioner provided at factory (Alternate I)**

Air conditioner manufacturer and model (see list at left).

Certified capacity _____ BTU/hour in accordance with the appropriate Air Conditioning and Refrigeration Institute Standards.
The central air conditioning system provided in this home has been sized assuming an orientation of the front (hitch end) of the home facing_____. On this basis the system is designed to maintain an indoor temperature of 75°F when outdoor temperatures are _____F dry bulb and _____F wet bulb.

The temperature to which this home can be cooled will change depending upon the amount of exposure of the windows of this home to the sun's radiant heat. Therefore, the home's heat gains will vary dependent upon its orientation to the sun and any permanent shading provided. Information concerning the calculation of cooling loads at various locations, windows exposures and shading are provided in Chapter 22 of the 1980 edition of the ASHRAE Handbook of Fundamentals.

☐ **Air conditioner not provided at factory (Alternate II)**

The air distribution system of this home is suitable for the installation of central air conditioning.

The supply air distribution system installed in this home is sized for a manufactured home central air conditioning system of up to_____ BTU/hr rated capacity which are certified in accordance with the appropriate Air Conditioning and Refrigeration Institute Standards, when the air circulators of such air conditioners are rated at 0.3 inch water column static pressure or greater for the cooling air delivered to the manufactured home supply air duct system.
Information necessary to calculate cooling loads at various locations and orientations is provided in the special comfort cooling information provided with this manufactured home.

☐ **Air conditioning not recommended (Alternate III)**
The air distribution system of this home has not been designed in anticipation of its use with central air conditioning system.

INFORMATION PROVIDED BY THE MANUFACTURER
NECESSARY TO CALCULATE SENSIBLE HEAT GAIN

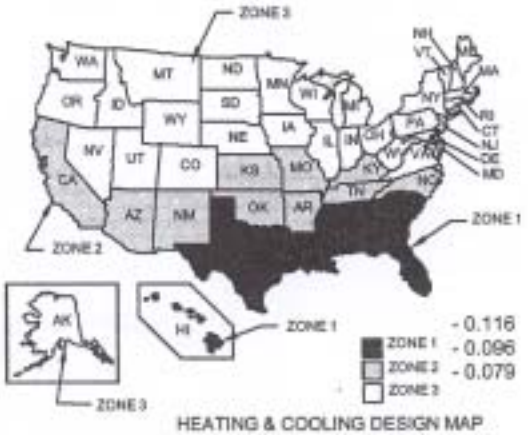
Walls (without windows and doors)_____"U"_____
Ceiling and roofs of light color_____"U"_____
Ceiling and roofs of dark color_____"U"_____
Floors_____"U"_____
Air duct in floor_____"U"_____
Air ducts in ceiling*_____"U"_____
Air ducts installed outside the home_____"U"_____

The following are the ducts areas in this home:

Air ducts in floor_____sq. ft.
Air ducts in ceiling_____sq. ft.
Air ducts outside the home_____sq. ft.

To determine the required capacity of equipment to cool a home efficiently and economically a cooling load (heat gain) calculation is required. The cooling load is dependent on the orientation, location and the structure of the home. Central air conditioners operate most efficiently and provide the greatest comfort when their capacity closely approximates the calculated cooling load. Each home's air conditioner should be sized in accordance with Chapter 22 of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Handbook of Fundamentals 1989 edition, once the location and orientation are known.

U_o Value Zone Map for Manufactured Housing



HEATING & COOLING DESIGN MAP
(U_o VALUE ZONES)

Manufacturer's Data Plate

Plumbing Work that May be Performed by Master Plumbers Who are Not Registered as Home Improvement Contractors

Recently, a question came up regarding what work may be performed by New Jersey licensed master plumbers who are not registered with the State as home improvement contractors. For clarification, New Jersey licensed master plumbers in good standing may perform work listed in *N.J.A.C.* 13:32-1.4(c) and (d) without being registered as a home improvement contractor.

The following plumbing work is described in Section (c):

1. Performance of plumbing work, including minor work, and ordinary repairs (even though a permit is not required for ordinary repairs);
2. Installation and service of storm, sanitary, and water piping to the final point of connection within three feet of the exterior of a building or structure located on private property;
3. Installation of the water service and backflow preventer for fire suppression systems and water sprinkler systems;
4. Performance of plumbing work at a place of business by employees of that business on property owned by the business;
5. Disconnection and sealing of water and sewer lines;
6. Installation and service of all direct and indirect drain piping associated with mechanical equipment that is connected to a sewer system;
7. Installation and completion of plumbing, at no cost, notwithstanding that the property is owned by a nonprofit organization;
8. Installation or disconnection of water-filtration or water-softening equipment, water heaters, humidifiers, ice-making equipment, or backflow preventers;
9. Installation of water piping on the house side of a well-water compression tank; and
10. Installation and service of storm, sanitary, and water piping between buildings or structures on a property.

The following work, as described in Section (d), does not fall within the scope of the practice of plumbing, but may be performed by a New Jersey licensed master plumber in good standing without registering as a home improvement contractor:

1. The clearance of stoppages and installation or removal of a cleanout or cleanout equivalent necessary to clear the stoppage;
2. The installation and service of storm, sanitary, and water piping from the final point of connection more than three feet from the exterior of a building or structure located on private property;
3. The installation, service, and maintenance of fire suppression systems and lawn sprinkler systems downstream from a backflow prevention device;
4. The installation, service, and maintenance of gas and hydronic piping;
5. The demolition or removal of plumbing, provided the water and sewer utilities are first disconnected and sealed outside the building;
6. The installation and service of transmission piping by water or sewer utilities; and
7. The installation and service of water lines to mechanical equipment downstream from a backflow prevention device.

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

Source: Thomas C. Pitcherello
Code Specialist
Code Assistance Unit

Modular Buildings

Questions continue to be asked that relate to:

- The requirements for submission of documents with the construction permit application, and
- The responsibilities of the municipal enforcing agency with respect to inspections and the issuance of Certificates of Occupancy (in regards to industrialized/modular buildings).

Below is another frequently asked question and the appropriate method for addressing the situation.

Question: What are the requirements for performing "corrective repairs" in modular buildings for which the manufacturer is responsible?

Response: The following policy and procedures shall be followed:

1. Identify the code violation(s) and/or defect(s).
2. Create a step-by-step method of corrective repairs with design/specifications by a New Jersey

licensed professional engineer. This requires review and approval by the third-party evaluation agency.

3. Apply for a construction permit from the local code enforcement agency, enclosing the above design/specifications.
4. The local code enforcement agency reviews and issues the construction permit.
5. Initiate corrective work only after the permit is issued.
6. The local code enforcement agency makes the necessary inspections during and/or after completion of the corrective repairs.
7. The third-party inspection agency makes the necessary inspections during and/or after completion of the corrective repairs.
8. The unit(s) is re-certified (re-validated).
9. The local code enforcement agency issues a Certificate of Approval to close the permit.

If there are any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva, P.E.
Industrialized Buildings Unit
Bureau of Code Services

New Jersey Register Adoptions

Date: September 19, 2005
Adoption: 37 *NJR* 3729(a)
Summary: The adopted amendments at *N.J.A.C.* 5:10-27.1, 27.4, and 27.6 clarify that, in multiple dwelling units, window guards must be installed upon the request of the tenant in any unit in which a child ten years of age or younger is regularly present for a substantial amount of time. The amendments also establish window guard specifications, inspection requirements, and record-keeping requirements.

Date: November 7, 2005
Adoption: 37 *NJR* 4216(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.4 reformat the requirements entitled "Responsibilities" into chart form for ease of reference. In addition, the proposed amendments revise the assignment of enforcement responsibilities for certain subcodes of the Uniform Construction Code (UCC) and assign enforcement responsibilities for code sections that were not assigned previously.

Date: November 21, 2005
Adoption: 37 *NJR* 4399(b)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.14, 3.21, and 4.26 establish live load requirements for attics based on the likelihood of items being stored in the space by setting forth dimensional criteria for attics with space for storage. In addition, the amendments include requirements to facilitate the placement of trusses.

Date: December 5, 2005
Adoption: 37 *NJR* 4531(b)
Summary: The adopted amendments at *N.J.A.C.* 5:18-1.6, 3.1, 3.3, 3.4, 3.6, 5.1, and Appendix A update the editions of National Fire Protection Association (NFPA) 58 and the American Petroleum Institute standards referenced in the liquefied petroleum gas (LPG) rules, and amend the compliance dates for requirements phased in under NFPA-58. Also, the amendments require an additional label for propane cylinders that warn against bringing the tank indoors, change the voltage threshold for prohibiting electric lines installed above or adjacent to an LPG tank from 600 to 240 volts, amend property line distance requirements, amend tracer wire gage, amend storage requirements of LPG cylinders on roofs and balconies, and increase the distance requirement between building doors and cylinder exchange cabinets to 20 feet.

Date: December 19, 2005
Adoption: 37 *NJR* 4907(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-2.28 replaces language to provide clear direction on how to perform volume calculations.

Date: December 19, 2005
Adoption: 37 *NJR* 4907(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.11 and 3.14 reserve high-level alarms as an enforcement activity for the Department of Community Affairs for plan review, as provided at *N.J.A.C.* 5:72. In addition, the adopted amendments clarify the definitions for Groups R-3 and R-5.

Date: December 19, 2005
Adoption: 37 *NJR* 4907(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-3.4 assigns plumbing inspectors the responsibility for inspecting the installation of bonding jumpers when water heaters are replaced.

Date: December 19, 2005
Adoption: 37 *NJR* 4907(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-4.5 requires construction officials to report suspensions or dismissals of subcode officials or inspectors for failure to properly enforce the UCC.

(continued on page 10)

(continued from page 9)

Date: December 19, 2005
Adoption: 37 *NJR* 4907(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-4.18 and 4.20 establish permit fees to be charged by local enforcing agencies and by the Department for retaining walls subject to the UCC.

Date: December 19, 2005
Adoption: 37 *NJR* 4907(a)
Summary: The adopted amendment at *N.J.A.C.* 5:23-8.11 requires all licensed asbestos safety control monitors to provide the Department with the name and address of a registered agent in the State upon whom service of process may be made.

Date: January 17, 2006
Adoption: 38 *NJR* 484(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.15 incorporate contractor certification requirements for work involving fire-protection equipment, alarm installations, and landscape irrigation equipment. In addition, the adopted amendments require proof of certification as part of the construction permit.

Date: January 17, 2006
Adoption: 38 *NJR* 485(a)
Summary: The adopted new rule at *N.J.A.C.* 5:23-2.16A modifies the records retention requirements of the UCC to require fewer records be retained for the life of the building and to address records retention for revoked or cancelled permits. The adoption also requires that plans and specifications for certain essential facilities be retained for the life of the structure, and that they be retained for ten years for all other buildings and structures.

Date: January 17, 2006
Adoption: 38 *NJR* 485(b)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.14 and 3.21 regulate pools with the capability of holding water 24 inches or more in depth, regardless of the area of the pool. The adopted amendments also eliminate redundant testing requirements for automatic sprinkler systems and revise the requirements for elevator cars to accommodate ambulance stretchers.

Date: February 21, 2006
Adoption: 38 *NJR* 1183(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.18 and 4.5 require the use of a framing checklist by the responsible person in charge of construction of one- and two-family homes.

Date: February 21, 2006
Adoption: 38 *NJR* 1183(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.20 and 3.21 require the installation of a safety valve or control switch to manually stop the flow of oil from a tank to an oil burner.

Date: February 21, 2006
Adoption: 38 *NJR* 1183(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23A-2.4 establish standards for the retention of records for construction boards of appeal.

Date: April 3, 2006
Adoption: 38 *NJR* 1567(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.6, 4.18, 6.5, 6.6, 6.7, 6.8, 6.9, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.23, 6.24, 6.25, 6.26, 6.27, 6.28, and 6.31 incorporate annual changes to the Rehabilitation Subcode of the UCC.

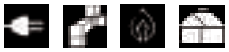
Date: April 3, 2006
Adoption: 38 *NJR* 1567(a)
Summary: The adopted repeal at *N.J.A.C.* 5:23-9.8 (Interpretation: Bed and Breakfast Guest Houses -- Change in Group Requirements) is the result of moving it to *N.J.A.C.* 5:23-6.31(p), the change of use to a bed and breakfast section of the Rehabilitation Subcode.

Date: April 3, 2006
Adoption: 38 *NJR* 1572(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.15 require contractors subject to licensing under the "Contractors' Registration Act" -- and contractors who are exempt from that act, but subject to municipal licensing, certification, or registration -- to include their license or registration number on the application for a building permit.

Date: April 3, 2006
Adoption: 38 *NJR* 1573(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-4.14 and 4.18 require contractors subject to licensing under the "Contractors' Registration Act" -- and contractors who are exempt from that act, but subject to municipal licensing, certification, or registration -- to include their license or registration number on the application for a building permit.

Date: April 3, 2006
Adoption: 38 *NJR* 1573(a)
Summary: The rule at *N.J.A.C.* 5:23-4.5A has been repealed because the authority for this rule no longer exists due to new statute P.L. 2005, c. 212.

Source: Denise L. Jones
Code Development Unit

Party Time 

It's party time. Spring is in the air and tents will soon be in bloom. This year, most of the party-givers will be going to the fire official, not to the construction official, to get their permits.

Tents and tensioned-membrane structures give rise to a number of safety concerns, and have caused the following question to be asked: "Is a permit required?" The enforcement responsibilities have been shifted to the fire official for all but those tents where there are structural considerations. The shift of enforcement responsibility for most tents from the local construction official to the local fire official should result in more efficient enforcement of the requirements because the fire official is better able to deal with weekend events.

As a part of the rule changes, the Uniform Construction Code (UCC) permitting requirements for these types of structures (which are administrative requirements) were relocated from the Building Subcode, *N.J.A.C.* 5:23-3.14, to the administrative requirements at *N.J.A.C.* 5:23-2.14. Also, the temporary greenhouse requirements were moved from *N.J.A.C.* 5:23-3.14 to the UCC's commercial farm building section at *N.J.A.C.* 5:23-3.2(d).

The new rules specify that tents, tensioned-membrane structures, and canopies require UCC permits under the following conditions: 1) they are greater than 140 feet in any dimension, or greater than 16,800 square feet in area; 2) they remain in place for 180 days or more; 3) they are used or occupied between December 1 and March 31 (and therefore might be subject to a snow load); 4) they have a permanent anchoring system or foundation; or 5) they contain platforms or bleachers greater than 11 feet in height.

The requirements specify that tents and tensioned-membrane structures require a fire permit, issued under the Uniform Fire Code (UFC), if they are greater than 900 square feet and more than 30 feet in any dimension; but, are 16,800 square feet or less in area and 140 feet or less in any dimension. If there is electrical or mechanical equipment installed other than cord-and-plug connected utilizing an existing permanently installed receptacle, a UCC permit is required.

The new rules also address outdoor mazes. Outdoor mazes are defined as attractions that lack roofs and are designed to disorient patrons, reduce vision, present barriers, or otherwise impede the flow of traffic, and do not consist solely of corn stalks; trees; or similar living, rooted plants. Under the requirements, outdoor mazes that are greater than six feet in height or contain electrical equipment require a construction permit under the UCC. Outdoor combustible mazes with vertical dimensions less than six feet in height with no electrical equipment require a fire permit under the UFC. The UFC exempts mazes created of bales not more than 42 inches in height from the requirements for a permit. Party on!

Note: These amendments at *N.J.A.C.* 5:23-2.14, 3.1, 3.14, and 5:70-2.7 were adopted on March 21, 2006, and will appear in the May 1, 2006 *New Jersey Register*.

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

Source: Suzanne Borek
Code Assistance Unit

Peer Review Activities

About one year ago, I wrote a *Construction Code Communicator* article entitled "Peer Review is Overworked." The Office of Regulatory Affairs had brought 33 licensed individuals before Peer Review in the Years 2003 and 2004, and an additional 36 licensed individuals were forced to retire, or received letters of warning or reprimands. The purpose of sharing this information was the hope of creating a deterrent which would have a positive effect on the number of sanctions issued to licensed officials. Unfortunately, there was little change in 2005. The Office of Regulatory Affairs brought before Peer Review 15 individuals; an additional 16 individuals either surrendered their licenses, or received various letters of warning or reprimands. Following are eight brief synopses of cases brought before the Peer Review Committee and its recommended sanctions:

1. While serving as a construction official, an individual accepted free construction work on his home, as well as other gifts and gratuities, from a contractor over whom he enforced the code. The construction official also issued a Certificate of Occupancy to this contractor without all the inspections being completed and without subcode approvals. The Office of Regulatory Affairs recommended revocation of all Uniform Construction Code (UCC) licenses. The Building Peer Review Committee affirmed this recommendation.
2. While serving as an Electrical Inspector, an official approved numerous electrical installations that contained serious electrical violations. The Office of Regulatory Affairs proposed revocation of all licenses. The Electrical Peer Review Committee affirmed the recommendation.

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3. While serving as a construction official, an individual signed off on footing and foundation inspections on at least four occasions without the proper licenses. The Office of Regulatory Affairs recommended a $1,000 penalty. The Electrical Peer Review Committee recommended a $600 penalty and also required that the official retake the construction official course. The Deputy Director affirmed the Electrical Peer Review Committee's recommendation.

4. While serving as an electrical subcode official for a third-party agency, an individual ran an electrical business in the State of New Jersey. This is a violation of the conflict-of-interest provision in the UCC. The Office of Regulatory Affairs recommended revocation of all licenses. The Electrical Peer Review Committee affirmed the recommendation.

5. While serving as a construction official/building subcode official, an individual solicited a job for his son with a contractor over whom he enforces the UCC. This official subsequently inspected his son's work. The Office of Regulatory Affairs recommended revocation of all of the official's licenses. The Building Peer Review Committee affirmed the recommendation.

6. While serving as a building inspector, an individual accepted three bribes and admitted to negotiating a higher amount. The Office of Regulatory Affairs recommended revocation of all of the official's licenses. The Building Peer Review Committee affirmed the recommendation.

7. While serving as a building subcode official, an individual performed final inspections and gave subcode approval to a construction official for issuance of a Certificate of Occupancy without evidence of footing and foundation inspections. The Office of Regulatory Affairs recommended a $2,500 penalty. The Building Peer Review Committee affirmed the recommendation.

8. While serving as a building subcode official, an individual constructed a new home in the municipality in which he worked and had subordinates inspect the construction. This individual subsequently sold the home without ever living there. The Office of Regulatory Affairs recommended revocation of all licenses. The Building Peer Review Committee recommended a 60-day license suspension, a $500 penalty, and the retaking of the construction official course. The Deputy Director affirmed the Building Peer Review Committee's recommendations.

If you are not sure what to do in a certain situation, give us a call. We will resolve any ambiguities and we will provide counsel to ensure that the issues you face do not escalate into problems that could result in sanctions.

If you have any questions, please call the Office of Regulatory Affairs at (609) 984-7672.

Source: Lou Mraw
Office of Regulatory Affairs

Radon — Vent Pipe Support

Lately, there have been questions with regard to vent piping in *N.J.A.C.* 5:23-10, the Radon Hazard Subcode. As we all know, this subcode pertains to the new construction of all Group E (Educational) and Group R (Residential) buildings located in Tier One municipalities. The "Construction Techniques" of the Radon Hazard Subcode, Section 10.4, govern the installation of radon-resistant construction features and their components in new construction. More specifically, *N.J.A.C.* 5:23-10.4(b)12 requires vent pipe for radon mitigation to be "adequately supported."

Adequate support can be obtained by using the pipe manufacturer's installation instructions or by using the industry standard, Radon Mitigation Standards (RMS), EPA 402-R-93-078. Section 14.2.4 of the RMS states, "Supports for radon vent pipes shall be installed at least every six feet on horizontal runs. Vertical runs shall be secured either above or below the points of penetration through floors, ceilings, and roofs, or at least every eight feet on runs that do not penetrate floors, ceilings, or roofs." To view the RMS, you may visit the United States Environmental Protection Agency (EPA) web site at http://www.epa.gov/radon/pubs/mitstds.html.

Plumbing subcode officials, please note that radon vent piping does not follow the same installation methods of the Plumbing Subcode, Mechanical Subcode, or Fuel Gas Subcode. Therefore, only the Radon Hazard Subcode should be referenced for radon vent piping installations as indicated above.

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

Source: Rob Austin
Code Specialist

Swimming Pool: New Definition

As of January 17, 2006, Section 3109.2 of the International Building Code (IBC) 2000 and Section AG102.1 of the International Residential Code (IRC) 2000 define a swimming pool as "any structure intended for swimming or recreational bathing that can hold water 24 inches or more in depth. This includes in-ground, above-ground, and on-ground swimming pools, hot tubs, and spas." In the past, only pools with a surface area of 250 square feet and greater than 24 inches in depth were regulated. Now, all pools -- regardless of their size -- are regulated. This definition includes the commonly used blow-up pool that is 24 inches or more in depth.

When applying the definitions in both IBC/2000 and IRC/2000 to the construction of swimming pools, spas, and hot tubs, the applicable standards from the American National Standard Institute/National Spa and Pool Institute (ANSI/NSPI) are as follows:

- In-ground public pools shall be designed and constructed in conformance with ANSI/NSPI-1, 1991 edition;
- Permanently installed public spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-2, 1992 edition;
- Permanently installed residential spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3, 1992 edition;
- Above-ground/on-ground residential pools shall be designed and constructed in conformance with ANSI/NSPI-4, 1992 edition;
- In-ground residential pools shall be designed and constructed in conformance with ANSI/NSPI-5, 1995 edition;
- Portable residential spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6, 1992 edition.

Note: At N.J.A.C. *5:23-3.14(b)21.iii, Section 3109.6 of IBC/2000 should reference ANSI/NSPI-6 and will be corrected upon the adoption of IBC/2006.*

Finally, NSPI has changed its name to the Association of Pool and Spa Professionals. However, its web site still uses the old name at http://www.nspi.org.

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

Source: Rob Austin
Code Specialist

Transition Solvent Cement: Permitted or Not Permitted?

Is transition solvent cement permitted to be used for the transition joints between ABS and PVC non-pressure piping?

In the National Standard Plumbing Code (NSPC) 2003, Table 3.1.3, "Standards for Approved Plumbing Materials and Equipment," Section IV, "Pipe Joints, Joining Materials, Coupling, Gaskets," Item 21 lists "Solvent Cements for Transition Joints Between (ABS) and (PVC) Non-Pressure Piping Components," and refers to the American Society for Testing and Materials (ASTM) D3138-95 standard.

In the standard, Note 1 states: "This specification was developed to provide a means for joining an ABS to a PVC non-pressure piping system using a solvent-cemented transition joint (for example, joining an ABS building drain to a PVC sewer system). The intention was not to create a specification for an all-purpose ABS-PVC solvent that would be used for mixing of ABS and PVC piping materials, nor to specify cement that could generally be used for either material. Specific cements for ABS and PVC components should be used."

Based on Note 1 of the ASTM D3138 standard, transition solvent cement for the joining of an ABS to a PVC non-pressure piping system may be used only for the connection of the building drain to the building sewer; this would occur three feet outside the building. Therefore, the use of transition cement for joining ABS to PVC would not be permitted within the building.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Who's Got the Bonding Jumper?

The December 19, 2005 *New Jersey Register,* at 37 *NJR* 4907, contained an adoption making the inspection of the bonding jumper for the replacement of **only** gas water heaters the responsibility of the plumbing inspector. This is no longer the electrical inspector's responsibility!

The plumbing inspector will now inspect for the bonding jumper on gas water heater replacements only. The bonding jumper does not require an electrical permit and is to be included on the Plumbing Subcode Technical Section with the gas water heater replacement fee. The

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plumbing inspector will check for the bonding jumper and sign off on the Plumbing Subcode Technical Section on the line for "other," inserting "water heater bonding jumper."

The bonding jumper, Section 250.104(B) of the 2002 National Electrical Code (NEC), is to be sized in accordance with Table 250.122 of the 2002 NEC using the rating of the circuit that may energize the piping system. This means, if the water heater is in a structure that has a 200-AMP service with a 200-AMP main breaker, this is the rating of the circuit which could energize the piping system and then the size of the bonding jumper in Table 250.122 would be a 6-AWG copper, or 4-AWG aluminum or copper-clad aluminum, conductor.

The clamps installed on the water pipes must be approved and listed, as stated in Sections 250.70 and 110.3(B) in the 2002 NEC. The clamps may be of dissimilar metals, provided they are approved and listed for the use.

To sum it up . . .

Gas Water Heater Replacement:

- No electrical permit
- Plumbing Subcode technical fee includes the bonding jumper
- Plumbing inspector signs off for the bonding jumper on the "other" line on the technical section

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

Source: Suzanne Borek
Code Assistance Unit

TIA Alert! Equipotential Bonding Grid for Pools

The 2005 National Electrical Code (NEC) contains a gap in its requirements that would impact swimming pool safety. That gap has been closed, and the error corrected, by the issuing of a Tentative Interim Amendment (TIA) that revises the code language in Sections 680.26(C) and 680.26(C)(1) of the 2005 NEC. These sections contain the requirements for the Equipotential Bonding Grid for pools.

Because the TIA language was not included in the text of the 2005 NEC, it is not part of the Electrical Subcode in the Uniform Construction Code, *N.J.A.C.* 5:23-3.16, as adopted May 1, 2006. The language changes are below in bold, underlined type.

(C) Equipotential Bonding Grid. The parts specified in 680.26(B) shall be connected to an equipotential bonding grid with a solid copper conductor, insulated, covered, or bare, not smaller than 8 AWG or rigid metal conduit of brass or other identified corrosion-resistant metal conduit. Connection shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are of stainless steel, brass, copper, or copper alloy. The equipotential bonding grid shall **conform to the contours of the pool and shall** extend **within or** under paved walking surfaces for 1 m (3 ft) horizontally beyond the inside walls of the pool and shall be permitted to be any of the following:

Exception: The equipotential bonding grid shall not be required to be installed under the bottom of or vertically along the walls of vinyl lined polymer wall, fiberglass composite, or other pools constructed of nonconductive materials. Any metal parts of the pool, including metal structural supports, shall be bonded in accordance with 680.26(B). For the purposes of this section, poured concrete, pneumatically applied (sprayed) concrete, and concrete block, with painted or plastered coatings, shall be considered conductive material.

(1) Structural Reinforcing Steel. The structural reinforcing steel of a concrete pool **or deck** where the reinforcing rods are bonded together by the usual steel tie wires or the equivalent. **Where deck reinforcing steel is not an integral part of the pool, the deck reinforcing steel shall be bonded to other parts of the bonding grid using a minimum 8 AWG solid copper conductor. Connection shall be per 680.26(D).**

The Department of Community Affairs advises that, for new pools that are constructed during the six-month grace period immediately following the adoption of the 2005 NEC (until November 1, 2006), this TIA should be applied. An amendment to the Electrical Subcode implementing this TIA is forthcoming.

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

Source: Suzanne Borek
Code Assistance Unit

NOTES



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State of New Jersey
Jon S. Corzine, Governor

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Susan Bass Levin, Commissioner

Volume 18 Number 2

Summer/Fall 2006

Highlights of the 2005 *New Jersey Construction Reporter*

√ Construction activity was at a record level in 2005, due mainly to new home construction.

√ The estimated cost of work authorized by building permits was $15.4 billion. Residential construction (new and rehabilitation) was $8.2 billion, 53.1 percent of all activity. New home construction totaled $5.6 billion.

√ The amount of work was $1.1 billion more than last year's record level, an increase of 7.9 percent. In real terms, based on an inflation rate of 3.4 percent, construction activity grew by more than 4 percent between 2004 and 2005.

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Barrier Free-COAH Law: Accessible Townhouses in New Jersey

P.L. 2005, c. 350 amended the Uniform Construction Code (UCC) statute to require that townhouses for which municipal credit is sought under the Council on Affordable Housing's (COAH's) fair-share requirements be adaptable. The components of an adaptable townhouse for which COAH credit is sought are spelled out in the statute. The townhouse must have:

1. An adaptable entrance, with the plans for the adaptation to provide an accessible entrance. It is important to note that, for the purposes of fulfilling this requirement, the use of an exterior ramp, a platform lift, or a limited-use/limited-application elevator is acceptable;
2. An adaptable toilet and bathing facility on the first floor;
3. An adaptable kitchen on the first floor;
4. An accessible interior route of travel through the entry level of the dwelling unit (it is important to note that an interior accessible route to other stories of the dwelling unit is not required); and
5. An adaptable room that can be used as a bedroom, with a door or the casing for the installation of a door, on the first floor.

Why this Law was Needed:

There are approximately 1.8 million people with disabilities who live in New Jersey. Of that number,

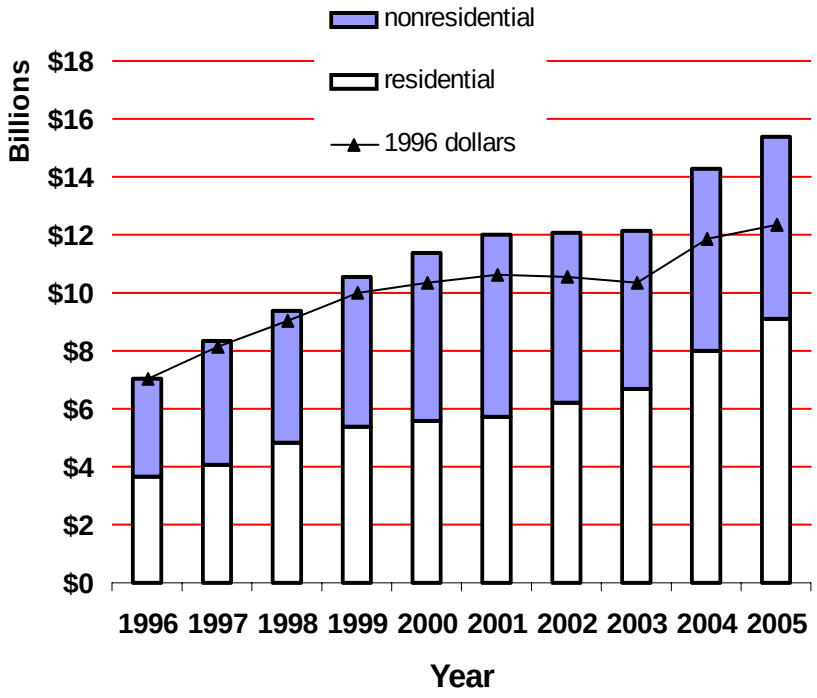
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Estimated Cost of Construction Authorized by Building Permits, 1996-2005



√ The number of new houses authorized for construction was 39,688,434 more units than in 2004, an increase of 1.1 percent.

√ Office construction declined by 1.2-million square feet, almost 10 percent less than in 2004. Retail space was up by 1-million square feet, a 21.5-percent increase.

√ Jersey City in Hudson County and the City of Newark in Essex County had the most construction and the most new houses in 2005. Jersey City led all communities with $707.5 million of construction and 3,776 authorized housing units. Newark ranked second in both categories with $344.6 million of work and 2,611 authorized dwellings. Over 73 percent of the construction activity in Jersey City was for new houses. New homes accounted for 45.6 percent of the work authorized by permits in Newark. Just over 16 percent of all the new houses authorized for construction in 2005 were in Jersey City and Newark.

√ Northern New Jersey had $6.5 billion of construction, 42.3 percent of all activity in the State. Jersey City, Newark, and other northern communities accounted for 15,982 authorized houses, over 40 percent of the total for the State.

√ Central New Jersey had $5.1 billion of construction — 33.1 percent of all construction — and 12,734 authorized housing units, 32.1 percent of all new houses.

√ Southern New Jersey had $3.2 billion of commercial and residential construction, and 10,972 authorized housing units, accounting for 21 percent of all the construction activity in the State and 27.6 percent of all authorized housing.

√ Although new homes were the driving force behind the construction industry's strong performance, accounting for $5.6 billion of activity, the estimated cost of new construction for commercial and other nonresidential structures increased at

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New Jersey Construction Indicators				
	Estimated Construction Costs	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
1996	$7,028,424,990	27,577	6,229,515	4,880,139
1997	$8,346,533,144	30,017	10,409,171	5,688,955
1998	$9,396,755,517	35,676	12,703,824	7,921,892
1999	$10,584,167,530	37,536	13,237,891	6,229,471
2000	$11,387,683,514	38,065	15,531,039	6,063,412
2001	$12,007,456,630	35,680	19,134,533	7,244,833
2002	$12,079,942,099	34,589	9,261,054	6,560,913
2003	$12,148,747,807	35,171	9,744,146	6,038,428
2004	$14,274,331,850	39,254	12,219,068	4,911,257
2005	$15,397,507,147	39,688	11,038,132	5,965,258
Change Between 2004 and 2005				
2004-2005	$1,123,175,297	434	-1,180,936	1,054,001
Percent Change	7.9%	1.1%	-9.7%	21.5%
Source: N.J. Department of Community Affairs, 5/8/06				

a faster rate. New home construction grew by $809.3 million, 16.8 percent, while new nonresidential structures increased by $834.1 million, 31.4 percent more than last year.

√ New home construction made up just over one-third of all authorized work. New commercial buildings and other new nonresidential structures accounted for less than one-quarter of all activity (24.2 percent or $3.5 billion). Tenant fit-ups for commercial buildings and other nonresidential additions and alterations accounted for another $3.7 billion, 24.2 percent of all authorized work. Rehab work on existing houses made up $2.5 billion, 16.5 percent of construction activity in 2005.

√ Housing rehab was the only component of the construction industry that declined in 2005. In 2004, the estimated cost of additions and alterations to existing dwellings was $3.1 billion. In 2005, it was $2.5 billion, a decline of 19.2 percent.

√ One of the bigger commercial projects to break ground in 2005 was the Borgata Hotel Casino & Spa north expansion in Atlantic City, Atlantic County. About half of the $310 million of construction reported by Atlantic City was for the new Borgata addition. Atlantic City ranked third behind Jersey City and Newark with the most activity in 2005.

√ Two other communities with strong activity in 2005 were Bernards Township and Warren Township, both in Somerset County. Over $52 million of the work reported in Bernards was to refurbish a complex of existing buildings for an office campus for Verizon Communications. In Warren Township, over $41 million was authorized for a new special education center.

√ “State buildings” refers to a category of buildings built on behalf of State government agencies or their instrumentalities, like New Jersey Transit or the New Jersey Sports & Exposition Authority. This category of construction accounted for

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Major Construction Indicators by Region				
Region	**Estimated Cost of Construction**	**Authorized Housing Units**	**Authorized Office Space (square feet)**	**Authorized Retail Space (square feet)**
North	$6,508,235,134	15,982	4,474,379	2,345,236
Central	5,100,559,035	12,734	4,079,046	1,965,117
South	3,234,476,044	10,972	2,133,440	1,565,370
State Buildings	554,236,934	0	351,267	89,535
New Jersey	**$15,397,507,147**	**39,688**	**11,038,132**	**5,875,723**
Percent Distribution by Region				
North	42.3%	40.3%	40.5%	39.3%
Central	33.1%	32.1%	37.0%	32.9%
South	21.0%	27.6%	19.3%	26.2%
State Buildings	3.6%	0.0%	3.2%	1.5%
New Jersey	100.0%	100.0%	100.0%	100.0%
Source: N.J. Department of Community Affairs, 5/8/06				
Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties				
Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties				
Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties				

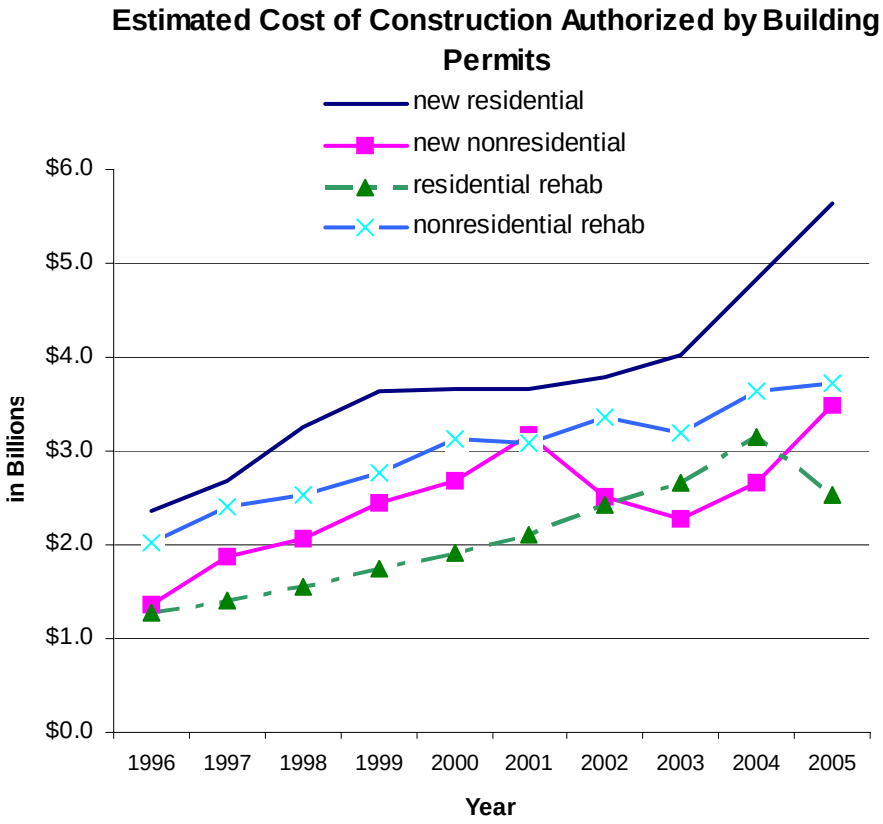
$554.2 million. Among the bigger projects reported were four new construction permits for the Meadowlands Xanadu retail and entertainment complex. The estimated cost of work reported on these permits was $160 million.

√ Building permits also showed major expansions on New Jersey State college and university campuses. Over $180 million of activity was reported for work at Rutgers University (New Brunswick), New Jersey City University (Jersey City), Rowan University (Glassboro), William Paterson University (Wayne), the University of Medicine & Dentistry of New Jersey (Newark), Ramapo College (Mahwah), and Stockton State College (Galloway Township).

√ It cost more to buy a new home in New Jersey. The median sale price of the 24,571 new houses that began enrollment in a new home warranty program in 2005 was $378,992. This was 8.3 percent more than 2004.

√ Hunterdon County had the most expensive new houses. Half of the 349 houses that began enrollment in a new home warranty program in 2005 cost more than $644,002. Cumberland County had the least expensive new houses. The median sales price was $232,000.

Information in this report is from the 2005 Annual issue of The New Jersey Construction Reporter*, a publication of the New Jersey Department of Community Affairs that examines construction statistics derived from building permits and certificates issued throughout the State. The* Reporter *can be viewed online at* http://www.nj.gov/dca/codes/cr/conrep.shtml*. If you have any questions about the information in this report, contact John Lago at (609) 984-7609.*



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"Coming Attractions" – Code Adoptions Planned for this Year

For those of you who have not heard, the State of New Jersey is planning to adopt the 2006 codes in the not-to-distant future. Planned for adoption are the following: the 2006 International Building Code (IBC/2006), the 2006 International Residential Code (IRC/2006), the 2006 International Fuel Gas Code, the 2006 International Mechanical Code, the 2006 International Energy Conservation Code (IECC/2006), and the 2006 National Standard Plumbing Code.

It is our goal to have these codes adopted in Calendar Year 2006. Please watch the *New Jersey Register* for the proposal in September. We look forward to your comments on this very important code adoption.

We are currently working with the International Code Council (ICC) to publish New Jersey editions of the IBC/2006, IRC/2006, and IECC/2006, which will be available through the ICC after the codes have been adopted.

In the meantime, please visit our web site at:
http://www.nj.gov/dca/codes
for updates on the adoption of the 2006 codes and other useful tools. The web site will also provide the proposal and adoption dates.

Lastly, as with every new adoption of a model code, there will be a six-month "grace period" to allow for the finalization of projects designed under the previous model codes, as per *N.J.A.C.* 5:23-1.6.

Source: John N. Terry
Code Assistance Unit

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Construction Indicators Top New Jersey Municipalities					
Municipality	**County**	**Estimated Cost of Construction (dollars)**	**Authorized Housing Units**	**Authorized Office Space (square feet)**	**Authorized Retail Space (square feet)**
Jersey City	Hudson	$707,459,081	3,776	438,879	0
Newark City	Essex	344,588,628	2,611	134,021	148,871
Atlantic City	Atlantic	308,275,936	116	3,012	2,800
Hoboken City	Hudson	173,736,936	443	0	0
Monroe Twp.	Middlesex	147,581,898	666	85,262	15,216
Paramus Boro.	Bergen	139,055,545	47	29,413	247,707
Franklin Twp.	Somerset	136,958,035	498	112,625	0
Jackson Twp.	Ocean	132,933,494	746	36,050	4,680
Ocean City	Cape May	130,712,287	539	0	36,723
Hamilton Twp.	Mercer	124,598,370	340	559,673	37,384
Englewood City	Bergen	122,208,506	685	37,768	16,964
Bernards Twp.	Somerset	118,004,475	23	2,836	0
Dover Twp.	Ocean	116,604,654	275	207,802	111,680
Warren Twp.	Somerset	115,556,601	30	6,883	22,915
South Brunswick Twp.	Middlesex	112,589,057	213	143,989	127,233
Top Municipalities		$2,930,863,503	11,008	1,798,213	772,173
New Jersey		**$15,307,574,897**	**39,395**	**11,010,724**	**5,935,626**
Top as % of New Jersey		19.1%	27.9%	16.3%	13.0%
Source: N.J. Department of Community Affairs, 5/8/06					

Correction: Accessible Parking Signs

In the Spring 2006 *Construction Code Communicator*, Volume 18, Number 1, the third paragraph of the "Accessible Parking Signs: Referenced Standard" article misstates the placement of the R7-8P sign. The paragraph should actually read as follows:

> Lastly, each accessible parking space shall also be marked with a 12-inch high by 10-inch wide R7-8P penalty sign, with a black legend and border on a white background (dimensions and colors as per New Jersey Department of Transportation), beneath the ***R7-8*** sign. The ***R7-8P*** sign shall contain the following language . . . .

We apologize for any inconvenience.

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

New House Prices			
Period	Number of New Houses	Median Sales Price	Percent Change in Sales Price
1996	20,903	$183,300	
1997	21,640	$190,000	3.7%
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
2001	23,372	$253,670	9.5%
2002	23,647	$274,705	8.3%
2003	22,226	$307,168	11.8%
2004	23,844	$349,900	13.9%
2005	24,571	$378,992	8.3%
1st Quarter 2004	4,924	$326,652	
2nd Quarter 2004	6,350	$350,000	7.1%
3rd Quarter 2004	6,219	$350,539	0.2%
4th Quarter 2004	6,351	$365,000	4.1%
1st Quarter 2005	5,205	$367,900	0.8%
2nd Quarter 2005	6,564	$379,954	3.3%
3rd Quarter 2005	6,207	$378,554	-0.4%
4th Quarter 2005	6,595	$387,709	2.4%

Source: N.J. Department of Community Affairs, 5/8/06

Corrective Repair Procedures for Modular Buildings

Question: What are the requirements for performing corrective repairs in modular buildings for which the manufacturer is responsible?

Response: This is covered in Part IV, Section 6(E) of the Uniform Administrative Procedures of the Industrialized Buildings Commission adopted at *N.J.A.C.* 5:23-4A.10 and *N.J.A.C.* 5:23-2.22. Following is a summary of the requirements:

Corrective Repair Procedures

1. Code violation(s) and/or defect(s) are identified.
2. The step-by-step method of corrective repairs (design/specifications) is reviewed and approved by the evaluation (third-party) agency.
3. Necessary inspections are performed by the inspection (third-party) agency during and/or after completion of the corrective repairs.
4. The unit(s) is recertified (revalidated).

Because these are corrections to the labeled unit, the same entity responsible for ensuring compliance in the factory and affixing the label in the first place is responsible for the corrective work. Any repairs to the foundation or other site work under the jurisdiction of the local enforcing agency should be handled by the local enforcing agency.

If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva, P.E.
Industrialized Buildings Unit
Bureau of Code Services

Discount on the 2006 National Standard Plumbing Codes

The New Jersey Chapter of the Plumbing-Heating-Cooling Contractors Association (PHCC-NJ) has extended to municipalities the "member" price for the new 2006 editions of the National Standard Plumbing Code, both the non-illustrated and illustrated versions. The 2006 edition is tentatively scheduled to be adopted in New Jersey by the end of 2006. (Visit our web site at http://www.nj.gov/dca/codes for updates on the adoption of the 2006 codes.)

In order to receive the discount, a municipality must submit the request on official municipal letterhead and must include the inspector's name(s). The purchase order and/or check should be made payable to "PHCC-NJ." Each

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approximately 45 percent (or 810,000) have a physical disability that requires the use of an accessible route, including an accessible building entrance. People with disabilities are more likely to be of low and moderate income than is the population generally, yet little of the housing built pursuant to the Fair Housing Act (commonly known as COAH housing) has been accessible. Traditional townhouses -- single-family attached dwellings, which are constructed in greater density than single-family detached homes -- became the most common design for affordable housing. Because townhouses are exempt from State and Federal accessibility requirements, there was little affordable housing being constructed that was accessible to people with disabilities. This meant that, for an entire segment of New Jersey's citizens who needed accessible affordable housing, options were few, even though requirements for accessible dwelling units in multifamily dwellings had been part of the UCC since the mid-1970s.

The Barrier Free-COAH law, which corrects this problem by requiring townhouse units that are counted toward a municipality's fair-share obligation under the New Jersey Fair Housing Act be adaptable for people with disabilities, creates an incentive for the first time to build accessible and affordable townhouses.

What is a Townhouse?

When determining whether a dwelling is a townhouse, the following definition, which may be found at *N.J.A.C.* 5:23-7.3(b)1i, is applied: "A townhouse shall be a single dwelling unit with two or more stories of dwelling space, exclusive of basement or attic, where each dwelling unit extends from foundation to roof. The dwelling unit shall have an independent entrance that shall serve one dwelling unit only at or near grade; most or all of the sleeping rooms shall be on one story; and most or all of the remaining habitable space, such as kitchen, living, and dining areas, shall be on another story." This describes the traditional, single-family townhouse, attached to other dwelling units on one or both sides. It does not include all the designs that have recently been called "townhouses." For example, it does not include one multistory dwelling unit stacked on top of another. Similarly, it does not include a multistory dwelling unit on top of a flat (a single-story dwelling unit). The traditional townhouse has been exempt from the Barrier Free Subcode since its inception and is the type of dwelling unit covered by the Barrier Free-COAH law. The other designs are multistory dwelling units and, as is clear in the Barrier Free Subcode [at *N.J.A.C.* 5:23-7.5(b)1 and (c)2] where there are four or more dwelling units in a single structure, they are – and have been – required to be accessible.

Adaptable Entrance:

Townhouses for which COAH credit is sought may have an adaptable (rather than an accessible) entrance. In order to ensure the entrances that are constructed to be adaptable can, in fact, be adapted when there is a need, a plan for an accessible entrance must be submitted as part of the permit application, and must be reviewed and approved by the local code enforcement agency. The means of making the entrance accessible can include the use of an accessible ramp, a platform lift, or a limited-use/limited-application elevator.

Funds to Adapt the Entrance:

In addition, in order to ensure that the planned adaptation can be made when needed, the builder must deposit in the Affordable Housing Trust Fund sufficient funds to adapt ten percent of the townhouse units for which COAH credit is sought that were not constructed with an accessible entrance. This fund is managed by the municipality. Residents must be informed that the entrance can be made accessible and that there is a fund managed by the municipality dedicated to that purpose.

Enforcement:

How will the Barrier Free/COAH law be enforced? The UCC permit application includes a check-off box that requires the permit applicant to indicate whether the housing planned for construction is low- and moderate-income housing. When that box is checked, the local code official will ask whether the housing is designated for COAH credit. When the answer is yes, the local code official will make that note in the file. When plans are submitted, they will be reviewed for the adaptability of the entrance and the interior space. Plan review and inspections will ensure that the townhouse meets the requirements of P.L. 2005, c. 350, which will become part of the Barrier Free Subcode. A proposal to amend the Barrier Free Subcode is planned for publication in the *New Jersey Register* before the end of this year.

Penalty for Noncompliance:

What is the penalty for noncompliance? If the townhouse for which COAH credit is sought is not constructed with a code-compliant, adaptable entrance and interior, the COAH credit will be withdrawn and any townhouses constructed without adaptability will be ordinary market-rate, single-family townhouses.

Questions:

If there are questions about the interaction of the Barrier Free and the COAH parts of this law, please contact Emily Templeton in the Division of Codes and Standards at (609) 984-7609, or Larissa DeGraw in COAH at (609) 292-3000. If there are questions about compliance with the requirements of the Barrier Free Subcode, please contact the Code Assistance Unit at (609) 984-7609.

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municipality may order up to four codebooks at the member price.

Please call PHCC-NJ at (609) 499-8070 for the member price, and shipping and handling charges.

Your order should be mailed to:

PHCC-NJ
1305 Maple Avenue
Roebling, New Jersey 08554

Attention: Denise Voorhees, Executive Director

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Domestic Water Heaters in Residential Garages

The Department of Community Affairs has received many questions pertaining to the application of the 18-inch elevation requirement to the installation of the new flammable-vapor-resistant type water heaters when a heater is replaced or a new water heater is installed in a residential garage. For the following reasons, the Department recommends that flammable-vapor-resistant listed water heaters be approved for installation in residential garages without the 18-inch elevation requirement.

When the water heater is located in a residential garage, the installation requirements must comply with Section G2408.2, Elevation of Ignition Source, of the 2000 International Residential Code (IRC). The water heater ignition source is to be elevated so that it is not less than 18 inches above the floor. The 2003 and 2006 editions of the IRC have added an exception to Section G2408.2 to address these new types of water heaters. The exception states: "Elevation of ignition source is not required for appliances that are listed as flammable vapor resistant and for installation without elevation." This exception is also listed in the New Jersey adopted 2003 International Fuel Gas Code (IFGC), which is used for nonresidential projects.

New Jersey did not and will not adopt the 2003 edition of the IRC. The 2006 edition of the IRC is proposed for adoption later this year. The adoption of the IRC/2006, which includes the exception, will eliminate this installation requirement issue.

In the meantime, refer to the third paragraph of the IRC/2000, Section G2401.1, Application, which states: "The omission from this chapter of any material or method of installation provided for in the International Fuel Gas Code shall not be construed as prohibiting the use of such material or method of installation." Because New Jersey has adopted the IFGC/2003, flammable-vapor-resistant listed water heaters should be permitted to be installed without the 18-inch elevation in residential garages.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Fire Department Connections for Standpipes and Fire Sprinklers -- How Many?

A question has been raised regarding the number of fire department connections (FDCs) required for a building protected by a fire sprinkler system and standpipe system having a common riser. Does each system require a separate FDC, or is a common FDC appropriate?

The answer is simple. One FDC is code compliant. The 2000 International Building Code, New Jersey edition, Section 906, Fire Department Connections, cites requirements for FDCs. Section 906.1, Required, requires a single FDC for all water fire-extinguishing and standpipe systems.

If that's not clear enough, Section 906.8, Signs, requires a sign to read "Automatic Sprinkler" or "Standpipe," or both, as applicable.

Clearly, one FDC supplying both fire sprinklers and standpipes from a common riser is code compliant.

Any questions, please contact me at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

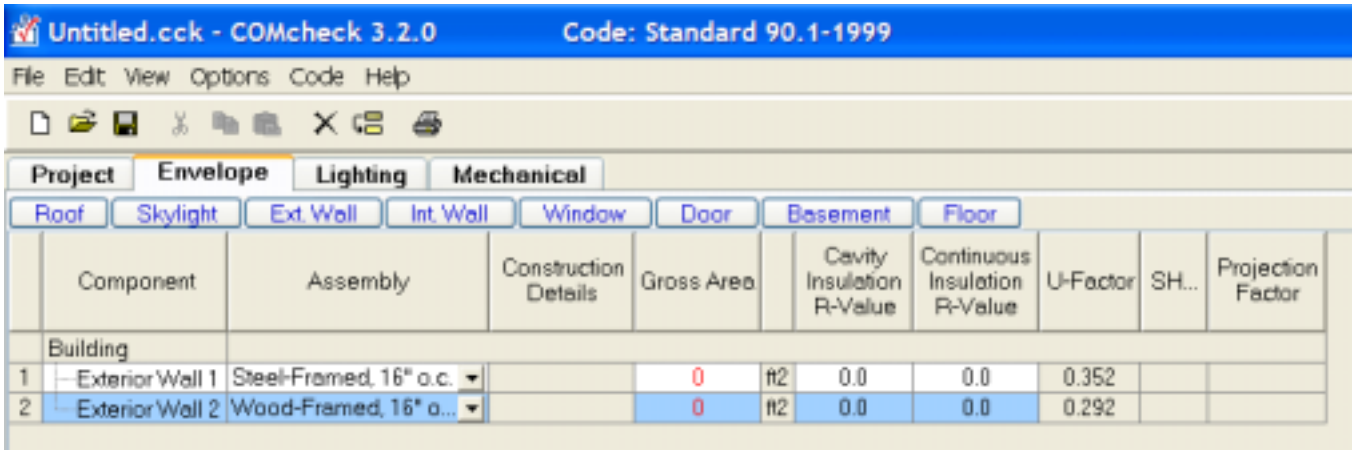
Energy – Wood vs. Metal Construction (ASHRAE Standard 90.1-1999)

When incorporating wood or metal construction into an assembly of the building thermal envelope, keep in mind that these components function very differently in terms of thermal transmittance (U-factor). Take a look at Table B-13 of your American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999, or refer to your Winter 2005 *Construction Code Communicator* article, "ASHRAE Standard 90.1-1999: Energy Code Compliance." Under the "Nonresidential" column and at the "Walls, Above Grade" row, the following is listed:

	Nonresidential	
Opaque Elements	**Assembly Maximum**	**Insulation Minimum R-Value**
Walls, Above Grade		
--Mass	U - 0.151*	R - 5.7 ci*
--Metal Building	U - 0.113	R - 13.0
--Steel Framed	U - 0.124	R - 13.0
--Wood Framed and Other	U - 0.089	R - 13.0
*Exception to 5.3.1.2a applies.		

As you can see, metal-, steel-, and wood-constructed assemblies all require R-13 as the minimum insulation value. However, the assembly maximum U-factor is different due to the actual thermal transmittance value of the metal, steel, or wood combined with the insulation. This may look odd and, for those of you not using the COM*check* software, it can get confusing. If you are doing your energy calculations manually, consult Appendix A, Assembly U-Factor, C-Factor, and F-Factor Determination, which contains pre-calculated, typical construction assemblies. It also provides the means to calculate the U-Factor for specific assemblies. Because metal-/steel-framed walls do not perform as efficiently as wood-framed walls, when calculating the overall thermal transmittance value for a building, the framing chosen can dramatically help or hinder your energy code compliance.

Lastly, below is an example of how COM*check* automatically performs the calculations for the user based on construction type (in this case, steel-framed wall and wood-framed wall). On the right-hand side is the "U-Factor" column, which shows a 0.06 difference for calculation purposes between wall assemblies. This, in turn, affects the overall thermal transmittance value.



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

Source: Rob Austin
Code Assistance Unit

Expedited Workable Relocation Assistance Plans

On May 1, 2006, the Department of Community Affairs adopted rules at *N.J.A.C.* 5:11-1 et seq. that establish a procedure for submitting Workable Relocation Assistance Plans (WRAPs) to the Department on an expedited basis when displacement of residential occupants by a municipality is sudden, could not have been anticipated, is of an emergency nature due to imminent hazard conditions, and is limited to a single occurrence. This will enable towns to expeditiously receive assistance with relocation.

The new expedited WRAP procedure, which includes a preliminary notice requesting the Department's consent to emergency displacement due to an imminent hazard condition and a simplified checklist intended to demonstrate that appropriate relocation assistance is being provided to displacees, provides added safeguards to ensure that relocation assistance is provided to individuals or families endangered by imminent hazard conditions that are entitled by law to receive relocation assistance. In addition, the procedure provides municipalities with clear direction on how to comply with the relocation assistance statutes and rules to expedite the relocation process. Finally, under the expedited process, a municipality can request funding over and above the 50 percent allowed under the normal WRAP process provided that funding cannot be obtained or recovered from any other source, such as from the owners of properties from which displacement occurred. If the funding request is approved, the Department reimburses eligible relocation expenses incurred by the municipality.

Expedited WRAPs are case specific and funds are not required to be set aside in advance.

For more information about the expedited WRAP procedure or about the Relocation Assistance Program in general, please call (609) 984-7609.

Source: Megan Sullivan Czyz
Code Development Unit

Fire Sprinkler Hydrostatic Testing: Is the Test Always Required?

I have received numerous telephone calls over the years from both fire sprinkler contractors and fire protection inspectors asking for guidance regarding when a hydrostatic test is needed for a fire sprinkler system which has undergone modifications.

Acceptance testing requirements for a fire sprinkler system are referenced in the National Fire Protection Association's (NFPA's) Standard 13. In Section 10-2.2, Hydrostatic Tests, of the 1999 edition of NFPA 13, all piping and attached appurtenances are required to be hydrostatically tested at 200 psi without a loss of pressure or visible leakage. The standard also provides six exceptions, of which Exceptions 4 and 5 apply to the above question.

> **Exception 4 –** This exception requires additions or modifications made to an existing system, which affect more than 20 sprinklers, to be isolated and tested at not less than 200 psi for two hours.
>
> **Exception 5 –** This exception states that modifications which cannot be isolated, such as relocated drops, shall not require testing in excess of system working pressure.

Therefore, if a contractor has relocated drops on existing branch lines (regardless of how many), it is not necessary for this work to be hydrostatically tested. It only needs to be tested at the system working pressure.

If you have any questions, please contact me at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

Installing Fire Sprinklers Throughout Is Not Always *Throughout*

Various sections of Chapter 9 of the 2000 International Building Code (IBC), New Jersey edition require a building to be protected "throughout" with fire sprinklers. What does this really mean?

Some fire subcode officials believe throughout means *completely* throughout. It does not. It means in accordance with the code text in the IBC and the referenced National Fire Protection Association (NFPA) standards, NFPA 13 and 13R. Both the IBC and the standards provide exemptions for some areas, and are silent on other areas.

I recently received a telephone call from a sprinkler contractor saying a local official was requiring sprinklers in a noncombustible, concealed space between a suspended acoustical ceiling and the floor above. No excessive wiring was in this space. The official stated the code requires the building to be protected throughout; therefore, he believed this space needed protection. This

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is not correct because NFPA 13 does not require sprinklers in the space described above. In addition, IBC Section 903.3.1.1.1, Exempt Locations, provides five exemptions where sprinklers are not required in a building considered to be protected throughout.

Another example: NFPA 13, Sections 5-13.9.1 and 5-13.9.2 exempt sprinklers in dwelling unit bathrooms not exceeding 55 square feet with noncombustible or limited-combustible walls and ceilings, and in small closets less than 24 square feet and not exceeding 3 feet in the least dimension.

Throughout does have meaning in a mixed-use application. For example: A non-sprinklered Group B is located in a building also occupied by an R-2 and the appropriate fire separations are present. Code text requires a sprinkler system be provided throughout all buildings with an occupancy in Group R-2. Therefore, both the Group B and R-2 would be required to have sprinklers installed. The system is to be installed as required by the IBC and applicable NFPA standard.

So, you see, throughout doesn't always mean *throughout*. It means in accordance with the appropriate code or standard.

Any questions, please contact me at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

Group Homes Are Not Therapeutic Residences

It has come to the Department of Community Affairs' attention that "group homes" are sometimes being classified as "therapeutic residences." The two should not be used interchangeably.

Section 310.2, Definitions, of the 2000 International Building Code (IBC), as amended by *N.J.A.C.* 5:23-3.15(b)4vii, defines a therapeutic residence as "a residence for adults, each of whom is capable of prompt evacuation (three minutes or less), and who live within a single dwelling unit for therapeutic purposes, without a resident landlord or operator, but with some government or private social service provider oversight." Section 310 of the IBC/2000, as amended by *N.J.A.C.* 5:23-3.14(b)3viii, classifies a therapeutic residence as Residential Group R-4 when there are more than five but not more than 16 occupants, excluding staff, capable of prompt evacuation.

The definition of therapeutic residence includes three criteria that must be met:

(1) It is a residence for adults – facilities housing children would not be classified as Residential Group R-4;

(2) Each resident must be capable of prompt evacuation – this means evacuation within three minutes or less without staff assistance; and

(3) The residence does not have a resident landlord or operator – homes with staff constantly present would not qualify.

In short, group homes serving children are not Residential Group R-4, group homes with residents incapable of prompt evacuation are not Residential Group R-4, and group homes with staff constantly present are not Residential Group R-4.

If you have any further questions on how to classify a particular facility, please contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Home Improvement Contractors' Registration Denial List

The Division of Consumer Affairs has published a list of home improvement contractors whose applications for registration have been denied or withdrawn and who are therefore not eligible to receive permits to perform home improvement work in New Jersey. This list can be viewed at: http://www.njconsumeraffairs.gov/contractors/denial.htm.

It is ultimately the applicant's responsibility if false information is provided on the permit application and it is not the construction official's responsibility to check this list every time a permit application is submitted. However, this information is useful for the construction official to know.

If you have any questions on the Home Improvement Contractors' Registration program, please contact the Division of Consumer Affairs at 1-888-656-6225. If you have questions about this article, please contact me at (609) 984-7609.

Source: Denise L. Jones
Code Development Unit

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Moisture-Vapor Retarder Requirements

The requirements for moisture-vapor retarders are located in two areas of the International Residential Code 2000. Section R322, Moisture-Vapor Retarders, contains the requirements for framed construction. Section R506.2.3, Vapor Retarder, addresses slab-on-grade construction. This section requires an approved vapor retarder with joints lapped not less than six inches to be placed between the concrete floor slab and the base course, or the prepared subgrade where no base course exists. Please visit these sections for further clarification and exceptions.

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

Source: Rob Austin
Code Assistance Unit

New Homebuilder Information Available Online

Information on new homebuilders is now available online through the Department of Community Affairs' web site. Available information includes a database of registered new homebuilders and a database of warranty claims filed.

The database of registered new homebuilders includes the company's name, its New Jersey builder registration number, the name of the builder's warranty plan, and the status of the builder (i.e., if the builder's registration is revoked or suspended). This list of New Jersey builders can be accessed at:
http://www.nj.gov/dca/codes/newhome_warranty/builder-list_toc.shtml

Another useful tool available to you is the New Jersey New Home Builder Claim and Default Report for 2005. This report lists the number of formal warranty claims submitted by registered builders. The report includes, by

company, the number of new homes for which warranties were issued, the number of claims submitted by homeowners to the warranty company, and the number of cases where it was decided that the defect was the builder's responsibility and the builder did not correct the defect. Also listed for each company is a summary of total claims for all companies sharing the same principals. For the purposes of the report, a claim is a formal filing with the warranty company for the correction of defects in materials or workmanship, or a claim for a major structural defect. Items which a new homeowner reports to the builder that are promptly corrected are not included in this report. This report can be accessed at:
http://www.nj.gov/dca/codes/newhome_warranty/pdf/claim_report_2006-05.pdf

Source: Denise L. Jones
Division of Codes and Standards

New Jersey Register Adoptions

Date: May 1, 2006
Adoption: 38 *NJR* 1824(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-2.14, 3.2, 3.14, and 5:70-2.7 shift the enforcement responsibilities from the construction official to the fire official for all tents other than those involving structural considerations. The amendments relocate the construction permitting requirements for these structures from the Building Subcode to the administrative requirements and move the temporary greenhouse requirements to the commercial farm building section. Additionally, the proposed amendments outline permitting requirements for tents, tensioned-membrane structures, and outdoor mazes.

Date: May 1, 2006
Adoption: 38 *NJR* 1827(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.16(a)2.i reference the codes and standards referenced in the Fine Print Notes of the Electrical Subcode (National Electrical Code 2005). Additionally, the amendment updates Bulletin No. 05-2 to 06-2.

Date: June 5, 2006
Adoption: 38 *NJR* 2418(a)
Summary: This adoption at *N.J.A.C.* 5:23-4.21 amends the rule concerning private on-site inspection agency authorization and reauthorization fees to reduce the percentage of gross revenue from construction code enforcement that is required to be paid to the Department of Community Affairs from five to two percent. This fee reduction is retroactive to November 1, 2005.

Source: Denise L. Jones
Code Development Unit

Nonmetallic-Sheathed Cable and Garages

Question: Is a 15-minute finish rating required with the installation of nonmetallic-sheathed cable in a one- or two-family dwelling garage?

Background References: Section 334.10, Uses Permitted, and Article 100, Definitions, specifically "Dwelling Unit," "Dwelling, One-Family," "Dwelling, Two-Family," and "Garage" of the National Electrical Code (NEC) 2005.

Answer: The dwelling unit definitions in NEC/2005 do not define a "garage" or a similar space as part of the dwelling. Because an attached or detached garage is defined as a building or portion thereof, it is considered an "other structure" as per Section 334.10. Therefore, garages require cables to be concealed within walls, floors, and ceilings that provide a thermal barrier of material that has a minimum 15-minute finish rating.

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

Source: Suzanne Borek
Code Assistance Unit

Private Residence Elevators

There have been some questions regarding the installation of private residence elevators. In the American Society of Mechanical Engineers (ASME) 17.1 code, the Safety Code for Elevators and Escalators, under Part V, entitled Private Residence Elevators, the scope of work states: "This Part applies to elevators installed in or at a private residence. This Part also applies to similar elevators installed in buildings as a means of access to private residences within such buildings provided the elevators are so installed that they are not accessible to the general public or other occupants in the building."

The scope of the code is clearly for elevators that serve a single dwelling unit. The use of one private residence elevator is not acceptable for two-family homes where it serves both units. One elevator must be installed for each unit in a two-family home. This applies regardless of whether the dwelling units are located side by side or one on top of another. The building subcode official of the town must check this on his building review.

If there are any questions, please call the Elevator Safety Unit at (609) 984-7833.

Source: Alfred Zipf and Ed Donovan
Elevator Safety Unit

Prohibited: Urea-Formaldehyde Foam Insulation

All officials should know that urea-formaldehyde foam insulation is on the list of products violating the code (*N.J.A.C.* 5:23-3.8) and therefore prohibited in the State of New Jersey.

It has come to the Department of Community Affairs' attention that urea-formaldehyde foam insulation is beginning to be used in buildings being constructed in New Jersey. Some builders are submitting urea-formaldehyde foam insulation to the architect or construction manager as an "or-equal" substitute for a code-compliant product that has already been specified as the insulation inserts for block walls. Thus, the urea-formaldehyde foam insulation is installed before the code official knows it has been used.

Code officials need to be aware of this developing practice and enforce the prohibition of this product.

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

Source: Jeffrey Applegate
Code Assistance Unit

Radon and Crawl Spaces

N.J.A.C. 5:23-10.4, Construction Techniques, specifies the minimum radon protection features required in Group E (educational) and Group R (residential) buildings located in Tier One municipalities. The requirements for radon venting for basements and slab-on-grade construction seem clear; however, questions do arise about crawl spaces.

If you take a close look at Section 10.4, you will see that crawl spaces are only referenced in Construction Techniques 1, 6, 9, 10, and 15. Essentially, these techniques require crawl spaces to be provided with continuous vapor barriers, and all adjacent spaces are to be sealed and taped to prevent radon gas entry. The techniques listed do not require a vent stack pipe unless there is a combination basement/crawl space or slab-on-grade/crawl space as stated in Technique 15.

The reason for the above is that Section R408.1, Ventilation, of the International Residential Code (IRC) 2000 requires "under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement or cellar) to be provided with ventilation openings through the foundation walls or exterior walls." Because these areas should already be ventilated, there is no need for a radon stack vent. The exceptions to this case are as follows:

- √ Crawl Space that Communicates with a Basement: Here, the exceptions from IRC/2000, Section R408.2, Openings for Under-Floor Ventilation, allow the openings to be eliminated so that, for example, the space could be mechanically ventilated or conditioned.
- √ Crawl Space Next to Slab on Grade: A stack vent(s) should be installed under the slab-grade portion only because the crawl space should be ventilated as per R408.1 of IRC/2000.

Keep in mind, every building is different. *Typically,* crawl spaces do not require radon stack vents. The other construction techniques of Section 10.4 could be required, depending on the building's design.

Note: Compliance with the construction techniques in Section 10.4 is not fully required for additions. In such cases, those construction techniques that are feasible should be incorporated into the design.

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

Source: Rob Austin
Code Assistance Unit

Residential Basement Insulation

When applying *N.J.A.C.* 5:23-3.18(b)1ii, the basement wall insulation exception, Sections 502.2.3 and 502.2.6 of the Council of American Building Officials Model Energy Code (MEC) 1995 should be consulted to explain why no insulation is required for the basement wall or basement floor/ceiling assembly. Here's the explanation:

When completing a residential building thermal envelope, Section 502.2.3 of MEC/1995 requires floors over unheated spaces to be insulated. Examples of this are ventilated crawl spaces and unconditioned basements. However, a design professional may choose not to insulate the floor above the basement. If this is the case, Section 502.2.6 of MEC/1995 requires basement walls to be insulated to complete the thermal envelope. The reason for this is in Section 502.2.6, which states that walls of basements below UN-INSULATED floors shall be insulated. When applying the exception from *N.J.A.C.* 5:23-3.18(b)1ii, ALL heating equipment installed must be rated high-efficiency [90 percent annual fuel utilization

efficiency (AFUE) for furnaces, 85 percent AFUE for boilers, and 8.0 heating seasonal performance factor (HSPF) for an air-source heat pump] and then the basement wall insulation can be eliminated.

Please visit my Summer/Fall 2003 *Construction Code Communicator* article, "Energy Code – Residential Basement Wall Insulation Trade-Off," for this application, in conjunction with the RES*check* software. Additional guidance for basement wall insulation in walk-out basements can be found in the article below: "'Walk-Out' Basements and High-Efficiency Heating Equipment."

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

Source: Rob Austin
Code Assistance Unit

"Walk-Out" Basements and High-Efficiency Heating Equipment

As per *N.J.A.C.* 5:23-3.18(b)1ii, residential buildings provided with high-efficiency equipment throughout [90 percent annual fuel utilization efficiency (AFUE) for furnaces, 85 percent AFUE for boilers, and an 8.0 heating seasonal performance factor (HSPF) for air-source heat pumps] shall be exempt from the requirement to insulate basement walls. However, it has come to our attention that, in the case of "walk-out" basements, this exemption is not always applied correctly.

When you have high-efficiency equipment and a walk-out basement, you should consult the definition of "Gross Area of Exterior Walls" from the 1995 Council of American Building Officials Model Energy Code. Here it states, "For each basement wall with an average below-grade area less than 50 percent of total basement wall area, including openings, the entire wall, including the below-grade portion, is included as part of the gross area of exterior walls."

Therefore, if a basement wall meets the criteria defined in Gross Area of Exterior Walls, insulation is required because the basement wall exemption of *N.J.A.C.* 5:23-3.18(b)1ii no longer applies.

For additional guidance regarding basement wall insulation and exceptions, refer to the article "Residential Basement Insulation" in this issue of the *Construction Code Communicator*.

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

Source: Rob Austin
Code Assistance Unit

Warning: Automatic Fire Sprinklers Bearing Counterfeit UL Mark

Underwriters Laboratories, Inc. (UL) has issued a notice regarding chrome-plated automatic fire sprinklers that bear a counterfeit UL mark for the United States and Canada. Although marked with the word "Globe," these sprinklers are not manufactured by Globe Fire Sprinkler Corporation and have not been evaluated for safety by UL.

Identifying descriptions and marks for this particular fire sprinkler are as follows:

Model of Product: GL 5651
Date of Manufacture: 2005 to present
Identification: Pendent-type automatic fire sprinkler
Marking on Frame: "GLOBE"
Markings on the Deflector: "SSP," "cULus" in a circle, "GL 5651, 2005," and "155°F/68°C"

Sprinklers with the counterfeit UL mark are manufactured with a slot-head screw and a Job F5 glass bulb. UL-listed sprinklers manufactured by Globe Fire Sprinkler Corporation contain a hex-head screw and a Job G5 glass bulb.

If you come across sprinklers with the counterfeit UL mark, UL recommends that the sprinklers be replaced by qualified service personnel and returned to the place of purchase. Code enforcement officials should not allow these sprinklers to be utilized.

To view a picture of this sprinkler, go to:
http://www.ul.com/media/newsrel/nr071406.html
For additional information, contact Joe Hirschmugl at UL in Illinois by telephone at 1-847-664-1508 or by e-mail at Joseph.F.Hirschmugl@us.ul.com.

Source: John Terry
Division of Codes and Standards

CELEBRATION — 25 YEARS
New Jersey Building Safety Conference

What a conference we had! The 25th Annual New Jersey Building Safety Conference was the event of the year! The seminars and the instructors were top shelf! The food was outstanding and the entertainment received rave reviews. The word most used on the opinion poll was “excellent;” thus, a job well done. What more could we ask for? The service from Bally’s staff was the best yet. We will see them next year when we return for the 2007 conference on May 2-4.

Our focus was clear. This conference is our opportunity to highlight the importance of safe buildings, recognize the professionals responsible for making and keeping buildings safe, and provide training of the highest caliber. We did it this year in the grandest of styles!

A Proclamation from our Governor, Jon S. Corzine, publicly recognized and commended all local and State construction code enforcement officials and their support staff for their commitment, dedication, and untiring efforts in ensuring the health, safety, and welfare of every citizen of this State.

The award recipients of the 2006 Building Safety Conference are:

Joseph Albanese, Jr. – Plumbing Inspector of the Year
Wayne Township, Prospect Park Borough, and Wanaque Borough

Anthony Saccomanno – Building Inspector of the Year
Cherry Hill Township and Berlin Borough

Richard M. Marshall – Electrical Inspector of the Year

John J. Drucker, Jr. – Fire Protection Inspector of the Year
Red Bank Borough and Little Silver Borough

Judith Russo – Technical Assistant of the Year
Montvale Borough

Congratulations to all!

Source: Susan H. McLaughlin
Supervisor, Education Unit
Bureau of Code Services

NOTES



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State of New Jersey
Jon S. Corzine, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

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Demolition Permits

Ever play the kid's game, "Telephone?" Someone whispers a message. It gets repeated and the last person says what she heard, usually to the amusement of all. Every month when I review demolition permits, I play Telephone. Construction officials and technical assistants start with a simple message, something like: "Mike likes to wear boots when it floods." Only, I hear "I like Milk Duds."

Demolitions are significant events. They are very important to demographers, who like to count things. They want to know what gets built, when, and where. They also want to know when something is torn down. They are crazy for information on dwelling units, a fancy term for places where people live — houses, apartments, and condominiums. Hotels, hospital beds and nursing-home rooms, time-shared apartments, college dormitories, prison cells, and extended-stay suites are not dwellings. They look like them, but because a person may stay in them for a short time, they should not be counted or reported as dwellings, either on construction or demolition permits.

Too many confuse dwellings with buildings. Don't report a lost dwelling when you mean building. You enter a "1" to let me know a building was lost. I know that. You can't have a demolition without doing so. A tear down without the loss of a structure is an alteration. If you demolish an "M" use (mercantile) and report "1" for-rent unit lost, I see the removal of a store with an apartment.

A big source of confusion comes from the wrong use group. Report only the use of the building to be demolished. That sounds simple, but too many enter "U" for accessory or miscellaneous structures, such as detached garages, sheds, swimming pools, and fences, and also report the loss of a dwelling. I see a tear down of a detached garage with an apartment over top. Thus far in 2006, there were over 260 demolitions of "U" buildings that had dwellings. Sorry, these aren't all detached garages with apartments. Most of them are mistakes.

If the building is empty or abandoned, report the last known use. Don't use "U" as a catchall. For a tear down of a vacant building last used to make horse harnesses, enter "F" for factory. Also, don't confuse a change of use with a demolition. A demolition permit is not a change of use. Don't report the use group of the building you expect to replace the one torn down.

Most everyone knows oil tanks and other underground tanks are accessory structures, and report the proper use group, "U." Still, each month, some misclassify

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tank removals with "R-2," "R-3," "R-4," or "R-5" designations. Software developers are logical people. When you issue a demolition permit for a residential use, the reporting software prompts you for the number of dwellings lost. An underground tank is not a house. By misapplying the "R" uses, some of you report a lost house every time a tank is removed. Stop that. If you don't, I will publish a list of towns where people live in underground tanks.

Accurate construction data are important for many reasons. At the top of the list of reasons is your job. You can't keep track of what needs to be done, when, and where without good records. Construction data also are used by others. Most recently, they are used by planners who calculate affordable housing obligations. Your town's fair share of regional affordable housing needs depends on how much it grows. Planners use building permits and demolitions to measure growth. Get it right. If you have questions, call me at (609) 292-7898 or e-mail me at jlago@dca.state.nj.us, anytime, as often as needed.

Source: John Lago
Division of Codes and Standards

Energy Requirements Revisited: Documentation

The Code Assistance Unit has received many inquiries as to why some municipalities are requiring energy compliance documentation and some are not. As a reminder, *N.J.A.C.* 5:23-2.15(e)1.vi requires the submission of calculations showing compliance with the Energy Subcode for all new buildings and additions that are heated or cooled. Additions should be analyzed by themselves. However, as an alternative, when the addition taken by itself does not comply, the entire existing building including the addition may be analyzed if the proper information is available for the existing building.

Newly constructed, detached, one- and two-family residential buildings and other residential buildings three stories or less in height shall demonstrate compliance by the submission of a RES*check* software compliance certificate (visit http://www.energycodes.gov for the New Jersey-specific version), proof of conformance with the prescriptive packages (see Bulletin No. 03-2), submission of "hand" calculations, or for new homes only, submission of New Jersey Energy Star® Homes compliance documentation (see the Spring 2004 *Construction Code Communicator* article, "New Jersey Energy Star® Homes and the Energy Subcode").

For all other buildings, compliance shall be demonstrated by submission of a COM*check* software compliance certificate [visit http://www.energycodes.gov for the American Society of Heating, Refrigerating, and Air-Conditioning Engineers' (ASHRAE) 1999 version] or "hand" calculations.

As per *N.J.A.C.* 5:23-2.15(e)1.vii, all building calculations shall be signed and sealed by the design professional, with the exception of calculations for class III structures [as defined at *N.J.A.C.* 5:23-4.3A(d)], which may be submitted by the mechanical contractor or a single-family homeowner as per *N.J.A.C.* 5:23-2.15(e)1.ix.

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

Note: As a reminder, the Department of Community Affairs anticipates the adoption of the 2006 International Energy Conservation Code and the 2004 ASHRAE 90.1, as amended at *N.J.A.C.* 5:23-3.18, on February 20, 2007.

Source: Rob Austin
Code Assistance Unit

Design Professionals and "Other" Documents

N.J.A.C. 5:23-2.15(e)1.xi(1) states, "All documents prepared by people other than the design professional shall be reviewed by the design professional and submitted with a letter indicating that they have been reviewed and found to be in conformance with the regulations for the design of the building."

Two examples of this code requirement are:

1. A New Jersey State licensed architect chooses to use pre-engineered lumber in his design. After review of the specifications of the pre-engineered lumber (normally certified by a licensed engineer), the architect must supply a letter, including his seal,

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attesting to the lumber's appropriate use in the design. Please keep in mind, the architect is not sealing "over" the engineer's seal; he is simply stating he has reviewed the material and that it "works" in the design.

2. A licensed electrician proposes to install wiring through a fire-rated assembly in a new structure. The design professional must review this proposal to make sure the penetration does not jeopardize the rating of the wall. If the proposed installation is acceptable, the design professional must submit a signed and sealed letter stating that the electrical plans meet the intent of his design. (A fire-alarm system is a good example; this situation can also be applied to the proposed installation of piping by a master plumber.)

Please keep in mind that this is not an all-inclusive list. There are a multitude of situations to which the above-referenced section can be applied. These examples are intended as a reminder as to when further documentation is required.

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

Source: Rob Austin
Code Assistance Unit

Energy Efficiency Tax Credits – Information to Pass Along

The Federal Energy Policy Act of 2005 provides a variety of tax credits for homeowners, businesses, and manufacturers for purchase of energy-efficient equipment, completion of new energy-efficient buildings, and improvements to existing buildings which were made or are to be made after January 1, 2006 and before December 31, 2007. The United States Department of the Treasury has amended Tax Form 1040 to include a line for energy tax credits in the tax credit section, and issued regulations in early 2006 specifying the energy efficiency equipment and which improvements to existing buildings or new building designs qualify for the credits. The Energy Efficiency and Renewable Energy Information Center hotline is collecting information on the tax credits, and will be updating same as it becomes available. The hotline number is (877) 337-3463.

Additional Resources

> Tax incentives for buildings and other efficiency improvements:
http://www.energytaxincentives.org

> Commercial building provisions:
http://www.efficientbuildings.org

> Residential building provisions:
http://www.energystar.gov/index.cfm?c=products.pr_tax_credits

> IRS tax credit rules and information for homeowners:
http://www.irs.gov/newsroom/article/0,,id=154657,00.html

> IRS tax credit rules and information for home builders:
http://www.irs.gov/newsroom/article/0,,id=154658,00.html

Source: Rob Austin
Code Specialist

DOT Curb Ramps

It has come to the Department of Community Affairs' (DCA's) attention that sometimes curb ramp specifications provided by the New Jersey Department of Transportation (DOT) are submitted with permit applications. The DCA has reviewed the DOT curb ramp specifications. There are more design configurations included in the DOT specifications than are included in the International Code Council/American National Standards Institute Standard A117.1; this is due, in part, to the application of DOT specifications to existing streets. The DOT curb ramp specifications provide an accessible route and should be accepted by code officials.

For some curb ramp designs, the DOT specifications do not include dimensions for cross slope. In the absence of dimensions for cross slope, the standard cross slope of 1:48 should apply.

If you have questions about whether a DOT curb ramp may be used, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily Templeton
Division of Codes and Standards

Emergency Rule Regarding Day-Care Centers

This is a reprint of a letter sent on October 27, 2006.

Dear Construction Official:

Last week, the Governor authorized the adoption of an emergency rule by the Department of Children and Families. This rule seeks to address the licensing of child-care centers on contaminated sites. The emergency rule arises out of a case that came to light this summer where children were exposed to mercury because a day-care center had been allowed to open in a former thermometer factory.

The emergency rule triggers requirements for additional environmental investigation on the past use(s) of the building based on Uniform Construction Code (UCC) group classifications. Under this new rule, applications for a child-care center license or license renewal must now include a certification as to whether the building ever was classified as one of the following uses: Group F (factory/industrial), Group H (high hazard), Group S (storage), or nail salons or dry cleaners of Group B. If the building predates the UCC, then the certification should be based on what the group classification would have been had the UCC been in effect. The applications go to the Department of Children and Families, but it is likely that you will receive inquiries from child-care center operators about the past group classifications of the buildings that they are using or considering using.

The emergency rule establishes environmental requirements to be met by child-care center providers as follows:

1. Child-care centers located or to be located in buildings that were classified in Group F, H, S, or that were dry cleaners or nail salons (Group B) must meet Department of Environmental Protection (DEP) soil guidelines for child-care centers. Child-care providers using such buildings must also contact the Department of Health and Senior Services (for indoor environmental conditions) and the DEP to determine what additional steps, if any, must be taken to address any risks posed by the past use of the property.
2. The operator must certify that the child-care center has a potable water supply that meets safe drinking water standards. For child-care centers using private wells, this means that the well must be tested.
3. The operator must certify that the facility complies with the Department of Children and Families' regulatory requirements for radon, asbestos, and lead.

Additionally, after January 1, 2007, all child-care centers located in the same building as a dry cleaner or nail salon will need to have indoor-air sampling. And effective June 1, 2007, all child-care center license or license renewal applications will need to include a No Further Action letter from the DEP covering the site on which the center is located.

The Department of Children and Families' *Manual of Requirements for Child-Care Centers* requires a valid Certificate of Occupancy, so this is not a prior approval issue. As stated above, these new requirements will be enforced by the Department of Children and Families as part of their child-care licensing requirements. But I did want to make you aware of these new rules because I expect that many of you will receive inquiries.

The full text of the rule may be viewed on the Department of Children and Families' web site:
http://www.state.nj.us/dcf/notices/10-122PhysPlntReq.pdf

Should you have any questions regarding this new rule, please feel free to contact the Code Assistance Unit at (609) 984-7607.

Sincerely,

William M. Connolly
Director
Division of Codes and Standards

Note: An information web site page including links to this letter, the group descriptions, and the emergency rule can be accessed at:
http://www.nj.gov/dca/codes/misc/childcare_providers_emergency_rule/child_care_providers_secondary_page.htm

Child-Care Centers 

This is a reprint of a letter sent on January 31, 2007.

Dear Construction Official:

On January 11, 2007, the Governor signed a bill into law requiring environmental investigations prior to the issuance of a permit or of a Certificate of Occupancy for child-care centers or for schools where certain conditions are met (P.L. 2007, c. 1). The purpose of the new law is to ensure that buildings and building sites with a history that might include contamination undergo an environmental investigation to ensure that they are safe prior to becoming child-care centers or schools. I am writing to inform you of the new law, and of how to proceed with the issuance of permits and Certificates of Occupancy in these cases.

The emergency rules adopted by the Department of Children and Families, which were the subject of my October 27, 2006 letter *(see facing page)*, are still in force and effect. These rules apply to applications for a license to operate a child-care center and to license renewals. The new statute governs new construction, rehabilitation, or changes of use on sites or in buildings with an industrial past that create a new child-care center or school. Please note that my October 27, 2006 letter states clearance of the property and of any existing building for use as a child-care center is not a prior approval. With the passage of the new law, this has changed. These environmental clearances are now required prior approvals. (A copy of the October 27, 2006 letter is also available on the Division's web site at **http://www.nj.gov/dca/codes/misc/childcare_providers_emergency_rule/child_care_providers_secondary_page.shtml**.)

Under the new statute, the Department of Environmental Protection (DEP) is responsible for determining whether the site is safe for a child-care center or for a school. The Department of Health and Senior Services (DHSS) is responsible for making a determination as to whether an existing building (interior) is safe for reuse as a child-care center or as a school. Like the emergency rule, the new statute triggers requirements for additional environmental investigation based on the past use(s) of the building or property. The following is an outline for use in determining whether a prior approval pursuant to this statute is needed for a particular project. Please note that, in accordance with the framework of the statute, two separate approvals are required: one for the site and one for the building interior.

BUILDING SITE – A Remedial Action Workplan approved by the DEP or a No Further Action letter from the DEP must be obtained prior to the issuance of a permit if one of the three conditions listed below is met:

1. The property was the site of one of the following uses:
   - **>** Factory/Industrial (Group F)
   - **>** High Hazard (Group H)
   - **>** Storage (Group S)
   - **>** Nail Salon or Dry Cleaner (Group B)
   - **>** Gasoline Station (Group M)

   If the use of the property predates the Uniform Construction Code (UCC), then the determination should be based on what the group classification would have been had the UCC been in effect.
2. The property is on a list of contaminated sites maintained by the DEP, or is subject to the Industrial Site Recovery Act. To assist you in determining whether a site is a known contaminated site or a site suspected of contamination, you can review the DEP Site Remediation & Waste Management (SRWM) Program web site at **http://www.nj.gov/dep/srp**, specifically the SRWM data resources links.
3. The construction official knows or has been advised by other local officials that the property has been used for dumping, or there is some other factual basis for believing that there may be "suspected contamination."

For construction on properties that fall into any of the above categories, if a Remedial Action Workplan was submitted prior to issuance of a permit, a No Further Action letter from the DEP is required prior to issuance of a Certificate of Occupancy. If a No Further Action letter was submitted prior to issuance of the permit, then as the name suggests, nothing further is required prior to issuance of the Certificate of Occupancy.

When the site proposed for reuse has no building on it at the time of application, then the DEP prior approval is the only one required.

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Free Online Access to the *New Jersey Administrative Code*

The New Jersey Office of Administrative Law and LexisNexis have created a web site for the *New Jersey Administrative Code* (*N.J.A.C.*) and the *New Jersey Register* (*NJR*) at http://www.lexisnexis.com/njoal. The full *N.J.A.C.*, along with historical annotations, is available and will be updated quarterly. Documents can be browsed by title, chapter, subchapter, and section, and can be searched by keywords. The documents may also be printed and e-mailed and, although the *N.J.A.C.* cannot be downloaded, sections may be copied and pasted into word documents. Hyperlinks are permitted to be created to a title, chapter, subchapter, or section.

A database of notices from current and past *NJRs* dating back to mid-1995 is also available through the web site. This database is fully searchable, and the documents may be printed and downloaded, but hyperlinks are not permissible.

Source: Denise L. Jones
Code Development Unit

FTO-8 Withdrawn 

Effective November 6, 2006, Formal Technical Opinion 8, "Use Group Classification — Department of Human Services Residential Programs," was withdrawn. FTO-8 provided direction to code officials regarding the group classification of group homes licensed by the New Jersey Department of Human Services (DHS). Since the publication of FTO-8, some of the programs in the DHS have been reorganized into the Department of Children and Families (DCF).

There are two divisions in the DHS that license group homes: the Division of Developmental Disabilities (DDD) and the Division of Mental Health and Hospitals. The DCF also licenses group homes through the Division of Youth and Family Services. Of these divisions, the DDD licenses the largest number of group homes.

Now that the FTO has been withdrawn, code officials are to determine the group classification by applying the provisions of the Building Subcode.

The DDD is installing sprinklers in all its newly licensed group homes. The Department of Commuity Affairs (DCA) recognizes, however, that it is likely code officials will have to make judgments in the case of group homes that were "in the pipeline" at the time of the withdrawal of this FTO. The DCA is prepared to provide guidance on code requirements for group homes. When the DCA becomes aware that a group home is "in the pipeline" in a specific municipality, a letter will be sent to the construction official providing guidance. In addition, code officials may direct any questions to the Code Assistance Unit at (609) 984-7609.

Source: John Terry
Division of Codes and Standards

Home Improvement Contractor Registration Abandonment List

The Division of Consumer Affairs has published a list of home improvement contractors whose applications for registration have been abandoned and who are, therefore, not eligible to receive permits to perform home improvement work in New Jersey. This list can be viewed at:
http://www.njconsumeraffairs.gov/contractors/abandoned.htm

If you have any questions on the Home Improvement Contractors' Certification program, please contact the Division of Consumer Affairs at (888) 656-6225.

Source: Denise L. Jones
Code Development Unit

A Low-Voltage Wiring License . . . Not! 

The Board of Examiners of Electrical Contractors has been receiving numerous inquiries regarding a "Low-Voltage Wiring License" that municipalities are requiring in order for contractors to install items such as speakers, central vacuum systems, etc. Such a license does not exist. However, a Limited Telecommunications Wiring Exemption Certificate is available to persons or businesses exempt from electrical contractor licensure requirements when they are engaged in telecommunication wiring as covered in the Board of Examiner's regulations at *N.J.A.C.* 13:31-4.1. The exemption certificate application can be downloaded at:
http://www.state.nj.us/lps/ca/electric/telewire.pdf

A permit is not required for telecommunication wiring in any Class 3 structure provided the fire-rated assemblies are not penetrated as per *N.J.A.C.* 5:23-2.7(c)3.iii of the Uniform Construction Code. Other low-voltage wiring requires an electrical permit and may only be performed by a licensed electrical contractor, a

homeowner in their own single-family dwelling, or someone otherwise exempted from licensure by the Board.

Now, the point of all this is . . . make sure you ask for the right thing when requesting a license or other information. If you have any questions on this matter, please contact me at (609) 984-7609.

Source: Suzanne Borek
Code Specialist

Home Improvement Contractors' Registration Denial List Alternate Web Site Address

The web site address in the Home Improvement Contractors' Registration Denial List on page 12 of the Summer/Fall 2006 edition of the *Construction Code Communicator* is listed as:
http://www.njconsumeraffairs.gov/contractors/denial.htm
If you are having difficulties accessing this address, try the alternate address at:
http://www.njconsumeraffairs.com/contractors/denial.htm

Source: Denise L. Jones
Division of Codes and Standards

Variation for Gas-Fired, Category 1 Equipment  

Gas-fired, Category I equipment (water heaters, furnaces, or boilers) installed in multistory residential and other multistory occupancies and connected to a common venting system is permitted by the International Fuel Gas Code (IFGC) 2000, 2003, and 2006 when the combustion air is obtained from the exterior of the building, and not from the interior habitable space.

However, there are many existing buildings where the furnace room is located in the middle of the units with no access to an exterior wall. Here the combustion air is taken from an adjacent interior habitable space. This type of installation was permitted before the adoption of the IFGC.

Today, many water heaters and furnaces are being replaced due to the age of the equipment. The replacement of this equipment is considered a renovation project under the Rehabilitation Subcode (*N.J.A.C.* 5:23-6.5). Section 5:23-6.5(h) requires all materials and methods used in the renovation to comply as specified in *N.J.A.C.* 5:23-6.8, Materials and Methods.

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LP-Gas Installation Notice Requirements Reduced

The Department of Community Affairs has proposed to eliminate the requirement for Liquefied Petroleum Gas installation notices to be filed for most installations.

The LP-Gas installation notice will still be required for all temporary heating installations using one or more tanks of 250 gallons or more water capacity and remaining in place for six months or less (temporary installations).

If you have any questions, please contact the Code Assistance Unit at (609) 984-7609 or the LP-Gas Unit at (609) 633-6835.

Source: Denise L. Jones
Code Development Unit

Minimum Rating/Maximum Setting . . . Huh? 

The confusion of the label on air conditioners has raised questions regarding the conductor sizing, circuit breaker rating, and disconnect rating.

Section 440.4(C), Branch-Circuit Selection Current, of the 2005 National Electrical Code (NEC) states that equipment having a protection system which is approved for use with the motor-compressor it protects and which permits continuous current in excess of the specified percentage of the nameplate rated-load current given in Subsection 440.52(B)(2) or (B)(4) shall also be marked with a branch-circuit selection current that complies with 440.52(B)(2) or (B)(4). The marking shall be provided by the equipment manufacturer and shall be on the nameplate(s) where the rated-load current(s) appears.

Section 440.6, Ampacity and Rating, (A), Hermetic Refrigerant Motor-Compressor, states that the rated-load current marked on the nameplate of the equipment in which the motor-compressor is employed shall be used in determining the rating *or* ampacity of the disconnecting means, the branch-circuit conductors, the controller, the branch-circuit short-circuit and ground-fault protection, and the separate motor overload protection. If there is no rated-load current shown on the equipment nameplate, the rated-load current shown on the compressor nameplate shall be used.

Exception Number One: Where so marked, the branch-circuit selection current shall be used instead of the rated-load current to determine the

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rating or ampacity of the disconnecting means, the branch-circuit conductors, the controller, and the branch-circuit short-circuit and ground-fault protection.

Section 440.21, General, states that Part III specifies devices intended to protect the branch-circuit conductors against overcurrent due to short-circuits and grounds. They are in addition to, or amendatory of, the provisions of Article 240.

Section 440.22(A), Rating or Setting for Individual Motor-Compressor, states that the motor-compressor branch-circuit short-circuit and ground-fault protective device shall be capable of carrying the starting current of the motor. A protective device having a rating or setting not exceeding 175 percent of the motor-compressor rated load current or branch-circuit selection current, whichever is greater, shall be permitted provided that, where the protection specified is not sufficient for the starting current of the motor, the rating or setting shall be permitted to be increased, but shall not exceed 225 percent of the motor rated-load current or branch-circuit selection current, whichever is greater.

Section 440.31 states that Part IV and Article 310 specify the ampacities of conductors.

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

Source: Suzanne Borek
Code Assistance Unit

New Jersey Register Adoptions

Date: October 2, 2006
Adoption: 38 *NJR* 4175(a)
Summary: As a result of the Supreme Court decision in the case of *DKM Residential Properties Corporation v. the Township of Montgomery and the Construction Board of Appeals of the Township of Montgomery* and Governor Richard J. Codey's Executive Order #33 of May 9, 2005, the following amendments and new rules have been adopted.

Permits: At *N.J.A.C.* 5:23-2.14, a permit is required for any work resulting from a Notice of Violation and Order to Terminate (F213) issued to the builder after the issuance of the Certificate of Occupancy.

Enforcement and Administration: The adopted new rules at *N.J.A.C.* 5:23-2.35 set requirements to ensure all homes in a development are inspected for similar violations when a substantial code violation, as defined within this new rule, is found; the municipality will be allowed to charge the developer for the costs of these enforcement actions. The adopted rules enable municipalities to hire licensed engineers or architects to assist with the enforcement of development-wide actions, address their qualifications, and stipulate that the work performed is subject to the supervision and control of the construction official. Three new forms have been added at *N.J.A.C.* 5:23-4.5: a "Consent to Undertake Proposed Work" (Form F101), a "Notice of Violation and Order to Terminate" (Form F213), and a "Notice and Order of Penalty" (Form F214).

Fees: Adopted amendments at *N.J.A.C.* 5:23-4.17, 4.18, and 4.20 establish fees for development-wide actions. The amendments at *N.J.A.C.* 5:23-4.17 mirror or reference the provisions of the Municipal Land Use Law for establishing and maintaining an escrow, making charges to the escrow, and accounting for the escrow charges associated with development-wide actions.

Hearing Procedures: The amendment at *N.J.A.C.* 5:23A-2.2 establishes that the filing of an appeal by any party in a dispute related to violations found after the issuance of a Certificate of Occupancy constitutes consent to entry by the members of the Board of Appeals and that all parties must be notified of any planned visit by any member(s) of the Board of Appeals.

Date: November 6, 2006
Adoption: 38 *NJR* 4691(a)
Summary: The amendments at *N.J.A.C.* 5:23-2.20, 3.14, 5.3, 5.4, 5.21, 5.22, and the new rules at *N.J.A.C.* 5:23-5.19G and 5.23B specify certification and education requirements for special inspectors. The categories of special inspectors are as follows: structural steel and welding special inspector, concrete special inspector, structural masonry special inspector, spray-applied fireproofing special inspector, and exterior insulation finish system special inspector.

Source: Denise L. Jones
Code Development Unit

Nonresidential Child-Care Facilities and FTO-9

It has come to the Department of Community Affairs' attention that there is some confusion about the application of Formal Technical Opinion (FTO) 9, Use Group Classification -- Department of Human Services Nonresidential Child Care Programs. The rule of thumb is that an FTO continues in force and effect until it is officially withdrawn. Therefore, FTO-9 remains enforceable. Some of the information in FTO-9, however, is a little out of date and therefore needs some explanation.

With the adoption of the International Building Code (IBC) 2000, some of the group categories changed. A new category, Group I-4, Day Care Centers, was introduced and a single-family home with not more than three stories became Group R-5. The IBC/2000 also contained some changes in code requirements. The combination of new group designations and new code requirements has apparently caused confusion about how to apply FTO-9. A summary of the group designations for day care centers follows.

Residential Day Care --

Group R-5 or Group R-3: Family Day Care

BOCA: In 1995, when FTO-9 was published, the Building Officials and Code Administrators (BOCA) National Building Code designated all single-family homes as Group R-3. So, that is the group designation included in the FTO. Family day care for up to five children of any age could be established in a home with no change in the Group R-3 designation.

IBC: The International Code Council (ICC) now covers single-family homes in two codes: (1) those that are three stories or less are Group R-5 and are contained in the International Residential Code (IRC), (2) those that are more than three stories are designated as Group R-3 and are covered in the IBC. A family day care with up to five children of any age may be established in either a Group R-5 or Group R-3 residence with no change in the group designation. The presence of more than one child under 2½ years of age does not change the group designation.

Commercial Day Care --

Group I-4: Day Care Centers for Children Under the Age of 2½

BOCA: The BOCA National Building Code designated day care centers with six or more children under 2½ years of age as Group I-2. The presence of one child under the age of 2½ did not change the group designation.

IBC: The IBC/2000 included a group designation specifically for day care centers. It designates commercial day care centers with any number of children under the age of 2½ years as Group I-4. The presence of one child under the age of 2½ years in a commercial day care setting establishes the designation as Group I-4.

Group E: Day Care Centers for Children Over the Age of 2½

BOCA: The BOCA National Building Code allowed commercial child care centers that served fewer than 50 children ages 6-13 years to be accessory to another group and to be considered part of the main use. BOCA designated commercial child care centers with 50 or more children ages 6-13 years as Group E.

IBC: The IBC/2000 designates commercial day care centers serving more than five children older than 2½ years as Group E.

Existing Day Care Centers: The IBC/2000 has no provisions for commercial day care centers to be treated as accessory to the main group designation and considered as part of that group. Existing commercial day care centers serving fewer than 50 children ages 6-13 years that were accessory to a main group designation and that were classified as part of that use when the BOCA National Building Code was the Building Subcode in New Jersey may continue in that group designation.

IBC/2006: The Department has proposed the IBC/2006 as the Building Subcode. The proposal was published in the *New Jersey Register* on September 5, 2006; the comment period ended November 4, 2006; it will be published as an adoption on February 20, 2007. Group designations and code requirements for day care centers are unchanged from the IBC/2000 to the IBC/2006.

The Department is in the process of revising FTO-9 to ensure its accuracy.

If you have questions about the applicability of the Uniform Construction Code to day care centers, contact the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development Unit

Warning: *More* Counterfeit Automatic Fire Sprinklers

Underwriters Laboratories, Inc. (UL) is again notifying consumers, distributors, and property owners of chrome-plated, automatic fire sprinklers that bear a counterfeit UL Mark for the United States. Although marked with the word "TYCO," these sprinklers are not manufactured by Tyco Fire Products, and have not been evaluated for safety by UL.

Model of Product: Not provided on product
Units: Unknown
Manufacturer: Unknown
Date of Manufacture: Not provided on product
Identification: Pendent-type, automatic fire sprinkler
Marking on Frame: TYCO
Marking on Deflector: SSP, a UL Mark (which is UL in a circle), 155°F/68°C

To view pictures of the product, go to:
http://www.ul.com/newsroom/newsrel/nr092106.html

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UPDATED REPRINT

Proper Disposal of Construction Material and Debris

This article is a repint with updates from the Fall 1996 Construction Code Communicator (*Volume 8, Number 3)*

Over the past few years, there has been increasing concern about the reuse of construction debris from a demolition project as "fill" on the site of origin. The Department of Community Affairs (DCA) requested and received guidance on this issue from the New Jersey Department of Environmental Protection (DEP). The purpose of this article is to provide you with the DEP's position on this issue.

Concrete, brick, and block are classified as Class B recyclables and are regulated by the DEP, Division of Solid and Hazardous Waste, Recycling Regulations (*N.J.A.C.* 7:26A). People who generate Class B recyclables have two options for disposal. The first is to transport the material to a recycling center; the second is to reuse the material on-site as clean fill.

The recycling or reuse of these materials that are generated, processed, and reused on-site is exempt from the approval requirements of the DEP [*N.J.A.C.* 7:26A-1.4(a)2]. To qualify for this exemption, the DEP, the host county, and the host municipality must be provided with written notification of the activity, as per *N.J.A.C.* 7:26A-1.4(b)5. Notification to the DEP should be sent to: State of New Jersey, Department of Environmental Protection, Division of Solid and Hazardous Waste, PO Box 414, Trenton, New Jersey 08625-0414. *(A fax number was provided in the 1996 edition of this article. Notification by fax is no longer accepted.)*

To be considered for an exemption, all of the following conditions must be met:

1. The material being used for clean fill is generated at the site. Materials may not be imported from other locations.
2. The material is not contaminated by exposure to chemicals from industrial processes or exposure to other contaminants.
3. The clean fill is not mixed with other materials such as wood, glass, plastic, etc.
4. The material is processed to reduce its size in order to minimize voids in the fill.

What effect do these requirements and exemptions have in the "real world?" An example may help: A homeowner wants to demolish his swimming pool and reuse the debris as fill in its place. He comes to your office to find out what he needs to do. You tell him he must get a demolition permit. He must also provide you with a site plan (not signed and sealed, just a sketch on an existing plot plan that shows where he is going to fill, which is – most likely – the site of the pool). He must provide evidence that he notified the DEP at the above address as well and evidence that he notified the county (usually the recycling or solid waste coordinator). He must also notify the municipality (the construction office). Now work may start. Any debris that is not concrete, brick, or block must be removed from the demolition debris. This includes removal of any rebar, vinyl (from the liner), or wood from the debris. The concrete, block, or brick must be broken up to the point where it will minimize voids in the fill. Although this size is interpretative, a good rule of thumb is three to four inches in diameter. *(The suggested minimal diameter of debris in the 1996 article was eight inches. This has changed to three to four inches.)*

Should you have any questions regarding the DEP requirements or exemptions, please contact the DEP's Bureau of Recycling and Planning at (609) 984-3438.

Source: John N. Terry
Code Assistance Unit

UL Product Database Available Online

Underwriters Laboratories, Inc. (UL) has announced the introduction of a new online tool for regulatory authorities.

The "Category Code/Model Code Database" is a search engine that links code sections to UL product categories. To view this new database, visit:

http://www.ul.com/regulators/codelink

Enter a code section from the International Building Code, International Mechanical Code, International Fuel Gas Code, or the National Electrical Code for a list of the corresponding UL product category and listing information.

This database also provides hyperlinks to the UL Guide Information and other specific information pertaining to each UL Category Code.

For more information, contact Bob Eugene in Seattle, Washington by telephone at (360) 593-2152 or by e-mail at Robert.Eugene@us.ul.com.

Source: John Terry
Division of Codes and Standards

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Subsection 5:23-6.8(f)3 states that all requirements of Chapter 5, Chimneys and Vents, shall be applied to the renovation project. IFGC Section 503.6.10.1, Equipment Separation, requires all equipment connected to the common vent to be located in rooms separated from habitable spaces. Each room is required to have provisions for an adequate supply of combustion, ventilation, and dilution air that is not supplied from habitable space.

This requirement can create hardships when renovating older, multistory buildings with common systems. As an example, based on the adopted Mechanical Subcode, in a first-floor furnace room located in the middle of the unit of a multistory condominium building, where each furnace room is located directly above the other, the flue connector from the replacement equipment would not be permitted to reconnect into the existing chimney. As you can see, this creates a hardship for the resident replacing the equipment on the first level because they would have to run a new flue vent which passes through the other units to get to the outdoors.

Because the original installations were code compliant at the time of the installation, the Department of Community Affairs will be proposing an exemption to IFGC Section 503.6.10 for the replacement of equipment of like or lesser capacity. The proposed amendment will also require that a carbon-monoxide detector be installed when equipment is replaced. This exemption is part of the annual amendments to the Rehabilitation Subcode, which were published in the *New Jersey Register* as a proposal on December 4, 2006.

It is recommended that a variation be granted until the change to the Rehabilitation Subcode is adopted.

Source: Thomas C. Pitcherello
Code Assistance Unit

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Legitimate, UL-listed sprinklers manufactured by Tyco Fire Products are manufactured with a Job G5 glass bulb. There is also a date code molded into the frame and the Sprinkler Identification Number (SIN) is stamped on the deflector. The identification number is TY followed by four digits 0 through 9. Sprinklers with the counterfeit UL Mark are manufactured without a date code or identification number and are manufactured with a Job F5 glass bulb.

Location: According to Tyco Fire Products, government officials in Delhi, India seized approximately 1,100 of these sprinklers, which were illegally imported from China. These sprinklers have only been found in India and Asia to date.

If you come across sprinklers with the counterfeit UL Mark, UL recommends that the sprinklers be replaced by qualified service personnel and returned to the place of purchase. Code enforcement officials should not allow these sprinklers to be utilized.

For more information, contact Joe Hirschmugl in Northbrook, Illinois by telephone at (847) 664-1508 or by e-mail at Joseph.F.Hirschmugl@us.ul.com.

Source: John Terry
Division of Codes and Standards

What's New in the 2006 IBC and IRC?

The purpose of this article is to make you aware of some of the major differences between the 2000 editions and the 2006 editions of the International Building Code (IBC) and the International Residential Code (IRC). This is not an all-inclusive list; it is merely the "big ticket items" that differ.

IBC:

- Group A occupancies used by less than 50 persons are classified as Group B. For those of you who are familiar with the 1987 Building Officials and Code Administrators (BOCA) National Building Code, this will sound familiar. Section 303.1, Exceptions 1-3 now address this issue.
- Section 507.3, Exception 3 now allows Group A-1 and Group A-2 occupancies in unlimited area buildings, such as shopping centers. There are limitations on the area of the Group A occupancies, as well as fire-protection and egress restrictions.
- Mixed use and occupancy have been relocated. The requirements for these have been moved from

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Section 302 to Section 508. Along with this move, Table 508.3.3 has been amended. This table no longer contains the fire-resistance rating for the separation of the same occupancy; these requirements are now found in Section 706.3.9.

> Table 803.5 has been amended. The requirements for exit passageways are now the same as those for vertical exit enclosures, instead of corridors (as in the 2000 IBC).

> The occupant load threshold for automatic fire sprinklers in Group A-2 has been reduced from 300 occupants to 100 occupants.

> All Group R buildings, other than Group R-5, are required to be provided with an automatic fire-sprinkler system. There are no exceptions.

> The Portable Fire Extinguisher requirements in Section 906 have been adopted.

> Chapter 10, Means of Egress, has been completely revised. Chapter 10 in the 2006 edition of the IBC looks more like the 1996 BOCA National Building Code. You should find it easier to use than the 2000 edition.

> The occupant load threshold for the installation of panic hardware in Section 1008.1.9 for Group A and Group E occupancies has been reduced from 100 to 50 occupants.

> Section 1405.12.2 establishes a minimum window sill height for Group R-2 and R-3 occupancies.

IRC:

> Section R301.2.1.1 requires construction, in regions where the basic wind speed is equal to or greater than 100 miles per hour, to be designed in accordance with one of the listed documents (for high-wind design) and not the IRC structural requirements. In the State of New Jersey, the 100 mph line is roughly east of the New Jersey Turnpike. Detached one- and two-family dwellings and attached single-family townhouses that are being constructed east of the Turnpike must also have their structure designed using one of the documents listed in R301.2.1.1. One of the listed documents is the American Forest & Paper Association's *Wood Frame Construction Manual*. This manual is similar to the IRC in format and is very user friendly.

> In the 2000 IRC, exterior walls with a fire-separation distance of three feet or less were required to be fire-resistance rated. In Section R302.1 and Table R302.1 of the 2006 IRC, this distance has been increased to five feet.

> In Section R403.1.4.1, as amended by the New Jersey adoption in *N.J.A.C.* 5:23-3.21, frost protection is not required for foundations for utility structures of up to 600 square feet of light-framed construction or 400 square feet for other than light-framed construction.

> Tables have been added to Chapter 4 to address reinforced masonry and concrete foundation walls. In the past, reinforced walls were required to be designed. These new tables provide code requirements without engineering being required.

> Tables have been added to Chapters 5, 6, and 8 to address steel framing code requirements.

> Section R613.2 establishes a minimum window sill height.

Again, this is only a list of the major changes from the 2000 IBC to the 2006 IBC. Should you have any questions regarding these or any other changes in the code, please contact me at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Equipotential What?

The topic of "equipotential bonding grid" is back! This time, it is in the form of a solution rather than a problem. Section 680.26(C) of the 2005 National Electrical Code (NEC) requires that the parts specified in Section 680.26(B), which include the deck of the pool, shall be bonded and Section 680.26(B)1 states that the usual steel tie wires shall be considered suitable for bonding the reinforcing steel together.

There have been questions as to what material is acceptable for use in the bonding grid. Section 680.26(C)(1) of the Tentative Interim Amendment (TIA) states that, where the deck reinforcing steel is not an integral part of the pool, the deck reinforcing steel shall be bonded to other parts of the bonding grid using a minimum 8 AWG solid copper conductor.

The Department of Community Affairs has determined that the deck reinforcing steel (wire mesh) is acceptable to be utilized for the bonding grid. This determination is based on the TIA language and Section 547.10(B) which requires the wire mesh to be bonded to the grid as part of the equipotential bonding grid.

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BUILDING INTERIOR – A certification from the DHSS that an existing building is safe for reuse as a child-care center is required prior to the issuance of a permit or of a Certificate of Occupancy for a proposed child-care center (Group I-4 or Group E) if the building previously housed one of the following uses:

- Factory/Industrial (Group F)
- High Hazard (Group H)
- Storage (Group S)
- Nail Salon or Dry Cleaner (Group B)
- Gasoline Station (Group M)

Again, if the building predates the UCC, then the determination should be based on what the group classification would have been had the UCC been in effect.

Similar to the requirements described above for building sites, if a certification from the DHSS that the building is safe for the proposed use is submitted prior to issuance of the permit, then nothing further is required for issuance of a Certificate of Occupancy. If additional environmental testing or remedial work is required by the DHSS, the requirements set by the DHSS must be submitted in writing with the permit application. If they are, then the permit may be issued. The Certificate of Occupancy cannot be issued until a written certification from the DHSS that all testing and/or remediation has been properly completed is submitted.

It should be noted that, when a building is proposed for reuse, the prior approval of both the DHSS (for the building) and the DEP (for the site) is required before a permit can be issued.

If remediation work is required, then both the DEP and the DHSS prior approvals will specify the nature of the work. The permit issued will cover both the remedial work (to the extent that the remedial work is work covered by the code) and the UCC work needed to construct or alter the building. Inspections to ensure that the remedial work is properly completed are the responsibility of the DEP and the DHSS, not the local enforcing agency. The local enforcing agency's obligation is to make sure they have the written DEP and the DHSS approvals of the remedial work in hand before issuing a Certificate of Occupancy.

The statute calls for the DHSS to develop rules for these interior environmental investigations and gives DHSS a year to put these rules in place. For child-care centers, the DHSS already is making these determinations because they are required to do that under the rules adopted by the Department of Children and Families. Accordingly, this prior approval is in effect now for child-care centers. For schools (Group E, Grades K through 12), we will have to await adoption of rules by the DHSS. We will notify you when those rules are in place. This directive to wait applies only to building interiors for existing buildings that previously had been one of the above uses that are being converted to schools. The requirement for a prior approval issued by the DEP for the building site for a child-care center or for a school should be enforced now. And, the requirement for a prior approval issued by the DHSS for the building interior for a proposed child-care center also should be enforced now.

Should you have any questions regarding the enforcement of this new law, please feel free to contact the Code Assistance Unit at (609) 984-7607.

Sincerely,

William M. Connolly
Director
Division of Codes and Standards

(continued from page 12)

If used as the bonding grid, the wire mesh must be connected to the grid with a listed clamp or connector. The NEC does not specify the size of the deck reinforcing steel. The deck reinforcing steel is not permitted to be used under pavers due to the listing of the material. Under pavers, a grid of 8 AWG bare, solid-copper conductors, 12 inches by 12 inches, with a 4-inch tolerance would be required.

Multiple bonding inspections will now have to be performed in order to ensure that the grid has been installed in accordance with the code.

Note: The TIA states that the equipotential bonding grid shall extend within or under paved walking surfaces. This includes pavers of conductive material such as brick and concrete.

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

Source: Suzanne Borek
Code Specialist

Fire Separation Distance Measurement in the One- and Two-Family Dwelling Subcode 

Section R302.1 of the International Residential Code (IRC) 2000 requires exterior walls with a fire-separation distance less than three feet to have at least a one-hour, fire-resistive rating. However, we receive many questions on how fire-separation distance is measured. Fire-separation distance is defined in Chapter 2 of the IRC/2000 as "the distance measured from the building face to the closest interior lot line, to the centerline of the street, alley, or public way, or to an imaginary line between two buildings on the property. The distance shall be measured at right angles from the lot line."

Projections, or overhangs, shall not extend into the fire-separation distance unless either (1) the projection is no more than 1/3 the distance to the property line from an assumed vertical plane located where protected openings are required, or (2) the projection is 12 inches or less, whichever of the two results in a lesser projection. A projection extending into the fire-separation distance shall have not less than one-hour, fire-resistive construction on the underside.

Note: Sections R302.2 and R302.3 do not allow openings or penetrations, respectively, with a fire-separation distance less than three feet.

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

Source: Rob Austin
Code Assistance Unit

NOTES



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Division of Codes and Standards
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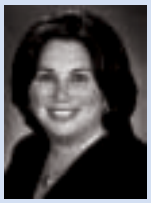


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Richard J. Codey
Acting Governor



Susan Bass Levin
Commissioner

What's Your Rating?

Should interrupting and short-circuit ratings be included on drawings for plan review? Can calculations be requested?

The National Electrical Code (NEC)/2000, Section 110.9, "Requirements for Electrical Installations, Interrupting Rating," requires that "equipment intended to interrupt current at fault levels shall have an interrupting rating sufficient for the nominal circuit voltage and the current that is available at the line terminals. Equipment intended to interrupt current at other than fault levels shall have an interrupting rating at nominal circuit voltage sufficient for the current that must be interrupted."

Section 110.10, "Requirements for Electrical Installations, Circuit Impedance and Other Characteristics," requires that "electrical components of the circuit to be protected shall be selected and coordinated to permit the circuit-protective devices to clear a fault without damage to the equipment. Faults are assumed to be either between two or more of the circuit conductors, or between any circuit conductor and the grounding conductor or the enclosing metal raceway."

N.J.A.C. 5:23-2.15(e)vii, "Construction Permits -- Application," provides that the appropriate subcode official may require adequate details of electrical work, including computations and other essential technical data.

Therefore, the answer to both questions is **YES**. Interrupting and short-circuit ratings should be provided with the permit application when necessary. These ratings not only apply to panels and breakers, but to transfer switches and fire-pump controllers, as well.

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

Source: Suzanne Borek
Code Assistance Unit

Who's Checking?

There seems to be an issue concerning who should check the height of electrical devices pertaining to the Barrier Free Subcode.

According to *N.J.A.C.* 5:23-7.14(a)2, "Barrier Free Subcode, Enforcement," operable parts that are regulated by the Electrical Subcode are the responsibility of the corresponding subcode official to meet the plan review and inspection requirements of ICC/ANSI A117.1/1998, Section 309, "Operable Parts."

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(continued from page 1)

Section 309.3, "Operable Parts, Height," requires that operable parts be placed in one or more of the reach ranges specified in Section 308, "Reach Ranges."

Therefore, the electrical devices installed and required to meet the Barrier Free Subcode should be inspected for the proper reach ranges by the electrical subcode official.

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

Source: Suzanne Borek
Code Assistance Unit

New Jersey Register Adoptions

Date: December 20, 2004
Adoption: 36 *N.J.R.* 5709(b)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.7, "Ordinary Maintenance," and *N.J.A.C.* 5:23-2.17A, "Minor Work," establish when a Uniform Construction Code (UCC) permit is required for the installation of cable television and low-voltage communication wiring based on the building type. In addition, the adopted amendments provide that the installation of cable TV or low-voltage communication wiring in Class 3 buildings is considered ordinary maintenance and would not require a UCC permit or inspection. Finally, these adopted amendments define communication wiring as that covered by Chapter 8 of the Electrical Subcode, the 2002 edition of the National Electrical Code.

Date: December 20, 2004
Adoption: 36 *N.J.R.* 5711(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.22, "Fuel Gas Subcode," *N.J.A.C.* 5:23-6.6, "Alterations," and *N.J.A.C.* 5:23-6.7, "Reconstruction," revise the Fuel Gas Subcode and Rehabilitation Subcode of the UCC to require that indoor or outdoor gas meters, regulators, and gas piping be protected by vehicle impact barriers in accordance with the International Fire Code whenever the work performed would expose these components to vehicular impact.

Date: January 3, 2005
Adoption: 37 *N.J.R.* 47(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.14, "Building Subcode," *N.J.A.C.* 5:23-6.5, "Renovations," *N.J.A.C.* 5:23-6.6, "Alterations," and *N.J.A.C.* 5:23-6.7, "Reconstruction," require the use of standardized fire service keys in newly installed elevators and in elevators undergoing work other than ordinary maintenance or minor work.

Date: January 18, 2005
Adoption: 37 *N.J.R.* 267(a)
Summary: These amendments to *N.J.A.C.* 5:23-3.15, "Plumbing Subcode," *N.J.A.C.* 5:23-3.20, "Mechanical Subcode," and *N.J.A.C.* 5:23-3.22, "Fuel Gas Subcode," adopt the 2003 editions of the National Standard Plumbing Code, the International Mechanical Code, and the International Fuel Gas Code as the Plumbing, Mechanical, and Fuel Gas Subcodes of the UCC, respectively. In addition, the adopted amendments to the Plumbing Subcode of the UCC assign enforcement responsibilities for combined domestic and fire water service lines.

Date: March 7, 2005
Adoption: 37 *N.J.R.* 771(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-6 incorporate annual code changes to the Rehabilitation Subcode of the UCC.

Source: Megan K. Sullivan
Code Development Unit

Propane Counter Documents

The Department of Community Affairs and the New Jersey Liquefied Petroleum Gas Education and Safety Board have reproduced a number of consumer safety pamphlets by the National Propane Gas Association, entitled "Using Propane Safely," to help make consumers aware of the dangers and necessary safety practices associated with propane use. Since the use of propane as a source of heat is somewhat isolated in New Jersey, the Department has not distributed the documents to all municipal building departments for distribution to the public. If there are any municipalities that are interested in using the pamphlets as counter documents, please contact Mike Baier of the Liquefied Petroleum Gas Safety Unit at (609) 633-6835.

Source: Mike Baier
LP Gas Safety Unit

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Employment Opportunities for Code Officials

The New Jersey Department of Community Affairs, Division of Codes and Standards has employment opportunities available for licensed subcode and construction officials for both in-house plan review and field inspection positions. Employment opportunities are also available for individuals with at least one Uniform Construction Code (UCC) technical license, but lacking a subcode or construction official license.

Candidates for the plan review positions will be required to review construction plans for projects such as casinos, schools, multifamily high-rise structures, correctional facilities, stadiums, and other large public assembly structures. The Division is also seeking qualified candidates to review plans for hospital and health-care facility projects.

Candidates for field positions will be required to have at least one UCC technical license and will be required to make inspections throughout the State or from one of the regional local enforcement offices.

Full-time, permanent employees of the State of New Jersey are provided a full benefits package including medical, dental, and prescription drug coverage for employees and their beneficiaries; leave time; and pension program. State vehicles may be available for field positions only. Starting salaries range from $43,869.07 to $60,773.24, depending upon level of licenses and past salary history.

Interested candidates can forward resumes to:

Esther Hilzer
Manager, Personnel Services
Division of Codes and Standards
New Jersey Department of Community Affairs
Post Office Box 802
Trenton, New Jersey 08625-0802

or send by fax:
(609) 633-6729

For additional information, please contact Esther Hilzer or Mary Ann DiMattia at (609) 292-7899.

PermitsNJ . . . Will UCCARS Permit Records be Converted?

The Department of Community Affairs has considered very carefully the practicality of converting existing Uniform Construction Code Administrative Records System (UCCARS) Permit records to *PermitsNJ* and has concluded it to be a highly impractical, if not impossible, endeavor for the local enforcing agency. Thus, the Department is *not* planning to support or require conversion of open UCCARS files to *PermitsNJ*.

Municipalities switching over to *PermitsNJ* at this time should use *PermitsNJ* to track and issue all new applications and permits, but should continue to use UCCARS to close out existing open permit records.

Closed UCCARS records may continue to be accessed through UCCARS for look-up purposes by storing municipal UCCARS instances on a local or network drive accessible to the individual(s) who typically does such look-ups.

While it would seem to have been more convenient from a look-up standpoint to have UCCARS-based permit records available from within *PermitsNJ*, the measures that would have to be taken by *you*, the user, to prepare each and every permit record for conversion would be enormous.

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PermitsNJ records vastly more data than UCCARS since it is a full processing system, not just a partial one.

Many, if not most, UCCARS records would require the local user to provide additional field information which may not be readily available, if available at all, for each permit record to be converted. Because it is a full processing system, *PermitsNJ* has far more data fields, edit checks, and controls. For example, you could not issue a Certificate of Occupancy (CO) or Certificate of Approval for a "converted" file unless you had also entered all subcode inspection information for that file. Remember, UCCARS did not store all that data, so the "conversion" of the UCCARS file would not populate the *PermitsNJ* database with the needed information; therefore, you would have to do it – by hand.

PermitsNJ was designed to prevent inadvertent mistakes, such as the issuance of a CO without all subcode sign-offs being in place. Errors such as that have caused serious problems for local enforcing agencies and licensed officials. *PermitsNJ* protects you because it just won't print the document (such as a CO) unless all the sign-offs are recorded. This is just one example of the many ways in which *PermitsNJ's* edit criteria protects you from inadvertent administrative errors.

Besides, converting UCCARS records would not have placed all permit data in the same location, anyway. Do not lose sight of all those pre-UCCARS permit records, which only reside in manual file systems; they will never be accessible through *PermitsNJ*.

So, when looking up the permit history of a property, users must look in both the UCCARS and *PermitsNJ* electronic files, which can be done from the same desktop if you store your UCCARS instance on a local or network drive accessible to the individual(s) who typically do such look-ups. And in addition, users must continue to physically search the manual system for the very oldest information.

If you have further questions concerning the conversion of UCCARS data, or if you need assistance with moving your UCCARS instance to your new personal computer's local drive or to a network drive, as always, please telephone us at (609) 292-7899. We may also be reached via Internet e-mail at: permitsnj@dca.state.nj.us.

But as for UCCARS/*PermitsNJ* conversion, be careful what you wish for, and be happy you didn't get it.

Source: Berit Osworth
Division of Codes and Standards

This article originally appeared in the Spring/Summer 2002 edition of the Construction Code Communicator. With the implementation of PermitsNJ, we are reprinting the article in this edition for your use and information.

PermitsNJ . . . What Will It Require?

Many of you have recently asked, "What kind of computer equipment and communications service must our offices purchase in order to use *PermitsNJ*?" In turn, we have asked our application development team. Here's what they said . . . .

PermitsNJ will be a web-based application accessed through a web browser on the desktop. Because all files and screens will be stored at the system level and processing will *not* be done on the desktop, a number of personal computers of various sizes and configurations will do.

The more important aspect to consider when using a web-based application is transmission speed. The speed at which you will transmit and receive information is influenced by three components: 1) your connection mode, 2) your Internet Service Provider (ISP), and 3) your modem.

With regard to your connection mode, the best choice is a Digital Subscriber Line (DSL), which may be ordered through your telephone company. Second to a DSL is a cable connection. This is *much* faster than an ordinary dial-up phone line, which of course would be your last choice.

In terms of selecting an ISP, Giga Information Group®, a leading global information technology advisory firm, suggests asking the following questions before committing to one of the many companies that offer this service:

1. What is the ISP's busy-free dial rate? (This is the ratio of subscribers to the number of the ISP's server ports; the lower the ratio of subscribers to server ports, the better.)
2. Does the ISP have tiered services and is there a business class available? (*Yes* is the answer you'll want to hear.)
3. Does the ISP prioritize traffic for customers? (Again, *Yes* is the correct answer.)
4. Does the ISP have asynchronous dial bonding inverse multiplexing? (This is a device on the ISP's end that doubles the speed of the line. Again, the correct answer is *Yes.*)

Concerning your modem, we have found that a better modem than that provided with most new PCs may be very helpful in increasing the speed of the transmission of information. A good choice on today's market is the US Robotics 56K external modem, which retails for around $86.

Thus, if you are considering or are in the process of purchasing the components necessary for participation in *PermitsNJ* this fall, please consider the foregoing, as well as the following guidelines.

PC
Current industry standard, which at present is:
-Pentium 4
-128 MB RAM
-20 GB hard drive
-MS Windows 98 or higher operating system.

Internet Browser
Microsoft's Internet Explorer 4.0 or higher. MS Internet Explorer comes packaged with MS Windows.

Update: For best results, update your browser to Internet Explorer 6. This is a free download from Microsoft's web site.

Modem
Minimum 56K. The size and quality of the modem affects the speed of the transmission. A modem of better quality than the one typically bundled with the PC would be a wise investment.

Monitor
17" is now standard, but larger (19", 21") or smaller (15") will work, too.

Telephone Line or Cable Connection
Again, a DSL is the best alternative. If DSL is not an option, however, remember that cable is about 10 to 20 times faster for transmission than a phone line with a 56K modem.

Internet Service Provider (ISP)
If a cable connection is used, the cable company becomes your ISP; otherwise, select wisely based upon the answers to those questions outlined above.

Printer(s)
Laser printers are now fairly standard and fairly common; you may even already have one, as many municipalities do. Any relatively new printer, however, should work. Whether a given model is adequate depends more upon your office's level of activity, i.e., how much printing you expect to do.

So, there you have it. Again, if you are in the process of purchasing computer equipment and are planning to use it with *PermitsNJ*, consider this advice.

On a related note, if your office is presently equipped with a late-model PC, it may also be adequate for use with *PermitsNJ*. We are presently testing application performance with various combinations of memory, speed, and operating systems. The results will enable us to identify minimum system requirements.

In the meantime, if you have further questions concerning equipment and/or communications requirements, as always, please telephone us at (609) 292-7898. We may also be reached via e-mail at bosworth@dca.state.nj.us.

Source: Berit Seiple Osworth
Division of Codes and Standards

Drawings Based on Class

N.J.A.C. 5:23-2.15(e)vi, "Construction Permits – Application," and *N.J.A.C.* 5:23-4.3A(d), "Enforcing Agency Classification," are to be used in conjunction with each other when applying the provisions of the Uniform Construction Code to plumbing, electrical, and mechanical plans.

Section 2.15(e)vi requires that all engineering plans and computations bear the seal and signature of the licensed engineer or registered architect responsible for the design. However, there are three exceptions to this rule:

1. Plumbing plans for Class III structures may be prepared by persons licensed pursuant to the Master Plumber Licensing Act, *N.J.S.A.* 45:14C-1 et seq.;
2. Electrical plans for Class III structures may be prepared by persons licensed pursuant to the Electrical Contractors Licensing Act, *N.J.S.A.* 45:5A-1 et seq.;
3. Mechanical plans for Class III structures may be prepared by mechanical contractors.

To determine which class applies, consult Section 4.3A(d). [Yes, "Classes I, II, and III" of Section 2.15(e)vi are the same as "Classes 1, 2, and 3" of Section 4.3A(d).] Please note that the exceptions to Section 2.15(e)vi only apply to Class III, which will be the focus of this article.

Class 3 buildings include the following:

* Business Group B less than 7,200 square feet, two stories, 40 feet high;

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* Mercantile Group M less than 4,800 square feet, one story, 40 feet high;
* Storage Group S-1 less than 4,200 square feet, one story, 40 feet high;
* Storage Group S-2 less than 7,200 square feet, two stories, 40 feet high;
* Residential Group R-3 as permitted in the Building Subcode, and including accessory private garages, radio and television antennae, and swimming pools;
* Residential Group R-4 as permitted in the Building Subcode, and including accessory private garages, radio and television antennae, and swimming pools; and
* Residential Group R-5 as permitted in the Building Subcode, and including accessory private garages, radio and television antennae, and swimming pools.

So, if the project under review at your local construction department is a Class III structure as mentioned above, then the plumbing, electrical, and mechanical plans may be submitted by a licensed master plumber, licensed electrical contractor, and mechanical contractor, respectively to Section 2.15(e)vi.

Source: Rob Austin
Code Assistance Unit

Employment Opportunities at Continuing Education Courses

Employment opportunities are available for retired New Jersey State licensed Uniform Construction Code (UCC) inspectors to facilitate continuing education seminars for New Jersey code enforcement officials. The seminars are sponsored by the Department of Community Affairs and Rutgers, the State University.

The position requires that the facilitator be on site from 7:30 a.m. until 4:00 p.m. to execute the following duties: set up audio/visual equipment, ensure the facility is properly arranged according to specifications, register students, introduce the seminars, be available for questions, validate CEU cards upon completion of the seminars, and break down audio/visual equipment at the end of the day. The pay rate for the position is $12 an hour for a fixed 8.5-hour work day, plus travel. Candidates should be available Tuesday through Friday during the regular semesters. The spring semester runs from the first week in March until the end of June; the fall semester runs from the end of August until mid-December. Facilitators have the opportunity to select the weeks in which they would like to work and should be able to commit at least two to three weeks per month to facilitate within their region. Also, candidates must be eligible to work in the United States and be able to lift at least 20 lbs.

PLEASE NOTE: *There will be a considerable amount of travel involved with the positions.*

Opportunities are available for the northern, central, and southern New Jersey regions. Qualified persons should send a letter of interest to Sherry Saperstein, Center for Government Services, Rutgers University, Suite 200, 33 Livingston Avenue, New Brunswick, New Jersey 08901-1979. You may call (732) 932-3640, Ext. 626 if you require additional information.

Source: Sherry Saperstein
Associate Program Specialist
Rutgers University

Garage Separations and Penetrations – International Residential Code/2000

N.J.A.C. 5:23-3.21(c)3ix, "One- and Two-Family Dwelling Subcode," amends the International Residential Code (IRC)/2000, Section R309.2, "Separation Required," to delete the original text and insert the following:

> (#1) Private garages located beneath rooms shall have walls, partitions, floors, and ceilings separating the garage from the adjacent interior spaces constructed with not less than a one-hour fire-resistance rating (see FTO-13, "Fire Separation Between Dwelling Units and Attached Private Garages").
>
> (#2) Attached private garages shall be completely separated from the adjacent interior spaces and the attic area by means of 1/2-inch gypsum board or equivalent applied to the garage side."

The goal of #1 above is to provide a one-hour fire-resistance-rated wall and ceiling assembly when there is living space above a garage. Any penetration in these assemblies must maintain the fire-resistance rating as per (1) the listed/labeled assembly or (2) FTO-13. Since a listed/labeled assembly has its own requirements for penetrations, the focus of this article will be how penetrations relate to FTO-13.

FTO-13 references old Section 714.1.6 of the Building Officials and Code Administrators National Building Code (BOCA)/1996 for vertical assemblies (garage walls), and old Section 714.2.6 of BOCA/1996 for horizontal

assemblies (garage ceilings). As we all know, the current building code is the International Building Code (IBC)/2000, and its corresponding sections for membrane penetrations in horizontal assemblies and vertical assemblies are Sections 711.3.2 and 711.4.2, respectively. Both sections state, "Where walls and partitions (Section 711.3.2) or floor/ceiling assemblies (Section 711.4.2) are required to have a minimum one-hour fire-resistance rating, recessed fixtures shall be installed such that the required fire resistance will not be reduced." However, both sections have three distinct exceptions that allow penetrations without jeopardizing the fire-resistance rating. These exceptions are as follows:

Garage Wall Exception #1:
Steel electrical boxes that do not exceed 16 square inches in area, provided that the total area of such openings does not exceed 100 square inches for any 100 square feet of wall area. Outlet boxes on opposite sides of the wall shall be separated as follows:

1.1. By a horizontal distance of not less than 24 inches (610 mm);
1.2. By a horizontal distance of not less than the depth of the wall cavity where the wall cavity is filled with cellulose loose-fill or mineral fiber insulation;
1.3. By solid fire-blocking in accordance with Section 716.2.1; or
1.4. By other listed materials and methods.

Garage Wall Exception #2:
Membrane penetrations for listed electrical outlet boxes of any material are permitted, provided such boxes have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing.

Garage Wall Exception #3:
The annular space created by the penetration of a fire sprinkler, provided it is covered by a metal escutcheon plate.

Garage Ceiling Exception #1:
Membrane penetrations by steel, ferrous, or copper conduits; electrical outlet boxes; pipes; tubes; vents; or concrete or masonry penetrating items where the annular space is protected in accordance with Section 711.4.1, or is protected to prevent the free passage of flame and the products of combustion. Such penetrations shall not exceed an aggregate area of 100 square inches (64 500 mm2) in any 100 square feet (9.3 m2) of ceiling area in assemblies tested without penetrations.

Garage Ceiling Exception #2:
Membrane penetrations by listed electrical outlet boxes of any material are permitted, provided such boxes have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing.

Garage Ceiling Exception #3:
The annular space created by the penetration of a fire sprinkler, provided it is covered by a metal escutcheon plate.

Examples of where these exceptions would apply include wall outlets (receptacles, switches, and luminaires). The exceptions apply since the penetration is only on one side of the assembly (a membrane penetration, not through penetration).

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

Source: Rob Austin
Code Assistance Unit

Gypsum Board Screws

Not all screws are created equal. Though a deck screw tends to look like a gypsum board screw, it is not listed for fastening gypsum boards to a structure; only gypsum board screws can be used for this purpose. The gypsum board screw has a special design that permits the head of the screw to recess below the board's paper surface without tearing the paper, and the screws are tested for effectiveness.

Actually, gypsum board screws are not all created equal, either; they come in different types for different uses. The classification system is found in American Society for Testing and Materials (ASTM) C1002-98, "Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases," which is referenced in the International Building Code (IBC)/2000, Table 2506.2, "Gypsum Board and Plaster," and the International Residential Code (IRC)/2000, Table R702.3.5, "Minimum Thickness and Application of Gypsum Board."

There are three classifications: Type G, Type S, and Type W. Type G is for fastening gypsum panels to other gypsum products, Type S is for fastening gypsum panels to light-gauge steel members, and Type W is for fastening gypsum panels to wood members.

Further, when the steel structural member exceeds the classification of light gauge (steel thickness 0.033 inch or greater), the Type S screw specified in ASTM C1002-98 is not appropriate. The code user is now referred to ASTM C954-98, which is also referenced in Tables 2506.2 and R702.3.5. These screws are meant to be used when the

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thickness of the steel making up the structural member is between 0.033 inch and 0.112 inch.

Most of the information in these two standards applies to the manufacturer of the screws; however, there is information the code user needs as well, such as the type of screw to be used in fastening the gypsum panels to the structural members and the required length of the screw to fasten the gypsum panels. The only length requirement given in ASTM C1002-98 is for the Type W screw; this requires the screw to penetrate the wood member to a depth of 5/8 of an inch. Thus, the minimum length of the screw is the thickness of the gypsum board being fastened plus 5/8 of an inch. IRC/2000, Table R702.3.5 goes further when indicating where Type S screws are used. They must penetrate the metal framing member by 3/8 of an inch.

Finally, the code user needs to know how many screws are required to fasten a given size panel. This information is found in the Table R702.3.5 for Group R-5 buildings; a fastening schedule is not included in the IBC. For buildings that are constructed under the IBC, the fastening schedule should be found in the construction documents or in the manufacturer's recommended installation instructions.

Source: Jeffrey Applegate
Code Assistance Unit

Attention: Code Instructors Wanted

At this time, we are seeking individuals who are interested in becoming instructors for courses for people seeking Uniform Construction Code (UCC) licenses. We are looking for instructors for all UCC subcode areas and all levels of licensure, RCS through HHS, throughout the State. However, the greatest need for instructors is in the northwest and southern portions of the State, and we are in need of plumbing and fire protection instructors. In addition, we are attempting to create a pool of instructors that would be willing to be "on call" for situations where the colleges are unable to locate instructors on their own or when an instructor is needed to fill in for an emergency situation. Please be aware that the compensation for instructors is negotiated between the individual instructor and the college for which the course is offered. Course hours run between 45 and 120 hours per course, with classes generally meeting one or two nights per week. Scheduling is arranged between the colleges and the individual instructors.

The requirements for becoming an instructor are: holding a subcode official license in the subcode area you would like to teach, and completion of an approved train-the-trainer educational program. Train-the-trainer programs are offered at various institutions of higher learning throughout

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the State. Please contact our office to obtain more information on approved train-the-trainer programs.

If you have already been authorized by the Division of Codes and Standards as an instructor, please be aware that your authorization remains valid at this time, provided you meet the requirement of holding a subcode official license in the area you would like to instruct. While there are many approved instructors, there are few active in the program. We would like to strongly encourage those already approved to become more active, and contribute their talents and expertise to the code enforcement students.

If working as an instructor to improve the educational aspect of code enforcement in New Jersey sounds appealing to you and you would like more information on this exciting opportunity, please contact the Licensing Unit at (609) 984-7834.

Source: Patrick Ryan
Licensing Unit

Licensing Update

There are two notable changes that have recently taken place within the Licensing Unit. Both concern the addition of the multiple dwelling program into the Unit, but concern construction code officials as well.

First, the overwhelming majority of multiple dwelling licensees also hold construction code licenses. To accommodate this convergence of programs and to better serve both overall groups of licensees, the Unit has combined the multiple dwelling licenses into the existing construction code database.

The result of this arrangement is the abandonment of the "MD" license nomenclature replaced by the traditional "00" numbers used in the construction code program. For those holding both construction code and multiple dwelling code licenses, this means that all of your multiple dwelling information will be contained within your (original) construction code records and will be similar to holding licenses within more than one construction code discipline (building and fire protection, for example). For those holding only the multiple dwelling licenses, this change affords you the benefit of uniformity within our overall program and the opportunity to more seamlessly move into the construction code program, should you decide to do so at some future point, and to keep the same license number. Recording continuing education information and licenses held was also vastly improved by this change.

Second, continuing education for the multiple dwelling program will be provided through Middlesex County College beginning in the very near future. This change will specialize training in multiple dwelling code enforcement, and will better serve the licensees and the public at large. Please be advised and assured that any and all continuing education courses previously completed through Rutgers University will continue to be credited towards the first renewal of your license. In sum, locations, times, and hours will remain similar to the Rutgers' offerings.

If you have any questions regarding these changes and their effect on your particular situation, please contact my office at (609) 984-7834 or by e-mail at codeslicensing@dca.state.nj.us.

Source: John A. Delesandro
Supervisor of Licensing

Location of Equipment Gas Shut-Off Valves



With the recent adoption of the International Fuel Gas Code (IFGC)/2003 (adopted January 18, 2005), a welcome change is the deletion of the word "ready" from Section 409.5, "Equipment Shut-Off Valve," pertaining to access to the shut-off valve.

In the 2000 edition of the IFGC, it was required that the gas shut-off valve be located in the same room as the appliance and not further than six feet away. Also, the shut-off valve had to be provided with "ready" access.

IFGC/2003, Section 409.5 requires that such shut-off valve be provided with access.

The difference between ready access and access is that "ready access" must be directly reached without requiring the removal or movement of any panel, door, or similar obstruction; whereas, "access" can be gained by ready access, or by removing or moving a panel, door, or similar obstruction.

With this change, a fireplace insert with the gas shut-off valve located below the firebox and access through a pull-down door would comply with the code. This would also apply to all appliances that require a gas shut-off valve to be accessible.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

PermitsNJ . . . Will Its Use be Mandatory?

Many of you have asked, "Will using *PermitsNJ* be mandatory and, if so, when will that be?" The short answer is "no," the Department of Community Affairs is not planning to mandate the use of its new construction code enforcement management software. The longer, more detailed answer, however, follows . . . .

There are four important changes with regard to issuing, managing, and reporting construction permit activity that *will* be required. We are publishing this information now as a "heads-up" and will supply the timeframes on it in the Summer/Fall 2005 issue of the *Construction Code Communicator*. The four changes are as follows:

1. Discontinuance of the Use of the Uniform Construction Code Administrative Records System (UCCARS)
   UCCARS users will be required to switch to an alternative method of managing and reporting construction permit activity. The Department will cease to provide for the technical support of UCCARS and will also cease to administer the UCCARS bulletin board.

2. Electronic Transmission of Permit and Certificate Activity
   At present, the Uniform Construction Code permits municipalities issuing less than 200 permits per year to provide the Department with monthly activity reports via mail and only requires the transmitting of data electronically where annual permit activity meets or exceeds 200 in number. In the future, however, this will change and *all* municipalities will be required to use *PermitsNJ* or an equivalent software product transmitting permit and certificate data electronically, regardless of activity level.

3. Increased Data Upload Requirements
   The data file transmitted to the Department from alternative construction code enforcement software products will increase both in scope and frequency of transmission. All municipalities using alternative products will be required to conform to the new upload standards.

4. Increased Construction Permit Services Access for New Jersey Residents
   The Department is presently working with its *PermitsNJ* developer to deliver construction permit services to New Jersey residents in a way that goes beyond traditional delivery methods and normal hours of operation; in other words, the New Jersey construction permit applicant will be able to apply for his/her construction permit from the comfort of his/her own home or office, and at any hour, by way of the Internet. Doing so must be possible for any New Jersey resident regardless of which construction code enforcement software product his/her municipality has chosen to use. Thus, at the time that the Department makes such service available through *PermitsNJ*, those municipalities using a software product other than *PermitsNJ* must also offer a comparable service.

In the meantime, if you have further questions concerning migrating to *PermitsNJ*, as always, please telephone us at (609) 292-7899. We may also be reached via Internet e-mail at: permitsnj@dca.state.nj.us.

Source: Berit Osworth
Division of Codes and Standards

New Code Adoptions



ATTENTION – ATTENTION – ATTENTION

This is to advise code officials, architects, engineers, etc. that the adoption of the 2003 editions of the National Standard Plumbing Code (NSPC), the International Mechanical Code (IMC), and the International Fuel Gas Code (IFGC) appeared in the January 18, 2005 *New Jersey Register*.

Therefore, as of January 18, 2005, compliance with the 2003 editions of the NSPC, IMC, and IFGC is accepted.

Also, between January 18 and July 18, 2005, compliance with the 2000 editions of the NSPC, IMC, and IFGC is still permitted. For new projects that are submitted for review after July 18, 2005, compliance with the 2003 editions of the NSPC, IMC, and IFGC will be required.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Certification Presentation Highlights Restructuring of Camden Building Department

On Thursday, February 17th, at a ceremony in the Camden City Council chambers, certificates for successful completion of the Technical Assistant course were presented to six members of the Building Bureau support staff — Ingrid Hartman, Sadie Smith, Ronica Solla, Melissa Snype, Gwendolyn Nock, and Lindia Lewis — and to Assistant Director Warren Sykes of the Camden Department of Code Enforcement, who is the head of the Building Bureau.

Division of Codes and Standards Director William M. Connolly praised the officials and staff of the Building Bureau for all of the work that has gone into making the Building Bureau a professional organization that the people of the City and of the State can be proud of. With its full team of officials, inspectors, and clerical staff now qualified as technical assistants, Camden has a local enforcing agency that is prepared to do its part in making it a better city for all of its residents. Camden is already experiencing a rapid rise in new construction and rehabilitation work, and this workload will increase significantly once redevelopment plans that are now under review reach the stage of actual construction. With its well-trained and highly motivated staff, the Camden Building Bureau stands prepared to meet this challenge.

Others praising the accomplishments of the clerical staff who are now new technical assistants included Mayor Gwendolyn Faison (who commended the awardees for their efforts in upgrading their skills and declared her strong support for the code enforcement program), Director Roberto Feliz of the Department of Code Enforcement, Assistant Director Sykes, and Construction Official Robert Scouler.

Source: Michael Ticktin
Chief, Legislative Analysis



Pictured from left to right are: Mayor of Camden, Gwendolyn Faison; City of Camden Construction Official, Robert Scouler; Assistant Director of Code Enforcement, L. Warren Sykes; DCA Director of the Division of Codes and Standards, William M. Connolly.

Pictured below from left to right are: Ingrid Hartman; Sadie Smith; Ronica Sollas; Melissa Snype; Gwendolyn Nock; Mayor of Camden, Gwendolyn Faison; Director of Code Enforcement, Roberto Feliz; Lindia Lewis.



Public Alarms -- Where They are Required

Apparently, there is some confusion in the field as to where visible alarms are required. The International Building Code (IBC)/2000, Section 907.9, "Alarm Notification Appliances," details code requirements for such devices.

Visible alarms are required in public and common areas, and for Groups I-1, R-1, and R-2 (Sections 907.9.1.1 to 907.9.1.3 of IBC/2000). The questions we frequently respond to are, "What are public and common areas?" "Is an office a public and common area?" "Is a corridor a public and common area?"

Common areas are those areas accessible to the general public, including corridors and lobbies. Offices, stockrooms, and equipment rooms are not public areas, and therefore do not require visible alarms. Devices are required in the lobbies, corridors, etc., but not in the office space or stockroom.

Hopefully, this clarifies the issue. Should you have any questions, you may contact me at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

New Radon Hazard Areas in the State

There has been a recent amendment to the regulations of the New Jersey Department of Environmental Protection (DEP) regarding radon (*N.J.A.C.* 7:28-27). After a reevaluation of radon levels throughout the State, DEP has amended its regulations to reflect its findings.

The tier ratings for radon have changed for some municipalities. The change in regulations adds eight new municipalities to Tier One. These municipalities are Washington Township (Burlington County), Greenwich Township (Cumberland County), Swedesboro Borough (Gloucester County), Woolwich Township (Gloucester County), Mine Hill Township (Morris County), Riverdale Borough (Morris County), Pilesgrove Township (Salem County), and Hardyston Township (Sussex County). Note: All previous Tier One municipalities are still Tier One.

The Radon Hazard Subcode (*N.J.A.C.* 5:23-10), Appendix 10-A, "New Jersey Municipalities in Tier One," is being amended to reflect the DEP changes. In the eight new Tier One municipalities, the requirements set forth for radon mitigation in the Radon Hazard Subcode must be met in newly constructed educational and residential buildings. Projects for which a permit application has not yet been submitted are required to comply with the regulations of *N.J.A.C.* 5:23-10. Projects for which applications already have been submitted and those with open permits may be allowed to proceed without being required to comply with the provisions of *N.J.A.C.* 5:23-10. However, code officials should advise permit applicants that have open permits to include a passive radon mitigation system if it is still early enough in construction to do so. This could save the applicant money in the long run.

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

Source: Rob Austin
Code Assistance Unit

Code Requirements for Office Partitions

Over the past several years, there have been a multitude of different interpretations regarding the building code requirements applicable to office partitions. The provisions in the International Building Code (IBC)/2000 should eliminate any interpretive problems that we may have had in the past.

As per IBC/2000, Section 603, entitled "Combustible Materials in Type I and II Construction," there is a list of items that are permitted in buildings with these types of construction. Number 8 of this section states "partitions that divide portions of stores, offices, or similar places occupied by one tenant only and which do not establish a corridor serving an occupant load of 30 or more may be constructed of fire-retardant-treated wood, one-hour fire-resistance-rated construction, or wood panels or similar light construction up to six feet in height."

There are several limitations in this text that might be overlooked. The first limitation is this exception applies only to spaces occupied by one tenant; therefore, these types of walls may not be used to separate tenancies. Additionally, the exception applies only to layouts that do *not* establish a corridor that serves an occupant load of 30 or more. The last limitation is that these partitions may not be greater than six feet in height. Any partition that exceeds the limitations of Section 603 is required to be constructed of materials consistent with the construction type of the building.

Once the limitations of the exception are established, we must then look at the material that is used to construct the partition. The code permits the use of wood panels, fire-retardant-treated wood panels, or one-hour rated construction; simply put, any approved construction material. *Because the code regulates these types of partitions, interior finish and trim requirements set forth in IBC/2000, Chapter 8, "Interior Finishes," apply.*

For these types of partitions in buildings constructed of Type III, IV, and V construction, any approved material, either combustible or noncombustible, may be used. Interior finish and trim requirements of Chapter 8 are also applicable.

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

Source: John N. Terry
Code Assistance Unit

Plumbing Fixture Count

Since the International Building Code (IBC)/2000 was adopted on May 5, 2003, the Department of Community Affairs has received many calls pertaining to the differences in use group classifications between those cited in the IBC/2000 and the National Standard Plumbing Code (NSPC)/2000, which was adopted on September 17, 2001, and the NSPC/2003, which was adopted on January 18, 2005.

NSPC/2000 and NSPC/2003, Table 7.21.1 cite the same use group classifications as the Building Officials and Code Administrators National Building Code (BOCA)/

1996. However, the IBC/2000 has changed some of the use group classifications from those provided in BOCA/1996.

To determine the proper plumbing fixture count, and to avoid any misinterpretation between the building and plumbing codes, it is recommended that the descriptions of the building use as set forth in both the building and plumbing codes be used, and NOT simply the use group classification.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Breaker, Breaker – Problem with Solar PV System Installations

Warning! The installation of solar photovoltaic systems requires that a back-fed breaker be installed.

The National Electrical Code (NEC)/2002, Section 690.64(b)(5), "Solar Photovoltaic Systems, Point of Connection," requires that equipment such as circuit breakers, if back-fed, shall be identified for such operation. Not only does the equipment need to be identified, it also must meet the requirements of NEC/2002, Section 408.16(F), "Switchboards and Panelboards, Overcurrent Protection, Back-Fed Devices."

Remember, Chapters 1 through 4 of NEC/2002 are mandatory unless modified by Chapters 6 through 8.

With that said, yes, the breaker would have to meet the requirements of Section 408.16(F), "Overcurrent Protection, Back-Fed Devices." "Plug-in type overcurrent protection devices that are back-fed and used to terminate field-installed, ungrounded supply conductors shall be secured in place by an additional fastener that requires something other than a pull to release the device from the mounting means on the panel."

So, when you are inspecting these system installations, don't forget to check the breaker for the additional fastening means and be sure that it is identified as being back-fed.

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

Source: Suzanne Borek
Code Assistance Unit

Replacement Electrical Panels

Newly installed versus replacement. Never installed versus upgrade. What am I getting at, you ask? Well, I'm referring to an electrical panel installed in an existing home. But, what rules apply from the National Electrical Code (NEC)/2002?

The requirements in *N.J.A.C.* 5:23-6, New Jersey's Rehabilitation Subcode, are in two specific sections: *N.J.A.C.* 5:23-6.8, "Materials and Methods," and *N.J.A.C.* 5:23-6.9, "New Building Elements."

For an upgrade/replacement, the panel is allowed to remain in its existing location and may be upgraded, for example, from 100 amps to 200 amps. At *N.J.A.C.* 5:23-6.8(d), the Materials and Methods requirements reference specific sections of NEC/2002 that are to be followed when a building owner upgrades/replaces the electrical panel. *N.J.A.C.* 5:23-6.8(d) also specifies that Sections 110.26, "Spaces About Electrical Equipment," 110.32, "Work Space About Equipment," 110.33, "Entrance and Access to Work Space," 404.8, "Accessibility and Grouping," and 408.8, "Clearances," of the NEC/2002 are not required to be followed. Further, *N.J.A.C.* 5:23-6.8(d)10 states, "Existing working clearances, clear space, access and entrance dimensions to working spaces, illumination, headroom clearances, and location of overcurrent protection devices shall be allowed to remain without modification."

When a brand-new electrical panel is being installed in a location other than the original panel, the "New Building Elements" Section at *N.J.A.C.* 5:23-6.9(a)19 states, "Newly installed (not replacing an existing device) electrical service equipment, switchboards, panelboards, motor control centers, and other electrical equipment containing overcurrent, switching, or control devices likely to require examination, adjustment, servicing, or maintenance while energized shall conform with the requirements specified in *N.J.A.C.* 5:23-6.8, Materials and Methods, and in addition shall conform with Sections 110.26 (Space About Electrical Equipment — 600 Volts, Nominal or Less), 110.32 (Work Space About Equipment — Over 600 Volts, Nominal), 110.33 (Entrance and Access to Work Space), 404.8 (Accessibility and Grouping — Switches), and 408.8 (Clearances — Switchboards and Panelboards), as applicable, of the Electrical Subcode."

As you can see, all of the NEC/2002 sections deleted by *N.J.A.C.* 5:23-6.8(d) apply to the brand-new installation of an electrical panel. If you have any questions on this matter, you may reach me at (609) 984-7609.

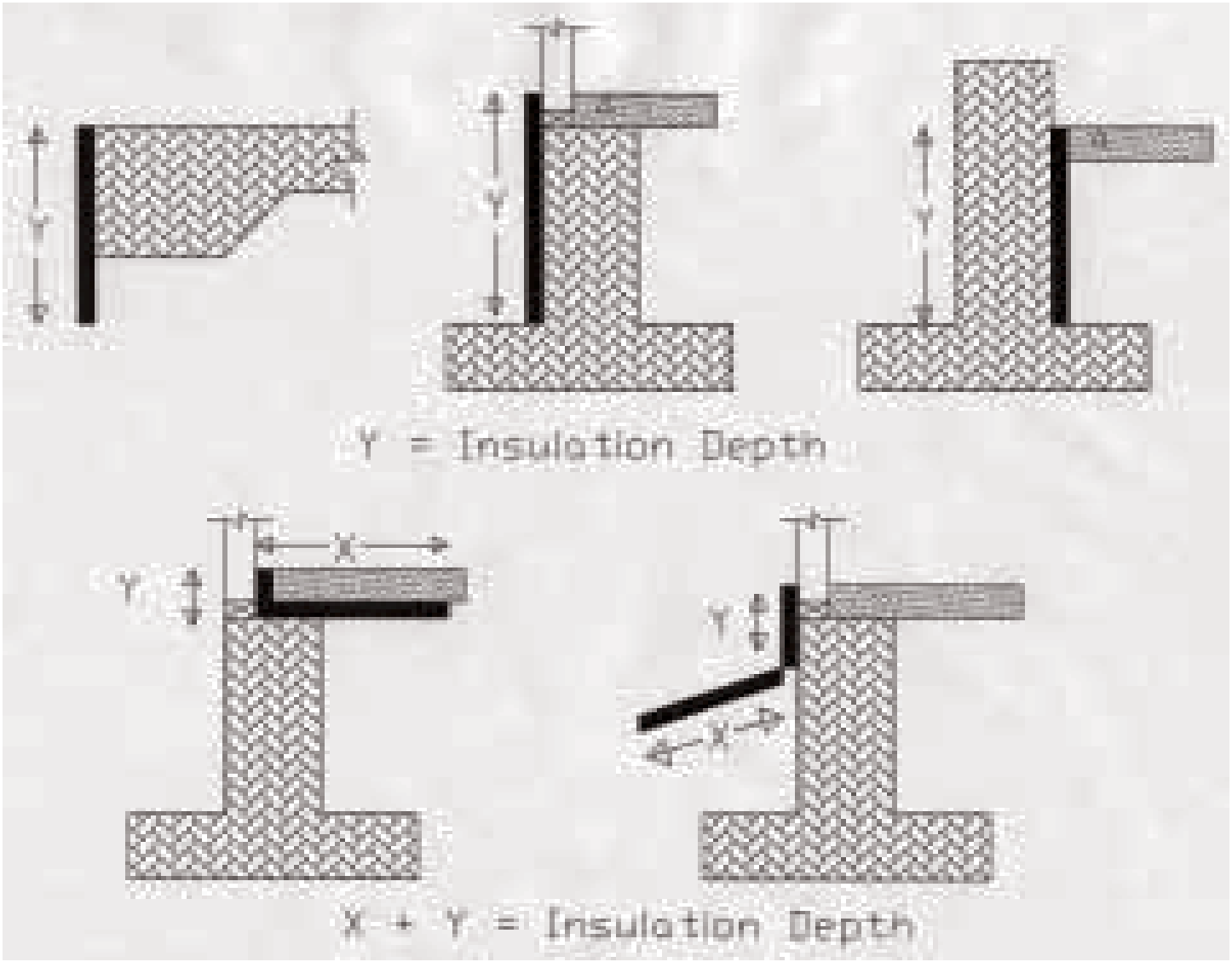
Source: Rob Austin
Code Assistance Unit

Slab-on-Grade Floors – Perimeter Insulation

When a design utilizes slab-perimeter insulation based on the Council of American Building Officials Model Energy Code (CABO MEC)/1995, Section 502.2.4 or Section 602.4.4, both entitled "Slab-on-Grade Floors," the insulation may be placed on the outside OR on the inside of the foundation wall. Since the entire State of New Jersey is below 6,000 annual Fahrenheit heating degree days, all slab-perimeter insulation is required either to (1) extend downward from the elevation of the top of the slab for a minimum distance of 24 inches, OR (2) extend downward to at least the bottom of the slab and then horizontally to the interior or exterior for a minimum total distance of 24 inches. Also, the horizontal insulation extending outside of the foundation wall must be covered with a minimum of 10 inches in thickness of pavement and/or soil. Lastly, the top edge of the insulation installed between the exterior wall and the edge of the interior slab shall be permitted to be cut at a 45-degree angle away from the exterior wall. NOTE: All insulation shall be of an approved type.

Since the CABO MEC/1995 does not provide similar guidance in the Appendix as it does for crawl-space wall insulation, the attached drawing should be helpful in checking for the installation of slab-perimeter insulation.

Source: Rob Austin
Code Assistance Unit



UL Classified Breakers

What are UL Classified breakers, you ask? They are molded-case circuit breakers that have been classified for use in specified panelboards in accordance with the details described on the circuit breaker.

The National Electrical Code/2002, Section 110.3(B), "Requirements for Electrical Installations, Installation and Use," requires that listed or labeled equipment be installed and used in accordance with any instructions included in the listing and labeling.

UL, Underwriters Laboratories, Inc., has Classified molded-case circuit breakers for use in place of other listed circuit breakers in specific listed panelboards.

A circuit breaker that is UL Classified only is marked on the side with the statement: "Classified for use only in specified panelboards where the available short-circuit current is 10 kA, 120/240 volts ac or less. Do not use in equipment connected to circuits having an available system short-circuit current in excess of 10 kA, 120/240 volts ac. For catalog numbers (or equivalent) of specified panelboards, refer to Publication No. ____ provided with this circuit breaker. If additional information is necessary, contact [Classified circuit-breaker manufacturer's name]."

A circuit breaker that is both UL Classified and UL Listed is marked on the side with the statement: "This circuit breaker is Listed for use in circuit breaker enclosures and panelboards intended and marked for its use. This circuit breaker is Classified for use, where the available short-circuit current is 10 ka, 120/240 volts ac or less, in the compatible panelboards shown in Publication No. ____ provided with this circuit breaker. When used as a Classified circuit breaker, do not use in equipment connected to circuits having an available system short-circuit current in excess of 10 kA, 120/240 volts ac. If additional information is necessary, contact [Classified circuit-breaker manufacturer's name]."

The Classification Mark of UL on the product is the only method provided by UL to identify products manufactured under its Classification and Follow-Up Service. It appears on the side of the circuit breaker and consists of the words "Underwriters Laboratories, Inc. Classified Circuit Breaker" together with a control number. It may be abbreviated "Underwriters Lab. Inc." or "Und. Lab. Inc."

There will be a circular mark on the front, visible surface of the circuit breaker.

All of this means that these breakers are acceptable and in accordance with Section 110.3(B). Under the specified conditions, the installation is acceptable and any terms on the panel with regards to the warranty are not the code official's responsibility.

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

Source: Suzanne Borek
Code Assistance Unit

Update on New COAH Rules

In the Summer/Fall 2004 issue of the *Construction Code Communicator*, there was an article about new rules for the Council on Affordable Housing (COAH). COAH is the New Jersey housing agency responsible for assigning affordable housing obligations for every municipality in the State. Sometimes this obligation is called a "fair-share" number. Fair-share is the number of affordable housing units a municipality must allow for in its master plan and zoning regulations. This number is based on present and future regional needs.

COAH determines fair-share allocations. The New Jersey State Supreme Court ruled that all localities have a constitutional obligation to provide a realistic opportunity to meet present and future affordable housing needs. "Affordable" is defined as a percentage of median family income in the county where the municipality is located. COAH rules and the Supreme Court decisions require that a specified number of houses and apartments be affordable to low- and moderate-income families. Low-income generally means 50 percent of median family income or less, while moderate income refers to earnings between 50 and 80 percent of median family income.

As a construction official or technical assistant, you may receive calls from housing advocates, planners, or developers asking about the number of housing units that were issued a Certificate of Occupancy (CO), or the square footage of nonresidential development reported on the COs issued by your office. You also may be asked about any residential and nonresidential demolitions.

The reason for these inquiries is the new COAH rules, which took effect this year. These rules introduce a "growth-share" methodology to determine fair-share housing obligations. Put simply, the number of affordable housing units a town must allow in its planning and zoning regulations is tied to how much growth the town has, and growth is measured by the COs issued by your office.

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This is an important, new use of the construction statistics you provide each month. You may have more people asking for information. The Department of Community Affairs will publish summary statistics on the COs and building permits you issue online, so people can easily look up and download construction statistics. Look for this information soon on the Division of Codes and Standards' web site: http://www.state.nj.us/dca/codes/.

Be prepared for more inquiries from planning officials, housing advocates, and other interested citizens. Your work will be reviewed closely, because what you report directly determines the amount of affordable housing your town must allow for in its planning and zoning rules. For example, if your town builds a new WalMart, it will have an affordable housing obligation. It is very important for your monthly reports to be accurate and complete.

For more information on the COAH rules, check out its web site at http://www.state.nj.us/dca/coah.

Source: John Lago
Division of Codes and Standards

To Enforce or Not to Enforce?

The utility companies have certain installation requirements with regard to electrical services. Is it the local electrical inspector's responsibility to enforce a utility company's requirements as well as those of the Electrical Subcode, *N.J.A.C.* 5:23-3.16?

Per *N.J.A.C.* 5:23-3.16(a)1, the model code of the National Fire Protection Association, known as "The National Electrical Code 2002" is the Electrical Subcode for New Jersey; it does not incorporate utility company requirements.

Therefore, the answer to the question is **NO**; the utility company requirements are its own responsibility. The local electrical inspector enforces only the requirements of the Electrical Subcode of the Uniform Construction Code.

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

Source: Suzanne Borek
Code Assistance Unit

Combination Domestic/Fire Protection Service -- Who Reviews, Inspects, and Approves?

This article is a heads-up for fire and plumbing officials. For some time, confusion has existed as to who inspects, witnesses tests, and approves the installation of a single water service supplying both domestic and fire protection. In some municipalities, it has been the plumbing inspector and in others it has been the fire inspector.

This issue has been clarified. The January 18, 2005 Uniform Construction Code update modifies the National Standard Plumbing Code, Chapters 2, 3, and 15, to reflect National Fire Protection Association requirements for pipe depth, thrust blocks, flushing, and testing. Limited-area fire sprinklers are exempted. The specific requirements are referenced in the Plumbing Subcode at *N.J.A.C.* 5:23-3.15(b).

Plan review is done by both officials. The fire subcode official reviews sprinkler design calculations for compliance and the plumbing subcode official reviews the design for compliance with the modified section referenced above.

It is the plumbing inspector's responsibility to inspect, test, and approve the combination water service. The fire inspector continues to have inspection and testing responsibility for a dedicated fire service. Should you have any questions, I may be reached at (609) 984-7672.

Source: Gerald Grayce
Office of Regulatory Affairs

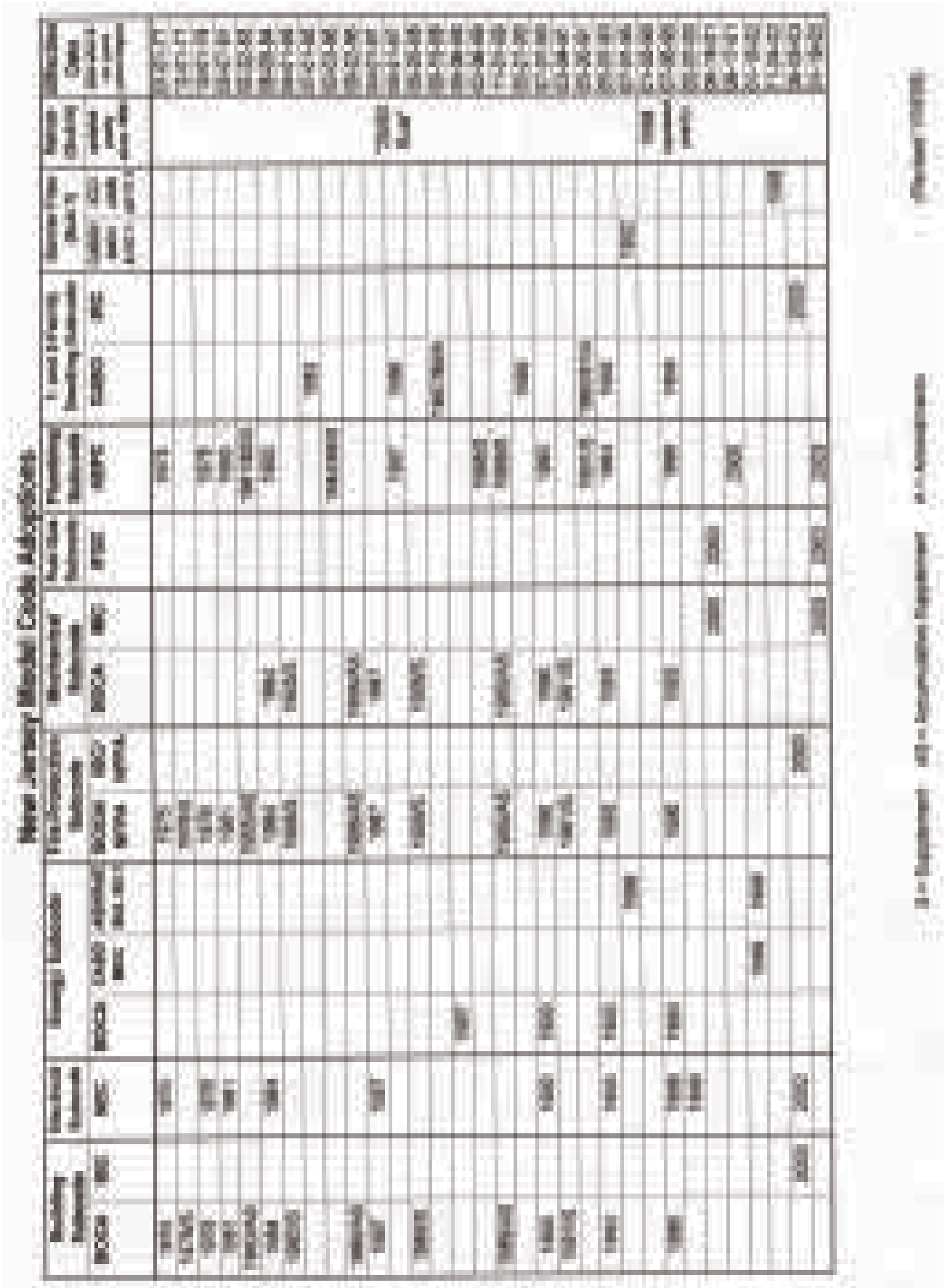
Yesterday's and Today's Model Codes

The chart on page 19 displays all of the codes the State of New Jersey has adopted since the adoption of the Uniform Construction Code on January 1, 1977. Various editions of the model codes date back to 1975.

The chart now includes the latest additions: the 2003 National Standard Plumbing Code, the 2003 International Mechanical Code, and the 2003 International Fuel Gas Code (the Plumbing Subcode, Mechanical Subcode, and Fuel Gas Subcode, respectively).

All three 2003 editions were adopted on January 18, 2005. Keep in mind that, from this date, the six-month grace period (see *N.J.A.C.* 5:23-1.6) for the 2000 National Standard Plumbing Code, the 2000 International Mechanical Code, and the 2000 International Fuel Gas Code has begun, and will end on July 18, 2005.

Source: Rob Austin
Code Assistance Unit



Greetings from Acting Governor Richard J. Codey and Commissioner Susan Bass Levin

One fundamental principle of the New Jersey State Uniform Construction Code (UCC) is that New Jersey citizens are provided with safe and affordable housing and buildings. This is achieved through local code enforcement agencies working in partnership with design professionals, builders and developers.

Three times per year, the Department of Community Affairs' (DCA) Division of Codes and Standards publishes the *Construction Code Communicator*. This newsletter provides subscribers - both public and private - with information on emerging construction issues. It also provides code officials with guidance on UCC administration and enforcement.

Through the *Construction Code Communicator* and all of our programs and services, we remain committed to providing safe and affordable housing and buildings to New Jersey citizens.

With all good wishes,

Richard J. Codey
Acting Governor

Susan Bass Levin
Commissioner



Susan Bass Levin
Commissioner
NJ Department
of Community Affairs



Richard J. Codey
Acting Governor
State of New Jersey

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Construction Code Communicator

State of New Jersey
Richard J. Codey, Acting Governor

Department of Community Affairs
Charles A. Richman, Acting Commissioner

Volume 17 Number 2

Summer/Fall 2005

24th Annual Building Safety Conference of New Jersey - 2005

This is the 24th year we have been celebrating building safety in New Jersey. The Building Safety Conference of New Jersey was held May 4-6, 2005 in Atlantic City at Bally's Atlantic City. As building safety professionals, we have an ongoing obligation to help make the world a safer place. We are the key players in our efficient and effective enforcement programs throughout the State. This conference gave us an opportunity to highlight the importance of safe buildings, and to recognize the outstanding professionals responsible for making and keeping them that way.

As always, our focus is on education. The Crackerbarrel Roundtables allow our attendees to discuss topics of general interest in the area of building codes and code enforcement. This year, there were 32 roundtables. Additionally, there were 21 seminars that provided up-to-date information on various subjects. An evening reception was also enjoyed by all.

Recognition was given to the following at this year's Awards Luncheon:

John A. D'Ascensio -- Fire Inspector of the Year
Presented by: New Jersey Fire Prevention & Protection Association

Seymour Goldstern -- Plumbing Inspector of the Year
Presented by: New Jersey Plumbing Inspectors Association

Edward A. Vanderberg -- Building Inspector of the Year
Presented by: Building Officials Association of New Jersey

Alan Wilkins -- Electrical Inspector of the Year
Presented by: Municipal Electrical Inspectors Association

Patricia Famularo -- Technical Assistant of the Year
Presented by: New Jersey Association of Technical Assistants

Many favorable comments were received in the evaluations: "Great seminars," "informative and insightful," "good opportunity to meet and greet new and old friends," "speeches were short," "excellent meal," "a great year!"

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Now we look forward to next year. William Williams, Jr., Construction Official for the Village of Tuckahoe in Cape May County, was the lucky person selected to receive a complimentary registration for next year's event. Mark your calendar now for the grand celebration of our 25th year for Building Safety, May 3-5, 2006, to be held at Bally's Atlantic City.

Source: Susan H. McLaughlin, Supervisor
Education Unit



From left to right: James McGlynn, Municipal Electrical Inspectors Association; Alan Wilkins, Electrical Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

Air-Conditioning Disconnects

Does Section 110.26 of the 2002 National Electrical Code (NEC) apply when an air-conditioning unit is being replaced?

N.J.A.C. 5:23-6.8(d)2 in the Rehabilitation Subcode excludes Section 110.26 of the 2002 NEC. This applies to working clearance space around electrical equipment. However, Section 440.14 of the 2002 NEC is not excluded under *N.J.A.C.* 5:23-6.8(d)5. This section states that the disconnecting means shall be located within sight of, and readily accessible from, the air-conditioning or refrigerating equipment. The disconnecting means is permitted to be installed on or within the air-conditioning or refrigerating equipment.

Therefore, the answer is ***NO***, Section 110.26 of the 2002 NEC is not applicable to units that are being replaced. Any existing disconnect shall be permitted to remain, provided that the disconnect is in sight of the unit and readily accessible; i.e., nothing has to be moved to access it.

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

Source: Suzanne Borek
Code Assistance Unit

The *Construction Code Communicator* is published three times a year by the New Jersey Department of Community Affairs. Editor: Denise Jones. Layout and design: Mary Ellen Handelman. Address: Division of Codes and Standards, New Jersey Department of Community Affairs, 101 South Broad Street, Post Office Box 802, Trenton, New Jersey 08625-0802. Address changes and subscription requests may be directed to the *Publications Unit*. Comments and suggestions should be sent to the attention of the *Code Development Unit*.



From left to right: Steve Jones, President of the Building Officials Association of New Jersey; Edward A. Vanderberg, Building Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.



From left to right: Patricia Famularo, Technical Assistant of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

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From left to right: Joseph Albanese, New Jersey Plumbing Inspectors Association; Seymour Goldstern, Plumbing Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.



From left to right: Arthur Londensky, President of the New Jersey Fire Prevention & Protection Association; John A. D'Ascensio, Fire Inspector of the Year; William M. Connolly, Director of the Division of Codes and Standards, DCA.

Barrier Free Subcode: A Few Changes and a Clarification

On June 20, 2005, a few changes to the Barrier Free Subcode were adopted. With a brief explanation for each, they are:

- **Assisted-Living Facilities:** This rule amendment provides that, when an apartment or room that was constructed to be adaptable is made available for respite care (short-term stays), those features required to make that apartment or room accessible be adapted. This will enable people with disabilities to use the services offered by the assisted-living facility.
- **Townhouses and Multistory Dwelling Units:** The definition of "townhouse" in the Barrier Free Subcode is amended to provide that the townhouse unit must extend from foundation to roof. This eliminates any apparent disconnect between the Barrier Free Subcode and the International Residential Code, and it makes clear that townhouses are side-by-side, attached, single-family dwellings. Other configurations, with shared entrances or units that are stacked one on the other, for example, are multistory dwellings. A cross-reference to the accessibility requirements for multistory dwelling units has been added for clarity.
- **Firewalls and Partywalls:** A reference to "partywall" has been added to the Barrier Free Subcode to ensure that the application of a firewall and a partywall is clearly understood. When counting the number of dwelling units in a single structure, a firewall or a party wall does not designate separate buildings.
- **Dormitories:** This rule amendment requires that five percent of newly constructed dormitory rooms must be accessible; the remaining 95 percent must be adaptable. This rule codifies two Federal laws — the Rehabilitation Act of 1973 and the Federal Fair Housing Amendments Act of 1988 — as they apply to dormitories.
- **Fines for Violating the Restrictions on an Accessible Parking Space:** The fine for violating the restrictions on an accessible parking space has been changed to reflect the statutory change of P.L. 2003, c. 161, which increased the fine from $100 to $250. (See companion article in this newsletter.)
- **Accessible Hotel Rooms:** This rule provides requirements for an accessible bed in an accessible hotel room. The required bed is on a standard bed frame, and will allow a guest who uses a lift to transfer to the bed and use the room.

If you have questions about the Barrier Free Subcode, please call the Code Assistance Unit at (609) 984-7609.

Source: Emily Templeton
Code Development Unit

Defining Project Classification for Plan Review

A contractor submitted plans and permit applications to a Class 2 Local Municipality for a 21,000-square-foot, Group M drugstore and a 2,300-square-foot, Group A-2 restaurant. The construction official directed the contactor to submit the plans to the Department of Community Affairs' Bureau of Construction Project Review (BCPR) for the plan review. Was the construction official correct in doing so? The answer is "Yes."

Both projects were to be tenant fit-outs in a 125,000-square-foot, mixed-use shopping center. Although the tenant areas did not exceed the allowables of a Class 2 agency, each fit-out was part of a larger "*structure"* exceeding the limits as defined in *N.J.A.C.* 5:23-4.3A(a), (d), and (e). The area of the total structure defines the project classification and not the size of the individual project spaces for review by the local municipality or BCPR.

The contractor then asked if the adjacent Class 1 local enforcing agency could perform the review. The answer is "No." Only those construction officials and subcode officials appointed by that municipality are allowed to review work for that municipality, per *N.J.A.C.* 5:23-4.4.

Upon submission of a written request by the local construction official with the project plans for review to the BCPR, a "Return to Local" authorization letter may be issued by the BCPR, per *N.J.A.C.* 5:23-4.3A(e).1, to the local enforcing agency allowing them to perform the plan review and issue the permits. A telephone call to the BCPR to inquire about a particular structure or plan review is always welcome.

Source: Emile Kolick, R.A., Supervisor
Bureau of Construction Project Review
(609) 633-7461

Correction

In the Spring 2005 *Construction Code Communicator*, Volume 17, Number 3, the second paragraph of the "What's Your Rating?" article referred to the 2000 National Electrical Code instead of the 2002 National Electrical Code. The sentence should have read, "The National Electrical Code (NEC)/**2002**, Section 110.9, . . ."

We apologize for any inconvenience.

Fire Sprinkler Flexible Piping Systems

I have received a number of calls asking about the use of fire sprinkler flexible piping systems. In the event you are not familiar with the system, it is a flexible, braided, leak-tested sprinkler drop with a minimum internal corrugated hose diameter of one inch. The flexible pipe attaches to a branch line at one end and to a fire sprinkler at the other. Hose lengths are from two feet to six feet, with both ½-inch and ¾-inch outlets. The advantage the sprinkler contractor has when using this system is he can place the sprinkler in the desired position by merely bending the flexible pipe. At least one manufacturer's system is UL and FM listed, and intended for use in NFPA 13, 13R and 13D, wet, dry, pre-action, and deluge systems.

Why am I bringing this to your attention? First, to let you know the system can be used. Second and perhaps more importantly, to make you aware of the friction loss. This piping is generally a drop. Friction loss is routinely not calculated for a drop. That's the potential problem. One manufacturer's specifications show a significant friction loss through the flexible pipe. For example, a 2-foot pipe having a ½-inch outlet has an equivalent length of 17 feet, while a 6-foot pipe has an equivalent length of 28 feet. A 2-foot pipe having a ¾-inch outlet has a 9-foot equivalent; and the 6-foot pipe has a 25-foot equivalent length. (Equivalent lengths reflect three bends.) The manufacturer also specifies a minimum bend radius.

If you see this system during plan review or when inspecting a job, you need to make sure the hydraulic calculations take into consideration the equivalent length of pipe. You also need to check the manufacturer's listing to ensure the proper application.

Should you have any questions, I may be reached at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

Drilling and Notching Wood Members: Who's Responsible?

Because the Building Subcode [International Building Code (IBC) 2000], the One- and Two-Family Dwelling Subcode [International Residential Code (IRC) 2000], and the Electrical Subcode [National Electrical Code (NEC) 2002] all have requirements for the drilling/boring of holes and notching of wood members, the question has been asked, "Who is responsible for conducting the inspections?" The answer is: both building and electrical inspectors, but for different reasons.

Here's where they are the same: All three subcodes contain the dimension and placement requirements for a hole and notch [IBC/2000 sections 2308.9.10 and 2308.9.11; IRC/2000 section R602.6; and NEC/2002 section 300.4(A), with technical amendment *N.J.A.C.* 5:23-3.16(b)5i]. These are the building inspector's responsibility.

Here's where they are different: NEC/2002 section 300.4(A) requires that any hole or notch be protected against nails or screws by a steel plate that is at least 1/16 inch thick before the building finish is applied. This is the electrical inspector's responsibility.

Note: The steel plates described above appear to be an easy inspection item that the building inspector could check for during his or her framing inspection. However, because not all wiring methods are easily distinguishable and not all wiring methods require steel-plate protection, this portion remains the electrical inspector's responsibility.

Lastly, if the hole or notch penetrates a rated assembly or passes through a space that is to be draftstopped or fireblocked, the materials to fill the void created by the penetration are inspected by the building inspector so that the integrity of the rating, draftstopping, or fireblocking is maintained.

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

Source: Rob Austin
Code Assistance Unit

Ducts: Can They Be Submarine Ducts?

Some construction just shouldn't hold water. This statement applies to duct systems in buildings constructed in compliance with the One- and Two-Family Dwelling Subcode [International Residential Code (IRC) 2000, New Jersey edition] and buildings constructed in compliance with the Building Subcode and the Mechanical Subcode [International Building Code (IBC) 2000, New Jersey edition/ International Mechanical Code (IMC) 2003] that are in a flood zone. There are a few differences between these. The IRC has a requirement that forbids ducts from being placed below the design flood elevation (Section R-327.1.5), but the IMC permits ducts to be below the design flood elevation as long as these ducts are designed and constructed to prevent water from entering and accumulating within the ducts (Section 603.13). In essence, the duct needs to be constructed as a boat; more specifically, as a submarine. Also addressed in the IMC are identical requirements that address plenums (Section 602.4).

The requirement for the design of the ducts to address hydrostatic and hydrodynamic loadings is interesting. Hydrostatic loading is the pressure applied to the duct or plenum when the water is stationary or static; a hydrodynamic loading is the pressures applied when the water is moving or flowing. Thus, hydrostatic design is for floodwaters that just rise and fall with little horizontal movement, and hydrodynamic design is for floodwaters that have a horizontal velocity. The intent of these designs is to keep the duct from being torn away during the flooding event. This should explain the submarine analogy. There is also a requirement for the design to address the effects of buoyancy or "will the submerged duct cause the building or part of the building to move due to floating."

These requirements (IRC versus IMC) are not contrary to each other. Each applies to different building types and only to new building construction. The IRC requirement only applies to new one- and two-family buildings. The IMC requirements apply to all new buildings designed using the IBC/IMC combination. If the designer of a new one- or two-family building wants to use a design that has ducts below the design flood elevation, this may be accomplished through a variation. The ducts should be designed and constructed to prevent water from entering and accumulating within the ducts, in accordance with the minimum requirements found in the Mechanical Subcode (IMC 2003). This is prudent because the IMC 2003 has been adopted and contains new technical requirements that were not included in the 2000 IRC, but are included in the 2003 IRC (though not adopted by New Jersey.)

If there are any questions concerning this article, please contact the Code Assistance Unit at (609) 984-7609.

Source: Jeffery Applegate
Code Assistance Unit

Energy – RES*check* and COM*check* Internet Links

New releases for both the RES*check* and COM*check* energy compliance tools have been added to the United States Department of Energy's web site, http://www.energycodes.gov. Included in the latest versions of RES*check*, RES*check* Web, and COM*check*-EZ, is the addition of COM*check*-EZ Web. The links are as follows:

RES*check* for Windows, Version 3.6, Release 2 *(runs on Windows 98, 2000, and XP)*
*****http://www.energycodes.gov/rescheck/download.stm

RES*check* for Macintosh, Version 3.6, Release 1a *(runs on Mac OS X)*
*****http://www.energycodes.gov/rescheck/download.stm

RES*check* Web, no download required *(requires Netscape or Internet Explorer)*
*****http://energycode.pnl.gov/REScheckWeb/

COM*check*-EZ for Windows, Version 3.0, Release 2a *(runs on Windows 98, 2000, and XP)*
*****http://www.energycodes.gov/comcheck/ez_download.stm

COM*check*-EZ for Macintosh, Version 3.0, Release 1a *(runs on Mac OS X)*
*****http://www.energycodes.gov/comcheck/ez_download.stm

COM*check*-EZ Web, no download required *(requires Netscape or Internet Explorer)*
*****http://energycode.pnl.gov/COMcheckWeb/

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New Jersey-specific Prescriptive Packages, for one- and two-family detached dwellings and all other residential buildings three stories or less in height only (there are no prescriptive packages recognized for all other buildings), can be found at: *http://www.state.nj.us/dca/codes/energycodes/index.shtml.

NOTE: Use the 4500 packages for Atlantic, Camden, Cape May, Cumberland, Gloucester, and Salem Counties; use the 5000 packages for Burlington, Essex, Hudson, Mercer, Middlesex, Monmouth, Ocean, and Union Counties; use the 5500 packages for Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex, and Warren Counties.

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

Source: Rob Austin
Code Assistance Unit

Flexible Air Ducts and Flexible Air Connectors

There is still some confusion regarding the difference between a flexible air duct and a flexible air connector. I will try to clear up some of the questions I have been receiving.

Air ducts and air connectors are typically factory-made assemblies. Flexible air ducts and air connectors are generally used in air distribution systems for relatively short runs of duct.

One of the main problems is that a flexible air duct and a flexible air connector can look exactly alike. However, the markings on the material will identify it as either a flexible air duct or a flexible air connector. Both the flexible air duct and flexible air connector must comply with the requirements of UL 181 for Class 0 or Class 1. Flexible air ducts require more extensive testing (flame-penetration, puncture, and impact tests) than flexible air connectors. This difference in testing is what determines the markings on the material and whether or not it is classified as a flexible air duct or a flexible air connector.

The labeling on an air duct is rectangular and states, "LISTED AIR DUCT." The labeling on an air connector is round or oval and states, "LISTED AIR CONNECTOR." Also, the label for an air connector states, "For installation in length not over 14 feet." Because the testing for flexible air connector material is less stringent than for flexible air duct material, the length for a flexible air connector is limited to 14 feet.

International Mechanical Code/2003, Section 603.6.1.1, "Duct Length," states: "Flexible air ducts shall not be limited in length." Therefore, if a flexible air duct were used as a flexible connection, the 14-foot limitation would not apply.

So, it is very important to check the labeling of the flexible duct or connector to determine whether it is an air duct or air connector before making your determination as to whether or not the 14-foot maximum length is required.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Foundation Drains in Residential Crawl Spaces: Are They Needed?

Section 406.1 of the New Jersey Edition of the 2000 International Residential Code requires walls or portions thereof that retain earth, and that enclose interior spaces and floors below grade, to be waterproofed or dampproofed in accordance with Section 406. This applies only when the floor of the crawl space is below the adjacent grade. Assuming there is no hydrostatic pressure condition, Section 406.4 requires dampproofing and also requires a drain to be installed around the foundation perimeter. The requirements for the drain are found in Section 406.4.2. Remember, the drain does not always require a pipe.

So, the short answer to the question "Are foundation drains needed in residential crawl spaces?" is yes. If you have any questions regarding this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Handicapped Parking Fines Increased

P.L. 2003, c. 161 increased the fine for violating the restrictions on an accessible parking space from $100 to $250. In order for the $250 fine to be enforceable, the fine amount posted on each sign must be changed to $250. There are companies (I do not have names) that make stickers that can be put over the existing numbers.

The Handicapped Parking Act, which was passed in 1989, designated the "reserved parking" signs as the required signs and also required the penalty signs. The responsibility for ensuring that the signs are updated is as follows:

- Signs that are posted at parking spaces that serve an accessible building entrance are considered to be "UCC spaces" and the construction official is responsible for ensuring that the amount of the penalty shown on the sign is increased.
- Signs that are posted at spaces on a municipal street are the responsibility of the municipal engineer — or another designated municipal official.
- Signs that are posted at spaces in a municipal parking lot that does not serve a specific building entrance are also the responsibility of the municipal engineer — or another designated municipal official.

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

Source: Emily Templeton
Code Development Unit

Home Improvement Contractor Registration Deadline Looms Near

As the end of 2005 draws near, so does the Division of Consumer Affairs' registration deadline for all home improvement contractors in the State of New Jersey. Like it or not, December 31, 2005 is the deadline for home improvement contractors to be registered with Consumer Affairs in order to perform work in the State. Additionally, these contractors must be registered prior to the issuance of a construction permit.

Consumer Affairs cannot possibly register all of the contractors in the State during the month of December; therefore, they are requesting that construction departments help them with getting the word out. When a contractor comes to the counter to obtain a construction permit, please remind him or her of the contractor registration requirements. Applications may be obtained by logging onto http://www.njconsumeraffairs.com/contractor.htm, or calling toll-free (888) 656-6225.

Consumer Affairs has published a poster for you to display in your office. If you have not received one, please contact Soraya Westerband by e-mail at soraya.westerband@lps.state.nj.us, or by telephone at (973) 504-6543. Thank you for your assistance.

Source: John N. Terry
Code Assistance Unit

IRC – Mechanical/Fuel Gas Requirements, Contents Inside

In the case of one- and two-family detached dwellings and townhouses, all three stories or less, have you been citing the mechanical and fuel gas sections (Chapters 12 through 24) of the International Residential Code (IRC) for code compliance? If you have, keep up the good work. For those of you who have been citing the International Mechanical Code (IMC) and International Fuel Gas Code (IFGC) for one- and two-family detached dwellings and townhouses, all three stories or less, please take note of the above. There are some differences between residential applications (IRC) and commercial applications (IMC and IFGC) for mechanical and fuel gas installations, therefore requiring you as the code official to cite the permit applicant the appropriate section.

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

Source: Rob Austin
Code Assistance Unit

Mortgagors, Mortgagees, and Unfinished Buildings

In 2001, the New Jersey Legislature passed an amendment to the State Uniform Construction Code Act that added a new paragraph c. to *N.J.S.A.* 52:27D-131. This new provision authorizes an enforcing agency to revoke or cancel a construction permit if the project is not completed by the third anniversary of the date of issuance of the construction permit. This provision became operative on the third anniversary of the amendment to the statute, January 14, 2005; an implementing Department of Community Affairs' rule, at *N.J.A.C.* 5:23-2.16(f), also became operative on that date.

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Both the statute and rule provide for three exceptions to the authority of the construction official to revoke or cancel permits. These exceptions are: (1) permits for construction improvements to the interior of a house in which the permit holder resides that are not visible from the exterior; (2) permits for any building for which the exterior and all required site improvements are complete; and (3) permits for projects under control of a mortgagee in possession.

It has come to our attention that there is some confusion among code officials as to who qualifies as a mortgagee in possession. A mortgagee in possession is a bank or other lender who has foreclosed on a mortgage, accepted a deed in lieu of foreclosure, or otherwise taken control of a property from the borrower, who is also known as the mortgagor.

The ***mortgagor*** is the property owner who gives a mortgage, which is an interest in real property, to a mortgagee, who is the lender, as security for a loan. Because people commonly speak of "getting a mortgage" from a bank, the terminology is easy to misunderstand. However, it is more accurate to say that what a property owner (mortgagor) ***gets*** is a loan; what he or she ***gives*** to the mortgagee to get that loan is a mortgage, which is the right to take ownership of the property in the event of default.

This raises the question as to why that last provision is in the law and therefore in the rule. The answer, quite simply, is that the banks did not want to risk having properties on which they might foreclose be demolished and, not being in the business of finishing houses, they successfully lobbied the sponsor of the bill to exempt them.

Source: Michael Ticktin, Esq.
Chief, Legislative Analysis

New Jersey Register Adoptions

Date: July 5, 2005
Adoption: 37 *N.J.R.* 2474(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.23 tie temporary Certificates of Occupancy to the soil district's Conditional Report of Compliance. In addition, the adopted amendments require Temporary Certificates of Occupancy to include a list of any work that is to be completed before the issuance of a Final Certificate of Occupancy.

Date: June 20, 2005
Adoption: 37 *N.J.R.* 2201(b)
Summary: These adopted amendments to *N.J.A.C.* 5:23-6.31, 7.3, 7.5, 7.7, 7.9, and 7.10 revise the requirements of the Barrier Free Subcode of the Uniform Construction Code for assisted-living facilities, townhouses, boarding homes, dormitories, accessible beds in hotel rooms, firewalls and partywalls, accessible entrances, and accessible parking.

Source: Megan K. Sullivan
Code Development Unit

New Jersey Association of Technical Assistants Goes National

During this year's Building Safety Conference, held May 4-6 in Atlantic City, the New Jersey Association of Technical Assistants (NJATA) invited a representative from the Washington State Association of Permit Technicians (WSAPT) to speak at our State technical assistants association meeting. Shawna Gossett, 2nd Vice-President of WSAPT, provided an overview of their association, followed by a question-and-answer period in which we discussed some of our similarities and differences.

This exchange presented a great opportunity for us to build a working relationship with an established organization. We hope to continue to build towards a national conference for "Permit Technicians," as they are known nationally. Shawna took home a lot of information from her visit and we gained some great information from her, as well.

The following is some brief information on the WSAPT. I am including their web address and encourage all of you to browse their web site.

WSAPT was begun in 1995 by a group of people interested in forming an association to provide support for the city and county workers who are commonly referred to as "front-counter staff" from the building, planning, and engineering departments. This group formed an interim board of executive officers and began to work on bylaws. In January 1999, they became an official chapter of the International Council of Building Officials (ICBO). With the merger of the three national model codes into a single international code, the ICBO chapter elected to become a chapter of the International Codes Council (ICC). They are now recognized by the ICC, and are continuing with their educational programs and support for their members.

The WSAPT association is composed of people who currently work for a municipality (which includes city and county governments). Their board consists of a president, 1st vice-president, 2nd vice-president, recorder, and treasurer. Each of those board members is a liaison to chairs of various WSAPT committees including

Administration, Bylaws, Code Development, Education/Certification, Membership, Newsletter, and Peer.

In the early years, this group's main goal was to establish a Certified Permit Technician test through ICBO. Members of WSAPT have been obtaining this certification since September 1998. Today, Washington has 136 certified members, the second highest number in the country.

We in New Jersey believe there is a lot to learn from such an accomplished group. Many thanks to the WSAPT members for working with us and sharing in our conference. We look forward to continuing our relationship. For more information, please visit http://www.wabo.org and click on the WSAPT link.

Source: Dawn M. Neil
President
New Jersey Association of Technical Assistants



From left to right: Shawna Gosset, 2nd Vice-President of the WSAPT; Dawn Neil, President of NJATA; Debbie Timko, Secretary of NJATA; Linda Aiello, VP/Treasurer of NJATA.



From left to right: Dawn Neil, President of the NJATA, is presented with WSAPT membership materials from Shawna Gosset, 2nd Vice-President of the WSAPT.

Oh Where, Oh Where Does the Bond Wire Go?

The pool season has done it again! It has brought more questions like, "Does the bond wire get connected to motor control panels or sub-panels?"

Section 680.26(B)(4) of the 2002 National Electrical Code states that metal parts of electrical equipment associated with the pool water circulating system (including pump motors) and metal parts of equipment associated with pool covers (including electric motors) shall be bonded. Where double-insulated pump motors are utilized, the bonding is not required.

Therefore, the answer is ***NO***; the bond wire does not get connected to the motor control panel or sub-panel. Unlike the motor, these panels are not associated with the pool water circulating system.

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

Source: Suzanne Borek
Code Assistance Unit

Plan Review Authority for Residential Health Care Facilities

On March 14, 2005, Acting Governor Richard J. Codey issued Reorganization Plan No. 002-2005. This plan transfers responsibility for all license, regulatory, and enforcement activities related to free-standing residential health care facilities, as defined in P.L. 1953, c. 212, §1, as amended (C. 30:11A-1), from the New Jersey Department of Health and Senior Services (DHSS) to the Department of Community Affairs (DCA). This transfer does not apply to residential health care facilities located within, or functioning as part of, another licensed health care facility such as a nursing home, assisted-living facility, or hospital.

Since both free-standing residential health care facilities and boarding houses provide services to similar populations, the Bureau of Rooming and Boarding House Standards (BRBHS) will now be the agency within the DCA with authority over residential health care facilities.

For over 30 years, while the residential health care program was under the DHSS authority, these free-standing facilities were considered "licensed health care facilities." At that time, per *N.J.A.C.* 5:23-3.11(a)8, plan review for these facilities was reserved to the DCA Health Care Plan Review Unit as the sole plan review agency for health care facilities. With the transfer of authority for free-standing residential health care facilities to the DCA, these facilities are no longer "licensed health care facilities" and, as such, there is no longer any need for plan review to be reserved to the DCA Health Care Plan Review Unit.

Therefore, appropriately licensed municipalities may now review plans for construction projects within their jurisdiction that involve free-standing residential health care facilities. Municipalities shall apply the New Jersey Uniform Construction Code and its associated adopted standards (IBC, IMC, NSPC, NEC), as appropriate, when reviewing such projects.

Local officials who are unfamiliar with these types of facilities can receive guidance in applying the codes by calling our offices at (609) 984-7850.

Source: David B. Uhaze, RA
Chief
Bureau of Construction Project Review

Purple Wire Connectors

There have been some questions as to whether or not there is a wire connector listed and labeled for connecting aluminum to copper wire. The answer is *yes*.

The wire connectors that are listed and labeled for this specific use are purple, and can be used only once. They cannot be reused like standard wire connectors due to the antioxidant compound contained within the connector.

There is only one manufacturer at present who has the wire connectors for this purpose; it is a model #65. *Do not confuse these with standard purple wire connectors*!

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

Source: Suzanne Borek
Code Assistance Unit

Shop Drawing Revisited

Over the past few years, code officials have handled the submittal of documents for engineered lumber in a multitude of ways. The following are three separate scenarios that are intended to provide direction as to how design documents or shop drawings should be handled.

In the first scenario, the design professional of record has provided sufficient detail on the original design documents to determine compliance with the requirements of the code for the engineered wood product. If the design

professional provides sufficient specification and detail (depth, width, joist series, on-center spacing), there is no need for a shop drawing to be submitted by the manufacturer. Any additional information that is needed to determine compliance with the code should be requested of, and provided by, the design professional of record.

In the second scenario, the design professional of record does not provide sufficient information on the design documents to determine compliance with the requirements of the code. When the design professional of record does not include detail on the original design documents, signed and sealed shop drawings are required. As per *N.J.A.C.* 5:23-2.15(e)1xi, any deferred submittal must be reviewed and accepted by the design professional of record.

In the third scenario, engineered wood products are used in place of other specified products. In this instance, the documents submitted by the engineered wood product manufacturer are required to be signed and sealed. This is a deviation from the original design and must be approved by the design professional of record.

These three scenarios should guide you in determining the need for your documents to be signed and sealed, as well as by whom. If you have further questions on this matter, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Supporting Recessed Lighting Fixtures

Article 410, Part IV of the 2002 National Electrical Code (NEC/2002), specifically Sections 410.15 and 410.16, contains the requirements for the support of lighting fixtures. When installing *recessed lighting fixtures* in a suspended ceiling, Section 410.16(C) and Section 410.15(A) of the NEC/2002 contain specific requirements for the means of support.

Section 410.16(C): The framing members of a suspended ceiling may support recessed lighting fixtures as long as the fixtures are fastened by mechanical means (i.e., screws, rivets, and/or listed clips) to the framing members. The framing members shall be fastened together and attached to the building structure appropriately.

Section 410.15(A): This section is key. The suspended ceiling framing members can be properly attached to the building structure and the recessed lighting fixtures properly attached to the suspended ceiling; but, *if the weight of the fixtures is not accounted for*, the ceiling could fail. To help prevent failure, the building subcode official shall verify the design specifications for the maximum weight allowance of the ceiling assembly with all lighting fixtures installed.

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

Source: Rob Austin
Code Specialist

Which Way Does It Go? . . . The Emergency Lighting Branch Circuit

The question keeps arising: "On which branch circuit is the emergency lighting required to be installed?"

Section 700.12(E) of the 2002 National Electrical Code states that the branch circuit for unit equipment, such as an exit sign with battery-powered backup, shall be the same branch circuit as that serving the normal lighting in the area and is to be connected ahead of any local switches. The branch circuit that feeds the unit equipment shall be clearly identified at the distribution panel.

This means that, wherever the emergency lighting unit equipment is installed, it is required to be on the normal lighting circuit in the area. The overcurrent protective device has to be clearly identified in the panel that is feeding the unit equipment.

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

Source: Suzanne Borek
Code Assistance Unit

Your Service . . . and Stucco?

That's right . . . the latest and greatest stylish thing to do to your house is stucco! Does this mean that the service may be encapsulated or covered in its entirety by stucco? The answer is no.

Section 230.6 of the 2002 National Electrical Code (NEC/2002) states that service conductors shall be considered outside of the building where they are installed under 2 inches or more of concrete; where they are installed within a building in a raceway that is encased in concrete or brick that is 2 inches thick; where they are installed in a vault that meets the construction requirements of Article

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450, Part III; or where they are installed in conduit and under not less than 18 inches of earth beneath a building.

Section 110.3(B) of the NEC/2002 states that listed or labeled equipment shall be installed and used in accordance with the instructions included in the listing or labeling.

Service conductors *are not* considered outside of the building when they are contained within a building finish. The listing and labeling of the service conductors is not approved for being installed in stucco. And, just like painted service conductors, Underwriter's Laboratories, Inc. has not tested the conductors under these conditions.

Therefore, service conductors shall not be installed in or behind stucco.

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

Source: Suzanne Borek
Code Assistance Unit

NOTES



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NEW JERSEY UNIFORM CONSTRUCTION CODE

State of New Jersey
Richard J. Codey, Acting Governor

Department of Community Affairs
Charles A. Richman, Acting Commissioner

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Accessible Parking: Check Out the Closest Parking Space

It has come to the Department of Community Affairs' attention that there is at least one nationally known small business that has a standard building and site design currently being submitted to municipalities throughout the State. There is a problem, however, with the site design — the accessible parking spaces are often not the closest parking spaces on the shortest accessible route to the accessible building entrance. In fact, in many cases, the accessible spaces can be as many as three parking spaces from the accessible entrance.

Both the Department and the Division of Civil Rights have received complaints from people with disabilities regarding this area of noncompliance, and have been working toward a resolution. Although the complaint is focused on newly constructed stores belonging to a national pharmacy chain, the problem could exist at other, similar sites.

To ensure that the noncompliant parking does not remain, the building subcode official should check the accessible parking spaces at all newly constructed stores. If the accessible parking spaces are not the closest spaces on the shortest accessible route to the accessible building entrance, the building subcode official should order that the noncomplying spaces be corrected.

If there are questions about this initiative, please contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Emily Templeton
Code Development

ASHRAE Standard 90.1-1999: Energy Code Compliance

For those of you having difficulty using the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999 for energy code compliance, this article will be helpful for the building envelope portion.

Chapter 5 of the ASHRAE 90.1/1999 is divided into four sections: 5.1 – General, 5.2 – Mandatory Provisions, 5.3 – Prescriptive Building Envelope Option, and 5.4 – Building Envelope Trade-Off Option. From these sections, the end result will be to go to Tables B-13 and B-14 in the back of the standard. These tables contain the prescriptive requirements for building envelope design only.

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The breakdown on how to use the tables is as follows: Section 5.1.3 sends the user to Table D for New Jersey requirements, which lists Table B-13 for Newark, and Table B-14 for Atlantic City, Long Branch, and Oakhurst. As per Section 5.3, Tables B-13 and B-14 shall be inserted into Table 5.3 to be used for the Prescriptive Building Envelope Option. Since only four municipalities are listed, the design professional has to base the energy design criteria on the closest listed municipality.

Table 5.3 (from Tables B-13 or B-14) provides the minimum building envelope requirements, very much like a prescriptive package for low-rise residential, but it does not cover the electrical and mechanical provisions of ASHRAE 90.1/1999. The most direct method is to use these tables as a baseline for design criteria by inserting their values into the COM*check-EZ* software package (www.energycodes.gov) and letting the program do all the calculations for not only the building envelope, but the electrical and mechanical portions as well.

Tables B-13 and B-14 follow this article on pages 3 and 4. The symbols below are used in the tables; their corresponding definitions have been inserted for use with the tables.

C-Factor (Thermal Conductance)
Time rate of steady-state heat flow through unit area of a material or construction, induced by a unit temperature difference between the body surfaces. Units of C are Btu/h*ft^{2}*°F. Note that the C-factor does not include soil or air films.

F-Factor
The perimeter heat loss factor for slab-on-grade floors, expressed in Btu/h*ft^{2}*°F.

Rated R-Value of Insulation
The thermal resistance of the insulation alone as specified by the manufacturer in units of h*ft^{2}*°F/Btu at a mean temperature of 75°F. Rated R-value refers to the thermal resistance of the added insulation in framing cavities or insulated sheathing only and does not include the thermal resistance of other building materials or air film. (See thermal resistance.)

Thermal Resistance (R-Value)
The reciprocal of the time rate heat flow through unit area induced by a unit temperature difference between two defined surfaces of material or construction under steady-state conditions. Units of R are h*ft^{2}*°F/Btu.

U-Factor (Thermal Resistance)
Heat transmission in unit time through unit area of a material or construction and the boundary of air films induced by unit temperature difference between environments on each side. Units of U are Btu/h*ft^{2}*°F.

NR = no insulation requirement

ci = continuous insulation

Lastly, if one chooses not to follow the above, Section 5.4 – Building Envelope Trade-Off Option may be used. This requires hand calculations using Appendix C. These calculations can be tedious to do as a design professional and even more tedious to review as a code official. This will leave the electrical and mechanical portions to factor into the equation, and again leads to the recommendation of using the COM*check-EZ* software package, as it is FREE.

NOTE: Unlike the Council of American Building Officials' Model Energy Code 1995 that requires slab insulation for all low-rise residential structures, ASHRAE 90.1/1999 only requires slab-perimeter insulation for heated slabs in New Jersey. Unheated slabs under ASHRAE 90.1/1999 are not required to have perimeter insulation (unless the design utilizes the insulation to pass the overall energy code compliance in a COM*check-EZ* report).

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

Source: Rob Austin
Code Specialist

Bulletins on the Web

Are your Uniform Construction Code (UCC) bulletins looking tattered and old? Do some of the code references look a little dated? Well, have I got good news for you: We are now in the process of revising all UCC bulletins. Each bulletin will be placed on the Internet as it is formatted, complete with up-to-date code references and new revised dates or updated code reference dates so you can tell what is old, what is new, or what was updated to reflect current model codes. Currently, there are only a handful of bulletins online, but please bear with us as we are working diligently to accomplish this project. In your free time, please visit our web site at www.state.nj.us/dca/codes and view, print, download, etc. the available bulletins to update your UCC.

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ASHRAE 90.1-1999, Table B-13						
Building Envelope Requirements (HDD65: 3601-5400, CDD50: 3601+)						
(Based on Table D-1, US Climatic Data: Newark and Neighboring Municipalities)						
	Nonresidential		**Residential**		**Semi-Heated**	
Opaque Elements	*Assembly Maximum*	*Insulation Minimum R-Value*	*Assembly Maximum*	*Insulation Minimum R-Value*	*Assembly Maximum*	*Insulation Minimum R-Value*
Roofs						
--Insulation Entirely Above Deck	U - 0.063	R - 15.0 ci	U - 0.063	R - 15.0 ci	U - 0.218	R - 3.8 ci
--Metal Building	U - 0.065	R - 19.0	U - 0.065	R - 19.0	U - 0.097	R - 10.0
--Attic and Other	U - 0.034	R - 30.0	U - 0.027	R - 38.0	U - 0.081	R - 13.0
Walls, Above Grade						
--Mass	U - 0.151*	R - 5.7 ci*	U - 0.104	R - 9.5 ci	U - 0.580	NR
--Metal Building	U - 0.113	R - 13.0	U - 0.113	R - 13.0	U - 0.134	R - 10.0
--Steel Framed	U - 0.124	R - 13.0	U - 0.064	R - 13.0 plus R - 7.5 ci	U - 0.124	R - 13.0
--Wood Framed and Other	U - 0.089	R - 13.0	U - 0.089	R - 13.0	U - 0.089	R - 13.0
Wall, Below Grade						
--Below Grade Wall	C - 1.140	NR	C - 1.140	NR	C - 1.140	NR
Floors						
--Mass	U - 0.107	R - 6.3 ci	U - 0.087	R - 8.3 ci	U - 0.322	NR
--Steel Joist	U - 0.052	R - 19.0	U - 0.038	R - 30.0	U - 0.069	R - 13.0
--Wood Framed and Other	U - 0.051	R - 19.0	U - 0.033	R - 30.0	U - 0.066	R - 13.0
Slab-On-Grade Floors						
--Unheated	F - 0.730	NR	F - 0.730	NR	F - 0.730	NR
--Heated	F - 0.950	R - 7.5 for 24 inches	F - 0.840	R - 10 for 36 inches	F - 1.020	R - 7.5 for 12 inches
Opaque Doors						
--Swinging	U - 0.700		U - 0.700		U - 0.700	
--Non-Swinging	U - 1.450		U - 0.500		U - 1.450	
Fenestration	*Assembly Maximum U (Fixed/ Operable)*	*Assembly Maximum SHGC (All Orientations/ North-Oriented)*	*Assembly Maximum U (Fixed/ Operable)*	*Assembly Maximum SHGC (All Orientations/ North-Oriented)*	*Assembly Maximum U (Fixed/ Operable)*	*Assembly Maximum SHGC (All Orientations/ North-Oriented)*
Vertical Glazing, % of Wall						
-- 0 - 10.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 10.1 - 20.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 20.1 - 30.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 30.1 - 40.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 40.1 - 50.0%	U_{fixed} - 0.46 U_{oper} - 0.47	$SHGC_{all}$ - 0.25 $SHGC_{north}$ - 0.36	U_{fixed} - 0.46 U_{oper} - 0.47	$SHGC_{all}$ - 0.25 $SHGC_{north}$ - 0.36	U_{fixed} - 0.98 U_{oper} - 1.02	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
Skylight with Curb, Glass, % of Roof						
-- 0 - 2.0%	U_{all} - 1.17	$SHGC_{all}$ - 0.49	U_{all} - 1.17	$SHGC_{all}$ - 0.36	U_{all} - 1.98	$SHGC_{all}$ - NR
-- 2.1 - 5.0%	U_{all} - 1.17	$SHGC_{all}$ - 0.39	U_{all} - 1.17	$SHGC_{all}$ - 0.19	U_{all} - 1.98	$SHGC_{all}$ - NR
Skylight with Curb, Plastic, % of Roof						
-- 0 - 2.0%	U_{all} - 1.30	$SHGC_{all}$ - 0.65	U_{all} - 1.30	$SHGC_{all}$ - 0.62	U_{all} - 1.90	$SHGC_{all}$ - NR
-- 2.1 - 5.0%	U_{all} - 1.30	$SHGC_{all}$ - 0.34	U_{all} - 1.30	$SHGC_{all}$ - 0.27	U_{all} - 1.90	$SHGC_{all}$ - NR
Skylight without Curb, All, % of Roof						
-- 0 - 2.0%	U_{all} - 0.69	$SHGC_{all}$ - 0.49	U_{all} - 0.69	$SHGC_{all}$ - 0.36	U_{all} - 1.36	$SHGC_{all}$ - NR
-- 2.1 - 5.0%	U_{all} - 0.69	$SHGC_{all}$ - 0.39	U_{all} - 0.69	$SHGC_{all}$ - 0.19	U_{all} - 1.36	$SHGC_{all}$ - NR

* Exception to 5.3.1.2a applies.

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ASHRAE 90.1-1999, Table B-14						
Building Envelope Requirements (HDD65: 3601-5400, CDD50: 1801-3600)						
(Based on Table D-1, US Climatic Data: Atlantic City, Long Branch, Oakhurst, and Neighboring Municipalities)						
	Nonresidential		**Residential**		**Semi-Heated**	
Opaque Elements	*Assembly Maximum*	*Insulation Minimum R-Value*	*Assembly Maximum*	*Insulation Minimum R-Value*	*Assembly Maximum*	*Insulation Minimum R-Value*
Roofs						
--Insulation Entirely Above Deck	U - 0.063	R - 15.0 ci	U - 0.063	R - 15.0 ci	U - 0.218	R - 3.8 ci
--Metal Building	U - 0.065	R - 19.0	U - 0.065	R - 19.0	U - 0.097	R - 10.0
--Attic and Other	U - 0.034	R - 30.0	U - 0.034	R - 30.0	U - 0.081	R - 13.0
Walls, Above Grade						
--Mass	U - 0.151*	R - 5.7 ci*	U - 0.104	R - 9.5 ci	U - 0.580	NR
--Metal Building	U - 0.113	R - 13.0	U - 0.113	R - 13.0	U - 0.134	R - 10.0
--Steel Framed	U - 0.124	R - 13.0	U - 0.084	R - 13.0 plus R - 3.8 ci	U - 0.124	R - 13.0
--Wood Framed and Other	U - 0.089	R - 13.0	U - 0.089	R - 13.0	U - 0.089	R - 13.0
Wall, Below Grade						
--Below Grade Wall	C - 1.140	NR	C - 1.140	NR	C - 1.140	NR
Floors						
--Mass	U - 0.107	R - 6.3 ci	U - 0.087	R - 8.3 ci	U - 0.322	NR
--Steel Joist	U - 0.052	R - 19.0	U - 0.052	R - 19.0	U - 0.069	R - 13.0
--Wood Framed and Other	U - 0.051	R - 19.0	U - 0.033	R - 30.0	U - 0.066	R - 13.0
Slab-On-Grade Floors						
--Unheated	F - 0.730	NR	F - 0.730	NR	F - 0.730	NR
--Heated	F - 0.950	R - 7.5 for 24 inches	F - 0.840	R - 10 for 36 inches	F - 1.020	R - 7.5 for 12 inches
Opaque Doors						
--Swinging	U - 0.700		U - 0.700		U - 0.700	
--Non-Swinging	U - 1.450		U - 0.500		U - 1.450	
Fenestration	*Assembly Maximum U (Fixed/ Operable)*	*Assembly Maximum SHGC (All Orientations/ North-Oriented)*	*Assembly Maximum U (Fixed/ Operable)*	*Assembly Maximum SHGC (All Orientations/ North-Oriented)*	*Assembly Maximum U (Fixed/ Operable)*	*Assembly Maximum SHGC (All Orientations/ North-Oriented)*
Vertical Glazing, % of Wall						
-- 0 - 10.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.49 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.49 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 10.1 - 20.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 20.1 - 30.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 30.1 - 40.0%	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 0.57 U_{oper} - 0.67	$SHGC_{all}$ - 0.39 $SHGC_{north}$ - 0.49	U_{fixed} - 1.22 U_{oper} - 1.27	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
-- 40.1 - 50.0%	U_{fixed} - 0.46 U_{oper} - 0.47	$SHGC_{all}$ - 0.26 $SHGC_{north}$ - 0.36	U_{fixed} - 0.46 U_{oper} - 0.47	$SHGC_{all}$ - 0.26 $SHGC_{north}$ - 0.36	U_{fixed} - 0.98 U_{oper} - 1.02	$SHGC_{all}$ - NR $SHGC_{north}$ - NR
Skylight with Curb, Glass, % of Roof						
-- 0 - 2.0% -- 2.1 - 5.0%	U_{all} - 1.17 U_{all} - 1.17	$SHGC_{all}$ - 0.49 $SHGC_{all}$ - 0.39	U_{all} - 1.17 U_{all} - 1.17	$SHGC_{all}$ - 0.36 $SHGC_{all}$ - 0.19	U_{all} - 1.98 U_{all} - 1.98	$SHGC_{all}$ - NR $SHGC_{all}$ - NR
Skylight with Curb, Plastic, % of Roof						
-- 0 - 2.0% -- 2.1 - 5.0%	U_{all} - 1.30 U_{all} - 1.30	$SHGC_{all}$ - 0.77 $SHGC_{all}$ - 0.62	U_{all} - 1.30 U_{all} - 1.30	$SHGC_{all}$ - 0.27 $SHGC_{all}$ - 0.27	U_{all} - 1.90 U_{all} - 1.90	$SHGC_{all}$ - NR $SHGC_{all}$ - NR
Skylight without Curb, All, % of Roof						
-- 0 - 2.0% -- 2.1 - 5.0%	U_{all} - 0.69 U_{all} - 0.69	$SHGC_{all}$ - 0.49 $SHGC_{all}$ - 0.39	U_{all} - 0.69 U_{all} - 0.69	$SHGC_{all}$ - 0.36 $SHGC_{all}$ - 0.19	U_{all} - 1.36 U_{all} - 1.36	$SHGC_{all}$ - NR $SHGC_{all}$ - NR

* Exception to 5.3.1.2a applies.

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Also in the future, we will be updating the formal technical opinions.

NOTE: Bulletins that have updated code references will not be republished; they will be posted on our web site only. Bulletins that needed extensive revisions or substantive changes will be mailed as part of your update package at a later date and then placed on our web site.

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

Source: Rob Austin
Code Specialist

Do You Know Your NRTLs?

There are references to Nationally Recognized Testing Laboratories (NRTLs) in all of the adopted subcodes of the Uniform Construction Code and at *N.J.A.C.* 5:23-3.7(a), which provide for the local enforcing agency to accept an NRTL report when an alternative material, equipment, or a method of construction is used for all of the subcodes. Acceptance of the NRTL is up to the local code enforcement agency.

The following is a list of organizations currently recognized by the Occupational Safety and Health Administration as NRTLs that may be helpful:

- ☐ Applied Research Laboratories, Inc. (ARL)
- ☐ Canadian Standards Association (CSA) (also known as CSA International)
- ☐ Communication Certification Laboratory, Inc. (CCL)
- ☐ Curtis-Straus LLC (CSL)
- ☐ Electrical Reliability Services, Inc. (ERS) [also known as ETI Conformity Services and formerly Electro-Test, Inc. (ETI)]
- ☐ Entela, Inc. (ENT)
- ☐ FM Global Technologies LLC (FM) (also known as FM Approvals and formerly Factory Mutual Research Corporation)
- ☐ Intertek Testing Services NA, Inc. (ITSNA) (formerly ETL)
- ☐ MET Laboratories, Inc. (MET)
- ☐ NSF International (NSF)
- ☐ National Technical Systems, Inc. (NTS)
- ☐ SGS U.S. Testing Company, Inc. (SGSUS) (formerly UST-CA)
- ☐ Southwest Research Institute (SWRI)
- ☐ TUV America, Inc. (TUVAM)
- ☐ TUV Product Services GmbH (TUVPSG)
- ☐ TUV Rheinland of North America, Inc. (TUV)
- ☐ Underwriters Laboratories, Inc. (UL)
- ☐ Wyle Laboratories, Inc. (WL)

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

Source: Suzanne Borek
Code Assistance Unit

New Fire Extinguisher Requirements and the UCC: How are They Enforced?

Recently, there was an amendment to the Uniform Fire Safety Act requiring portable fire extinguishers to be installed in one- and two-family residences. Be advised that this is to be enforced at change of ownership under the Uniform Fire Code (UFC). This requirement is not to be enforced under the Uniform Construction Code (UCC). There are no requirements contained in the UCC regarding this recent amendment. The requirement does not apply to a transfer between a new home builder and the first buyer. The UFC regulation was required by a recently enacted law. That law does not require fire extinguishers to be provided by the seller in the first sale of a new home.

If you have any questions regarding this matter, please call me at (609) 984-7609.

Source: Carmine Giangeruso
Division of Codes and Standards

Gas Pipe Sizing Confusion

In the Fall 2001 edition of the *Construction Code Communicator*, an article appeared entitled "Sizing of Gas Piping." This article updated the sizing tables for iron piping and schedule 40 standard piping that are listed in Bulletin No. 94-1.

The article stated which tables should be used for gas pipe sizing when the utility supplier provides gas with a specific gravity of 0.6, a system pressure of 0.5 PSIG or less, and a pressure drop of 0.3 inches of water column.

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Fenestration Area

Section 5.3.2.1 of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999 contains the glazing requirements for energy code compliance in all new buildings except one- and two-family detached dwellings, and multifamily buildings three stories or less in height. This section states, "The total vertical fenestration area, including both fixed vertical fenestration and operable vertical fenestration, shall be less than 50% of the gross wall area. The total skylight area, including glass skylights, plastic skylights with a curb, and all skylights without a curb, shall be less than 5% of the gross roof area." When applying the definition of "fenestration, vertical," the user must go to the definition of "fenestration." Fenestration is all areas (including the frames) in the building envelope that let light in including: windows, plastic panels, clerestories, skylights, glass doors that are more than one-half glass, and glass-block walls.

So, in short, all glazing in the building envelope that lets light in must meet the area requirement of Section 5.3.2.1:

- ☐ Less than 50% of the gross wall area may allow light in
- ☐ Less than 5% of the gross roof area may allow light in

Note: When one sees an italicized word in a section requirement of ASHRAE 90.1/1999, this is a reminder to the user that the word is defined in Chapter 3.

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

Source: Rob Austin
Code Specialist

Here Come the Home Improvement Contractor Registration Requirements!!

As most of you have heard, the Home Improvement Contractor Registration requirements are effective starting January 1, 2006. Beginning on this date, construction permits may not be issued to any home improvement contractor who is not registered with the Division of Consumer Affairs.

The Division of Consumer Affairs has issued every registered contractor a wallet card as proof of registration. Prior to the issuance of a construction permit for a home improvement project, it will be necessary for the permit applicant to present verification of his registration. The

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The article also stated, "When natural gas is delivered under conditions other than those described above, the appropriate gas pipe sizing table should be used."

The tables in that article are to be used as a guide, and do not preclude the use of other tables as listed in the International Fuel Gas Code (IFGC) for other gas pressures and piping materials. Also, the manufacturer's sizing tables may be used.

The IFGC/2003, Section 402.3, Sizing, states three sizing methods that may be used to size gas piping. They are:

1. Pipe sizing tables or sizing equations in accordance with Section 402.4;
2. The sizing tables included in a listed piping system's manufacturer's installation instructions; or
3. Other approved engineering methods.

The 0.3 pressure drop was agreed to by the four gas suppliers in New Jersey at the time Bulletin No. 94-1 was approved. Since that time, some gas suppliers are now permitting the use of a 0.5 pressure drop. If a 0.5 pressure drop is used, then the appropriate table should be used. It is not mandatory that the 0.3 pressure drop be used. Have the contractor supply a letter from the gas supplier stating that the 0.5 pressure drop is acceptable in their service area.

Also, remember that the manufacturer's sizing tables are an acceptable sizing method, especially for sizing corrugated stainless-steel tubing.

As another point of interest, the IFGC/2000 has tables for sizing gas piping for one- and two-pound pressures with a ten percent pressure drop. The IFGC/2003 omitted these two tables from the code. Therefore, it is recommended that Tables 402.3(7) and 402.3(8) from the IFGC/2000 be permitted to be used to size gas piping for one and two pounds with a pressure drop of ten percent.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Glazing and COM*check-EZ*

When inserting or verifying glazing data (windows, doors, skylights) into COM*check-EZ* for all new buildings (except one- and two-family detached dwellings, and multifamily buildings three stories or less in height), you should know the following:

1. *Total window components, total glazed door components, and total skylight components*.
2. *Type of assemblies* (wood, vinyl, metal, etc.) *for #1*.
3. *Construction details* (i.e., clear/tinted, operable/fixed) *for #1*.
4. *U-factors (values) for #1*. U-factors are developed by the National Fenestration Rating Council (NFRC) using a whole product (glazed assembly) performance energy rating system. For additional information, visit its web site at www.nfrc.org.
5. *Solar heat gain coefficients (SHGCs) of #1*. These are also developed by the NFRC.

   A typical window label from the NFRC (see Figure 1) clearly states the U-factors and SHGCs. If a window, glazed door, or skylight does not contain a label, the information can usually be obtained from the manufacturer.



Figure 1

6. *Projection factors (if applicable) for windows and glazed doors.* Windows and glazed doors with overhangs will produce a projection factor. A projection factor is nothing more than a ratio; length of the overhang measured from the building surface to the edge of the overhang furthest away from the building (dimension A) divided by the height of the overhang measured from the bottom of the window or glazed door (dimension B). (See Figure 2.)

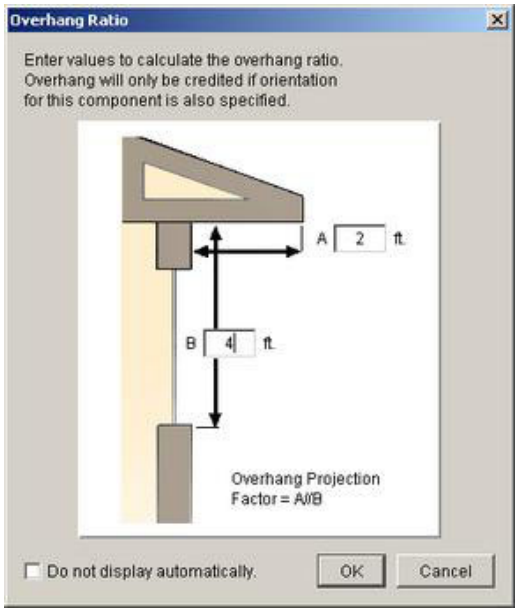


Figure 2

7. *Individual or total gross areas of #1* (i.e., windows, glazed doors, or skylights may be combined if all previous statements have the same values). An example of this would be multiple, double-pane, vinyl windows that are clear and operable, with a 0.35 U-factor, 0.32 SHGC, and 0.50 projection factor. If any of these components differ from another window, then that window must be entered separately.

For additional glazing information, refer to the article entitled "Fenestration Area" in this issue of the *Construction Code Communicator*.

NOTE: COM*check-EZ* can be downloaded for free at www.energycodes.gov. After installation, make sure the program is using ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) Standard 90.1-1999 (this can be verified in the menus at the top of your screen under the heading "Code").

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

Source: Rob Austin
Code Specialist

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contractor must present his wallet card and his certification number must be recorded on the permit application. There are, however, certain instances and types of projects where the contractor is not required to be certified. Any permit applicant who is claiming an exemption shall identify the exemption being claimed in place of the registration number. When a contractor is claiming the “licensed trade” exemption, his licensed trade number should also be recorded in the appropriate section of the permit application. The list of exemptions and codes are as follows:

EXEMPTIONS FROM THE REQUIREMENT FOR CONTRACTOR REGISTRATION	
Exemption	**Definition**
Registered Builder	Any person required to register pursuant to "the New Home Warranty and Builders' Registration Act," P.L. 1977, c. 467
Homeowner	Any person performing a home improvement upon a residential or noncommercial property he owns, or that is owned by a member of his family, a bona fide charity, or other nonprofit organization
Licensed Trade	Any person regulated by the State as an architect, professional engineer, landscape architect, land surveyor, electrical contractor, master plumber, or any other person in any other related profession requiring registration, certification, or licensure by the State who is acting within the scope of practice of his profession
Condo	Any person who is employed by a community association or cooperative corporation
Utility	Any public utility as defined under R.S. 48:2-13
Contractor with Financing	Any person licensed under the provisions of Section 16 of P.L. 1960, c. 41 (C. 17:16C-77) (Note: These are contractors licensed by the New Jersey Department of Banking and Insurance to offer financing.)
Big-Box Store	Any home improvement retailer with a net worth of more than $50,000,000, or employee of that retailer who is making or selling home improvements within the person's scope of employment

Should you have any questions on the Home Improvement Contractor Registration requirements, please contact the Division of Consumer Affairs at 1-888-656-6225.

If you have any questions regarding the relationship of this law to the Uniform Construction Code, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Industrialized/Modular Buildings: Frequently Asked Questions

Questions related to the requirements for submission of documents with the construction permit application, and the municipal enforcing agency's responsibilities with respect to inspection(s) and the issuance of Certificates of Occupancy (COs) (in regards to industrialized/modular buildings) continue to be asked. Although this topic was covered in a previous (Spring 1997) *Construction Code Communicator* article, the questions that continue to be asked frequently are provided below:

Question: What are the requirements for filing documents at the time of application for a construction permit?

Response: This is covered in Part IV, Section 6(A) of the Uniform Administrative Procedures (UAP) of the Industrialized Buildings Commission adopted at *N.J.A.C.* 5:23-4A.10. Following is a summary of the requirements:

1. A statement that the work to be performed under such permit is to include the installation of a certified industrialized/modular building. The statement is to be signed by the applicant or his agent.

2. Schematic floor plan layouts and typical elevations showing the arrangement and layout of the specific building to be manufactured and installed wherein the manufacturer references the building's or building system's approvals of the evaluation agency. Such schematic floor plan layouts and typical elevations need not include sections; construction details; or structural, plumbing, mechanical, and electrical layouts or details typical to the building's or building system's approvals of the evaluation agency. These schematic plans do not need to be prepared or sealed by an architect or engineer.

3. Additionally, the following shall be submitted as required by *N.J.A.C.* 5:23-4A.9(a)1:

- ☐ Structural connections and connections of systems, equipment, and appliances to be performed on site shall be identified, detailed, and distinguished from work to be performed in the manufacturing facility.
- ☐ The method of interconnection between industrialized/modular buildings and the location of connections shall be indicated.
- ☐ Documents shall indicate the location of the certification label(s).
- ☐ Documents shall provide or show, as appropriate, occupancy or use, area, height and number of stories, type of construction, and loads (wind, floor, snow, and seismic).

4. Detailed plans shall be prepared for any site-built construction (e.g., foundation system) related to the *installation of industrialized/modular buildings*. These plans shall be prepared, signed, sealed, and dated by a New Jersey P.E. or R.A., and shall meet the applicable requirements of the New Jersey Uniform Construction Code. However, a homeowner who is planning to construct a single-family home himself to be used as his own principal residence is not required to submit signed and sealed plans [*N.J.A.C.* 5:23-2.15(e)].

5. Manufacturer's installation instructions for the *industrialized/modular building* as set forth at *N.J.A.C.* 5:23-4A.9(a)2.i(1): "Details and methods of installation of industrialized/modular buildings . . . on foundations and/or attachment to each other."

Question: What are the municipal enforcing agency's responsibilities with respect to inspection(s) and the issuance of a CO?

Response: This is covered in Part IV, Section 6(B), (C), (D), and (E) of the UAP of the Industrialized Buildings Commission, and *N.J.A.C.* 5:23-2.22. Following is a summary of the requirements:

1. Verification/confirmation of attachment of insignia (label) of certification; i.e., Industrialized Building Commission's label.

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2. Verification/confirmation of attachment of the manufacturer's data plate (product control and identification - *N.J.A.C.* 5:23-4A.8) to evaluate the suitability of the modular building for the particular location.

3. The local enforcement agency shall inspect work performed on site including foundations and structural, mechanical, plumbing, and electrical connections for compliance with the UAP.

4. The local enforcement agency shall inspect all industrialized/modular buildings upon, or promptly after, installation at the building site to determine whether all site-built work is in accordance with the plans filed with the permit application, the manufacturer's installation instructions, and the conditions listed on the manufacturer's data plate. This may include tests for tightness of plumbing connections done on site, for malfunctions in the electrical system (nondestructive testing by appropriate subcode official), and a visual inspection for damage and obvious nonconformity with the approved plans or the code.

5. The local enforcement agency shall issue a CO for the certified industrialized/modular building after it has been installed and inspected pursuant to the UAP, provided that any industrialized/modular building found not to comply with the code shall be brought into compliance before such CO shall be issued.

6. When the local enforcement agency is making an inspection and finds that the building contains violations to the UAP in work covered by the third-party inspection agency's approval, it shall report the details of such violations in writing to that inspection agency. Where violations compromise the life safety of occupants, a CO shall not be issued and the building shall not be occupied before such hazards are corrected. If the violations do not compromise the life safety of occupants, a Temporary Certificate of Occupancy shall be issued.

For the UAP of the Industrialized Buildings Commission, a list of approved inspection and evaluation agencies, and a list of approved manufacturers, visit its web site at www.interstateibc.org.

In case of any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva, P.E.
Industrialized Buildings Unit
Bureau of Code Services

Moisture Vapor Retarder Installation and the Energy Subcode

Recently, questions have arisen about moisture vapor retarder (MVR) (vapor barrier) installation, how it relates to *N.J.A.C.* 5:23-3.18 (the Energy Subcode), and how it relates to the New Jersey Energy Star® Homes program.

As stated in the Spring 2004 *Construction Code Communicator* article, "New Jersey Energy Star® Homes and the Energy Subcode," the local construction department needs to look for only two things: 1) The "Builder Acknowledgement Form" at the time of permit application and 2) the "Home Energy Rating Scale" (HERS) compliance certificate, or a "passing" final inspection report in lieu of the HERS certificate. This eliminates the need for the local construction department to inspect items covered by the Energy Subcode.

MVRs are a requirement of Section R322 of the the International Residential Code (IRC) 2000, which is the adopted One- and Two-Family Dwelling Subcode (*N.J.A.C.* 5:23-3.21). In addition, MVRs are required by the Building Subcode (*N.J.A.C.* 5:23-3.4) regardless of the method chosen for Energy Subcode compliance.

Therefore, based on the information above, the obligation of the local construction department to inspect for MVRs remains, even in New Jersey Energy Star® Homes.

As stated above, MVRs are required by IRC/2000, Section R322, and are to be installed on the "warm-in-winter" side of the insulation in all framed walls, floors, roofs, and/or ceilings comprising elements of the building thermal envelope. MVRs are defined in Chapter 2 of the IRC/2000; however, the definition is a little confusing. The MVR definition has been clarified in the IRC/2003. The IRC/2006 retains the IRC/2003 definition. Because the State of New Jersey will adopt the IRC/2006 in the near future, the MVR definition in the IRC/2003 may be used to provide clearer, more complete information.

The IRC/2003 defines MVRs as "a vapor-resistant material, membrane, or covering such as foil, plastic sheeting, or insulation facing having a permeance rating of 1 perm or less when tested in accordance with the desiccant method using Procedure A of ASTM E96. Vapor retarders limit the amount of moisture vapor that passes through a material of wall assembly." The definition defines materials that are placed *behind* the wallboard; therefore, an MVR is required to be on the inside of the framed wall in order not to allow moisture to enter the wallboard. Lastly, this definition does not define permeance-rated paint because paint is traditionally placed on the interior side of wallboard (facing a room).

Note: Per the IRC/2000, Section R322, installation of cellulose insulation must have a separate material, membrane, or covering installed on the warm-in-winter side having a permeance rating of 1 perm or less.

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

Source: Rob Austin
Code Specialist

Wall Sheathing Fasteners

It has been brought to the Department of Community Affairs' attention that some fasteners used for the installation of wall sheathing to framing are not of adequate size as per the International Residential Code (IRC) 2000, Tables R602.3(1) and R602.3(2).

Table R602.3(1) of the IRC/2000 requires that wood structural panels which are 5/16 and 1/2 inch in thickness be fastened with 6d common nails (0.113 inch in diameter) minimum. Table R602.3(2) of the IRC/2000 allows for the use of nails between the diameters of 0.097- to 0.099-inch thick. Furthermore, International Code Council Evaluation Report ESR-1539, which was reissued on September 1, 2005, continues to allow the use of alternate fasteners equal to or exceeding the lateral strength of connections found in the IRC/2000. ESR-1539 lists the smallest nail diameter as 0.092 inch with a length of 2-1/4 inches. Additionally, all power gun manufacturers listed in ESR-1539 specify a minimum nail diameter of 0.092 inch in their specifications.

Through investigation, the Department has found some fasteners that are undersized (typically 0.085 inch in diameter) as per the IRC/2000 and ESR-1539. Please be advised, contractors are not permitted to use the undersized nails unless the design professional submits a testing report prepared by a nationally recognized testing agency. The only way to determine the size of the fasteners is to look at the label on the fastener box. The label should clearly state the diameter and length of the fastener. If the fastener is undersized, inform the contractor of this violation and contact me with the manufacturer's information. We will contact the manufacturer and notify them of the problem.

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

Source: Marcel Iglesias
Code Assistance Unit

New Jersey Register Adoptions

Date: July 18, 2005
Adoption: 37 *NJR* 2673(b)
Summary: The adopted amendment at *N.J.A.C.* 5:23-2.14 revises the rule concerning construction permits to require permits for the construction, enlargement, alteration, reconstruction, or demolition of a retaining wall or series of retaining walls having a total height of four feet or greater, or a retaining wall less than four feet providing structural support for a foundation.

Date: October 17, 2005
Adoption: 37 *NJR* 3974(a)
Summary: The adopted amendments at *N.J.A.C.* 5:23-3.13 allow the submission of State-sponsored model code change proposals by the general public. In addition, the adopted amendments change the submission period for State-sponsored model code change proposals to coincide with the development cycle of the model codes. Finally, the adopted amendments provide a process for submitting code change proposals for other State-developed subcodes.

Date: October 17, 2005
Adoption: 37 *NJR* 3974(b)
Summary: The adopted amendment at *N.J.A.C.* 5:23-3.15 requires a minimum earth cover of six inches for building sewers that discharge to private sewage disposal systems.

Source: Megan Sullivan Czyz
Code Development Unit

Occupant Intervention and ASHRAE Standard 90.1-1999

Chapter 9, the lighting section of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-1999, contains a section for automatic lighting shutoff (Section 9.2.1.1). This provision applies to interior lighting in buildings larger than 5,000 ft^2. The lighting is to be controlled with an automatic control device to shut off the building lighting in all spaces by one of three options: 1) a time-of-day operated control device that turns the lighting off at specific programmed times (an independent program schedule is required for areas of more than 25,000 ft^2, but not more than one floor); 2) an occupant sensor that turns the lighting off within 30 minutes of the last occupant's departure; or 3) occupant intervention.

The question arises as to what is "occupant intervention?" As used in the ASHRAE standard, occupant intervention is not what you or I would call occupant intervention. This option is listed under automatic lighting

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Non-Required Fire Protection Systems: How Much is Enough?

I get calls from contractors, as well as officials, asking what requirements need to be complied with when an applicant voluntarily chooses to install a fire protection system (non-required systems).

I direct them to International Building Code Section 901.2, Fire Protection Systems. The exception commenting on non-required systems points out that only the work being performed needs to comply with code. For example, if a tenant having five offices wishes to install a fire detection system in three of them, then wiring, spacing of detectors, etc. must comply with the applicable code in the three offices. The official does not have the authority to require additional detectors in the other two offices. Simple, isn't it?

Should you have any questions, I can be reached at (609) 984-7672.

Source: Gerald E. Grayce
Office of Regulatory Affairs

Parking Garages: Minimum Entrance Height

Recently, the Department of Community Affairs has received several complaints about vehicular entrances to parking garages that have not been constructed to meet the height requirements of the Barrier Free Subcode. The technical design standard adopted for use in the Barrier Free Subcode is the International Code Council/American National Standards Institute (ICC/ANSI) A117.1.

ICC/ANSI A117.1, Section 502.5, entitled "Parking Spaces — Vertical Clearance," requires that "parking spaces for vans shall have a vertical clearance of 98 inches minimum at the space and along the vehicular route thereto."

Once the parking garage has been constructed, it is simply not possible to correct an entrance that is too low, but the low entrances prevent the use of the garage by people with disabilities who rely on vans. The Barrier Free Subcode (at *N.J.A.C.* 5:23-7.9) allows accessible van spaces to be clustered on a single parking level; there is no permission for drivers of vans to be precluded from using a parking garage at all.

Any questions about the requirements for accessible parking — in or out of parking garages — should be directed to the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

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shutoff. The definition of an automatic control device is a device capable of ***automatically*** turning loads off and on without manual intervention; it is definitely not a typical light switch. Essentially, occupant intervention is another form of a sensor. Since option 2 implies that an occupant sensor is some type of motion sensor, option 3 was meant as a catch-all statement for other signaling control devices or alarms that indicate the area is unoccupied and automatically shut off the lighting.

Note: Per Section 9.2.1.1, there is an exception that states lighting intended for 24-hour operation does not require an automatic control device.

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

Source: Rob Austin
Code Specialist

Ladders, Lighting, and Time Clocks . . . Oh, My!

Warning: The installation of certain pool items have been found not to be what you think they are!

The 2002 National Electrical Code (NEC), Section 110.3(B), "Installation and Use," requires that equipment be installed and used in accordance with the instructions included in the listing and labeling.

Currently, some pool equipment supplied by pool installers is listed and labeled, but is not being installed for its listed use. For example, installers have been supplying plastic and fiberglass ladders with metal handrails to customers, and stating that, because they are all plastic or fiberglass, there are no requirements for bonding. This is not always the case. Section 680.26(B)(3) states that all metal fittings within, or attached to, the pool structure shall be bonded. Isolated parts that are not over 100mm (four inches) in any dimension and do not penetrate into the pool more than 25mm (one inch) shall not require bonding. Therefore, any plastic or fiberglass ladder that has metal handrails which exceed the four inches and are within the pool by more than one inch as specified in Section 680.26(B)(3) **ARE NOT** isolated and **ARE** required to be bonded.

Another item not always being used in accordance with the listing and labeling instructions is a light that is being sold to be installed over the side wall of permanently installed, above-ground pools. There's only one small catch . . . these lights are listed to be used on storable pools, **NOT** on permanently installed, above-ground pools!

The third piece of equipment is an Intermatic Timeclock that is listed and labeled for portable and storable pools. The time clock by Intermatic is being installed in permanently installed, above-ground pools.

The point of all this, you ask? . . . . Check the manufacturer's installation instructions! There is more to equipment than meets the eye!!

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

Source: Suzanne Borek
Code Assistance Unit

RES*check-Web*: Starting Point

It has come to our attention that there is confusion with the initial code selection when using the web-based version of RES*check*, RES*check-Web*. The following instructions should be helpful in choosing the correct "Code" in the drop-down menu.

The web-based version requires the user to start at the same place as the downloadable version, the "Code" menu. The user should start by visiting the RES*check-Web* homepage at http://energycode.pnl.gov/REScheckWeb/. In the "Select Code and Location" box in the "Code" drop-down menu, select "New Jersey" (*do not select* "1995 MEC"). Once this is chosen, the second drop-down menu, "State," will become gray so that no other state can be selected, as the New Jersey Code is specific. Next, click on "Start RES*check-Web.*" You will notice that the "Code" and "State" drop-down menus have been automatically updated in the "Project" section of the new page.

Note: The "Code" menu in the downloadable version of RES*check* is located on the menu bar. Again, New Jersey should be selected and not 1995 MEC.

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

Source: Rob Austin
Code Specialist

SPECIAL ALERT

Special Alerts to be Published in the DCA Document Library

Over the years, the Department of Community Affairs has provided code clarification, subject-specific instruction, and other important information to New Jersey's licensed construction code community by way of a mass U.S. Postal Service mailing.

Beginning in the very near future, the Department will use e-mail alerts through the Document Library to provide such clarification, instruction, or otherwise important information, and will no longer send this information to you in paper form through the U.S. Postal Service.

In order to continue receiving this important information, you will need to subscribe to the Document Library. The subscription instructions are provided in the article entitled, "The DCA Document Library: Codes and Standards' Online Reference Room," which appears elsewhere in this newsletter. Please subscribe at your earliest opportunity to avoid missing out on important information from the Department.

If you have questions regarding this article or experience problems with the Document Library, please feel free to e-mail the PermitsNJ Technical Support Team at permitsnj@dca.state.nj.us.

Source: Berit Osworth
PermitsNJ Technical Support Team

Standard Forms Camera-Ready Art Now Supplied through the DCA Document Library

When substantive changes were made to a Uniform Construction Code (UCC) Standard Form in the past, camera-ready art was sent via U.S. Postal or special messenger service to each and every municipal construction code enforcement office.

Due to the sizable nature of such an undertaking, the Department of Community Affairs refrained from making the little changes that cropped up, and simply waited until modifications of substance were needed before undertaking the full production and distribution of camera-ready art.

With the advent of PermitsNJ, the Department's new construction code enforcement management system, and its companion Document Library, the Department is able to make all changes -- big and small -- to the Standard Forms and post the updated camera-ready art in the

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Document Library, ready for downloading as your individual needs arise.

For this reason, the Department will no longer be sending UCC Standard Form camera-ready art to municipal construction code enforcement offices via U.S. Postal or special messenger service. When you need to reorder preprinted stock from your local printing supplier, simply log onto the MyNewJersey portal and download camera-ready art for the form or forms you need.

To access the Document Library, follow the instructions provided in the article entitled, "The DCA Document Library: Codes and Standards' Online Reference Room," which appears on the next page.

If you have questions regarding this article or experience problems with the Document Library, please feel free to e-mail the PermitsNJ Technical Support Team at permitsnj@dca.state.nj.us.

Source: Berit Osworth
PermitsNJ Technical Support Team

Use Group Classification and Sprinkler Exceptions for Residential Buildings

The above-titled article was originally written in 1999 due to the discovery of residential buildings having incorrect Use Group (the term in 1999, now just Group) classifications. These problems occurred in various sections of the State. The design professional's R-3 Group classification was being wrongly accepted by some officials, when the correct classification was Group R-2. As a result, required fire sprinkler systems were not installed.

Additionally, in some cases, the design professional correctly designated buildings as R-2s. Some fire subcode officials incorrectly interpreted Section 904.9 of the 1996 Building Officials and Code Administrators (BOCA) National Building Code, and again did not require fire sprinkler systems.

I had hoped the article clarified these issues. Unfortunately, it did not for all officials.

My office has recently discovered buildings having incorrect Group (the new term) classifications. The result: required fire sprinklers were not installed. A few officials are still neglecting to enforce 2000 International Building Code (IBC) Section 903.2.8. It is the exact same language as was in the 1996 BOCA. Required fire sprinklers are again not being required by officials. These issues were discovered in both the northern and southern areas of the State.

The 1999 article has been updated and the substance of it is being reprinted. Please take heed of the issues. Failure to properly enforce these sections was, and is, a very serious matter.

Use Group Classification and Sprinkler Exceptions for Residential Buildings:

There have been errors made in applying the sprinkler exception for certain residential buildings. There are two steps to deciding whether a residential building is exempt from the suppression requirement contained in Section 903.2.8 of the IBC/2000. The first step is to determine the proper use group classification for the building. The second is to check whether the conditions for exemption in Section 903.2.8 have been met.

1. **Is it (Use) Group R-3 or R-2?**
   It is clear that a two-story residential building having two or more dwelling units per floor and having a means of egress through an enclosed corridor or stair is Group R-2. Take the same building and eliminate the front exterior wall, making the means of egress an exterior stair open in the front and enclosed on three sides. Architects sometimes erroneously classify these buildings as Group R-3. The means of egress includes exit access, exit, and exit discharge. If any portion of a means of egress of a unit is shared with more than two units, the use group is not R-3; it is R-2.

   Example: Two families living on the second floor exit their units and egress via a stair to a first-floor landing. Two families living on the first floor exit their units and also egress onto a common landing, and then use a single stair to grade. The commonality of the egress is a factor to be evaluated when determining the (use) group of a residential building.

2. **Are the conditions for sprinkler exception met?**
   Section 903.2.8 requires that "an automatic fire suppression system shall be provided throughout all buildings with an occupancy in Group R-2." The exception to Section 903.2.8 has been read incorrectly by some readers. The exception plainly states that it applies only to "buildings which do not exceed two stories, including basements which are not considered as a story above grade, and with a maximum of 12 dwelling units per fire area. Each dwelling unit shall have at least one door opening to an exterior exit access that leads directly to the exits required to serve the dwelling unit."

   To qualify for the exception, the building must meet all elements of the exception. If the building meets only one element, the exception cannot be applied. For

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The DCA Document Library: Codes and Standards' Online Reference Room

Even if you are not quite ready to jump in and start using PermitsNJ, you may still take advantage of its associated Document Library, the Department of Community Affairs' new Codes and Standards Online Reference Room.

What is it? The Document Library is a restricted channel on the State's MyNewJersey portal. The portal is simply the platform through which the State of New Jersey provides a variety of e-government services and online information. Routing access to PermitsNJ, and its associated Document Library, through the portal allows us to take advantage of a technology platform that is easy to use, efficient, and most importantly, secure. Again, the Document Library is a restricted channel on the State's MyNewJersey portal.

What will I find there? The Document Library contains information specific to using PermitsNJ and information about New Jersey construction code enforcement in general. The Document Library now contains Uniform Construction Code Standard Forms camera-ready art, current and back issues of the *Construction Code Communicator*, and special alerts to construction code enforcement staff throughout New Jersey. And over time, it will contain so much more.

How do I get in? The following three "keys" will open the Department's Document Library door to you: 1) You must have Internet access; 2) you must be a registered MyNewJersey portal user; and 3) you must be an authorized user to access the Department's Document Library. Note: If you are a construction official, subcode official, or technical assistant actively employed by any of New Jersey's municipal or Interlocal Construction Code Enforcement offices, you are eligible for authorization. By completing and returning the following request form, you will receive an invitation to use the system.

If you have questions regarding this article or experience problems with the Document Library or Online Reference Room, please feel free to e-mail the PermitsNJ Technical Support Team at permitsnj@dca.state.nj.us.

Source: Berit Osworth
PermitsNJ Technical Support Team

Please provide me with access to DCA's Document Library.

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Municipality(ies) in which I work: _____ **Work Telephone:** _____

Title:
(circle all that apply)

Construction Official		*Technical Assistant*	*Subcode Official*	
-Building-	*-Electrical-*	*-Plumbing-*	*-Fire Prot.-*	*-Elevator-*

e-Mail Address: _____

Return to:
NJ Department of Community Affairs
Division of Codes and Standards
Attention: Charles Pierson Jr.
P.O. Box 802
Trenton, NJ 08625-0802

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example, a two-story Group R-2 building with a basement does not fall under the exception. Any building that exceeds two stories requires a fire sprinkler suppression system. The basement, while not a story above grade, is considered a story for the purpose of applying this section. Therefore, in the above example, the building has three stories and a fire sprinkler is required.

The exception also states that egress from a dwelling unit must go to an exterior exit access. In most cases, this means that the door to the dwelling unit opens onto an exterior landing or balcony, onto an exterior stair to grade, or directly to grade. If the exit path is not an exterior exit access, this part of the exception is not met and fire sprinklers are required.

This code section has been in the BOCA National Building Code since the adoption of the 1993 edition. I hope this clarifies the application of the sprinkler exception. If you have any questions, please contact me at (609) 984-7672.

Source: Gerald Grayce
Office of Regulatory Affairs

Visible Alarm Notification – IBC/2000 and ICC/ ANSI A117.1-1998

Section 907.9.1.3 of the International Building Code 2000 requires occupancies of Group R-2 that are required to have a fire alarm system as per Section 907.2.10.1.2 to be provided with the capability to support visible alarm notification appliances within all of the dwelling units.

This means that the wiring methods associated with the visible alarm notification appliance are to be treated as an adaptable feature. This is similar to providing grab bars, which are an adaptable feature; the supportive blocking is installed in the wall and the actual grab bar is installed when needed by the occupant. Based on the same principle, the wiring for the existing notification appliance must be provided for the future installation of a visible alarm notification appliance.

Note: Section 907.2.10.1.2 requires Groups R-2, R-3, R-4, and I-1 to have single- or multiple-station smoke alarms installed and maintained regardless of occupant load.

Source: John N. Terry
Code Assistance Unit

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James E. McGreevey
Governor



Susan Bass Levin
Commissioner

Wood Preservatives – What's Up?

As most of you know by now, Chromated Copper Arsenate (CCA) treated lumber is no longer registered with the United States Environmental Protection Agency as a wood preservative pesticide. Based on this fact, the use of CCA treated lumber will be eliminated for all but some special products. In place of CCA, Alkaline Copper Quaternary (ACQ) treated lumber is now being used.

The purpose of this article is to inform code users of some of the issues that have been identified as a result of the use of ACQ. Much of the information contained in this article is anecdotal. ACQ treated lumber has not been used for a sufficient length of time to establish requirements. However, the industry has established recommendations regarding the alleged corrosive effects of this product. Much of this information is being provided by the industry and may or may not be provided for proprietary reasons. With all of the disclaimers in place, let's look at the problem:

It has been claimed that ACQ treated lumber corrodes certain steel, iron, and aluminum products at an alarming rate. Because of these allegations, most lumber suppliers and fastener manufacturers are recommending the use of hot-dipped zinc galvanized, triple zinc-coated (electroplated) or stainless steel fasteners and connectors. Additionally, direct contact of ACQ treated lumber with aluminum, steel, or iron products is not recommended. This includes flashing, lag, and anchor bolts. Since there is no building code provision regulating the fastener type when ACQ treated lumber is being used, the Department of Community Affairs recommends that the building subcode official utilize the fastener manufacturer or lumber recommendations. This information should be readily available from the fastener supplier.

It should be noted that the use of CCA is not prohibited; it is merely unavailable for purchase. Projects utilizing CCA treated lumber need not be concerned with this issue. Should you have any questions on this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

When are Soil Borings Required?

The 2000 edition of the International Building Code (IBC/2000), Section 1802, entitled "Foundation and Soils Investigations," details when soil borings are required. Section 1802.2.8, "Building Height," states that soil borings are required for buildings that are more than three stories, or 40 feet or more in height. When borings are required, Section 1802.4.1 provides the number of soil borings that are to be performed.

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The confusion arises because, in IBC/2000, Section 1802.2.8 has been indented and it gives the appearance that it is a subsection of Section 1802.2.7, "Seismic Design Category D, E, or F." This is not the case. Numerically, Section 1802.2.8 cannot be a subsection of Section 1802.2.7.

Soil borings are required only for buildings that are more than three stories, or 40 or more feet in height and are not based upon seismic design.

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

Source: Marcel Iglesias
Code Assistance Unit

Are Exterior Windows and Exterior Doors Required to Comply with the Wind Loads of the One- and Two-Family Dwelling Subcode?

There seems to be some confusion regarding the design wind-load requirements for exterior windows and doors in residential construction. The confusion arises in buildings or structures that are *not* within the wind-borne debris region. Are exterior openings (windows and doors) that are not in the wind-borne debris regions required to be designed to resist wind load?

Let's look at the code requirements in the 2000 edition of the International Residential Code (IRC/2000) with respect to wind loads on exterior windows and exterior doors.

Section R301.1, entitled "Design," requires that all "buildings and structures, and all parts thereof, be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, *wind loads*, and seismic loads." This section clearly indicates that all exterior components of a building or structure must be designed to support the wind load.

Section R301.2.1, entitled "Wind Limitation," states "Where loads for windows, skylights, and exterior doors are not otherwise specified, the loads listed in Table R301.2(2), 'Component and Cladding Loads for a Building With a Mean Roof Height of 30 Feet Located in Exposure B,' adjusted for height and exposure per Table R301.2(3), 'Height and Exposure Adjustment Coefficients for Table 301.2(2),' shall be used to determine design load performance requirements for exterior windows and exterior doors." This section specifically addresses all exterior windows and exterior doors, and requires that they be designed to the specific site condition for wind load.

Therefore, all exterior windows and exterior doors must be designed to the applicable wind load.

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

Source: Marcel Iglesias
Code Assistance Unit

New Jersey Register Adoptions

Date: January 20, 2004
Adoption: 36 *N.J.R.* 466(a)
Summary: This adopted amendment makes an administrative correction to the Uniform Construction Code (UCC) at *N.J.A.C.* 5:23-4.9, State Enforcing Agencies — Establishment, to reflect the scope of the Department of the Treasury, Division of Building and Construction's plan review authority with respect to buildings built under the authority of the Division.

Date: January 20, 2004
Adoption: 36 *N.J.R.* 467(a)
Summary: These adopted amendments at *N.J.A.C.* 5:23A include references to P.L. 1995, c. 54 and P.L. 1999, c. 11 to make clear the jurisdiction already assigned by statute to county construction boards of appeals in cases involving municipal utility authority and sewerage authority escrows.

Date: February 2, 2004
Adoption: 36 *N.J.R.* 648(b)
Summary: The adopted amendments at *N.J.A.C.* 5:10-25.2, 25.3, and 25.4 make an administrative correction to the Regulations for Maintenance of Hotels and Multiple Dwellings to replace the references to the "Construction Code Element" with the "Bureau of Construction Project Review," which is the State office responsible for plan review, and update the mailing address for the Bureau of Construction Project Review of the Division of Codes and Standards.

The *Construction Code Communicator* is published three times a year by the New Jersey Department of Community Affairs. Editor: Kristy Paolillo. Layout and design: Mary Ellen Handelman. Address: Division of Codes and Standards, New Jersey Department of Community Affairs, 101 South Broad Street, Post Office Box 802, Trenton, New Jersey 08625-0802. Address changes and subscription requests may be directed to the *Publications Unit*. Comments and suggestions should be sent to the attention of the *Code Development Unit*.

Date: February 2, 2004
Adoption: 36 *N.J.R.* 649(a)
Summary: These adopted amendments at *N.J.A.C.* 5:23-7.2 revise the requirements in the 1998 edition of the International Code Council/American National Standards Institute (ICC/ANSI) A117.1 for reach ranges and electrical outlets for adaptable kitchens in dwelling units. In addition, these adopted amendments delete the requirements for alarms in ICC/ANSI A117.1-1998, and the requirements for ranges and stoves, refrigerators and freezers, and dishwashers for commercial kitchens.

Date: February 2, 2004
Adoption: 36 *N.J.R.* 649(b)
Summary: This adopted amendment at *N.J.A.C.* 5:23-9.3 provides that the installation of battery-powered and plug-in type carbon monoxide alarms is considered ordinary maintenance.

Date: February 17, 2004
Adoption: 36 *N.J.R.* 949(b)
Summary: These adopted amendments at *N.J.A.C.* 5:23-2.14, 3.11, 3.20, 4.4, 4.18, 4.20, 4.24, 5.3, 5.5, 5.19A, 7.3, 7.5, 7.9, 7.10, 9.8, 9.9, 12.2, 12.3, 12.4, 12.5, 12.6, and 12.9 insert "Group R-5" into the UCC, which is the designation for one- and two-family dwellings constructed in conformance with the One- and Two-Family Dwelling Subcode, and is equivalent to "old" Use Group R-4 in the previously adopted One- and Two-Family Dwelling Subcode. In addition, these adopted amendments delete "Use" from "Use Group" to provide consistency with the terminology used in the Building Subcode.

Date: February 17, 2004
Adoption: 36 *N.J.R.* 952(a)
Summary: These adopted amendments at *N.J.A.C.* 5:23-3.11A provide that municipalities in which public schools are located have the right of first refusal to perform the plan review of a proposed construction project provided that the agency is appropriately classified to perform the plan review.

Source: Megan K. Sullivan
Code Development Unit

Communicator Index Available on the DCA Website

How many times have you dealt with an issue on which you knew there was an article published in the *Construction Code Communicator*? Oftentimes when this happens, you pick up the telephone, call a colleague, and ask them if they remember the article. This could go on for days if the article was published years ago.

Those days are gone! Now available on the Department of Community Affairs' web site is an index of the *Communicator*. Just go to http://www.state.nj.us/dca/codes/ and click on the link, "View the index of the Construction Code Communicator," and a pdf file will open, which gives you the ability to search for articles by title or by subcode matter.

If you need a copy of a particular article, contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Bathroom Exhaust Fans

The Department of Community Affairs has received many telephone calls pertaining to bathroom ventilation and bathroom exhaust fans for residential dwellings that address the question, "When is a bathroom exhaust fan required?"

There are two types of bathroom ventilation: natural and mechanical. Requirements for both types are contained in the 2000 edition of the International Residential Code (IRC/2000).

IRC/2000, Section R303.3, entitled "Bathrooms," requires that bathrooms be provided with an aggregate glazing area in windows of not less than three square feet and that one-half must be openable. This section also contains an exception which states that, where a mechanical ventilation system is provided, the glazed areas are not required. If mechanical ventilation is provided, the minimum ventilation rates required are 50 cfm for intermittent ventilation and 20 cfm for continuous ventilation. Ventilation air from the space must be exhausted directly to the outside.

Therefore, if a residential building is constructed in accordance with the IRC/2000 and the bathroom includes the aggregate glazing area in windows per Section R303.3 as mentioned above, a bathroom exhaust fan would not be required.

Please note that IRC/2000, Section R303 does not reference the 2000 edition of the International Mechanical Code (IMC/2000) for ventilation. Ventilation requirements for residential buildings are to be in accordance with the IRC/2000 and not the IMC/2000.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Location of Gas Shutoff Valves

The Code Assistance Unit has received many questions on the requirements for placement of gas shutoff valves, particularly those for vented decorative appliances and decorative appliances for installation in vented fireplaces.

The question is, "Where may the required equipment shutoff valve for a vented decorative appliance or a decorative appliance for installation in vented fireplaces be located in order to be in compliance with the code?"

The 2000 edition of the International Fuel Gas Code (IFGC/2000), Section 409.5, "Equipment Shutoff Valve," provides that, when installing a shutoff valve to operate in conjunction with an appliance, the shutoff valve must be located in the same room and within a prescribed distance to the appliance. However, Section 409.5 also includes an exception for vented decorative appliances and decorative appliances for installation in vented fireplaces. This exception would allow the gas shutoff valve to be installed in an area remote from the appliance provided that the valve is readily accessible, does not serve any other equipment, and is permanently identified.

The IFGC/2000 defines a "vented decorative appliance" as "a vented appliance wherein the primary function lies in the aesthetic effect of the flames." A "decorative appliance for installation in vented fireplaces" is defined as "a vented appliance designed for installation within the fire chamber of a vented fireplace, wherein the primary function lies in the aesthetic effect of the flames." A "valve – equipment shutoff" is a "valve located in the piping system used to isolate individual equipment for purposes such as service or replacement" (and not used as an emergency shutoff valve).

As stated above, according to the exception provided in Section 409.5, the equipment shutoff valve for the decorative appliances listed may be located in an area remote from the appliance. This exception would allow the shutoff valve to be located in a basement or another area that is not located in the same room as the appliance. This valve, as defined in the IFGC/2000, would be used as a shutoff valve for servicing the equipment; but remember, the valve must be provided with ready access, serve no other equipment, and be permanently identified. Based on the definition of an equipment shutoff valve, the valve would be used for servicing or replacement of the appliance and not used as an emergency shutoff valve.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Homeowners Signing Energy Calculations

The Code Assistance Unit has received a number of calls from code users with the question, "Who may sign and seal the energy calculations to be submitted with the permit jacket?" For instance, the RES*check* energy calculation program prints a signature line for the "Builder/Designer" to sign. The purpose of this article is to provide additional clarification in such instances.

N.J.A.C. 5:23-2.15, "Construction Permits – Application," at Subsection (e)1vi states that energy calculations showing compliance with the Energy Subcode are to be submitted for all new buildings and for additions to existing buildings. It also states that these calculations for Class I and Class II are to be signed and sealed by the design professional. Calculations for Class III structures may be submitted by the mechanical contractor.

Class I and Class II structures must have energy calculations signed and sealed by a licensed engineer or a registered architect. Class III structures may have a licensed engineer, a registered architect, *or* a mechanical contractor sign and seal the energy calculations. In the case of a single-family homeowner who has prepared his or her own plans, including energy calculations, for the construction of a structure used or intended to be used exclusively as his or her private residence [see *N.J.A.C.* 5:23-2.15(e)1ix and *N.J.A.C.* 13:27-3.3(a)], the homeowner is permitted to sign the energy calculations.

The RES*check* software does offer a signature line for the "Builder/Designer" to sign. Keep in mind, the RES*check* software is created by the United States Department of Energy for distribution and use throughout the country. So, the design professional/mechanical contractor/owner, as appropriate, signature line is a generic clause in the program for the "design professional" to sign when related to the State of New Jersey.

NOTE: The New Jersey edition of RES*check* can be found at www.energycodes.gov.

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

Source: Rob Austin
Code Assistance Unit

Hotel and Multiple Dwelling Security Requirements

In August of 1979, the Department of Community Affairs issued Bulletin No. 79-6, entitled "Hotel and Multiple Dwelling Security Requirements." This bulletin states that the issuance of a Certificate of Occupancy for a new hotel or multiple dwelling is considered equivalent to the Certificate of Inspection issued for the initial hotel or multiple dwelling inspection. This means that the construction department is responsible for verifying that the new hotel or multiple dwelling complies with all of the requirements of the Regulations for Maintenance of Hotels and Multiple Dwellings.

The Uniform Construction Code addresses all of these regulations except one: building security. The text of the Regulations for Maintenance of Hotels and Multiple Dwellings applicable to building security can be found in *N.J.A.C.* 5:10-19.1, "Hotels," and 19.2, "Multiple Dwellings." It is not necessary for you to go find these requirements; they are reprinted in Bulletin No. 79-6 for your use.

This is not new information. It is a reminder that code officials are responsible for the enforcement of these requirements and that Bulletin No. 79-6 remains active.

Should you have any questions on this matter, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

New Jersey Energy Star® Homes and the Energy Subcode

N.J.A.C. 5:23-2.15(e)1vi(1) requires detached one- and two-family residential buildings, and other residential buildings three stories or less in height, to comply with the Energy Subcode by using one of four methods: [1] Submission of New Jersey Energy Star® Homes (NJESH) compliance documentation, [2] Submission of RES*check* software printouts (http://www.energycodes.gov), [3] Conformance with the prescriptive packages (Bulletin No. 03-2), or [4] Submission of hand calculations (*guidance* can be found in the appendices of the 1993 Building Officials and Code Administrators Energy Conservation Code).

When focusing on NJESH, the local construction department needs to look for only two things. [1] The permit application must contain the "Builder Acknowledgement" form. This form is provided to the permit applicant (usually the building contractor) from the local utility or the utility's consultant (for example, McGrann Associates and EAM Associates). [2] The "Home Energy Rating Scale" (HERS) compliance certificate must be submitted to the construction office before the Certificate of Occupancy (CO) can be issued. HOWEVER, a "**passing**" **final inspection report** may be submitted in lieu of the HERS certificate, since this certificate is normally not available until long after the home is ready for its CO. The passing

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final inspection report demonstrates conformance with NJESH and proves to the local code official that the home meets or exceeds the guidelines of NJESH. For more information on NJESH, please visit their web site at www.njenergystarhomes.com.

Note: If the owner or person in responsible charge decides mid-project not to continue with the NJESH program, the residence must still comply with one of the other methods listed above as per the Energy Subcode, *N.J.A.C.* 5:23-3.18.

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

Source: Rob Austin
Code Assistance Unit

Playground Equipment – "A Public Service Message"

As you may have noticed in 1999, the Playground Safety Subcode was added to the Uniform Construction Code (UCC) as *N.J.A.C.* 5:23-11. This new subcode did not create any new enforcement obligations for the code officials. As has always been the case, permits are required for any element of playground construction that is subject to the permit requirements of the UCC. The owners of the playgrounds are responsible for compliance with all of the requirements of these rules. This article is to let you know that the first of the compliance deadlines contained in these rules is approaching. As a public service, you may want to pass the word along to those who manage playgrounds in your town.

The Playground Safety Subcode requires the upgrade and improvement of all playgrounds. **The upgrade of surfaces is required by October 18, 2004.** The definition of a playground is "an improved area designed, equipped, and set aside for play of six or more children, which is not intended for use as an athletic playing field or athletic court, and shall include any play equipment, surfacing, fencing, signs, internal pathways, internal land forms, vegetation, and related structures."

The compliance deadlines are as follows:

- **April 18, 2000** -- All newly constructed playgrounds built, and all new and replacement equipment installed, by a governmental, nonprofit, or private for-profit entity shall conform to the requirements of this subcode.
- **October 18, 2004** -- All governmental, nonprofit, and for-profit private entities operating playgrounds shall upgrade their playgrounds by replacement or improvement as necessary to comply with this subcode for surfacing.
- **October 18, 2007** -- All governmental and for-profit private entities operating playgrounds shall upgrade their playgrounds by replacement or improvement as necessary to comply with this subcode for all other elements, or in the case of governmental entities, at such earlier date as State funds are made available for such purpose.
- **October 18, 2014** -- All nonprofit entities operating playgrounds shall upgrade their playgrounds by replacement or improvement as necessary to comply with this subcode for all other elements.

NOTE: All construction or alteration of playgrounds, playground equipment, and surfacing that are subject to the Playground Safety Subcode shall comply with the applicable provisions of the Barrier-Free Subcode (*N.J.A.C.* 5:23-7). Also, in accordance with *N.J.A.C.* 5:23-7.18(d) and ICC/ANSI A117.1-98, Sections 302 and 303, surfaces of all routes and spaces required to be accessible shall be stable, firm, and slip-resistant. Sand and gravel shall therefore not be used as surfacing materials when new equipment is being installed, or a new safety surface is being put in place, and the Barrier-Free Subcode is applicable.

Playground upgrades and new installations are required to comply with the 1997 edition of the "Handbook for Public Playground Safety" (HPPS), Pub. No. 325, which is produced by the United States Consumer Product Safety Commission and adopted by reference as the Playground Safety Subcode. The HPPS guidelines govern design, installation, inspection, and maintenance of playgrounds and playground equipment. These guidelines can be found on the Internet at: http://www.cpsc.gov/cpscpub/pubs/325.pdf.

Source: Rob Austin
Code Assistance Unit

Energy: Recessed Lighting Fixtures

Recessed lighting fixtures (RLFs) have been a topic of discussion lately, especially in relation to the Energy Subcode (*N.J.A.C.* 5:23-3.18). Questions have arisen as to what the code requirements are for RLFs and which subcode is responsible for regulating these fixtures.

N.J.A.C. 5:23-3.18 adopts by reference the 1995 edition of the Council of American Building Officials' Model Energy Code (CABO MEC/1995) as New Jersey's Energy Subcode of the Uniform Construction Code. Sections

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502.3.4 and 602.3.3 of CABO MEC/1995, both entitled "Recessed Lighting Fixtures," contain requirements for RLFs in relation to the Energy Subcode. The following are the three options for the installation of RLFs when installed in the building envelope. Only one must be followed to meet the requirements of the Energy Subcode:

1. Type IC rated, manufactured with no penetrations between the inside of the recessed fixture and ceiling cavity, and sealed or gasketed to prevent air leakage into the unconditioned space; or

2. Type IC rated or non-IC rated, installed inside a sealed box constructed from a minimum ½-inch-thick gypsum wall board or constructed from preformed polymeric vapor barrier, or other air-tight assembly manufactured for this purpose, while maintaining required clearances of not less than ½ inch from combustible material and not less than three inches from insulation material; or

3. Type IC rated, in accordance with ASTM E 283-91 (Standard Method of Test for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors), with no more than 2.0 cfm air movement from the conditioned space to the ceiling cavity. The lighting fixture shall be tested at 75 Pa or 1.57 lbs/ft^2 pressure difference and shall be labeled.

Sections 502.3.4 and 602.3.3 of CABO MEC/1995 are the responsibility of the building subcode official, who inspects RLFs to ensure that they are either insulation cover rated (IC rated), or installed in a sealed box that has the insulation at least three inches from the light fixture. It is the building subcode official's responsibility to ensure compliance, both in the inspection plan review and inspection plan review stages, because RLFs pose a potential fire hazard if installed incorrectly with insulation. These fixtures also act as chimneys, transferring heat loss and moisture through the building envelope into attic spaces if not installed properly. The heat loss resulting from improperly insulated RLFs can be significant.

NOTE: Electrical subcode officials are responsible for the wiring methods of RLFs.

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

Source: Rob Austin
Code Assistance Unit

Energy – Can't Download? No Problem! (Corrections to Web Site Links)

The correct web site for free downloads of the energy compliance tools RES*check*, New Jersey edition and COM*check-EZ* is www.energycodes.gov. Please make this correction to your *Construction Code Communicator* article found on page 11 of Volume 15, Number 3, Winter 2003.

Also, the links for RES*check* and COM*check* Package Generators allow you to generate your own code-compliant packages based on your building location and window-to-wall ratio. They do not print out a compliance certificate showing compliance with the Energy Subcode of the Uniform Construction Code. When speaking to the United States Department of Energy, it was discovered that only RES*check* can be used online for compliance; however, the web site to visit is http://bldgcode.pnl.gov/REScheckWeb/.

Lastly, the reference to the "1995 Mechanical Energy Code" should read "1995 Model Energy Code."

I apologize for any inconvenience. If you have any questions, you may reach me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

The Atrium

"The Atrium" – A different thing to different people.

To the building user, it may be a grand entrance to a building.

To the building owner, it may be a pronouncement – "Look to see how significant my building is."

To the architect, it may be a statement of grandeur in a work of art.

To the code official, it may be a challenge in providing life safety to the building users.

Life-safety requirements for atriums have been set forth in the Uniform Construction Code for as long as I have been in code enforcement; and with a number of major code adoptions have come a number of significant changes, each time providing for improved "constructability," increased life safety, and more usability. Now, since the adoption of the 2000 edition of the International Building Code (IBC/2002), more changes have occurred.

The changes are a result of both the normal code change process and of combining three independent publications into one code. Trade-offs that were only in the Building Officials and Code Administrators National Building Code have been lost, while new and somewhat more stringent requirements have come from other codes. Let's take this time to revisit the requirements for atriums.

First, let's define an atrium. An atrium is a space that is two or more stories in height with a low fire-hazard use, such as an entrance with a lobby.

Second, let's look at what an atrium is *not*. It is not a shaft such as a stair shaft, elevator shaft, or mechanical shaft. It is not a tall room or auditorium with or without mezzanines or balconies. All of these structures have their own code requirements and the requirements set forth for atriums do not apply.

Third, I'd like to discuss the three major code issues concerning the atrium: (1) automatic sprinkler protection, (2) smoke control, and (3) the enclosure of the atrium.

(1) Automatic Sprinkler Protection (See IBC/2000, Section 404.3):
Automatic sprinkler protection is required in all atriums and throughout buildings containing atriums, *except* (there's always an exception or two in the code) sprinklers are not required at the ceiling of an atrium where the ceiling of the atrium is 55 feet or greater above the atrium's finished floor, or in portions of the building where those portions are separated from the atrium by two-hour fire-rated assemblies, either vertical or horizontal. A two-hour rating provides adequate separation between sprinklered and unsprinklered areas, just as they provide effective separation between uses. This exception might be used when an addition which contains an atrium is added to an unsuppressed existing building.

(2) Smoke control (See IBC/2000, Section 404.4):
All atriums are required to have a smoke control system capable of controlling the smoke within the complete volume of the atrium, except for four specific cases, which are indicated in two exceptions.

The first exception is when an atrium complies with Exception 7 of Section 707.2, which sets forth provisions for shaft enclosures. This exception provides four specific items with which the atrium must comply and it must comply with ALL of the items. The four items are:

(1) It cannot connect more than two floors,
(2) It is not part of a required means of egress,
(3) It is not open to a corridor in Group I or R uses,
(4) It is separated from other atriums or floor openings serving other floors.

The second exception: The atrium is not required to have smoke control when it complies with Exception 2, 8, or 9 of Section 707.2.

- Exception 2 allows escalator openings and non-egress stairs to have unenclosed floor openings in fully sprinklered buildings.
- Exception 8 addresses parking garages.
- Exception 9 addresses floor openings between a mezzanine and the floor below.

(3) The Enclosure of the Atrium (See IBC/2000, Section 404.5):
The volume of an atrium is defined by one-hour enclosure assemblies. The enclosure is permitted to be of a tested fire-resistive rated fire barrier or of glass that is completely wetted by an automatic sprinkler system. If the glass exception is used, then the glass must be either set in gasketed frames to allow for the expansion and contraction of the glass when heated by the fire and cooled by the sprinkler system or, as indicated in Section 404.5, Exception 1.2, the glazing may be of glass block construction having a tested rating of ¾ of an hour.

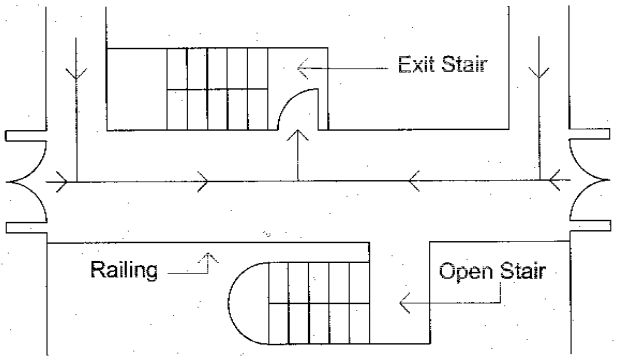
The above provisions require any atrium that has an egress element passing through it to have smoke control. This includes a lobby in an atrium when the design requires that the occupants pass through the atrium at the first level to get from an exit stair to the exit discharge, or when the occupants are required to cross the atrium at an upper level to get to an exit stair. (See Figure A.) These requirements also allow the construction of an atrium of more than two stories without requiring a smoke control system, provided the atrium is not open to more than two stories. (See Figure B.) If two or more atriums and/or floor openings are interconnected, then the volume will be determined by the separation or lack of separation from each other.

If more than three floors are penetrated and are open to a combination of atriums and/or floor openings, the maximum number of atriums or floor openings that may be connected together is three. They must be separated from any other atriums or floor openings by construction conforming to the requirement for shaft enclosures. A one-hour assembly is required in buildings

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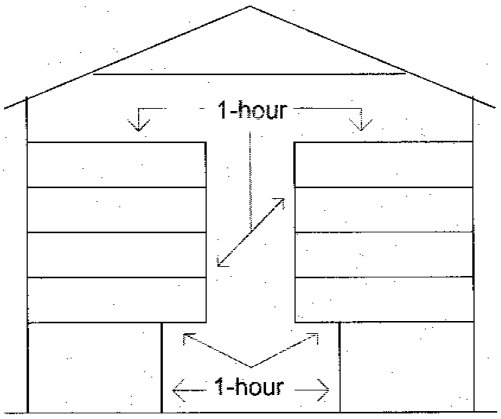
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Figure A



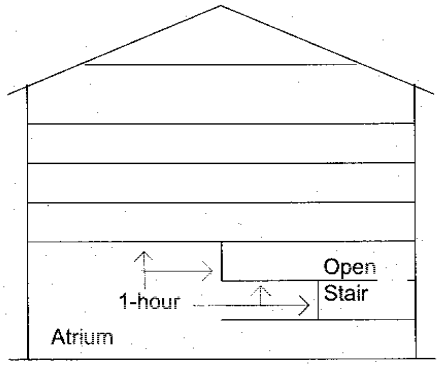
2-STORY ATRIUM

Figure B



OPEN TO 2 STORIES

Figure C



2 HOURS OF SEPARATION REQUIRED
IN PLACE OF 1 HOUR ASSEMBLY

up to three stories and a two-hour assembly for buildings greater than three stories. (See Figure C.) This is required by Section 707.2, “Shaft Enclosure Required,” Exception 7.

Care must be taken when determining compliance with the atrium sections because so many exceptions and options exist. If not properly protected, multiple floor openings on connected floors can cause a chimney effect that could block the means of egress and make exiting from a building difficult, if not impossible.

If you have any questions on this article, you may contact the Code Assistance Unit at (609) 984-7609.

Source: Jeffrey Applegate
Code Assistance Unit

Uniform Construction Code Penalties

A recent amendment (P.L. 2003, c. 228) was made to the Uniform Construction Code (UCC) Act (P.L. 1975, c. 217) that increases the maximum penalty that can be issued by local enforcing agencies for violations of the UCC from $500 to $2,000. This amendment was signed into law by Governor James E. McGreevey on January 9, 2004 and is immediately enforceable.

There are four conditions under which penalties greater than $500 may be levied by local enforcing agencies as follows:

1) Up to $1,000 per violation for failure or refusal to comply with any lawful order, unless the failure or refusal to comply is done with the knowledge that the failure or refusal to comply will endanger the life or safety of any person, in which case the penalty shall be up to $2,000 per violation;
2) Up to $2,000 per violation for failure to obtain a required permit prior to commencing construction, or for allowing a building to be occupied without a Certificate of Occupancy;
3) Up to $2,000 per violation for failure to comply with a Stop Construction Order;
4) Up to $2,000 per violation for willfully making a false or misleading written statement, or willfully omitting any required information or statement in any application or request for approval.

Note: In an occupied building, a code violation involving fire safety, structural soundness, or the malfunctioning of mechanical equipment that would pose a life-safety hazard shall be deemed to endanger the life or safety of a person. In an unoccupied building, a code violation of a requirement intended to protect members of the public who are walking by the property shall be deemed to endanger the life or safety of a person.

Amendments to the UCC to make it conform to the Act will follow shortly. If a violation of the UCC falls under one of the conditions outlined above, code officials should apply the higher penalty.

If you have any questions regarding issuing penalties for violations of the UCC, contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Louis Mraw
Supervisor, Office of Regulatory Affairs

Water Heaters and Bonding

Bonding jumpers are required for water heaters in accordance with the 2002 edition of the National Electrical Code, Section 250.104, entitled “Bonding of Piping Systems and Exposed Structural Steel.” Section 250.104(B), “Other Metal Piping,” states that “metal piping systems that may become energized shall be bonded to the service equipment enclosure, the grounded conductor at the service, the grounding electrode conductor where of sufficient size, or to the one or more grounding electrodes used.”

The bonding jumper shall be sized in accordance with Section 250.122, “Size of Equipment Grounding Conductors,” using the rating of the circuit that may energize the piping system. The equipment grounding conductor for the circuit is to be allowed to serve as the bonding means. The points of attachment of the bonding jumper must be accessible.

If, at the time of replacement, an existing water heater has no bonding jumper but has an equipment grounding conductor present, then no bonding jumper would be required to be installed because the equipment grounding conductor is allowed to serve as the bonding means.

However, if there is no bonding jumper or equipment grounding conductor present at the time of replacement, particularly with gas water heaters, then a bonding jumper must be installed and an electrical permit is required.

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

Source: Suzanne Borek
Code Assistance Unit

Wells Used as the Grounding Electrode

The Code Assistance Unit has received questions concerning wells that are used as grounding electrodes. Where a well pump that had served as the sole grounding electrode for the electrical service has been removed, a new grounding electrode and conductor are required to be installed. The installation requires an electrical permit.

If the well did not serve as the grounding electrode and no grounding electrode conductor was connected to it at the time of removal, then a new grounding electrode and conductor are not required to be installed, and an electrical permit is not required. If you have any questions on this matter, you may reach me at (609) 984-7609.

Source: Suzanne Borek
Code Assistance Unit

Greetings from Governor James E. McGreevey and Commissioner Susan Bass Levin

One fundamental principle of the New Jersey State Uniform Construction Code (UCC) is that New Jersey citizens are provided with safe and affordable housing and buildings. This is achieved through local code enforcement agencies working in partnership with design professionals, builders and developers.

Three times per year, the Department of Community Affairs' (DCA) Division of Codes and Standards publishes the *Construction Code Communicator*. This newsletter provides subscribers - both public and private - with information on emerging construction issues. It also provides code officials with guidance on UCC administration and enforcement.

Through the *Construction Code Communicator* and all of our programs and services, we remain committed to providing safe and affordable housing and buildings to New Jersey citizens.

With all good wishes,

James E. McGreevey
Governor

Susan Bass Levin
Commissioner



Susan Bass Levin
Commissioner
NJ Department
of Community Affairs



James E. McGreevey
Governor
State of New Jersey



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NEW JERSEY UNIFORM CONSTRUCTION CODE

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NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS



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James E. McGreevey
Governor



Susan Bass Levin
Commissioner

The following is from the 2003 annual issue of the New Jersey Construction Reporter*, a publication by the Department of Community Affairs that examines construction statistics from building permits and certificates issued by building officials throughout the State. For a complimentary issue, please call John Lago at (609) 292-7898, or e-mail him at jlago@dca.state.nj.us.*

2003 Highlights of the *New Jersey Construction Reporter*

This was a good year for New Jersey's construction industry. A strong housing market and State buildings sustained the industry's performance. State buildings refer to a category of construction that includes structures built by State governmental agencies or any of its instrumentalities, like transit and highway authorities, and State colleges and universities. School construction also had a featured role. But, the lead story was the way New Jersey's housing industry performed, especially in the State's big cities.

Estimated construction costs authorized by building permits were $12.1 billion. This was about the same as last year (0.6 percent more). In real terms, assuming prices grew by 2.3 percent, estimated construction costs declined by 1.7 percent compared to last year.

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Fire Alarm Systems, Bulletin No. 94-6

This article is intended to be a heads up for electrical subcode officials and inspectors. Bulletin No. 94-6, entitled "Fire Alarm Systems," comments on plan review and inspection responsibilities for both electrical and fire protection subcode officials. The bulletin points out that plan review is shared between both subcodes, and both subcode officials are required to perform inspections. Electrical subcode officials are required to inspect wiring and wiring location, power supply for the panel, etc. Fire subcode officials are required to inspect the location of the detectors and perform the final acceptance test.

Discussions with some electrical subcode officials indicate that most officials are in fact inspecting the 110V circuitry for fire alarm systems; however, the low-voltage fire alarm systems are another matter.

Low-voltage fire alarm systems require the same inspection as one would perform for 110V circuitry, utilizing Article 760 of the 2002 edition of the National Electrical Code. The wiring is required to be inspected by the electrical subcode official. If you haven't been doing so, now is the time to start.

If you have any questions, please call me at (609) 984-7672.

Source: Gerald Grayce
Office of Regulatory Affairs

New Jersey Register Adoptions

Date: April 5, 2004
Adoption: 36 *N.J.R.* 1753(a)
Summary: These adopted amendments establish requirements for the submittal of prototype plans, make changes to the conditions for plans to qualify as prototype plans, clarify the information needed to obtain permits based on the prototype plan filing, and extend the possibility of prototype plan review to structures that are to be built repeatedly in different municipalities throughout the State. In addition to establishing clear standards for prototype plan submittal, these adopted amendments also establish fees and time frames for the issuance of permits based on a released prototype, both by the Department of Community Affairs and by the municipality.

Date: April 5, 2004
Adoption: 36 *N.J.R.* 1755(a)
Summary: These adopted amendments assign enforcement responsibilities for the 1995 edition of the Council of American Building Officials Model Energy Code, which references the 1999 edition of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers Standard 90.1, to building, plumbing, or electrical subcode officials, as appropriate. In addition, these adopted amendments provide a cross-reference to the Building Subcode for permitting requirements for the construction of "hoophouse" or "polyhouse" structures.

Date: April 5, 2004
Adoption: 36 *N.J.R.* 1757(a)
Summary: This adopted amendment makes an administrative correction at *N.J.A.C.* 5:23-3.11(j)6 to replace the reference to "Group R-4" with "Group R-5" for consistency with the definition in the Building Subcode of the Uniform Construction Code (UCC).

Date: April 5, 2004
Adoption: 36 *N.J.R.* 1757(b)
Summary: These adopted amendments provide that the only accepted standards for modular construction in the State are the adopted subcodes of the UCC.

Date: April 5, 2004
Adoption: 36 *N.J.R.* 1758(a)
Summary: These adopted amendments update the provisions of the Rehabilitation Subcode and incorporate changes resulting from the adoption of the 2000 edition of the International Building Code as the Building Subcode of the UCC.

Date: May 17, 2004
Adoption: 36 *N.J.R.* 2490(a)
Summary: This amendment readopts *N.J.A.C.* 5:12, "Ski Lifts," without change.

Date: May 17, 2004
Adoption: 36 *N.J.R.* 2490(b)
Summary: This adopted amendment makes administrative corrections in the Rehabilitation Subcode at *N.J.A.C.* 5:23-6.3, 6.8, and 6.24A. The adopted amendment at *N.J.A.C.* 5:23-6.3 corrects a typographical error in the definition of "UFC fire barrier." The adopted amendment at *N.J.A.C.* 5:23-6.8 deletes a duplicate cross-reference. Finally, the adopted amendment at *N.J.A.C.* 5:23-6.24A deletes a reference to "Automatic Fire Sprinkler System."

Date: June 7, 2004
Adoption: 36 *N.J.R.* 2733(a)
Summary: The adopted amendments at *N.J.A.C.* 5:18-1.6, "Container Markings," set forth requirements for the size and color of lettering for emergency contact information on liquefied petroleum (LP) gas containers. *N.J.A.C.* 5:18-6.4, "Submittal of Notice of LP-Gas Installations," contains requirements for notifying the Bureau of Code Services of LP-gas installations when plans are not required. *N.J.A.C.* 5:18-10.1, "Licenses Required," amends the insurance requirement for license holders to provide for consistency with the Federal Motor Carrier Safety Administration.

Date: June 21, 2004
Adoption: 36 *N.J.R.* 3055(c)
Summary: The adopted amendments to *N.J.A.C.* 5:11 are the result of the recodification of *N.J.A.C.* 5:40, the Relocation Assistance and Eviction rules, to *N.J.A.C.* 5:11, and reflect the transfer of the Relocation Assistance Program to the Division of Codes and Standards. The adoption also includes editorial amendments.

Source: Megan K. Sullivan
Code Development Unit

The *Construction Code Communicator* is published three times a year by the New Jersey Department of Community Affairs. Editor: Kristy Paolillo. Layout and design: Mary Ellen Handelman. Address: Division of Codes and Standards, New Jersey Department of Community Affairs, 101 South Broad Street, Post Office Box 802, Trenton, New Jersey 08625-0802. Address changes and subscription requests may be directed to the *Publications Unit*. Comments and suggestions should be sent to the attention of the *Code Development Unit*.

Discount on National Standard Plumbing Codes

In our continuing effort to negotiate with the organizations that publish our adopted codes, the Plumbing-Heating-Cooling Contractors Association (PHCC), publisher of the National Standard Plumbing Code (NSPC), has agreed to provide municipalities with a "member" price for the 2003 NSPC, both the non-illustrated and the illustrated versions.

To receive the discount, the municipality must submit a request on official municipal letterhead and include the inspector's name(s), along with a purchase order or check made payable to PHCC. Each municipality will be entitled to up to four code books at the member price.

Please call PHCC at (609) 499-8070 for the member price, and for shipping and handling charges.

Your order should be mailed to:

PHCC-NJ
1305 Maple Avenue
Roebling, New Jersey 08554

Attention: Denise Voorhees, Executive Director

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Experior Has a Second Testing Site

As was promised when the administration of the exams offered by Experior for the National Certification Program for Construction Code Inspectors (NCPCCI) was moved from Prometric, Experior has opened a second testing site in New Jersey.

The address of the site is 1168 White Horse Pike, Hammonton. Directions may be found on the Experior web site, www.experioronline.com.

If you have questions about licensing requirements, please contact the Licensing Unit at (609) 984-7834. If you have questions about the exams themselves, please contact me at (609) 984-7609.

Source: Emily W. Templeton
Code Development Unit

UCC Construction Permits and Septic System Prior Approvals

While continuing to work together with the New Jersey Department of Environmental Protection (DEP), it has been brought to the attention of the Department of Community Affairs (DCA) that local construction permits are being issued without prior approvals, or are inconsistent with approvals from the local health agency (county or municipal) for projects that are connected to septic systems for new construction, new additions, changes of use, or alteration work that increase bedroom counts. Local health agencies administer the rules for septic systems (properly called "individual on-site sewage disposal systems").

There have been a number of situations where homes or other buildings with existing septic systems are expanded in a way that violates either the septic system rules or the Uniform Construction Code (UCC) because of interplay between the two sets of rules. This occurs when either the municipal or county board of health or the UCC officials do not ensure that both sets of rules are satisfied before construction permits are issued.

In collaboration with the DEP, the DCA is seeking to remedy these problems by reminding UCC officials of their duty to require septic system approvals prior to issuing a construction permit for new construction to be served by septic systems. (As a reminder, this topic is discussed in DCA Bulletin No. 79-7, "Septic Systems," which was revised in May 1995. This bulletin reminds UCC officials to carefully compare the septic system approval with the building it serves to ensure the septic system is properly sized.) This issue continues to be a problem if, after an existing building has been expanded, altered, or has had its use changed, it is discovered that the septic system is no longer sufficient for that particular building. This is extremely problematic when there is insufficient room on the property to expand the system, causing a financial hardship on unsuspecting owners.

When you receive a construction application for any property served by a septic system, some quick rules of thumb to help identify potential problems are:

1) Check to identify any increase in the footprint of the building, including raised portions of the structure that are enclosed or could impede access to the septic system. These additions could violate the maintenance of setbacks from the septic system.

2) Check the reconfiguration of a home when the construction increases the number of bedrooms. Include rooms that could reasonably be anticipated to be used as a bedroom. Any rooms that are finished

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in an expansion attic would also require expansion of the septic system.

3) Be aware that any UCC construction application that includes a proposal to install a garbage grinder must be accompanied by an approved design for a septic system for which a garbage grinder has been included. These types of systems are required to have septic tanks sized 50 percent greater and disposal areas 25 percent greater than systems without garbage grinders. Similar requirements may be applied to buildings that propose to use sewage ejector pumps. It is important that the local health department be consulted when garbage grinders or ejector pumps are included in the plan approval.

4) Beware that any increase in the square footage of a commercial property or any substantial changes in use (e.g., a change from a retail space to a restaurant, school, or laundromat) could require an expansion of the septic system. You should alert the local health department when you are aware of such a situation.

Please take special care to review all applications for construction permits involving existing properties that use septic systems for sewage disposal. Prior to issuing a construction permit, you should contact the applicable municipal or county board of health that has jurisdiction over septic systems in your area to determine if there is, or if there could be, a problem. The municipal or county board of health is required to sign a Certificate of Compliance stating that the construction plans conform to the septic system standards prior to the issuance of a Certificate of Occupancy. Remember, it is the responsibility of both agencies -- not one agency or the other -- to review plans for compliance. Because the local code office is the first point of contact, the code official should ensure that prior approval is met. By being proactive and consulting with the health department prior to issuing construction approvals, all parties will know the information that is required prior to problems arising.

By maintaining dialogue between the State agencies, and continuing a collaborative outreach to all building and health officials, we hope to make everyone's job a little easier. If you have any questions, please contact the Code Assistance Unit at (609) 984-7609 or the DEP's Bureau of Nonpoint Pollution Control at (609) 292-0407.

Sources: Thomas C. Pitcherello
Code Assistance Unit
and
Mark Miller
DEP, Bureau of Nonpoint Pollution Control

Building Stats Used to Determine Affordable Housing Numbers

Every ten years, the U.S. government conducts a nationwide census to count people, and to compile important information on where and how we live. In between the decennial censuses, we rely on a variety of indicators to measure population change and to discern trends in settlement patterns. Building permits are a vital resource for this initiative. They are a barometer of an important sector of the economy, the construction industry, and they help us to gauge what is being built and where. Economists, planners, demographers, utility companies, and school administrators are among the users of the important information provided through building permits each month.

Now there is a new user of building permit data. Have you ever heard of the Council on Affordable Housing (COAH)? COAH knows about your work as construction officials and technical assistants. Newly proposed COAH rules would use construction data to determine each town's affordable housing obligation. This data is arguably the single most important housing number in New Jersey. Its derivation depends on construction data from your monthly reports. The new COAH rules propose to link directly how much affordable housing a town would be required to have to the amount of development it allows.

Background

Every municipality in the State must have planning and zoning regulations that allow for its fair share of regional affordable housing needs. COAH was created by the Fair Housing Act of 1985 to determine *fair-share housing obligations*. A series of New Jersey Supreme Court rulings, collectively referred to as the *Mount Laurel* decisions, defined and affirmed this responsibility.

COAH has proposed a significant change in the way it assigns how many affordable houses a municipality must allow for. Under consideration is a two-tiered formula that bases affordable housing obligation on the amount of development in a community. COAH calls this its growth-based methodology. The first part of the formula stipulates an obligation of one new, affordable house or apartment for every ten new, market-rate units. The second part bases the obligation on the number of new jobs created — one affordable dwelling for every 25 jobs. How are these figures calculated? From Certificate of Occupancy (CO) reports submitted by local construction offices.

COAH will rely on housing COs to determine the first part of the formula. Refinements in the construction reporting software will be made to allow construction officials to distinguish affordable dwellings from market-rate houses. This will mean construction officials will have

to report when a CO is issued for an affordable dwelling and when one is issued for a market-rate unit. The second part of the calculation also relies on COs. It looks at the square footage of nonresidential buildings and makes certain assumptions about job growth that vary by nonresidential building uses. For example, the proposed COAH rules assume that a new office building, which is classified as a "B" use or business use, generates three jobs per 1,000 square feet. A one-million square-foot office tower means 3,000 new jobs. After applying the 1:25 rule, this would mean an affordable housing obligation of 120 units.

How this Affects You

There will be a new audience for your monthly construction data. Consider this a compliment to the fine and dependable work you already do. Housing advocates and planners are going to be closely following the COs you issue. It is important to report this information accurately. If you repeat square footage on permit updates, it will cause problems later on when you issue the COs. Don't double count. It will artificially raise your town's affordable housing obligation. If you issue a permit for a footing and foundation, and it is your practice to identify only one square foot for this phase of work, be sure that you remember to update the permit and add the balance of the building's area. Don't confuse volume with area and mix cubic feet with square feet. Not only will this inflate your building fees, but also under the affordable housing rules currently proposed, it would mean a higher affordable housing obligation. The Department of Community Affairs will be publishing CO data, and making it widely available to planners and housing advocates, so be prepared to have your work reviewed thoroughly.

If you have questions, please feel free to call me at (609) 292-7898, or e-mail me at jlago@dca.state.nj.us.

Source: John Lago
Division of Codes and Standards

Concrete-Encased Electrode In an Addition

If you are requiring that the rebar in an addition be used as the concrete-encased electrode when no electrical service is being installed or relocated, don't.

Compliance with the 2002 edition of the National Electrical Code (NEC 2002), Section 250.52(A)(3), "Grounding Electrodes, Electrodes Permitted for Grounding, Concrete-Encased Electrode," is required for a new electrical service or system.

Uniform Construction Code Bulletin No. 02-2, "Availability of Concrete-Encased Electrodes," provides information on where and how the electrode must be installed, as well as the minimum size conductor, as stated in Section 250.52(A)(3).

Where the service is being relocated in an addition and where there is a rebar in the footing in accordance with Section 250.52(A)(3), the concrete-encased electrode is required.

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

Source: Suzanne Borek
Code Assistance Unit

Construction Code Enforcement and Relocation Assistance

The Relocation Assistance Program was recently transferred to the Division of Codes and Standards for administration. Although many municipalities are aware of the Relocation Assistance Program, others are not. This article intends to provide some basic information on this important program.

The general rule for providing relocation assistance states, "whenever a State agency or unit of local government undertakes a program of building code enforcement . . . that causes the displacement of any person, the said State agency or unit of local government shall provide relocation payments and assistance to all lawful occupants who are displaced . . ." [*N.J.A.C.* 5:11-2.1(a)]. In addition to all lawful occupants, the occupants of overcrowded dwelling units who are required by the municipality to relocate are also eligible for this assistance. The Relocation Assistance Program assists the municipality in bearing the expense of these displacements by reimbursing the municipality up to 50 percent of its costs. The Relocation Assistance regulations specify the maximum amount the State may reimburse to a municipality.

The Relocation Assistance Program is not the only means available to the municipality to recover the costs associated with displacement and relocation. The municipality has two other opportunities to recover these costs. First, the municipality must prosecute the property owner for a penalty. Once it is successful in the penalty case, the municipality can file a lien for the cost of all relocation payments at an interest rate of 18 percent per year. In addition to filing a lien, the municipality may bring a civil action against the owner of the property, including any corporate director, officer, or holder of more than 5 percent of the shares, and may recover relocation costs, interest, and attorney's fees and costs. When the

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municipality regains its expenses through either of these means, it must make proportional repayments to the State for any Relocation Assistance reimbursements received.

It is important to emphasize that there is a difference between code enforcement actions undertaken pursuant to the Uniform Construction Code (UCC) "because a building has become unsafe or uninhabitable as a direct result of a natural disaster, soil subsidence, fire, a latent defect or other sudden and unforeseeable occurrence . . ." [*N.J.A.C.* 5:23-2.32(b)1] and those where the building has become uninhabitable due to delayed maintenance or conditions that could have been foreseen and prevented. Although the municipality may provide assistance to any resident or tenant who is displaced by the imminent hazard provisions of the UCC, only those displacements made in accordance with *N.J.A.C.* 5:11 are eligible for reimbursement under the Relocation Assistance Program. This actually means that those displacements that take place under the imminent hazard provisions of the UCC (Standard Forms F242 and F245) are not eligible for reimbursement; those that take place under the unsafe structures provisions of the UCC (Standard Form 421) are eligible for reimbursement.

Because the Relocation Assistance Program operates through the submittal and approval of a Working Relocation Assistance Program (WRAP), and because many of these code enforcement relocations are not predictable, the Department of Community Affairs is working on a process that will better serve the municipalities and the residents who are displaced due to code enforcement issues. More information will be available on that initiative in the future.

In the meantime, if you have questions about the Relocation Assistance Program, please contact Emily Templeton or Megan Sullivan at (609) 984-7609.

Source: Michael Ticktin, Esq.
Chief, Legislative Analysis

Correction to IBC/2000, Section 905.4, Exception 1

It has been brought to the Code Assistance Unit's attention that, upon adoption of the 2000 edition of the International Building Code, the Department of Community Affairs inadvertently omitted some language from Section 905.4 entitled "Location of Class I Standpipe Hose Connections," Exception 1. The language that was excluded is "are reachable from exit."

The exception should read as follows:

1. Where the floor area***s*** adjacent to a horizontal exit ***are reachable from exit*** stairway outlets by a 30-foot (9,144-mm) hose stream from a nozzle attached to 100 feet (30,480 mm) of hose, a hose connection shall not be required at the horizontal exit.

A Notice of Administrative Correction will appear in the August 2, 2004 *New Jersey Register*. Please mark your code books.

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

Source: Marcel Iglesias
Code Assistance Unit

Enclosing an Existing Porch and the Energy Subcode

What happens when a homeowner wants to enclose his or her existing porch utilizing the existing roof structure? Are energy calculations required?

Enclosing an existing porch that has an existing roof is considered an "alteration" in accordance with the Rehabilitation Subcode at *N.J.A.C.* 5:23-6.6, "Alterations." This is NOT considered an "addition," as per *N.J.A.C.* 5:23-6.32, because constructing an addition would require an increase in the footprint of the home.

Energy calculations, in accordance with *N.J.A.C.* 5:23-2.15(e)1vi, must be applied to an addition, which is defined at *N.J.A.C.* 5:23-6.3 as "an increase in the footprint area of a building or an increase in the average height of the highest roof surface or the number of stories of a building."

Therefore, the enclosure of a porch utilizing the existing roof is considered an alteration, not an addition, and no energy calculations are required.

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

Source: Rob Austin
Code Assistance Unit

New Jersey Accepts NCPCCI and ICC Exams

Following a thorough evaluation of the exams offered by the National Certification Program for Construction Code Inspectors (NCPCCI) and those offered by the International Code Council (ICC), the Department of Community Affairs has determined that the following exams are equivalent. This means that the candidate may take either the exam offered by NCPCCI through Experior Assessments or the exam offered by the ICC.

The following table does not provide the licensing requirements; it simply gives the name of each exam and the status of equivalency.

You may reach the ICC through its web site at www.iccsafe.org. You may reach Experior through its web site at www.experioronline.com.

If you have questions about the licensing requirements, you may contact the Licensing Unit at (609) 984-7834. If you have questions about the ICC exams, please contact John Terry at (609) 984-7609. If you have questions about the NCPCCI exams administered by Experior, please contact me at (609) 984-7609.

Requirements – May Take *either* NCPCCI *or* ICC Exams

License Area/Level	NCPCCI Exam(s) Required	ICC Exam(s) Required
Building RCS	***1A - Building One- and Two-Family***	***B1 - Residential Building Inspector***
	4A - Mechanical One- and Two-Family	***M1 - Residential Mechanical Inspector***
Building ICS	***1B - Building, General***	***B2 - Commercial Building Inspector***
	4B - Mechanical, General	***M2 - Commercial Mechanical Inspector***
Building HHS	***1C - Building, Plan Review***	***B3 - Building Plans Examiner***
Electrical ICS	***2A - Electrical, One- and Two-Family***	***E1 - Residential Electrical Inspector***
	2B - Electrical, General	***E2 - Commercial Electrical Inspector***
Electrical HHS	***2C - Electrical, Plan Review***	***E3 - Electrical Plans Examiner***
Fire Protection ICS	***3B - Fire Protection, General***	***N7 - Building Fire Protection Inspector***
	4A - Mechanical One- and Two-Family	***M1 - Residential Mechanical Inspector***
Fire Protection HHS	***3C - Fire Protection, Plan Review***	***N8 - Building Fire Protection Plans Examiner***

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License Area/Level	NCPCCI Exam(s) Required	ICC Exam(s) Required
Plumbing ICS Inspector	***5B - Plumbing, General***	***N2 - New Jersey Commercial Plumbing***
	4B - Mechanical, General	***M2 - Commercial Mechanical Inspector***
Plumbing HHS	***5C - Plumbing, Plan Review***	***N3 - New Jersey Plumbing Plans Examiner***
Elevator HHS	***6B - Elevator, General***	***None***

Source: Emily W. Templeton
Code Development Unit

Mechanical Inspector	***4A - Mechanical, One- and Two-Family***	***M1 - Residential Mechanical Inspector***
One- and Two-Family		
	4B - Mechanical, General	***M2 - Commercial Mechanical Inspector***

Haunted Houses - Revisited

The Department of Community Affairs amended the Uniform Construction Code (UCC) requirements applicable to "Special Amusement Buildings" (haunted houses) last year. Upon further review and discussion between the Division of Codes and Standards and the Division of Fire Safety, the regulations regarding these special uses and occupancies are being revised again, and will be adopted in late September. As you know, special amusement buildings represent a unique hazard and the regulation amendment does not lessen the requirements for these uses. It merely assigns enforcement responsibility to the fire official for the temporary use of a building as a special amusement because fire officials are better equipped to deal with short-term occupancies.

From a UCC standpoint, the amendments are quite simple. At *N.J.A.C.* 5:23-2.6, entitled "Change of Use," an exception to (b)3 is added. This exception states that the use of an existing building or portion thereof as a special amusement for not more than 15 days in a calendar year is allowed, provided that the fire official has issued a permit. At *N.J.A.C.* 5:23-3.2(d)5, a similar change is made to the commercial farm building regulations, which also limits the use of the commercial farm building as a special amusement to 15 days with the issuance of a Uniform Fire Code (UFC) permit per *N.J.A.C.* 5:70. In both cases, should the owner choose to use the building as a special amusement building for a period longer than 15 days in the calendar year, it is considered a change in use, and the building is required to comply with the building and fire requirements contained in the Change of Use section of the Rehabilitation Subcode (*N.J.A.C.* 5:23-6.31).

Additionally, an amendment is being made to *N.J.A.C.* 5:23-3.14, "Building Subcode," to delete the exception to Section 411.4, "Automatic Sprinklers," of the 2000 edition of the International Building Code. This exception allowed a non-sprinklered, temporary special amusement building of less than 1,000 square feet. Because the UFC will regulate these temporary uses, this exemption is no longer needed. A similar exemption is also being deleted from *N.J.A.C.* 5:23-6.31(a)vii for the same reason.

From a UFC standpoint, the amendments are quite extensive. At *N.J.A.C.* 5:70-2.7(a)3xiv, entitled "Permits Required," a new section under "Type 1 Permit" is added. This amendment requires a Type 1 permit for the temporary use of any building or portion thereof as a special amusement building for a period not to exceed 15 days in a calendar year. The amendment further states that, if the building is used as a special amusement building for longer than the prescribed period, a Certificate of Occupancy pursuant to the UCC must be issued for the change of use.

Under the Type 1 permit, the building or portion of the building that is being used as a special amusement is required to comply with *N.J.A.C.* 5:70-4.16. There is one exception: the use of a non-sprinklered building or space

is permitted provided that the following conditions are met: (1) the special amusement is limited to 1,000 square feet of total building area or a 1,000-square-foot portion of the building that is separated from the remainder of the building with one-hour rated construction, (2) the maximum exit access travel distance is 50 feet, (3) the special amusement is located on the ground floor, (4) a 20-foot perimeter suitable for firefighting ground operation is provided, and (5) sufficient fire department personnel and apparatus are standing by on the site at all times when the special amusement is occupied. The amendment goes on to state that no variance from the interior finish requirements of *N.J.A.C.* 5:70-4.16 is permitted.

The last amendment to the UFC is at *N.J.A.C.* 5:70-4.16. This amendment requires Class I interior finish material for special amusements; Class II interior finish will no longer be acceptable.

The amendments discussed above establish a two-tiered system for code compliance in a special amusement building. Simply put, a building that is used as a special amusement for fewer than 16 days in a calendar year is required to comply with the UFC and any other special amusement is required to comply with the UCC as a change in the character of use.

Should you have any questions on the UCC requirements, please contact the Code Assistance Unit at (609) 984-7609. For questions on the UFC requirements, please contact George Miller of the Division of Fire Safety at (609) 633-6110.

Source: John N. Terry
Code Assistance Unit

Identification of Windows in Hazardous Locations

Recently, the Code Assistance Unit has received an influx of telephone calls regarding the labeling requirements for tempered glass installed in hazardous locations in single-family dwellings. Specifically, the issue is whether the tempered glass may be accepted without a label.

Section 308.1 of the International Residential Code, entitled "Identification," clearly states in Exception 1, "For other than tempered glass, labels may be omitted provided the building official approves the use of a certificate, affidavit, or other evidence confirming compliance with the code." Based upon this code section, tempered glass that is installed in a hazardous location ***must*** be labeled. The use of alternate means of verification of tempered glass, such as a "polarization test," is not based in the code.

Should you have any further questions on this issue, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Illegal Amusement Rides

The Department of Community Affairs' Carnival and Amusement Ride Safety Program maintains a hot line that is available 24 hours a day, 7 days a week for reporting incidents regarding carnival or amusement rides. Local code officials who find a ride that does not have a current permit issued by the Department, or a green sticker authorizing operation, should call (609) 292-2099. The hot line service will ask for some information regarding location, name of operator, etc.

The ride program has staff on duty from April through October to respond to such calls and an inspector can be dispatched at any time throughout the year to investigate infractions. Inflatable rides are covered by the carnival and amusement ride safety regulations.

If you have questions about the Carnival and Amusement Ride Safety Program, please call (609) 292-2099.

Source: Michael Triplett
Carnival and Amusement Ride Safety Program
Bureau of Code Services

New Jersey Construction Permit Application on the Internet

In January of 2001, the Department of Community Affairs, Division of Codes and Standards made available at its Internet web site convenient, downloadable versions of the New Jersey Construction Permit Application and Subcode Technical Sections.

In fact, your office may already be receiving permit applications that were obtained in this way. You will recognize them because they will more than likely be printed on plain bond paper and the Subcode Technical Sections will bear the following special instruction to the Internet user in place of the copy distribution at the bottom of the form: *"Applicant: When submitting this form to your Local Construction Code Enforcement Office, please provide one original plus three photocopies."* In every other way, however, they are exactly the same in content and in

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layout as the forms you have always been required to provide to construction permit applicants.

The Department made these forms available in response to the growing demand by New Jersey citizens for access to government services and information beyond traditional delivery methods and normal hours of operation.

If and when you receive a permit application in this format, you may complete the header information (i.e., BLOCK, LOT, QUALIFICATION CODE, SITE, AND PERMIT NO.) on the outside of a fresh, unused Construction Permit Application file folder and simply note somewhere below, "See Enclosed." Then, put the completed Internet-downloaded document within the folder.

Please be reminded that you *must* accept a permit application filed in this way.

To view the Construction Permit Application and related forms on the Internet, visit the Divisions' web site at www.state.nj.us/dca/codes/.

Source: Berit Osworth
Division of Codes and Standards

Is It a Kitchen?

The 2002 edition of the National Electrical Code (NEC/2002), Section 210.8(B)(3), entitled "Ground-Fault Circuit-Interrupter Protection for Personnel, Other Than Dwelling Units, Kitchens," requires that all 125-volt, single-phase, 15- and 20-ampere receptacles installed in kitchens have ground-fault circuit-interrupter (GFCI) protection for personnel.

This means that every receptacle in a kitchen, whether or not it serves a counter top, that is 125 volt, single phase, and 15 or 20 ampere is required to have GFCI protection.

Because the NEC/2002 does not define a kitchen in terms other than dwelling units, the design professional needs to identify kitchens on the drawings. Based on these drawings, appropriate articles of the NEC/2002 should then be applied for the installation.

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

Source: Suzanne Borek
Code Assistance Unit

More Rain-Tight Fittings

Underwriters Laboratories, Inc. (UL) has listed and labeled additional electrical metallic tubing (EMT) compression connectors and couplings as "rain-tight."

O-Z/Gedney, LLC EMT compression connectors and couplings with an SR or SRT suffix in trade sizes ½, ¾, and 1 inch have been listed and labeled as rain-tight.

UL also provides a list of rain-tight, compression-type fittings for EMT under the product category "Electrical Metallic Tubing Fittings (FKAV)" in the UL 2003 General Information for Electrical Equipment Directory (White Book).

For more information on rain-tight, compression type EMT fittings, visit UL's Regulators web page at www.ul.com/regulators/raintight.html.

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

Source: Suzanne Borek
Code Assistance Unit

Multi-Town Officials

As most construction officials know, for several years the Office of Regulatory Affairs has been asking each municipality for rosters that include the actual hours worked by each employee of the local building department.

The purpose of accumulating this information is to track officials who are working in multiple towns, because a large portion of complaints received are generated from part-time towns where the officials have limited hours.

Part of the tracking process entails field visits to each municipality in which a multi-town official works. Regulatory Affairs' investigators review the permit process, paying particular attention to the time frames for plan review and inspection requests. Official designated work hours are also checked and a comparison chart is developed to ensure that the official does not have conflicting hours.

The hours, as determined by the investigator, are then verified for accuracy by comparing them to the rosters, which were provided by the construction official as mentioned above.

Finally, if it is determined by review of the permit activity that there appears to be a significant amount of work in one or more municipalities in which the official is working, a staffing analysis is performed.

What is the purpose of all of this review? The main reason for monitoring officials in multiple towns is to ensure that each individual is capable of adequately enforcing the adopted Uniform Construction Code rules and regulations. Hurried or incomplete inspections can compromise the safety of the intended occupants. This is what we are ultimately trying to ensure will *not* happen.

To a lesser degree, we are attempting to resolve inaccurate or conflicting hours. After all, not even superman can be in two places at the same time.

It should also be noted that having conflicting hours has led to several officials being charged with theft of service, which is a criminal offense. While in most instances there is no criminal intent, everybody should be mindful that actions of this nature have potentially serious consequences.

Our efforts are not intended to be punitive. Therefore, when we discover that an official has conflicting hours or needs more hours, we require that the official correct or expand his or her hours. Whenever an official changes his or her hours, we request that the construction official verify the accuracy of the submission. If this is not possible, then the said official must terminate employment in one or more municipalities.

Any questions concerning this process should be directed to the Office of Regulatory Affairs at (609) 984-7672.

Source: Louis Mraw
Office of Regulatory Affairs

Where, Oh Where Did My "Ordinary Maintenance" Go?

Recently, the Code Assistance Unit has received some telephone calls from people inquiring about the deletion of *N.J.A.C.* 5:23-9.3, "Interpretation: Ordinary Maintenance." Please be advised that this section was not deleted; it was moved to a more logical place in the Uniform Construction Code (UCC). The requirements are now located at *N.J.A.C.* 5:23-2.7(c), "Ordinary Maintenance."

Subchapter 9 provides interpretations of existing UCC regulations. Previously, *N.J.A.C.* 5:23-2.7 referred code users to *N.J.A.C.* 5:23-9.3 for further interpretation of work that is considered ordinary maintenance. The purpose behind moving the provisions of *N.J.A.C.* 5:23-9.3 to *N.J.A.C.* 5:23-2.7 was to make the UCC more user friendly. So, as of April 5, 2004, "Interpretation: Ordinary Maintenance" is now located at *N.J.A.C.* 5:23-2.7(c).

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

Source: Rob Austin
Code Assistance Unit

Parking Below Other Groups

Sweeping rules, like the Building Subcode, are written to address a broad range of structures, uses, and situations. However, this subcode also includes special requirements to meet specific needs for types of buildings that require more than the average structure, such as high-hazard structures. Requirements for special construction have been in the Building Subcode since the adoption of the Uniform Construction Code in 1977. Such requirements have made construction of these different types of occupancies safer than if they had been constructed using the general requirements of the code. Special requirements may also allow a specific building use to be constructed more economically, while maintaining an appropriate level of safety. Regulations for special construction are located in the 2000 edition of the International Building Code in Section 508, "Special Provisions."

The purpose of this article is to highlight special construction requirements for the separation of parking garages below other uses.

Section 508 of the Building Subcode allows an enclosed parking garage of Group S-2 to be constructed below buildings that would normally require a large number of parking spaces associated with the building's use (usually required by the local zoning or planning codes). Possible uses include assembly, residential, business, and mercantile. Interestingly, it also contains provisions for the construction of enclosed parking structures below open parking structures.

Code officials should pay particular attention to the special code provisions for the fire-resistance ratings between the parking use below and the use above, from where the height of the use above is measured, and for the minimum construction type of the parking use. The following provides some of the applicable code provisions:

Fire Resistance of the Floor Separation

- √ Enclosed parking below Group A, B, M, or R (Section 508.2) – 3 hours
- √ Open parking below Group A, B, M, or R (Section 508.7) – per Table 302.3.3, "Required Separation of Occupancies (Hours)"
- √ Enclosed parking below open parking (Section 508.3) – per the construction type of the garage

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- √ Parking structure, open or closed, below a Group R (Section 508.5) – per the construction type of the garage

Where Allowable Height is Measured

- √ Enclosed parking below Group A, B, M, or R (Section 508.2) – from the roof deck of the garage
- √ Open parking below Group A, B, M, or R (Section 508.7) – from the grade plane
- √ Enclosed parking below open parking (Section 508.3) – from the grade plane
- √ Parking structure, open or closed, below a Group R (Section 508.5) – from the roof deck of the garage

Minimum Construction Type of the Garage

- √ Enclosed parking below Group A, B, M, or R (Section 508.2) – Type IA
- √ Open parking below Group A, B, M, or R (Section 508.7) – none designated
- √ Enclosed parking below open parking (Section 508.3) – Type I or Type II
- √ Parking structure, open or enclosed, below a Group R (Section 508.5) Type I or, for open-only use, Type IV

As you can see, even though these special provisions appear very similar, they each have unique characteristics. When an applicant indicates that a building is to be constructed per one of these special provisions, ensure that all requirements are met. Do not mix and match special provisions.

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

Source: Jeffrey Applegate
Code Assistance Unit

Telecommunication Exemption Certificate

Does it exist? What does it mean? Who issues it? Is a permit required for telecommunication work?

The **Telecommunication Wiring Exemption Certificate** does exist! It is issued by the Board of Examiners of Electrical Contractors and is used by contractors that install wiring for telecommunication systems, which include telephone and data wiring.

According to the Board of Examiners of Electrical Contractors, "Telecommunications wiring" means wiring within a premises, either inside or outside a building, for voice and/or data transmission at voltage(s) compatible with the system being installed, and connected to a Federal Communications Commission-recognized communication network at the point of connection provided by the utility providing communication services to the customer. It shall also include the interconnection of data wiring between computers and/or terminals.

A permit is required for telecommunication wiring, and is required to be signed and sealed by a New Jersey licensed electrical contractor or an exempt applicant, the telecommunication exemption certificate holder.

The Uniform Construction Code, at *N.J.A.C.* 5:23-2.7, "Ordinary Maintenance," Subsection (c)3iii, does not require a permit for the installation of communications wiring in one- or two-family dwellings, or for the alteration/rearrangement of existing communications wiring in other occupancies, provided however that the rearrangement does not involve the penetration of a fire-rated assembly and is not in a hazardous location, as defined in the Electrical Subcode, Chapter 5, entitled "Special Occupancies."

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

Source: Suzanne Borek
Code Assistance Unit

Zero Lot Lines

In recent years, one development concept that has become widely used is that of zero lot lines. This means that a house can be built without a side yard on one side, provided it is separated from the neighboring house by a side yard on the neighboring house's lot. Since the exterior fire rating of both houses is a function of the distance between the houses, it is important, prior to approving any such construction, there be assurance that the required side yard will never be built upon, or if it is, that additional fire protection is required.

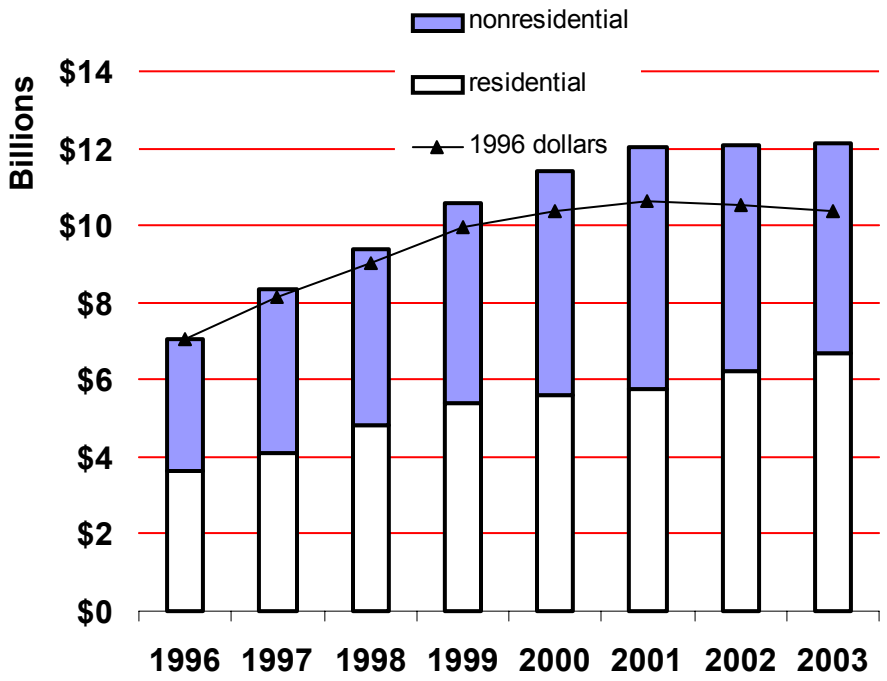
In order to make sure that this happens, good communication between the construction code enforcement and zoning offices is essential. Construction officials know that a zoning clearance must be obtained before a permit can be issued. Zoning officials should also be made aware that any application for a variance involving construction in a required side yard necessarily involves the construction code enforcement office and notice of any such application should therefore be given to the construction official.

In any new development involving zero lot lines, the planning board, as part of its approval process, should make side yards a condition of approval and require that there be deed restrictions on all lots to make sure the required side yards are never built upon. If a subsequent owner violates a condition of the approval, the zoning officer has authority to cite the violation in the same way that he or she would cite any other zoning violation. Construction officials should, therefore, make sure their planning boards make required side yards, and any other aspect of the development that would have construction code implications, a condition of any approval.

Source: Michael L. Ticktin
Chief, Legislative Analysis

(continued from page 1)

Estimated Cost of Construction Authorized by Building Permits, 1996-2003



Housing construction accounted for $6.7 billion. This was 54.9 percent of all activity authorized by permits. Nonresidential structures made up $5.5 billion, 45.1 percent of all work for the year. Three of the four major construction indicators in the *CONSTRUCTION REPORTER* were at or slightly above last year's levels. Total work was about the same. New houses authorized by permits increased by 582 units, about 1.6 percent. Office space was up by over 483,000 square feet, a 2.5-percent increase compared to last year, but significantly lower than in 2001, when a record 19.1-million square feet of new office space were authorized. That year, Jersey City in Hudson County accounted for 4.1-million square feet of new office space. Only new retail space was down by 21 percent compared to 2002.

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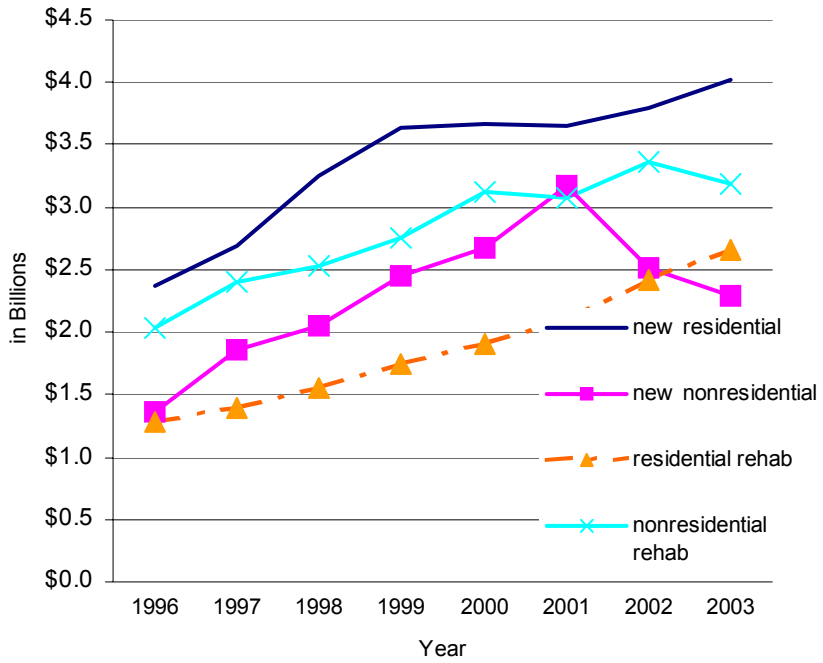
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New Jersey Construction Indicators: 1996-2003				
	Estimated Construction Costs	**Authorized Housing Units**	**Authorized Office Space (square feet)**	**Authorized Retail Space (square feet)**
1996	$7,028,424,990	27,577	6,229,515	4,880,139
1997	$8,346,533,144	30,017	10,409,171	5,688,955
1998	$9,396,755,517	35,676	12,703,824	7,921,892
1999	$10,584,167,530	37,536	13,237,891	6,229,471
2000	$11,387,683,514	38,065	15,531,039	6,063,412
2001	$12,007,456,630	35,680	19,134,533	7,244,833
2002	$12,079,942,099	34,589	9,261,054	7,560,913
2003	$12,148,747,807	35,171	9,744,146	6,038,428
Change between 2002 and 2003				
2002-2003	$68,805,708	582	483,092	-1,522,485
Percent Change	0.6%	1.6%	2.5%	-21.0%
Source: N.J. Department of Community Affairs, 4/7/04				

New home production continued as the most significant force in New Jersey's construction economy. While the number of new houses grew by only 1.6 percent between 2002 and 2003, the estimated construction cost of these houses increased by $224.4 million, or 5.9 percent. Housing renovations grew even faster. Last year, the estimated cost of all residential alterations and additions was $2.4 billion. In 2003, it was $2.7 billion, increasing by $238.4 million, or 9.9 percent.

The strong housing market compensated for sluggish activity in the nonresidential sector. New, nonresidential buildings accounted for only $2.3 billion of authorized construction in 2003. This was $228.5 million less (9.1 percent) than last year. Commercial and other nonresidential rehabilitation also dropped. The estimated cost of rehab work on nonresidential structures declined by $166.5 million, or 5 percent. This year was the first time in recent history that the amount of money spent to fix up existing housing exceeded the amount authorized to build new office buildings, stores, and other nonresidential structures.

Estimated Cost of Construction Authorized by Building Permits



Activity by Region

Central New Jersey had 36.3 percent of all new houses authorized by permits and 45.2 percent of all new office space. The region had the largest amount of new retail space, 38.2 percent, and accounted for $4.5 billion, or 36.7 percent, of the estimated cost of construction authorized by permits.

Northern New Jersey had the most work, $4.6 billion. This was 37.8 percent of all activity. Due in large measure to strong housing markets in the City of Newark in Essex County, the City of Hoboken and Jersey City in Hudson County, and the City of Elizabeth in Union County, northern New Jersey was the location of 32.5 percent of all the new houses in 2003.

Southern New Jersey had the smallest proportion of activity compared with other regions of the State. But, construction work has grown in this area, due in large measure to a strong housing market. Southern New Jersey communities accounted for 21.4 percent of all activity in 2003. This region also had 31.2 percent of all the new houses. In 1998, southern New Jersey had only 17.5 percent of all work in the State and 23.4 percent of the new dwellings.

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Major Construction Indicators by Region: 2003				
Region	**Estimated Cost of Construction**	**Authorized Housing Units**	**Authorized Office Space (square feet)**	**Authorized Retail Space (square feet)**
North	$4,587,958,818	11,431	3,079,208	2,239,779
Central	$4,461,322,637	12,752	4,405,090	2,307,208
South	$2,598,232,120	10,982	1,950,854	1,414,982
State Buildings	$501,234,232	6	308,994	76,459
New Jersey	**$12,148,747,807**	**35,171**	**9,744,146**	**6,038,428**
Percent Distribution by Region				
North	37.8%	32.5%	31.6%	37.1%
Central	36.7%	36.3%	45.2%	38.2%
South	21.4%	31.2%	20.0%	23.4%
State Buildings	4.1%	0.017%	3.2%	1.3%
New Jersey	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Source: N.J. Department of Community Affairs, 4/7/04				
Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties				
Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties				
Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties				

Leading Role for Big Cities

New Jersey's big cities were top performers. This continued a trend of recent years. No other municipality had more work authorized by permits than Jersey City, with $322.9 million. Newark ranked second with $248.1 million. Housing was a key reason for much of the activity in both cities. Newark had the most new houses with 1,730 authorized units. Jersey City ranked second among all localities with 969 new houses.

Other top urban performers were Atlantic City in Atlantic County, Hoboken, and Elizabeth. Most of the work in Atlantic City was hotel and casino related. New housing construction was the driving force, however, in Hoboken and Elizabeth. Nine of the top 15 communities with the most work had over 400 new houses in 2003.

Construction Indicators Top New Jersey Municipalities: 2003					
Municipality	County	Estimated Cost of Construction (dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jersey City	Hudson	$322,912,488	969	378,189	83,540
Newark City	Essex	248,116,867	1,730	236,042	16,205
Franklin Twp.	Somerset	177,453,393	569	121,117	6,335
Dover Twp.	Ocean	144,277,904	299	196,846	27,280
Atlantic City	Atlantic	126,745,674	100	6,900	0
Hoboken City	Hudson	117,919,493	599	52,858	83,690
East Brunswick Twp.	Middlesex	110,386,950	340	143,932	3,868
Princeton Twp.	Mercer	108,984,189	13	116,234	12,126
Jackson Twp.	Ocean	106,811,341	590	5,088	12,100
Edison Twp.	Middlesex	99,321,148	91	240,273	20,642
Woodbridge Twp.	Middlesex	95,371,392	110	15,081	355,624
Elizabeth City	Union	95,052,210	649	22,450	0
Ocean City	Cape May	94,779,047	432	99,648	22,851
Lakewood Twp.	Ocean	93,181,492	558	136,814	0
Cherry Hill Twp.	Camden	92,958,402	465	58,675	34,290
Top Municipalities		$2,034,271,990	7,514	1,830,147	678,551
New Jersey		**$12,148,747,807**	**35,171**	**9,744,146**	**6,038,428**

Source: N.J. Department of Community Affairs, 4/7/04

New House Prices

Another indicator on the strength of the New Jersey housing market is the price of a new home. The median sales price of a new house broke the $300,000 level in 2003. The median sales price of the 22,226 new houses that began enrollment in a new home warranty program in 2003 was $307,168. Last year it was $274,705. This increase of 11.8 percent was the largest annual increase in recent years. New houses in Hunterdon County cost the most. The median sales price in 2003 of a new Hunterdon County house was $563,308.

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New House Prices			
Period	Number of New Houses	Median Sales Price	Percent Change in Sales Price
1996	20,903	$183,300	
1997	21,640	$190,000	3.7%
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
2001	23,372	$253,670	9.5%
2002	23,647	$274,705	8.3%
2003	22,226	$307,168	11.8%
1st Quarter 2003	4,465	$295,000	
2nd Quarter 2003	5,540	$300,793	2.0%
3rd Quarter 2003	6,091	$307,950	2.4%
4th Quarter 2003	6,130	$319,650	3.8%
1st Quarter 2004	4,280	$323,870	1.3%
Source: N.J. Department of Community Affairs, 4/7/04			

NOTES

Greetings from Governor James E. McGreevey and Commissioner Susan Bass Levin

One fundamental principle of the New Jersey State Uniform Construction Code (UCC) is that New Jersey citizens are provided with safe and affordable housing and buildings. This is achieved through local code enforcement agencies working in partnership with design professionals, builders and developers.

Three times per year, the Department of Community Affairs' (DCA) Division of Codes and Standards publishes the *Construction Code Communicator*. This newsletter provides subscribers - both public and private - with information on emerging construction issues. It also provides code officials with guidance on UCC administration and enforcement.

Through the *Construction Code Communicator* and all of our programs and services, we remain committed to providing safe and affordable housing and buildings to New Jersey citizens.

With all good wishes,

James E. McGreevey
Governor

Susan Bass Levin
Commissioner



Susan Bass Levin
Commissioner
NJ Department
of Community Affairs



James E. McGreevey
Governor
State of New Jersey

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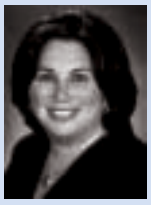


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Richard J. Codey
Acting Governor



Susan Bass Levin
Commissioner

Ten Volts or More

Apparently, an organization of licensed electrical contractors has published and distributed a flyer to local code enforcement agencies stating that a licensed electrical contractor is required for **any** electrical work ***over ten volts***.

Electrical work on projects with a potential intensity of ***ten volts or more*** usually requires a licensed electrical contractor. However, high-voltage intensity is not the only condition that requires the expertise of an electrical contractor. A homeowner who wishes to perform his own electrical work may do so with limitations.

The Electrical Contractors licensing law, *N.J.S.A.* 45:5A-18, "Exempt Work or Construction" (n), states that a homeowner of a single-family, detached dwelling unit may perform his own electrical work without requiring an electrical license. The voltage in dwelling units is greater than ***ten volts***.

Therefore, if you see or have this flyer posted, it should be removed because it contains misleading information.

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

Source: Suzanne Borek
Code Assistance Unit

When are Ice Shields Required?

The Code Assistance Unit has received numerous inquiries about ice-shield requirements for Group R-5 buildings. Let us compare the requirements in the 1995 Council of American Building Officials (CABO/1995) One- and Two-Family Building Code with the provisions in the 2000 edition of the International Residential Code (IRC/2000).

Section R905.2.7.1 of the IRC/2000 requires ice shields in areas where the average daily temperature in January is 25° F or less. Section 903.3 of CABO/1995 required ice shields in areas where the average daily temperature in January was 25° F or less, or where there was a possibility of ice forming along the eaves and causing a backup of water.

As one can see, CABO/1995 had an additional requirement that was not included in the IRC/2000. Therefore, ice shields are required only if the average daily temperature in January is 25° F or less. According to a report by the United States Department of Commerce, National Climatic Data Center, entitled "Climatography of the United States, No. 81," only New Jersey's northwest area (Sussex County) averages a January temperature of 25° F or

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less. Therefore, the northwest area of New Jersey is the only area where ice shields are required, in accordance with the IRC/2000 requirements.

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

Source: Marcel Iglesias
Code Assistance Unit

Billboards on Public Land Now Subject to DCA's Sole Jurisdiction under the UCC

Effective July 6, 2004, the Uniform Construction Code rules have been amended to provide that the Department of Community Affairs is now the sole enforcing agency for billboards located on land owned or controlled by any State, county, or local department, agency, board, commission, authority, or instrumentality.

The definition of a "billboard" is "any sign which exceeds 32 square feet in area on any face, except for signs which advertise or otherwise identify activities performed upon the property on which the sign is located." The rule further distinguishes between "pylon signs" on the one hand, and "ground signs" and "wall signs" on the other. A pylon sign is an elevated sign that either has its bottom edge 15 feet or more above ground level, or is mounted on the roof of another structure. A ground sign is mounted on the ground or less than 15 feet above the ground, while a wall sign is mounted on the wall of another structure so that it is exposed to wind loads from one side only.

Though the rule adoption was under the Department's existing statutory authority to designate categories of buildings and structures as being under its sole enforcement authority, the New Jersey State Legislature, with the enactment of P.L. 2004, c. 42, effective June 29, 2004, endorsed the rulemaking action. This new statute, in addition to making various other changes in the regulation and taxation of outdoor advertising signs, amended the State Uniform Construction Code Act by adding the following new Subsection c to *N.J.S.A.* 52:27D-129:

> c. Notwithstanding any other provision of law, rule, or regulation to the contrary, except for signs which advertise or otherwise identify activities performed on the property on which the sign is located, the Department of Community Affairs shall be the sole enforcing agency with regard to outdoor advertising signs which exceed 32 square feet in area on any face and which are located on land owned or controlled by any public entity, including but not limited to any State, county, or local department, agency, board, commission, authority, or instrumentality.

If you have any questions regarding this matter, please call me at (609) 292-7898.

Source: Michael Ticktin, Esq.
Chief, Legislative Analysis

New Jersey Register Adoptions

Date: July 6, 2004
Adoption: 36 *N.J.R.* 3274(a)
Summary: These adopted amendments clarify that the Department of Community Affairs is the sole enforcing agency for billboards erected on public lands to ensure that the requirements of the Uniform Construction Code (UCC), including all prior approvals, are being met. In addition, these adopted amendments delete high-pressure boilers, refrigeration systems, and pressure vessels from the list of enforcement activities reserved to the Department because Governor's Reorganization Plan No. 002-2002 transferred these programs to the New Jersey Department of Labor. Finally, these adopted amendments establish Departmental fees for permits for billboards.

Date: July 6, 2004
Adoption: 36 *N.J.R.* 3275(a)
Summary: These adopted amendments provide that proponents for code changes may submit Rehabilitation Subcode code change proposals to the Department at any time and that those proposals submitted by January 31 will be considered with the changes received during the previous calendar year. In addition, these adopted amendments incorporate language into the UCC to list the items that constitute a valid Rehabilitation Subcode code change proposal so that proponents may submit code change proposals without the prescribed form. Finally, these adopted amendments insert "model" before "code" in the rule text to provide a distinction between proposals for

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23rd ANNUAL BUILDING SAFETY CONFERENCE OF NEW JERSEY 2004

The evaluations have been reviewed and the results have been tabulated. Conference attendees have indicated another resounding success. The selection of seminars, networking opportunities, and award presentations were the highlights of our three days at Bally's Park Place in Atlantic City. All had a good time and there were some winners, too!

Joseph J. Santangelo, Electrical Inspector of the Year
Hamilton Township, Atlantic County

Edward J. Grobelny, Fire Protection Inspector of the Year
East Brunswick Township, Middlesex County

Thomas McGonigle, **Plumbing Inspector of the Year**
Atlantic City, Atlantic County

Joseph M. Valeri, Building Inspector of the Year
West Windsor Township, Mercer County

Edeltraut DeLuca, Technical Assistant of the Year
Vernon Township, Sussex County



Participants (from left to right): Tom McGonigle, Plumbing Inspector; Joe Valeri, Building Inspector; William M. Connolly, Director of the Division of Codes and Standards; Edie DeLuca, Technical Assistant; Joe Santangelo, Electrical Inspector; Ed Grobelny, Fire Protection Inspector.

The dates for the 2005 Building Safety Conference are May 4-6, 2005, to be held once again at Bally's Park Place in Atlantic City. **Mr. Matthew Valvano**, Building Subcode Official for the City of Linden in Union County was selected to receive a complimentary registration. We will look forward to seeing each of you at next year's conference.

If you have any questions, please call me at (609) 984-7820.

Source: Susan H. McLaughlin
Supervisor, Education Unit
Bureau of Code Services

(continued from page 2)

changes to the model construction codes and proposals for changes to the Rehabilitation Subcode of the UCC.

Date: July 19, 2004
Adoption: 36 *N.J.R.* 3397(c)
Summary: This adopted amendment revises the requirements of the Elevator Safety Subcode of the UCC to specify that the owner, or an authorized representative of the owner, must either reside or maintain an office in the State of New Jersey for the purpose of service of notices.

Date: August 2, 2004
Adoption: 36 *N.J.R.* 3525(b)
Summary: This adopted amendment deletes the reference to one- and two-family dwellings as a basis for determining jurisdiction over Liquefied Petroleum (LP) gas installations. LP gas installations now are regulated based upon the quantity of the fuel (2,000 gallons or less), not the use of the structure where the containers are installed.

Date: August 16, 2004
Adoption: 36 *N.J.R.* 3894(d)
Summary: This adopted amendment assigns building and fire protection plan review and field inspection responsibilities for some of the sections in Chapter 4 of the Building Subcode, entitled "Special Detailed Requirements Based on Use and Occupancy," and for Section 1621.3.10.1 of the Building Subcode, entitled "Fire Protection Sprinkler Systems."

Date: October 4, 2004
Adoption: 36 *N.J.R.* 4440(a)
Summary: These adopted amendments authorize an enforcing agency to revoke or cancel any permit in the event that any work on a construction project is not completed within three years of the date of issuance of the permit, with exceptions for interior improvements not visible from outside a residential building, buildings at which all exterior work and site improvements have been completed, and projects under the control of a mortgagee in possession. (Note: The operative date for these amendments is January 14, 2005. Please see the article in this issue of the *Construction Code Communicator* entitled "Update on Revocation of Permits for Uncompleted Buildings" for additional information.)

Date: October 4, 2004
Adoption: 36 *N.J.R.* 4441(a)
Summary: These adopted amendments, which bring the rules into conformance with a recent revision to the Uniform Construction Code Act, increase the maximum penalty that can be issued by local enforcing agencies for violations of the UCC from $500 to $2,000.

Date: October 4, 2004
Adoption: 36 *N.J.R.* 4442(a)
Summary: This adopted amendment revises the rule concerning review committees to eliminate a provision prohibiting the appointment of any person to more than two consecutive terms.

Date: October 18, 2004
Adoption: 36 *N.J.R.* 4814(a)
Summary: These adopted amendments add "Group" and "Use Group" to the definition section of the UCC making the two terms interchangeable, which is necessary as a result of the adoption of the 2000 edition of the International Building Code as the Building Subcode of the UCC.

Date: November 15, 2004
Adoption: 36 *N.J.R.* 5090(a)
Summary: These adopted amendments to the UCC establish enforcement responsibilities for special amusement buildings.

Source: Megan K. Sullivan
Code Development Unit

'Tis the Season

As many of you know, the New Jersey State Commission of Investigation (SCI) just completed a series of hearings on problems with residential construction. One of the issues publicized during the hearings was the acceptance of gifts of various kinds (e.g., food, construction materials, golf outings, and trips) by code officials. These gifts all were dutifully recorded in the financial records of the givers. I think that a word to the wise is in order here.

The acceptance of any kind of benefit or gift is covered under *N.J.A.C.* 5:23-5.25(a)7 and should have been reported. The code refers to failure to report "an offer or bribe or other favor." This means any favor. The only safe thing to accept is nothing! Furthermore, the acceptance of any gift is almost undoubtedly a violation of local ethics laws.

I know that the vast majority of licensed code officials understand the ethical implications here and refuse any sort of benefit offered by a contractor. The acceptance of a plate of sandwiches, a box of donuts, or an invitation to a holiday party may be viewed as a very innocent thing, but we serve as public officials and we hold a public trust. The acceptance of any sort of gift may be viewed as a violation of that trust. Anything offered by a business that might benefit from the "goodwill" of the code official should be politely, but firmly, refused.

If you have any questions or concerns, please ask your municipal ethics board (if there is one), your municipal attorney, or the Division of Local Government Services, which you may reach at (609) 292-4537. The Division of Local Government Services is responsible for enforcement of the Local Government Ethics Law in municipalities that do not have their own board. As an alternative, you may call the Office of Regulatory Affairs at (609) 984-7672.

Source: William M. Connolly
Director, Division of Codes and Standards

Assisted Living: Short-Term Stays 

The Department of Community Affairs proposed an amendment to the Barrier Free Subcode that will require an assisted-living facility to provide some accessible accommodations when it offers its residential units for short-term stays of less than 30 days.

Over a year ago, it came to the Department's attention that some assisted-living facilities, which are allowed to construct dwelling units as adaptable rather than fully accessible, were making the dwelling units available for respite care or for short-term stays. In some cases, when an interested person with a disability mentioned that their need was for an accessible room, the response was that adaptations are not made for short-term stays.

Assisted-living facilities are Group I-2, but because the dwelling units are more like apartments than like nursing-home facilities, they were allowed to be constructed as adaptable. Adaptable dwelling units (which are Group R-2) are allowed to have some features in the kitchen and bathroom that the resident can adapt to meet his or her own needs. Allowing adaptation is sensible when the person will be living in the dwelling unit for an extended period of time. It is not sensible for short-term stays.

Therefore, when an assisted-living facility decides to make available for a short-term stay dwelling units which were constructed as adaptable because they were intended to be occupied as a residence, the units made available will be required to be made accessible. In short, the adaptable features will be adapted and made accessible. Fundamentally, this means that grab bars must be installed in the bathroom to facilitate transfers, the vanity under the lavatory must be removed to ensure that the required clear floor space is provided, and any cabinets underneath the 30-inch length of work space in the kitchen must be removed to allow a forward approach. In addition, the kitchen cabinets might need to be lowered to the required accessible height.

This rule amendment is expected to increase the number of short-term accommodations available to people with disabilities that would benefit from them, without imposing an unreasonable cost to the facility.

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

Source: Emily W. Templeton
Code Development Unit

Circular Stair Confusion 

Since the adoption of the 2000 editions of the International Building Code (IBC) and the International Residential Code (IRC) as the Uniform Construction Code's (UCC) Building Subcode and One- and Two-Family Dwelling Subcode, there has been some confusion about proper sizing requirements for circular stairs. This has been due, in part, to a change in the IBC and the IRC from the Building Officials and Code Administrators code and the Council of American Building Officials code on how to measure the stair, the differences in where the dimensions are taken, and what values are to be used, as well as a misprint in the IBC. The following illustrations should help clarify the issue.

The IRC in R314.6 requires the confirmation of three dimensions for Group R-5 buildings. The first dimension is the tread depth, measured from nosing to nosing ". . . between the vertical planes of the foremost projection of the adjacent treads . . ." at 12 inches from the narrowest part of the tread. This dimension may not be less than 11 inches. The second dimension is at the narrowest part of the tread. This is required to be not less than 9 inches. The final dimension is the riser height. This may be no less than 8¼ inches, as indicated in R314.2.

For all buildings except those within Groups R-5 and R-3, and within dwelling units in Group R-2 buildings, the IBC in 1003.3.3.7 requires one additional dimension be taken: the inside radius of the stair curve. This requirement is based on the actual width of the stair. The minimum radius is twice the width of the stair. The other dimensions to be confirmed do not differ, but their values may differ as follows: nose-to-nose is 11 inches at 12 inches from the narrowest part of the tread, the narrowest dimension of the tread is 10 inches, and the maximum rise is 7 inches.

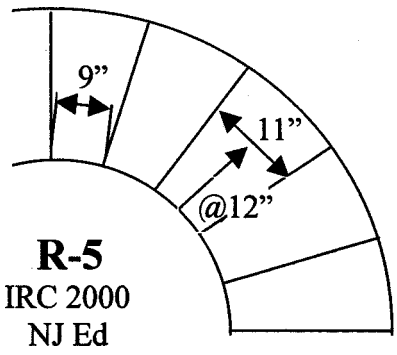
The IBC at 1003.3.3.7 also addresses circular stairs in Group R-3 and within dwelling units in Group R-2 buildings. The misprint is located here; the exception was meant to be deleted completely and a substitute text inserted. The requirements to be inserted are identical to those found in

(continued on page 6)

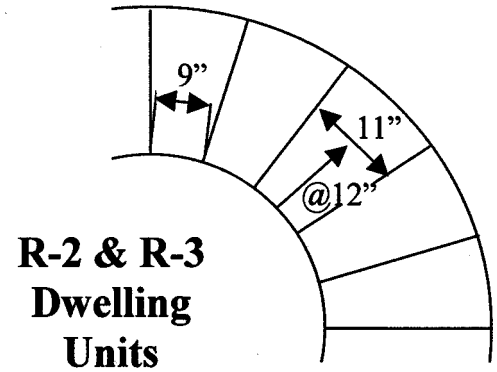
(continued from page 5)

the IRC for Group R-5. The actual requirements are found in *N.J.A.C.* 5:23-3.14(b)10vii and viii. Three dimensions are required to be checked: the nosing to nosing, 11 inches at 12 inches; the narrowest part of the tread, 9 inches; and the maximum riser height, not to exceed 8¼ inches.

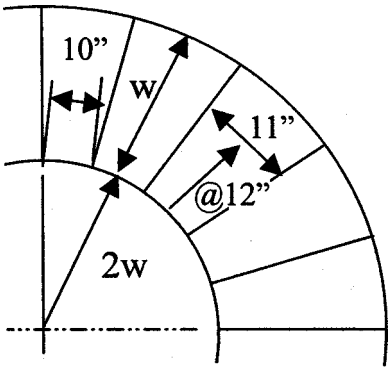
Though the requirements for circular stairs are similar for each of the groups, the values differ slightly. The designer of the building, the builder of the stairs, and the inspector need to confirm carefully that the appropriate requirements are applied to each specific circular stair.



R-5
IRC 2000
NJ Ed



R-2 & R-3 Dwelling Units
IBC 2000
NJ Ed



IBC 2000
NJ Ed
Other Uses

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

Source: Jeff Applegate
Code Assistance Unit

Chimney Certification Form

The Department of Community Affairs has received word that some municipalities are requiring the submission of a completed Chimney Certification Form, Uniform Construction Code (UCC) Standard Form F370, before the issuance of any permit for the replacement of fuel-fired equipment. This should not be.

The chimney certification form is required per *N.J.A.C.* 5:23-2.20(c), "Tests and Special Inspections;" however, as stated on the F370 itself, the code enforcement office must receive the form before final inspection.

Standard Form F370 allows the contractor installing the replacement equipment to certify proper sizing, lining, and cleaning of the chimney/vent. The construction official may refuse to accept a signed certification form from a contractor if the construction official has reason to believe the certification is not accurate.

The contractor may choose not to submit the certification, in which case the contractor must sign and date the form in the space under "Certification Not Submitted." If this option is chosen, the contractor agrees to be present for the inspection to remove and reinstall the chimney vent connector.

NOTE: As stated in *N.J.A.C.* 5:23-2.20(c), certifications from homeowners will not be accepted in lieu of the required inspection.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

CO Alarms: One- and Two-Family Detached Homes

Since April 7, 2003, the Department of Community Affairs has required the installation of carbon-monoxide (CO) alarms in one- and two-family dwellings. The installation of CO alarms in the immediate vicinity of all sleeping rooms in the dwelling is required if the dwelling contains a fuel-burning appliance or has an attached garage.

Now, what does "immediate vicinity of all sleeping areas" mean? Since a CO alarm is required to meet the listing and labeling requirements of UL 2034 and NFPA 720, it must be clearly audible in all bedrooms, over background noise levels, and with all intervening doors closed from ten feet away. This requires a minimum rating of 85 decibels. If the alarm is intended to notify occupants in the same room, the alarm may sound at 75 decibels from ten feet away. Therefore, in most cases, CO alarms listed and labeled as above should be within ten feet of the sleeping areas (i.e., bedrooms).

NOTE: This requirement does NOT apply to furnace rooms, laundry rooms, garages, etc. CO alarms are to be installed in the sleeping areas OR within the immediate vicinity of the sleeping areas (in the hallway, for example).

Lastly, remember that CO alarms must be installed in the location specified by the manufacturer (e.g., wall, ceiling, etc.). They may be battery powered, hard wired, or a plug-in type.

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

Source: Rob Austin
Code Assistance Unit

Conflict of Interest: A Reassurance and a "Heads-Up"

As Supervisor of Investigations, I receive complaints daily. The types of complaints coming across my desk range from technical to administrative allegations.

Over the past few years, I have noticed an increasing number of complaints that allege a violation of the conflict-of-interest provisions in the Uniform Construction Code, [*N.J.A.C.* 5:23-4.5(j)1 and 2]. It is alarming that our investigations are substantiating a good number of these complaints.

The Department of Community Affairs considers a conflict of interest violation a serious offense. The conflict-of-interest provisions apply equally to construction officials, subcode officials, and inspectors, full or part time, permanent or fill-in.

If you have not familiarized yourself with what constitutes a conflict of interest or the provisions governing violations, it is in your best interest to become familiar with them.

If you have any questions or think you might have a problem, please contact us before we contact you. Don't hesitate to call the Office of Regulatory Affairs at (609) 984-7672.

Source: Gerry Grayce
Office of Regulatory Affairs

Contractors' Registration Act Prohibits Issuance of Permits to Unregistered Contractors Not Otherwise Exempted

The "Contractors' Registration Act," (P.L. 2004, c. 16) was signed into law on May 13, 2004, with an effective date of December 31, 2005.

Under this law, any person who offers to perform, engages, or attempts to engage in the business of making or selling home improvements is required to register annually with the Division of Consumer Affairs under the New Jersey Department of Law and Public Safety, except if he comes within the scope of one of the following exemptions:

1. Any person required to register pursuant to "The New Home Warranty and Builders' Registration Act," P.L. 1977, c. 467 (*N.J.S.A.* 46:3B-1, et seq.);
2. Any person performing a home improvement upon a residential or noncommercial property he owns, or that a member of his family, a bona fide charity, or other nonprofit organization owns;
3. Any person regulated by the State as an architect, professional engineer, landscape architect, land surveyor, electrical contractor, master plumber, or any other person in any other related profession requiring registration, certification, or licensure by the State, who is acting within the scope of practice of his profession;
4. Any person who is employed by a community association or cooperative corporation;
5. Any public utility, as defined under *N.J.S.A.* 48:2-13;
6. Any person licensed by the New Jersey Department of Banking and Insurance under the provisions of Section 16 of the "Retail Installment Sales Act of 1960," P.L. 1960, c. 41 (*N.J.S.A.* 17:16C-77); or
7. Any home improvement retailer with a net worth of more than $50,000,000, or employee of that retailer.

The definition of a "home improvement" is "the remodeling, altering, renovating, repairing, restoring, modernizing, moving, demolishing, or otherwise improving or modifying of the whole or any part of any residential or noncommercial property" and includes "insulation installation and the conversion of existing commercial structures into residential or noncommercial property."

Of particular significance to construction officials is Subsection 12.b of the new law, codified at *N.J.S.A.* 56:8-147, which provides that "no municipality shall issue a construction permit for any home improvement to any contractor who is not registered pursuant to the provisions of this act." On or after December 31, 2005, it will be necessary for the construction official, before issuing any construction permit for a home improvement, to require the applicant to provide evidence of either (1) having a current registration issued by the Division of Consumer Affairs or (2) being in one of the exempt categories. The enforcing agency should retain this evidence as part of its permit documentation.

If you have any questions regarding this matter, please call me at (609) 292-7898.

Source: Michael Ticktin, Esq.
Chief, Legislative Analysis

Fire Alarm System Installers – License/ Certification Requirements

Who can install a fire alarm system in a building?

1. A licensed fire alarm system installer, as per *N.J.S.A.* 45:5A-25 (New Jersey Department of Law and Public Safety, Division of Consumer Affairs);
2. A certified fire protection system contractor, as per *N.J.A.C.* 5:74 (Department of Community Affairs, Division of Fire Safety);
3. A licensed electrical contractor, as per *N.J.S.A.* 45:5A (New Jersey Department of Law and Public Safety, Division of Consumer Affairs).

You can reach the appropriate agencies at the following numbers:

- Division of Consumer Affairs
  (800) 242-5846
  (609) 989-6671
  (973) 504-6200
- Division of Fire Safety
  (609) 633-6070
  (609) 633-6121
- Board of Examiners of Electrical Contractors
  (973) 504-6410

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

Source: Rob Austin
Code Assistance Unit

What, No Alarm?

When a fire protection system (e.g., sprinkler heads, horn-strobes, or smoke detectors) is undergoing maintenance, compliance with the following regulations is mandatory.

The Uniform Fire Code (UFC) (*N.J.A.C.* 5:70) at Section F-504.1, entitled "Protection Maintenance," states that the notification of the fire official is necessary before disconnection and interruption of the fire protection system, and upon the commencement and completion of tests, repairs, alterations, additions, or other such work. The fire officials shall be advised of the extent of and reason for such work, and the restoration of the fire protection system shall be diligently pursued.

Section F-502.0 of the UFC defines a fire protection system as devices, equipment, and systems utilized to detect a fire, activate an alarm, suppress or control a fire, or any combination thereof.

Be aware: The fire official also needs to be notified when a construction permit has been issued for all work stated.

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

Source: Suzanne Borek
Code Assistance Unit

Fire Protection Requirements for High-Piled Combustible Storage 

Confusion exists regarding the application of the 2000 International Building Code (IBC/2000) requirements for high-piled combustible storage.

Section 413.1 of the IBC/2000 requires high-piled stock or rack storage in any occupancy group to comply with the requirements of the 2000 International Fire Code (IFC/2000), regardless of the requirements set forth in Chapter 9 of the IBC/2000 for installation of fire protection systems. For example, a Group S-1 building of less than 12,000 square feet in area is not required to contain an automatic sprinkler system throughout the building as per Section 903.2.10 of the IBC/2000. If the building contains high-piled stock or rack storage, however, compliance with the IFC is required.

Section 2306.4 of the IFC/2000 requires the installation of an automatic sprinkler system when required by Section 2307, entitled "Solid-Piled and Shelf Storage," Section 2308, entitled "Rack Storage," and Section 2309, entitled "Automated Storage." Each of these sections refers to Table 2306.2, entitled "General Fire Protection and Life Safety Requirements." It is important to note that the second column in the table, entitled "Size of High-Piled Storage Area," is applicable to the area of the storage and **not** to the area of the building.

The key point to remember when dealing with high-piled stock or rack storage is that compliance with the IFC/2000 is required regardless of the area of the building.

If you have any questions regarding this matter, please feel free to contact me at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Bonding of Hot Tubs 

Does your manufactured hot tub have a properly sized bonding conductor? If the bonding conductor is 8 AWG or larger, then your manufactured hot tub is properly installed. If the bonding conductor is smaller than 8 AWG, then the manufactured hot tub does not comply with Section 680.42(B) of the 2002 National Electrical Code (NEC/2002), the Electrical Subcode of the Uniform Construction Code.

How do you fix this, you ask? Replacing the noncompliant bonding conductor with one that meets Section 680.42(B) is necessary. In addition, a letter of approval from the manufacturer is required for acceptance of the modification (see NEC/2002, Section 110.2).

NOTE: Section 680.42(B) refers the hot tub installer to use the swimming pool bonding requirements in Section 680.26(B), hence the 8 AWG bonding conductor size.

The only exception to the above requirement is in Section 680.26(B)(4). This section states: "Metal parts of listed and labeled equipment incorporating an approved system of double insulation and providing a means for grounding internal non-accessible, non-current-carrying metal parts shall not be bonded." This exception requires a listed and labeled wiring method, serving as both the equipment grounding conductor and the bonding jumper, that meets the requirements of UL 1563. The motor associated with the wiring must also meet the double insulation requirements of UL 1081.

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

Source: Rob Austin
Code Assistance Unit

Code Change Proposals for the Rehabilitation Subcode (*N.J.A.C.* 5:23-6)

Once again, it is time to submit code change proposals for the Rehabilitation Subcode. Code changes may be aimed at improving the Rehabilitation Subcode by recommending a requirement that is not currently there or addressing a requirement that seems unclear. Since its adoption in 1998, the Department of Community Affairs has encouraged code users to submit Rehabilitation Subcode code changes. This process, through which code changes based on the experience of the code users are presented and discussed, has been very successful.

To be considered this cycle, code changes must be submitted to the Department by February 11, 2005. The code change must be specific — the citation and the exact language change must be given. An explanation must be provided and any companion changes (other sections of the Rehabilitation Subcode that would also need to be changed) must be identified.

The code changes will be collated and presented to the Uniform Construction Code Advisory Board. A public hearing will be held at 9:30 a.m. on March 11, 2005 in Room 129 of the Department of Community Affairs at 101 South Broad Street in Trenton. The public hearing will give code change proponents a chance to present — and explain — their proposals to the members of the Board.

A code change proposal form is included in this edition of the *Construction Code Communicator* on page 16 for your convenience. If you have any questions about this process, please contact the Code Development Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Low-Voltage Lighting

Confusion exists as to what type of wiring method may be used for low-voltage lighting (both indoor and outdoor use). The purpose of this article is to highlight the requirements of the 2002 edition of the National Electrical Code (NEC/2002) that address this issue.

Low-voltage lighting systems require compliance with Article 411 of the NEC/2002, entitled "Lighting Systems Operating at 30 Volts or Less." Section 411.3, entitled "Listing Required," requires the listing of systems for their intended purpose; i.e., all components are required to be listed and labeled.

Underwriters Laboratories, Inc. (UL) has provided information on the type of marking required for all of the fittings for low-voltage lighting systems. These markings are as follows:

"DRY LOCATIONS ONLY"
OR
"SUITABLE FOR DAMP LOCATIONS"
OR
"SUITABLE FOR WET LOCATIONS"

According to UL, "Landscape Low-Voltage Lighting Systems," wiring between the power unit, lighting units, and fittings shall be **SPT-3, Underground Low-Energy Circuit Cable,** or other wire that is sun resistant, and suitable for direct burial and wet locations. This provision ensures that the systems are suitable for use outdoors in accordance with specific installation instructions provided with the power unit and lighting units.

Section 411.4, "Locations Not Permitted," prohibits installation of systems under the following conditions: (1) where concealed or extended through a building wall, unless a wiring method specified in Chapter 3, "Wiring Methods and Materials," is used; or (2) within ten feet of pools, spas, fountains, or similar locations, except as permitted by Article 680, "Swimming Pools, Fountains, and Similar Installations."

Chapter 3, "Wiring Methods and Materials," includes but is not limited to nonmetallic, sheathed cable; armored cable; and metal-clad cable. Article 725, "Class 1, Class 2, and Class 3 Remote-Control, Signaling, and Power-Limited Circuits," wiring methods are not applicable. Article 411 and Chapter 3 do not reference the methods found in Article 725; therefore, a Chapter 3 wiring method must be used for wiring when the system is concealed in or extending through building walls.

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

Source: Suzanne Borek
Code Assistance Unit

Manufactured Homes Installation and Assembly: Common Instances of Nonconformance

The unique design of the factory-built manufactured (mobile) home (MH) requires that the home be assembled and installed correctly. Equally important is that each home has a foundation and stabilization system properly designed by a New Jersey professional engineer or registered

architect. The system's design must be based on site-specific soil conditions, as well as the provisions contained in the manufacturer's installation instructions. The manufacturer's installation instructions must be approved by the third-party agency in compliance with the Federal MH Program.

Since installation and assembly is critical, the work performed at the site should be properly inspected and approved before the municipality issues a Certificate of Occupancy. The installation instructions should be filed with the local municipality at the time of construction permit application. An article in the Summer 2001 edition of the *Construction Code Communicator*, "Alert: Manufactured (HUD) Homes: Installation & Assembly," emphasized this point.

In many instances, MHs have been found to have been improperly installed and/or assembled. Below is a number of common examples of nonconformance:

Supports:
Spacing of the piers was not in accordance with the approved engineering drawings and specifications. In certain cases, the caps installed were not solid as indicated on the drawing. The marriage wall lacked the installation of supports. In many cases, the shims were improperly installed; for example:

- There was only one shim instead of a pair of shims.
- The size of the shims did not meet specifications listed in the manufacturer's installation instructions.

Anchors and Straps:
The approved drawings and specifications did not include the specifications for the anchors and straps (e.g., did not indicate a brand and/or model). Section 3280.306(f) of the Federal Manufactured Home Construction and Safety Standards (MHCSS) specifies a minimum working load of 3,125 lbs., and an ultimate load of 4,725 lbs.

The MHCSS also requires anchor certification. The building subcode official should ask for the anchor and strap manufacturer's product manual to verify the certifications before approving the plans.

In some cases, the manufacturer's instructions specify the installation of longitudinal straps at both ends of the units. If a variation(s) from the approved engineering drawings and specifications is necessary, the design drawings are to be revised and approved before any substitution is permitted in the field.

In a recent situation, the installed anchors were not the ones that were specified on the approved drawings and specifications. There was no approval for the anchors installed at the site. To make matters worse, the installed anchors were not in accordance with the anchor manufacturer's instructions, thus creating unsafe conditions.

Bottom Board:
Penetrations made into the bottom board lacked seals that deny entry to rodents and that limit air infiltration. (Refer to Section 3280.305(g)5, Section 307(d), and Section 505(a) of the MHCSS and the manufacturer's installation instructions.) The only accepted repair for the bottom board is approved tape or adhesive. Duct tape is not a suitable material for patching or repair.

Floor Joist Assembly:
The floor joists of the two units in a double-wide home were not fastened properly. The fastener type, size, and spacing were not in accordance with the manufacturer's installation instructions.

Roof Assembly:
The roofs of the two units in a double-wide home were not fastened properly. Either the fastener size and spacing were not in accordance with the MH manufacturer's installation instructions, or they were not fastened at all. The erection and assembly of the hinged roof, including the vent installation, lacked an inspection.

Endwall Assembly:
The endwalls of the two units in a double-wide home were either fastened improperly or not fastened at all. For example, the fastener type, size, and spacing were not in accordance with the manufacturer's installation instructions.

Drain Line Support:
There was inadequate, or a complete lack of, support that was not in accordance with the MH manufacturer's instructions.

Crawl Space Ventilation:
There was inadequate ventilation that was not in accordance with the requirements for size and location per Sections R408.1 and R408.2 of the International Residential Code (IRC).

Crawl Space Access:
The crawl space access opening was not in accordance with Sections R408.3 of the IRC.

In case of any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva
Industrialized Buildings Unit
Bureau of Code Services

Modular Homes Built in Vocational/Technical Schools

In response to inquiries regarding buildings built in vocational/technical (vo-tech) schools, the Department of Community Affairs has developed the following policies and procedures:

a) The local enforcing agency responsible for the area where the vo-tech school is located shall:
   1. Review and release the plans and specifications for the modular homes. A registered or licensed design professional will prepare the plans and specifications, in accordance with the applicable provisions of the Uniform Construction Code (UCC).
   2. Conduct necessary inspections of the modular homes during the manufacturing of the unit(s) to ensure conformance with the released plans and specifications.
   3. Issue a Certificate of Approval for the manufactured unit(s).

b) The local enforcing agency responsible for the area where the unit(s) are/will be located shall:
   1. Review and release the plans and specifications for the foundation system and other site work required for installation and assembly of the unit(s). A registered or licensed design professional shall design the foundation system and other site work in accordance with all the applicable provisions of the UCC.
   2. Inspect the pre-manufactured unit(s) for any visible damage. Subcode officials and/or inspectors shall perform the necessary and required UCC inspections of the foundation system, installation and assembly of the unit(s), and shall also perform the required nondestructive tests.
   3. Issue a Certificate of Occupancy.

If you have any questions regarding this, please contact me at (609) 984-7974.

Source: Paul Sachdeva
Industrialized Buildings Unit
Bureau of Code Services

Oil Piping Depth



With the adoption of the 2000 edition of the International Mechanical Code (IMC/2000), the Department of Community Affairs has received questions pertaining to the proper depth of oil lines below grade.

The previous edition of the mechanical code had a section that stated the minimum depth of pipe installed underground to be 18 inches.

Section1301.2 of the IMC/2000, entitled “Storage and Piping Systems,” states that “Fuel-oil piping systems shall comply with the requirements of this code.” Unfortunately, the IMC/2000 does not have any sections specifying the minimum depth of oil piping underground.

Since the adopted IMC subcode does not have any requirements for the installation of underground fuel-oil piping, it is recommended as a guidance to code officials that National Fire Protection Association (NFPA) 30, Section 3-7, entitled “Underground Piping,” be used.

NFPA 30, Section 3-7 states the following: “[i]n areas subject to vehicle traffic, the trench shall be sufficient depth to permit a bedding of at least 6 inches of well-compacted backfill material, and shall be covered with at least 18 inches of well-compacted backfill material and pavement. In areas not subject to vehicle traffic, the piping shall be provided with a cover of at least 6 inches of well-compacted backfill material. A greater burial depth shall be provided when required by the manufacturer’s installations or where frost conditions are present.”

Therefore, since there is no code language in the IMC/2000 for oil piping depth, NFPA 30, Section 3-7 applies.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Peer Review is Overworked

That is right, the Peer Review committees are overworked because they have been meeting at an astounding rate. The Office of Regulatory Affairs has brought 33 licensed individuals before Peer Review in the last two years. This does not include an additional 36 individuals who have been forced to retire, or those who have received letters of warning or reprimand. Unfortunately, many of the infractions violate regulations that have existed for years.

Here are 12 examples of infractions and subsequent Peer Review recommendations:

1. While serving as a construction official, an individual carried out enforcement on eight different projects where he owned the property involved. In a split decision, Peer Review recommended the revocation of all of his licenses.
2. While acting as a building inspector, an individual sold building materials to a contractor who was working on a job site that was under the building inspector's jurisdiction. Peer Review recommended a 15-day suspension and a $500 penalty.
3. While acting as a building subcode official, an individual ran a new home construction company in an adjacent municipality. Peer Review recommended revocation of all of the official's licenses.
4. While acting as an electrical subcode official for a third-party agency, an individual ran an electrical contracting company. Peer Review recommended revocation of all of the official's licenses.
5. While acting as a building inspector part time, an individual was a supervisor for a new home construction company in an adjacent municipality. Peer Review recommended revocation of all of the individual's licenses.
6. While acting as an electrical inspector part time, an individual falsified two inspections. Peer Review recommended revocation of all of the individual's licenses.
7. While acting as a plumbing subcode inspector, an individual signed 18 Plumbing Subcode Technical Sections indicating that he performed the inspections, when in actuality an unlicensed individual performed the inspections. Peer Review recommended revocation of all of the individual's licenses.
8. While acting as a construction official/building subcode official, an individual permitted the construction manager of a school project, who held a Uniform Construction Code license, to act as the building inspector and sign off on building inspections. Peer Review recommended revocation of all of the individual's licenses.
9. While acting as a construction official, an individual provided false information to the Department of Community Affairs' licensing section in support of his brother's licensing application. Peer Review recommended a ten-day suspension of all of the individual's licenses.
10. While acting as a construction official/building subcode official, an individual allowed his licenses to expire, but continued to perform inspections and other duties for three months with expired licenses. Peer Review recommended a $500 penalty, and required the individual to repeat construction official and building subcode official courses.
11. An individual failed to obtain the proper Plumbing Subcode licenses before accepting the plumbing subcode position in a municipality. After he obtained the proper license, it was learned that he failed to disclose the revocation of his New Jersey Master Plumbers license. Peer Review recommended the revocation of all of this individual's licenses.
12. While acting as a community college instructor, an individual purposefully misrepresented student attendance in courses with minimum attendance requirements. Peer Review recommended the revocation of all of this individual's licenses.

These 12 examples are just a sample of the improprieties that have been committed by some officials. The Office of Regulatory Affairs has increased its staff, which allows us to conduct more detailed and thorough investigations.

Some of these acts of malfeasance are the result of ignorance. We ask you to please consider your actions carefully. If you are not sure what to do, give us a call first. We will resolve any ambiguities and we will provide counsel to ensure that the issues you face do not escalate into problems that could result in sanctions.

If you have any questions, please call the Office of Regulatory Affairs at (609) 984-7672.

Source: Louis Mraw
Office of Regulatory Affairs

Glow-in-the-Dark Exit Signs



A new, innovative product has come to light -- or has it? Companies are marketing photoluminescent exit signs that do not require electricity or the use of lamps. Do these exit signs meet code?

Section 1003.2.10.4 of the 2000 International Building Code (IBC/2000) states that exit signs shall be internally or externally illuminated and that the face of an exit sign, illuminated from an external source, shall have an intensity of no less than five foot-candles.

(continued on page 14)

(continued from page 13)

Section 1003.2.10.5 of the IBC/2000 states that exit signs shall be illuminated at all times. This section also states that exit signs are to be connected to an emergency electrical system provided from storage batteries, unit equipment, or an on-site generator to ensure continued illumination for not less than 90 minutes in duration, in the event of primary power loss. The exception states that approved exit signs that provide continuous illumination independent of external power sources for no less than a 90-minute duration, in case of primary power loss, are not required to be connected to an emergency electrical system.

To obtain maximum illumination, the photoluminescent exit signs require exposure to a minimum of five foot-candles for at least an eight-hour duration; some require up to 24-hour durations. A constant, unfiltered fluorescent light with the intensity of five foot-candles must be present, 24 hours a day, seven days a week.

The question stands: do these types of exit signs meet the code? The answer is no. Officials cannot be expected to monitor buildings that intend to install these types of exit signs. They cannot ensure that the proper type and level of light are present at all times, nor can they gauge the light's exposure to the exit signs to guarantee that, when there is power loss, the signs will provide the illumination required.

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

Source: Suzanne Borek
Code Assistance Unit

Publication Inquiries

Have questions on Uniform Construction Code subscriptions? You can now reach the Publications Unit via e-mail.

The e-mail address is listed on the Division of Codes and Standards' web site. You may still reach the Publications Unit by phone.

- e-mail: UCCpublications@dca.state.nj.us
- web site: www.state.nj.us/dca/codes
- telephone: (609) 984-0040

Source: Cecilia Heredia
Publications Unit

How Much is that Panel on the Roof?

The real question is how to calculate the fee for photovoltaic (PV) systems. The Electrical Subcode Technical Section, F120, has no specific line item for these types of systems.

How many panels do you charge for and where do they belong on the technical section? The panels themselves are not listed, only the number of arrays that the panels make up; e.g., if there are 32 solar panels that are one-foot square and they make two four-foot by four-foot arrays, the fee would be for two "Communication Points." The reason is that the panels are collecting the solar energy and conveying it to the inverters changing the voltage. The total number of inverters for these systems belongs on the technical section line for "Switches."

Disconnects for these systems are based on an ampacity rating and belong on the technical section line as "AMP Motor Control Center/Disconnect." The term "disconnect" after this line item indicates another form of system control.

The back-fed breaker, which indicates the total ampacity for the PV system, belongs on the technical section line as a "Subpanel;" however, if it is a stand-alone system, it belongs on the technical section as a "Service."

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

Source: Suzanne Borek
Code Assistance Unit

ALERT! Recall of AFCIs

The United States Consumer Product Safety Commission (CPSC) is recalling about 700,000 Arc Fault Circuit Interrupters (AFCIs) manufactured after March 1, 2004 by Schneider Electric North America. Electrical distributors and retailers sold the AFCIs between March and September 2004.

The recalled units have a blue test button and the circuit breakers have one of the following date codes stamped in red on the breaker label: CD, DN, EN, FN, GN, HN, or JN. One of the following catalog numbers is printed on a label on the front of the breaker: QO115AFI, QO115AFIC, QO120AFI, QO120AFIC, QOB115AFI, QOB120AFI, HOM115AFI, HOM115AFIC, HOM120AFI, HOM120AFIC, QO115VHAFI, QO120VHAFI, QOB115VHAFI, or QOB120VHAFI.

As code officials, you are not responsible for enforcement of this recall. However, you may wish to alert the residents of your community of this recall as a service.

Concerned residents may obtain information by contacting Schneider Electric toll free at (877) 202-9046 or through the company's web site at www.us.squared.com/recallafci. Information is also available from the CPSC web site at www.cpsc.gov/cpscpub/prerel/prhtml05/05035.html.

Source: John N. Terry
Code Assistance Unit

Update on Revocation of Permits for Uncompleted Buildings

P.L. 2001, c. 457 allows a construction official to revoke a permit in most cases in which exterior and site work have not been completed within three years of the issuance of the permit or within three years of the effective date of the act, which was January 14, 2002, whichever is later. Thus, all owners of uncompleted buildings were given at least until January 14, 2005 to complete at least the exterior and site work. Since the statutory powers do not become operative until January 14, 2005, the implementation of the statute by rule must also be deferred until that date.

On August 26, 2004, Department of Community Affairs Commissioner Susan Bass Levin adopted an amendment to the Uniform Construction Code rules at *N.J.A.C.* 5:23-2.16, Construction Permits – Procedure, implementing P.L. 2001, c. 457. The amendment appeared in the October 4, 2004 issue of the *New Jersey Register.* However, it will not become operative until January 14, 2005 and West Publishing will not distribute it to code subscribers until that date.

Source: Michael L. Ticktin
Chief, Legislative Analysis

Safety Glazing



It has come to the attention of the Department of Community Affairs that Section R308.4 of the New Jersey edition of the 2000 International Residential Code (IRC/2000), entitled "Hazardous Locations," contains a misprint. Upon adoption of the IRC/2000 as the One- and Two-Family Dwelling Subcode of the Uniform Construction Code at *N.J.A.C.* 5:23-3.21(c)3viii, the Department deleted Item 9 in Section R308.4.

The Department has since discovered that, during the publication of IRC/2000, Item 9 was inadvertently retained and renumbered as Item 10. This probably occurred as the result of an automatic computer action. Code users should strike Item 10 in its entirety from their code books to eliminate confusion.

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

Source: Jeff Applegate
Code Assistance Unit

Luminaires in Ductwork



Ultraviolet (UV) luminaires reduce the production of mold spores. Air-conditioning system designers have demonstrated that UV luminaires can control mold when installed in ductwork. Proper labeling and listing of mold-reducing equipment is necessary.

Article 110 of the 2002 edition of the National Electrical Code (NEC/2002), entitled "Requirements for Electrical Installations," and Section 110.3(B) of the NEC/2002, entitled "Installation and Use," state that technicians installing mold-reducing equipment must adhere to any listing or labeling instructions.

This means any luminaire installed in ductwork has to be listed and/or labeled for that specific use.

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

Source: Suzanne Borek
Code Assistance Unit

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
CODE CHANGE PROPOSAL 2005
REHABILITATION SUBCODE (*N.J.A.C.* 5:23-6)

Due: **February 11, 2005**
Proposals must be presented with language proposed for deletion in brackets [ ].
Proposals must be presented with language proposed for addition underlined ____.

Mail code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625

Fax code change proposals to:
Code Development Unit
(609) 984-7717 or
(609) 633-6729

Direct questions to the Code Development or Code Assistance Units at (609) 984-7609.

Section (citation) proposed for change: _____

Sections (companion changes) that might also need to be changed: _____

_____

NAME: _____

ORGANIZATION (if any): _____

ADDRESS: _____

_____

TELEPHONE: _____ FAX: _____ E-mail: _____

Proposed Code Change:

_____

_____

Supporting Statement (reason for code change):

_____

_____

_____

_____

_____

_____

NOTES

NOTES

NOTES

Greetings from Acting Governor Richard J. Codey and Commissioner Susan Bass Levin

One fundamental principle of the New Jersey State Uniform Construction Code (UCC) is that New Jersey citizens are provided with safe and affordable housing and buildings. This is achieved through local code enforcement agencies working in partnership with design professionals, builders, and developers.

Three times per year, the Department of Community Affairs' (DCA) Division of Codes and Standards publishes the *Construction Code Communicator*. This newsletter provides subscribers -- both public and private -- with information on emerging construction issues. It also provides code officials with guidance on UCC administration and enforcement.

Through the *Construction Code Communicator* and all of our programs and services, we remain committed to providing safe and affordable housing and buildings to New Jersey citizens.

With regards,

Richard J. Codey
Acting Governor

Susan Bass Levin
Commissioner



Susan Bass Levin
Commissioner
NJ Department of Community Affairs



Richard J. Codey
Acting Governor
State of New Jersey



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Construction Code Communicator

State of New Jersey
James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

Volume 15 Number 1 ***Spring 2003***

The I-Codes Are Here!

The Department of Community Affairs adopted the 2000 editions of the International Building Code (IBC/2000) and the International Residential Code (IRC/2000) on May 5, 2003. The purpose of this article is to summarize the changes made by the State of New Jersey to these model codes. This article is not intended to provide an all-inclusive list of amendments, but merely a list of the "big-ticket" changes that are proposed by the Department.

IBC/2000

1. Occupancy Classification Clarifications (Chapter 3): The Department is amending the published occupancy descriptions for Group I and Group R. These amendments reflect the New Jersey laws for rooming and boarding homes, hotels and multiple dwellings, and the Department of Health and Senior Services regulations for assisted-living facilities. Additionally, the amendments provide clarification on Group R-3 occupancies because the definition, as published in the IBC/2000, is not clear. The amended language provides clarity on the limited scope of this occupancy classification.

2. Height and Area Limitations: The Department is amending the allowable number of stories per the IBC/2000. The number of stories allowed will be consistent with the number of stories allowed by the 1996 edition of the Building Officials and Code Administrators (BOCA) National Building Code.

3. Unlimited Area Buildings (Section 507): The IBC/2000 contains a provision for unsprinklered, unlimited-area buildings. This provision has been deleted upon adoption. The IBC/2000 also contains provisions for two-story, unlimited-area buildings. These provisions are limited to buildings of Type 1 or Type 2 construction.

4. Fire Wall Horizontal Continuity (Section 705.5): The IBC/2000 provides that fire walls must be continuous for a distance of four feet on either side where the firewall intersects with an exterior wall. This provision has been deleted and the BOCA/1996 requirement for a smoke-tight junction has been retained.

5. Elevator Lobbies (Section 707.14.1): The IBC/2000 contains requirements for elevator lobbies in occupancies that are required to have fire-resistance-rated corridors. In New Jersey, these requirements are limited to high-rise buildings that are required to have fire-resistance-rated corridors.

6. Fire Protection Systems:

A. Group I (Section 903.2.5) -- The fire sprinkler exception for day-care facilities with 100 or fewer children that have direct access to the exterior at grade is retained from BOCA/1996. However, this exception is NOT

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applicable to buildings of construction types IIIB and VB.

B. Group R (Section 903.2.8) -- The current exception from BOCA/1996 for two-story, Group R-2 buildings is retained.

C. Windowless Stories (Section 903.2.12.1) -- The current BOCA/1996 requirements for the suppression of windowless stories are retained.

D. Area Sprinkler Requirements (Section 903.2.16) -- A sprinkler threshold has been established for Groups B, F-2, and S-2. An automatic sprinkler system per Section 903.3.1.1, "NFPA 13 Sprinkler Systems," of the Building Subcode is required when the maximum area is exceeded for construction types IIB, IIIB, and VB.

E. Standpipe Installation (Section 905.2) -- The current requirements for standpipe system design from BOCA/1996 are retained.

F. Fire Department Connections (Section 906) -- The current requirements for Fire Department Connections (FDCs) from BOCA/1996 are retained because the IBC/2000 does not contain requirements for FDCs.

7. Horizontal Exits: The current requirements for horizontal exits are retained.

8. Structural Tests and Special Inspections: The Department has made a few changes to the IBC/2000 requirements for structural tests and special inspections. These are new concepts for construction code enforcement in New Jersey, and the provisions expand the quantity and types of special inspections required. The adopted amendments limit the application of these requirements to Class 1 buildings only.

9. Swimming Pool Barriers: The IBC/2000 inadequately addresses swimming pool protection. Therefore, the current requirements from BOCA/1996, as amended, are retained.

10. Referenced Standards: The 1999 editions of the National Fire Protection Association (NFPA) 13, 13R, 13D, and 20 are adopted in lieu of the 1996 editions of the NFPA standards, which are referenced in the IBC/2000. The 1996 editions of the NFPA standards are no longer in print.

IRC/2000

1. Stair Issues: The Department has amended the provisions for stairs in the IRC/2000 to retain the current building code requirements. Examples of these amendments include provisions for stairway illumination, tread and riser dimensions for all residential stair types, handrail grip size, and ladder effect of guardrails.

2. Private Garage Separations: The Department has retained the BOCA/1996 requirements for fire-resistance ratings for private garages that are located under or adjacent to a living space.

3. Emergency Escape and Rescue: The Department has deleted the requirement contained in the IRC/2000 for emergency escape and rescue openings for all basements that contain habitable spaces. These openings will be required for sleeping rooms only.

4. Sprinkler Trade-Off for Dwelling Unit Separation: The Department has amended the section that allows a reduction in the fire-resistance rating for the installation of an automatic fire sprinkler system installed in accordance with NFPA 13. The adoption allows use of the reduced fire-resistance ratings when an NFPA 13, 13R, or 13D system is installed.

5. Presumptive Load Bearing Values of Soil: The Department has retained the load-bearing values for soil from the 1995 edition of the Council of American Building Officials One- and Two-Family Dwelling Code.

6. Waterproofing and Dampproofing for Foundations: The Department has retained the BOCA/1996 text for the requirements applicable to the waterproofing and dampproofing of foundation walls.

7. Chimney Clearance to Combustibles: The Department has retained the current BOCA/1996 requirements for clearance to combustible sheathing and trim.

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

Source: John N. Terry
Code Assistance Unit

Adoption of the NEC 2002

The proposal for the adoption of the 2002 edition of the National Electrical Code (NEC/2002) as the Electrical Subcode was published in the December 16, 2002 *New Jersey Register*. The adoption was published on May 5, 2003. The highlights of the New Jersey amendments to the NEC/2002 are as follows:

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Article 80, "Administration and Enforcement," is deleted because the Uniform Construction Code contains the administrative provisions for the enforcement of technical subcodes in New Jersey.

The requirement for the installation of Arc Fault Circuit Interrupters at Section 210.12(B), entitled "Arc-Fault Circuit-Interrupter Protection," is also deleted. These installations will remain optional in New Jersey.

In addition, Section 334.12(A)(1), "Uses Not Permitted," which prohibits the installation of romex (Types NM, NMC, and NMS) cable throughout multi-story buildings of construction types III, IV, and V, is deleted.

Another significant feature of this adoption is the introduction of metric units (also known as SI units) as the preferred measurement system for enforcement of the Electrical Subcode. The conversion from the inch-pound units to SI units is allowed to be used as an approximate conversion (also known as a hard conversion), except in limited cases as covered in Section 90.9(C), "Units of Measurement, Permitted Uses of Soft Conversion." Accordingly, at Section 300.4(a)(1), "Protection Against Physical Damage, Cables and Raceways Through Wood Members," the allowed distance from the edge of a hole on a nail plate to the nearest edge of a wood member has been changed from "1¼ inches (31.8 mm)" to "32 mm (1¼ inches)" to make it consistent with the standardized text of the NEC/2002. Numbers shown in either SI units or inch-pound units are considered compliant.

Code officials are advised to note the corrections contained in the errata to the NEC/2002, which are posted at the National Fire Protection Association web site at www.nfpa.org, and to remember the provision for the six-month grace period for subcode revisions, as set forth at *N.J.A.C.* 5:23-1.6(a).

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

Source: Ashok Mehta
Code Assistance Unit

ALERT! Aluminum Structures

"Patio rooms," "sunrooms," "three-seasons rooms," "four-seasons rooms," or "Florida rooms" — call them what you want, but we have found that these aluminum structures are collapsing at an alarming rate in New Jersey. Why? Because many of the manufacturers have not taken into consideration the snow drifting requirements contained in Section 1608.7.1 of the 1996 Building Officials and Code Administrators (BOCA) National Building Code.

These structures are usually bolted to the rear wall of single-family dwellings. The roof of the aluminum structure is usually considerably lower than the roof of the main structure. That allows snow to build up and the structure eventually collapses.

There is a second problem. The Council of American Building Officials One- and Two-Family Dwelling Code and the 2000 International Residential Code (IRC), which have recently been adopted, do not contain provisions for drifting snow. To address this situation, the Department of Community Affairs will publish a Formal Technical Opinion (FTO). This FTO will contain the provisions from the 2003 IRC, which will have specific design criteria for aluminum structures. Until the FTO is published, all code officials should review these structures utilizing the provisions contained in the recently adopted 2000 International Building Code, Section 1608.7, "Drifts on Lower Roofs."

If you have any questions, please contact the Code Assistance Unit at (609) 984-7609 or the Office of Regulatory Affairs at (609) 984-7672.

Source: Lou Mraw
Office of Regulatory Affairs

Licensing of Autobody Repair Facilities

This article is to serve as a heads up for code officials in case you receive calls about the new licensing requirements for autobody repair facilities.

Recent statutory changes at *N.J.S.A.* 39:13, Motor Vehicles – Repairs, Licensing, and Permits, have established new licensing requirements for autobody repair facilities. For more information, anyone with questions may contact the New Jersey Department of Transportation, Division of Motor Vehicles (NJDOT DMV) at (609) 984-9632 or (609) 984-9631.

Please be advised, Uniform Construction Code officials do not have jurisdiction in this matter. This information is provided so that code officials may appropriately direct inquiries on autobody repair facility licensing requirements to NJDOT DMV.

Source: Yvonne Dawkins
NJDOT DMV

Highlights of the Differences Between IBC/2000 and BOCA/1996

The Department of Community Affairs adopted the 2000 edition of the International Building Code (IBC) on May 5, 2003 and many requirements of the 1996 Building Officials and Code Administrators National Building Code (BOCA) will change. The following chart highlights some of the new code requirements, illustrating primary differences between the IBC/2000 and BOCA/1996.

Chapter 3 "Use and Occupancy Classification" (Refer to other articles in this issue of the *Construction Code Communicator* for additional information.)	Use Groups, which are now Groups per the IBC/2000, have been revised and new ones have been added. For example, upon adoption, restaurants and nightclubs are both considered Group A-2, churches have been added to Group A-3, and indoor arenas are classified as Group A-4.
Chapter 4 "Special Detailed Requirements Based on Use and Occupancy"	There are requirements for security grilles and doors in malls. A standby power and an emergency voice/alarm communication system are required in malls with an area greater than 50,000 square feet. Atrium walls and ceilings must meet a Class B interior finish. A carport must be open on two sides, or it is considered a garage.
Chapter 5 "General Building Heights and Areas"	The Height and Area Table is different than that provided in BOCA/1996. Larger buildings can be constructed under the IBC/2000. IBC/2000 tabular areas have been increased when compared to those found in BOCA/1996. Also, the IBC/2000 allows a larger area increase for sprinklers than BOCA/1996.
Chapter 6 "Types of Construction"	The Types of Construction have been revised. Type 1A per BOCA 1996 is deleted and Type 1B is now Type 1A in IBC/2000. Also, Type 2A is now Type 1B, Type 2B is Type 2A, and Type 2C is Type 2B. The remaining Types of Construction are the same.
Chapter 7 "Fire-Resistance-Rated Construction"	Minor technical changes have been made and the chapter has been reorganized. There are new requirements for an elevator lobby in certain instances.
Chapter 8 "Interior Finishes"	Textile ceiling finishes must conform to Class A of ASTM E84. Suspended acoustical ceilings must be installed per ASTM C635 and ASTM C636. Pyroxylin plastic is not permitted in Group A occupancies.
Chapter 9 "Fire Protection Systems"	An automatic sprinkler system is required in woodworking operations greater than 2,500 square feet or where finely divided combustible material is created. An automatic sprinkler system is required in a cellulose nitrate or pyroxylin plastic fabrication area. There are new requirements for the installation of sprinklers in repair garages. A secondary water supply is required for high-rise buildings in seismic areas. There is a standpipe requirement in non-sprinklered Group A buildings with more than 1,000 occupants. These buildings also require an emergency voice/alarm communication system. There are new requirements for Group F and Group M involving manual alarms.
Chapter 10 "Means of Egress"	A new requirement states that protruding objects cannot reduce the clear width of an accessible route. A new section contains requirements on special doors and grilles. A new section has been added that requires stairway doors to be operable from both sides without knowledge or effort; there are exceptions. There are new requirements for turnstiles. There are new requirements for corridor continuity. There is a new requirement for the separation of ventilation equipment that serves exit enclosures from other ventilation equipment.
Chapter 12 "Interior Environment"	There are only minor changes to this chapter.
Chapter 14 "Exterior Walls"	There are requirements for a vapor retarder on exterior walls. There are new requirements for fastening of wall coverings.

Chapter 15 "Roof Assemblies and Rooftop Structure"	There is a new requirement for at least schedule 40 plastic pipes for gutters and leaders except in Group R-3, private garages and Type V construction. There are requirements for metal-panel roof systems and ballasted, single-ply roof systems. Roof covering material must be labeled with the manufacturer's and approved testing agency's identifying information.
Chapter 16 "Structural Design"	Wind speed is measured differently in the IBC/2000. The wind speed contour line for 110 mph (BOCA/1996 wind speed – 90 mph) has moved inland slightly so that there is a wind speed increase for coastal communities. The seismic section has been revised and new terms have been implemented. The same letter designation has been used to define Seismic Design Categories and Site Coefficient. These are two distinct parameters for seismic design.
Chapter 17 "Structural Test and Special Inspections"	There are new layers of responsibility for structural tests and special inspections. For example, inspection of smoke control requires an acceptance test after installation; windows and doors must be tested in accordance with AAMA/NWWDA or ASTM E330. Contractors are required to submit a statement of responsibility that acknowledges they are aware of the special quality assurance requirements, that specifies quality control procedures, and that identifies the persons responsible for quality control, etc.
Chapter 18 "Soil and Foundations"	There are new requirements for seismic overturning movement of foundations. There are soil liquefaction requirements. There are requirements for pools located close to sloping soils. There are minimum requirements for the width of footings. There are new design requirements for pier foundations.

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

Source: Marcel Iglesias
Code Assistance Unit

Carbon Monoxide Detectors in One- and Two-Family Dwellings

The requirement for the installation of Carbon Monoxide (CO) alarms in one- and two-family dwellings was adopted in the April 7, 2003 *New Jersey Register*. Please be advised, the six-month grace period does not apply to these regulations.

The six-month grace period does not apply because the requirement for installation of a CO alarm in accordance with the adopted regulations has no impact on the design of a home and may be addressed as an inspection item.

If you have any questions on this issue, you may contact the Code Assistance Unit at (609) 984-7609.

Source: Kristy Paolillo
Code Development

Did You Know the Division of Codes and Standards is on the World Wide Web?

The next time you are on the Web, be sure to surf to the Department of Community Affairs, Division of Codes and Standards web site. The Division's web site offers local construction offices and the general public a wide array of useful information and materials. From this web site you can:

- Find employment opportunities within the Division of Codes and Standards.
- Locate model codes adopted in New Jersey from 1975 to present.
- Comment on rule proposals via e-mail.
- Locate rule proposals and adoptions.
- Find information about the Carnival and Amusement Ride Safety Program.
- Locate a complete listing of working code officials (updated quarterly).

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- Locate a detailed listing of registered home builders in New Jersey.
- Print copies of the Uniform Construction Code (UCC) Construction Permit Application F100 and related UCC Standard Forms.
- Find information and print related applications for subcode and construction official license exams.
- Find seminar brochures and course dates, and e-mail your registration for continuing education seminars.
- Find information on how to order Division publications.

The Division's web site is updated on a regular basis, so be sure to add http://www.state.nj.gov/dca/codes/ to your "favorites" menu.

If you have any questions, you may e-mail me at dyedwab@dca.state.nj.us.

Source: Dana M. Yedwab
Division of Codes and Standards

Commercial Kitchen Hood Fire Suppression System 

With the adoption of the 2000 edition of the International Mechanical Code (IMC), a question has been raised on the requirements for the automatic shutdown of the fuel or electrical power supply to the cooking equipment when the hood fire extinguishing system is actuated. Previously, in the 1993 edition of the Building Officials and Code Administrators (BOCA) Mechanical Code, this code requirement was clearly stated in Section M-508.3.

In the IMC/2000, Section 509, "Fire Suppression Systems," reference is made to an approved automatic fire suppression system complying with the 2000 editions of the International Building Code (IBC) and the International Fire Code.

The IBC/2000, Section 904.11.2, "System Interconnection," clearly states the above requirement for automatic shutdown of the fuel or electrical power supply to the cooking equipment when the fire extinguishing system is actuated.

Please note, for projects approved prior to the adoption of the IBC/2000, the above requirements are referenced through the Uniform Construction Code to the 1996 editions of the BOCA National Building Code and the BOCA National Fire Prevention Code. BOCA/1996, Section 910, "Dry-Chemical Extinguishing Systems," and Section 914.0, "Wet-Chemical Range Hood Extinguishing Systems," make reference to National Fire Protection Association (NFPA) 17 and 17A standards. Both referenced NFPA standards have requirements for automatic shutdown of the fuel or electrical power supply to the cooking equipment when the fire extinguishing system is actuated.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

ISO is Reevaluating New Jersey's Code Enforcement Offices

The Department of Community Affairs and the Insurance Services Office (ISO) met recently to discuss ISO's Building Code Effectiveness Grading Schedule (BCEGS) program. A primary topic of this meeting was the State-adopted building code.

One of the premises of the BCEGS program is to encourage the adoption of the latest edition of a model building code. This is accomplished in two ways. First, less than full score is assigned when the code being used is over five years old. Second, when the final score is being calculated, a factor is applied to the balance of the points available that further reduces the maximum possible score.

Recently, several jurisdictions throughout New Jersey have had reductions in their BCEGS classifications. These reductions occurred primarily because the building code in use in New Jersey is more than five years old. The reductions are not a reflection on local code enforcement efforts.

The International Building Code (IBC/2000) and International Residential Code (IRC/2000) have been adopted as the Building Subcode for the State of New Jersey in the spring of this year. Municipalities whose scores were reduced are now eligible for additional points in the BCEGS program.

Following the adoption of the IBC/2000 and IRC/2000, ISO will contact each municipality that received a reduced score. To determine whether there have been any significant changes in your code enforcement activity other than the change in the adopted building code, ISO will include a brief questionnaire. The questionnaire will ask whether there has been a change in local support for code enforcement. ***Your municipality will be reclassified only***

if you answer the questions and return the questionnaire to ISO.

If you report that there have been some changes in code enforcement activity, or that there have been changes in the local support for code enforcement, ISO will contact the construction official and obtain additional information before recalculating your score and reclassifying your municipality. If you report that the code enforcement activity — and the support for code enforcement — remain substantially the same, ISO will recalculate your score and reclassify your municipality based on the information you previously provided, with credit given for the newly adopted Building Subcode. ISO will notify you of those results.

ISO wants to remind all municipalities that the BCEGS program is an advisory insurance underwriting information and rating tool. It is not intended to analyze all aspects of a comprehensive building code enforcement program. It is not for the purposes of determining compliance with any State or local law, nor is it for making loss prevention or loss safety recommendations.

If you would like to know more about this program, there is a web site that provides information about the BCEGS program. The web site also has information on a companion ISO program that evaluates community fire suppression capabilities. You may access this web site at www.isomitigation.com.

If you have any questions, please contact Lou Mraw at (609) 984-7672 or me at (609) 984-7609.

Source: Emily Templeton
Code Development

Guidelines for Building Enclosures in Flood-Prone Areas

Throughout New Jersey, there are many flood-prone areas. Some of these are "V" zones, which are areas where the floodwaters move at a rate of moderate to fast velocity and occur at the oceanfront. Others are "A" zones, where the floodwaters rise and fall with some horizontal movements, and are located near lakes, rivers, and the bayfront. When constructing buildings in these areas, certain factors need to be considered for the building's enclosures.

In a V zone, buildings that have enclosures below the Base Flood Elevation (BFE) are required to be constructed so that the enclosure would break away during a flood and allow the moving water to pass through the enclosure.

Buildings that have enclosures below the BFE in an A zone need to be constructed with vents to allow the water to enter and leave, thus eliminating differential hydrostatic pressures on the building's walls. Examples of enclosures allowed in A zones include vehicle parking areas and garages, storage rooms, and building access enclosures. Enclosures that are not allowed are living areas such as bedrooms, dining rooms, living rooms, family rooms, and service uses. Also, installation of mechanical equipment below the BFE is prohibited.

It has been indicated that there are cases where enclosures constructed below the BFE in A zones have not been provided with the required water equalization vents as required by the Building Subcode. In order to receive coverage under the Federal Flood Insurance Program at the standard rate, homeowners would need to identify the enclosures, and bring them into compliance with the hydrostatic venting requirements of the Building Subcode and the Federal standard 44CFR60.3(c)(5). Please be advised these requirements provide that a design must be certified by a registered professional engineer or registered architect. Otherwise, the enclosure may be designed using the following minimum criteria:

> A minimum of not less than two openings with a combined net area of not less than one square inch for every square foot of area subject to flooding are required; and vents may be equipped with screens, louvers, valves, or other coverings or devices, provided that they allow for the automatic entry and exit of floodwaters.

Please note, in entry foyers not separated from the living area by doors, the use of vents is neither advisable nor practical. Such areas are difficult to heat or cool and they are subject to insect infestation because insect screening will block the flow of water with debris. It is advised that, in newly constructed houses, the entryway or foyer floors be elevated to the level required by the Local Flood Damage Prevention Ordinance.

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

Source: Jeffrey Applegate
Code Assistance Unit

What Residential (Use) Group R Means in New Jersey

The 1996 edition of the Building Officials and Code Administrators (BOCA) National Building Code had Residential Use Groups R-1, R-2, R-3, and R-4. The adoption of the International Building Code (IBC) and International Residential Code (IRC), both 2000 editions, has five groups, which include the new designation, Group R-5.

Group R-5 is exclusively an IRC building. All other Group R buildings are constructed according to the provisions of the IBC.

BOCA/1996	IBC/2000
R-1 — Residential; hotels, motels, boarding homes, etc. (BOCA)	R-1 — Residential; hotels, motels, boarding homes, etc. (IBC)
R-2 — Residential; multiple family, dormitories, etc. (BOCA)	R-2 — Residential; multiple family, dormitories, etc. (IBC)
R-3 — Residential; 1 and 2 family, and multiple single family, 5 residents or less each (BOCA)	R-3 — Residential; 1 and 2 family, and adult/child care, 5 residents or less each (IBC)
R-4 — Residential; detached 1- and 2-family dwellings, 2 story max (CABO)	R-4 — Residential; therapeutic residences for 6-16 occupants (IBC)
	R-5 — Residential; detached 1- and 2-family dwellings, 3 story max (IRC)

New Jersey's amended IBC Section 310, Residential Group R, now reads like this:

R-1 Residential occupancies where the occupants are primarily transient (less than 30 days) including: *Hotels (including motels) having transient occupancy, rooming houses with more than five residents having transient occupancy.*

R-2 Residential occupancies containing more than two dwelling units where the occupants are primarily permanent, including: *Apartment houses, convents, dormitories, fraternity and sorority houses, monasteries, rooming houses with more than five residents not having transient occupancy, therapeutic residences with more than 16 residents.*

R-3 Detached one- and two-family dwellings greater than three stories in height, multiple single-family townhouses greater than three stories in height, and attached two-family dwellings separated from adjacent units by firewalls including: *Single residential occupancies accessory to a dwelling unit having no more than five roomers or lodgers (single occupancies, accessory to a dwelling unit, having more than five roomers or lodgers shall be classified as Group R-2 or I-1, as appropriate), adult and child day-care facilities accessory to a dwelling unit serving five or fewer persons of any age for less than 24 hours, rooming houses with five or fewer residents, therapeutic residences with five or fewer residents.*

R-4 Therapeutic residences including more than five but not more than 16 occupants, excluding staff, capable of prompt evacuation as defined by Section 22-1.3 of NFPA 101-97, referenced in Chapter 35. *Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided in the code.*

R-5 Detached one- and two-family dwellings not more than three stories in height, and multiple single-family townhouses not more than three stories in height, designed and constructed in accordance with the IRC.

With the retention of *N.J.A.C.* 5:23-3.21(b) during this interim period, the existing code requirements applicable to the height and area of such buildings shall continue to apply. Specifically, the basic tabular area and the increases allowed for open perimeter, sprinklers, or construction type shall apply. In addition, a third story of living space shall be allowed, provided it meets the habitable attic requirements.

Source: Rob Austin
Code Assistance Unit

What . . . More (Use) Groups?

The 2000 edition of the International Building Code (IBC/2000) has more (Use) Group classifications than the 1996 edition of the Building Officials and Code Administrators National Building Code (BOCA/1996). Most of these differences appear in the IBC/2000 Hazardous Group H and Institutional Group I. (There are separate articles in this issue of the *Construction Code Communicator* on Assembly Group A and Residential Group R.)

Group H in the IBC/2000 is very similar to Use Group H in BOCA/1996. However, BOCA/1996 classifies Hazardous Production Materials (HPM) Facilities in Chapter 4, "Special Use and Occupancy," Section 416, "HPM Facilities." IBC/2000 classifies HPM Facilities as an additional Group, according to Chapter 4, "Special Detailed

Requirements Based on Use and Occupancy," Section 415.9, "Group H-5."

Group I in the IBC/2000 also includes a new group, Group I-4, which pertains to day-care facilities. Per the IBC/2000, day-care facilities provide supervision, personal care services, and accommodations on less than a 24-hour basis for six or more persons of any age. If you recall, BOCA/1996 dealt with day-care facilities as Use Group I-2 and Use Group E for children, but never assigned a use group to facilities for adult care.

The following chart provides a simple comparison of the two codes.

BOCA/1996	**IBC/2000**
H-1 — High Hazard; detonation hazard	**H-1** — High Hazard; detonation hazard
H-2 — High Hazard; deflagration hazard	**H-2** — High Hazard; deflagration hazard
H-3 — High Hazard; combustion or physical hazard	**H-3** — High Hazard; combustion or physical hazard
H-4 — High Hazard; health hazard	**H-4** — High Hazard; health hazard
	H-5 — High Hazard; hazardous production materials (HPM)
I-1 — Institutional; supervised residential homes for 6 or more occupants	**I-1** — Institutional; supervised residential homes for 6 or more occupants
I-2 — Institutional; medical, nursing care, etc. for 6 or more occupants	**I-2** — Institutional; medical, nursing care, etc. for 6 or more occupants
I-3 — Institutional; jails, reformatories, asylums, etc. for 6 or more occupants	**I-3** – Institutional; jails, reformatories, asylums, etc. for 6 or more occupants
	I-4 — Institutional; day care for 6 or more occupants

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

Source: Rob Austin
Code Assistance Unit

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ISO and Training

It has come to our attention that some municipalities are receiving less than they may be eligible for regarding the questions on training that are included on the questionnaire for the Building Code Effectiveness Grading Schedule (BCEGS) used by the Insurance Services Office (ISO) in its evaluation of local code enforcement efforts.

The questionnaire allows for full credit to be given for up to 96 hours of training per year. This seems like a lot — 12 days of training each year. Although not everyone is expected to meet that criterion, you should know that ISO regards training in a broader scope than simply the required courses for license renewal. In addition to the training courses for license renewal, organized discussions about code issues also count as training.

ISO divides training into four distinct areas with specific contact hour criteria for each.

a) Administration – (12 hours) Training in administration means receiving education in the internal workings of a building department including permit processing and tracking, budgeting and staffing, supervising and managing, and public service issues.

b) Legal – (12 hours) Legal training includes education in the aspects of code enforcement that are affected by, or that pertain to, the legal rights, obligations, liabilities, or immunities of code enforcement staff, building owners, and contractors.

c) Mentoring – (12 hours) Mentoring means providing one-on-one education in code enforcement. A common means of mentoring is where a senior field inspector rides along with a junior field inspector to provide construction site instruction on specific issues and conditions to be addressed when performing inspections.

d) Technical – (60 hours) Technical training is education in those aspects of code enforcement that relate to interpreting and enforcing specific technical requirements in adopted codes and standards.

A classroom setting is not the only way to achieve ISO's credit for training. The BCEGS program can credit weekly staff meetings that devote time to education, a technical session that is part of a professional association meeting, courses taken via computer, or education through videotapes.

When deciding whether meetings count as training, it is helpful to have a record of the meeting, people who attended, date, time, and issues discussed (the agenda). Although some credit may be given for meetings that are not recorded, full credit can be given when records are available. The records may be in a log format and do not have to be lengthy.

The ISO has information available on its web site, www.isomitigation.com. If you have further questions on the ISO process, please contact Lou Mraw at (609) 984-7672 or me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Locking Means of Egress Doors Under Special Conditions in Hospitals, Nursing Homes, and Assisted-Living Facilities

In New Jersey, the construction of hospitals and other medical facilities is regulated by two standards: the 2000 edition of the International Building Code (IBC/2000) as mandated by the New Jersey Uniform Construction Code and the 2000 edition of the National Fire Protection Association Life Safety Code 101 (NFPA 101/2000) as mandated by the Health Care Finance Administration, a branch of the United States Department of Health and Human Services.

For years, the Building Officials and Code Administrator's National Building Code (BOCA) and the other national model codes have sparsely addressed the special needs and safety requirements particular to health-care occupancies. For this reason, the Health Care Finance Administration, which administers the Medicare/Medicaid reimbursement program for the federal government, has mandated the implementation of life safety requirements from NFPA 101 for all medical facilities.

In general, the requirements for means of egress set forth in both IBC/2000 and NFPA 101/2000 are very similar. However, recognizing the unique requirements of health-care facilities and the danger to certain patients posed by free access to, from, and through a health-care facility, NFPA 101/2000 allows for egress doors to be locked where the clinical needs of patients require specialized security measures for their safety, whereas IBC/2000 does not. Locking of egress doors is allowed per NFPA 101/2000 with the recognition that health-care facilities are fully sprinklered, staffed at all times, and compartmentalized to allow for the protection of patients within a facility without evacuation.

The following sections of NFPA 101/2000 provide requirements for the locking of egress doors:

7-5.2.1, Staff Availability, Exception #1 – Allows exit access in health-care occupancies to pass through

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Permits for Lead Hazard Abatement Work

INFORMATION REQUIRED FOR A LEAD PERMIT

Since January 1, 1996, the Lead Hazard Evaluation and Abatement Code (*N.J.A.C.* 5:17) has required that a permit be obtained under the Uniform Construction Code (UCC) for any work intended to abate lead hazards. (Please note: lead abatement projects involving superstructures and commercial buildings are exempt from this requirement.) Unfortunately, permits are still being issued without all of the information that is required by the UCC.

There are two subsections in Subchapter 2 of the UCC – specifically *N.J.A.C.* 5:23-2.15(a)7i-v and *N.J.A.C.* 5:23-2.15(b)4i-iii – that list exactly what is required when a lead contractor or owner-occupant of a single-family dwelling applies for a lead hazard abatement permit. Construction officials must ensure that applicants submit all of the information that is required by these subsections.

CLOSING OUT A LEAD PERMIT

As a reminder, in order to close out a lead hazard abatement permit, a Certificate of Clearance is issued (not a Certificate of Occupancy or a Certificate of Approval). The requirements for issuance of a Certificate of Clearance can be found at *N.J.A.C.* 5:23-2.23(o)1-5.

A Certificate of Clearance is required on all lead hazard abatement-permitted projects, except when the work is being performed by an owner-occupant of a single-family dwelling, provided the lead abatement is not an order from the local health department. If an owner-occupant of a single-family dwelling is performing his own lead abatement, and if it was not mandated by the local health department, the owner may apply for a Certificate of Clearance. However, a Certificate of Clearance is not required under the UCC for projects by owner-occupants of single-family homes.

Finally, a lead abatement Certificate of Clearance shall not be issued on a project that has been ordered by a local health department until approval of the health department has been given.

There are a few different scenarios, so if you come across a scenario in which you are not sure what is required, please call us at (609) 633-6224.

Source: Jim Amici
Bureau of Code Services

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rooms or spaces subject to locking, as provided in Chapters 12 and 13 of NFPA 101/2000.

18-1.1.1.5, General Requirements – Allows the authority having jurisdiction to determine the appropriate modifications to those sections of the code that require means of egress to be kept unlocked if patient safety and security warrants locking.

18-2.2.2.2, Means of Egress Requirements, Doors, Exception #2 – Allows locking of patient room doors where the clinical needs of the patients require security. Staff must carry keys at all times.

18-2.2.2.4, Exception #1 – Allows locking of means of egress doors in security areas (operating room suites, labor and delivery suites, nurseries, psychiatric units, Alzheimer's units, dementia units, etc.). Staff must carry keys at all times.

18-2.2.2.5 – Requires remote release and duplicate keying of locks in all units where means of egress doors are locked.

The above-noted sections have been used by the Health Care Plan Review Unit at both the Department of Community Affairs (DCA) and the Department of Health and Senior Services (DHSS) for the past 28 years to review health-care projects that include patient units with restricted egress. When this is allowed, staff in the unit must carry keys to the locked doors at all times. In addition, the requirements of Section 1003.3.1.8.2 of IBC/2000, Special Locking Arrangements, are also applied, except for the delayed-release provision. Therefore, locking devices on egress doors must be releasable from a central, remote location and the doors must unlock upon activation of the fire alarm system or the sprinkler system, or upon loss of power to the egress control device.

Permission to lock specific egress doors must be approved through a variation by the DCA's Bureau of Construction Project Review, Health Care Plan Review Unit.

Again, these locking arrangements are used in hospitals, psychiatric facilities, nursing homes, and assisted-living facilities throughout the State and throughout the country to provide the proper level of security for Alzheimer's units, dementia units, psychiatric units, operating suites, critical-care units, and labor/delivery/nursery areas, without which these units could not properly function.

Source: David B. Uhaze, RA
Chief
Bureau of Construction Project Review

Manufactured Housing – Permanent Foundation Guide

In the Winter 2002 *Construction Code Communicator,* the article entitled, "Manufactured Homes: Permanent Foundations," made reference to a publication issued by the United States Department of Housing and Urban Development entitled, "Permanent Foundations Guide for Manufactured Housing." Since then, the Department of Community Affairs has received several inquiries on how this guide may be obtained.

If you would like to view the publication, go to www.hudclips.org and click on "Library." Then, highlight "Guidebooks" and click on "Search." You will be prompted to enter either a word or phrase, or a document number. Enter the document number "4930.3G," and you will be able to view and download the guide.

Source: Paul Sachdeva
Bureau of Code Services

New Jersey Register Adoptions

Date: December 2, 2002
Adoption: 34 *N.J.R.* 4195(a)
Summary: These adopted amendments make an administrative correction in the Barrier-Free Subcode at *N.J.A.C.* 5:23-7.5, entitled "Residential Buildings Other Than Use Group R-1," to reconcile the rule text as adopted effective November 4, 2002 with the rule text as adopted effective August 5, 2002. In addition, these adopted amendments correct a typographical error at *N.J.A.C.* 5:23-7.5(b).

Date: December 16, 2002
Adoption: 34 *N.J.R.* 4428(a)
Summary: This adopted amendment deletes the requirement for only pressure-assisted (not gravity-flow) water closets in commercial buildings.

Date: January 6, 2003
Adoption: 35 *N.J.R.* 219(c)
Summary: This adopted amendment to *N.J.A.C.* 5:23-12.12, entitled "Special Safety Equipment," corrects a typographical error in a cross-reference (changing "204.4c" to "204.4e").

Date: February 18, 2003
Adoption: 35 *N.J.R.* 1054(b)
Summary: This adopted amendment to *N.J.A.C.* 5:23-9.6, entitled "Construction Requirements for New and Existing Casinos," extends the height allowance for casino slot machines up to 75 inches where certain conditions are met.

Date: February 18, 2003
Adoption: 35 *N.J.R.* 1055(a)
Summary: This adopted amendment to *N.J.A.C.* 5:23-12.12, entitled "Special Safety Equipment," requires a sign at the top and bottom landings of each escalator to state that standing escalators are not to be used as a building stair.

Date: April 7, 2003
Adoption: 35 *N.J.R.* 1558(c)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.20, 6.4, 6.5, 6.6, 6.7, 6.21A, 6.25A, 6.26A, 6.27, 6.31 and *N.J.A.C.* 5:70-1.5, 2.1, 2.3, 2.9, 4.19 require the installation of carbon monoxide alarms in new and existing one- and two-family dwellings. Buildings without fuel-burning appliances or attached garages are not subject to this requirement.

Source: Megan K. Sullivan
Code Development

Farewell to Ashok

After 13 years of answering electrical questions in the Code Assistance Unit, Ashok Mehta has left the Department of Community Affairs to move forward in his career at the Department of Health and Senior Services. We congratulate him on his achievements, though the Code Assistance Unit will not cease to remember with great affection and gratitude his unfailing polite manner, reliability, and depth of knowledge in the electrical field. We thank Ashok for his exceptional contributions to the Unit and wish him the best in his future. He will surely be missed!

Source: Code Assistance Staff

Operation Alert

It has been brought to the attention of the Department of Community Affairs that some inspectors are requiring verification of the operation of equipment before issuing either a Certificate of Approval or Certificate of Occupancy. Please be advised that the Uniform Construction Code (UCC) deals mainly with the *installation* requirements for equipment and not requirements for the *operation* of equipment. Therefore, code officials are required to ensure that equipment is installed in a manner that is compliant with the UCC. Unless specifically required otherwise by the applicable subcode or adopted standard, code officials are not responsible for equipment operation.

For example, Section 918.10 of the 1996 edition of the Building Officials and Code Administrators National Building Code, the Building Subcode, requires that fire alarm

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Nightclubs vs. Restaurants

Those who have been in construction code enforcement for more than a year or two have been asked the question of whether a specific space should be considered a nightclub or a restaurant. With the adoption of the 2000 edition of the International Building Code (IBC), this question is no longer an issue. The appropriate classification of both a nightclub and a restaurant is now Group A-2.

Along with this change, there are several other changes to the Group A occupancy classification. As stated above, Group A-2 includes nightclubs and restaurants; however, it will now also include banquet halls, taverns, and bars.

Group A-3 remains the "general assembly" group and applies to assembly uses intended for worship, recreation, or amusement. It will also now include churches and indoor swimming pools without spectator seating.

Group A-4 has been added, and applies to assembly uses intended for viewing indoor events and activities with spectator seating. This would include arenas, skating rinks, swimming pools, and tennis courts. Again, this applies only when these functions include spectator seating. Without spectator seating available, these occupancies would be classified as Group A-3.

Please note that Groups A-1 and A-5 remain the same, applying to theaters and outdoor assembly.

Hopefully, this summary will save some time when enforcing the IBC 2000. Should you have any questions regarding this article or any other IBC-related issue, please call the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Phone Number Change – Lead/Asbestos Unit

Please be advised, the telephone number for the Lead/Asbestos Unit at the Department of Community Affairs has recently been changed to (609) 633-6224. The phone number provided in the Winter 2002 edition of the *Construction Code Communicator* in the article entitled "Prohibited Paint Removal Methods" is no longer valid.

Source: Kristy Paolillo
Code Development

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systems be subjected to a 100 percent acceptance test in accordance with the 1993 edition of the National Fire Protection Association 72 standard. Similarly, Section 700-4(a) of the 1999 edition of the National Electrical Code (NEC/1999), Electrical Subcode, entitled "Tests and Maintenance," requires that the test for a complete emergency electrical system be conducted or witnessed upon installation. In such cases, it would be a violation of the UCC if the equipment installed does not operate in accordance with the applicable code or standard. However, it is not the intent of the UCC to regulate the operation of appliances.

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

Source: Ashok K. Mehta
Code Assistance Unit

Rob is a New Addition to Our Unit

The Department of Community Affairs, Division of Codes and Standards introduces Robert Austin, the newest member of the Code Assistance Unit. Rob joined the Department in 2001 as a recent graduate of The College of New Jersey with a Bachelor's degree in Mechanical Engineering. Since then, he has proved to be a valuable asset to the Department, demonstrating reliability through his work with the members of the Unit, and his responsiveness to the inquiries of local officials and those in the construction industry. Rob has been closely involved in the adoption of the 2000 editions of the International Building Code and International Residential Code, and updates to the new energy code regulations. He has successfully completed the Fundamentals of Engineering examination and will soon be working toward his Professional Engineer license.

Source: Code Assistance Staff

Underwriters Laboratory Standard UL 94

Recently, William Connolly, Director of the Division of Codes and Standards, sent the following letter to all New Jersey construction officials in response to the fire at the "Station" nightclub in Rhode Island. This letter is reprinted here for all readers of the *Construction Code Communicator*.

March 7, 2003

Dear Construction Official:

The tragic event at the "Station" nightclub in Rhode Island has again placed the construction code enforcement industry on the front page. As you may know, the unusually rapid spread of this fire was due to the use of unrated foam packaging material as an interior finish. The purpose of this letter is to inform you of the findings of the Department of Community Affairs regarding the documentation of the flame spread of interior finishes.

There are some foam products on the market that advertise that they comply with the Underwriters Laboratory Standard UL 94. The title of this standard is "Tests for Flammability of Plastic Material for Parts in Devices and Appliances". This standard clearly states "these requirements do not cover foamed plastics for use as materials for building construction or finishing." UL 94 is not scoped for the testing of building materials and products tested using UL 94 should not be accepted as complying with the interior finish requirements of the code.

Only material that has been tested in accordance with ASTM E84, the Test Method for Surface Burning Characteristics of Building Materials, and that complies with the interior finish requirements of the Building Subcode or the Rehabilitation Subcode may be installed in buildings in New Jersey. Code officials ensure compliance with this standard by requiring design professionals or building owners to submit documentation on the specific product to be used.

Should you have any questions regarding the ASTM E84 standard or any product's compliance with this standard, please contact the Code Assistance Unit at (609) 984-7609.

Sincerely,

William M. Connolly
Director
Division of Codes and Standards

Employment Opportunities on the Web

Find the latest employment opportunities within the Division of Codes and Standards by visiting the Division's web site, or point your browser to: http://www.nj.gov/dca/codes/employment/employmentopportunities.htm.

This site provides a list of available positions within the Bureau of Construction Project Review, the Office of Local Code Enforcement, and the Office of Regulatory Affairs. Applicants are encouraged to file applications electronically. The Employment Opportunities Web page is updated on a regular basis, so be sure to add the URL to your browser's "favorites" menu.

Source: Dana Yedwab
Division of Codes and Standards

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS

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James E. McGreevey
Governor



Susan Bass Levin
Commissioner

Electrical Subcode Officials, We Need Your Help!

The Department of Community Affairs is seeking information as to whether any municipality has a utility performing installations under *N.J.A.C.* 5:23-2.18A, which contains provisions for the Utility Load Management Device Installation Program. If so, and if there is current action, please e-mail me at raustin@dca.state.nj.us, with the subject line reading "load management." You may also reach me at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Energy Code - Residential Basement Wall Insulation Trade-Off

QUESTION: The Energy Subcode (*N.J.A.C.* 5:23-3.18) allows high-efficiency heating equipment to be utilized in place of basement wall insulation. How does this trade-off work while using the RES*check* software?

BACKGROUND: *N.J.A.C.* 5:23-3.18(b)1ii allows for the exemption of insulation in basements of residential buildings provided that high-efficiency equipment is used. The high-efficiency equipment/basement insulation trade-off requires that *all* mechanical equipment installed throughout a residential building meet or exceed the minimum high-efficiency standards (90 percent AFUE for furnaces, 85 percent AFUE for boilers, and 8.0 HSPF for an air source heat pump).

> *Note: N.J.A.C.* 5:23-3.18(b)1ii states that a high-efficiency boiler is rated at 85 percent AFUE or greater. *N.J.A.C.* 5:23-3.18(b)4i refers to Table 502.2.1a; Note 4 of this Table states that a high-efficiency boiler is 86 percent AFUE or greater. The correct rating is 85 percent. This change was published in the June 2, 2003 *New Jersey Register* as an administrative correction.

ANSWER: The RES*check* (formerly known as MEC*check*) software has to be "tricked" to allow the high-efficiency equipment/basement insulation trade-off. When entering area measurements of the proposed residential building, omit the area for a basement and do not include any mechanical equipment. The basement area to be excluded includes the slab, basement walls, and basement ceiling (first floor assembly). The excluded mechanical equipment defaults the software to the equivalent of a minimum AFUE and/or HSPF value.

For example, the only information entered into the software would be walls above grade, glazing, doors and ceiling(s), and a comment on the

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RES*check* Compliance Certificate indicating that high-efficiency equipment will be provided, eliminating the basement insulation requirement.

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

Source: Rob Austin
Code Assistance Unit

New Jersey Register Adoptions

Date: April 21, 2003
Adoption: 35 *N.J.R.* 1663(b)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.6, 3.2, and 6.31 clarify the applicability of the change of use provisions for special amusement buildings, including temporary haunted houses, and provide standards for the issuance of variations for special amusement buildings.

Date: May 5, 2003
Adoption: 35 *N.J.R.* 1939(c)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.14, 2.15, 2.18, 2.20, 3.14, 3.16, 3.21, and 12.12 adopt the 2000 edition of the International Building Code (IBC/2000), the 2000 edition of the International Residential Code (IRC/2000), and the 2002 edition of the National Electrical Code (NEC/2002) as the Building, One- and Two-Family Dwelling, and Electrical Subcodes of the Uniform Construction Code (UCC).

Date: May 19, 2003
Adoption: 35 *N.J.R.* 2203(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-1.4, 2.15, 2.16, 2.18, 2.21, 2.23, 2.24, 2.30, and 9.2 address several different code enforcement issues as follows: the role of plans and plan review in the code enforcement process, the design details that must be submitted with a permit application for a building relying on truss construction, the required elements of a framing inspection, the submittal of calculations to demonstrate compliance with the Energy Subcode, and a requirement for foundation location surveys.

Date: May 19, 2003
Adoption: 35 *N.J.R.* 2207(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.32 and 5:23A-2.1 enable construction officials to act

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Bathtub Traps/Slab Openings

The Department of Community Affairs has received telephone calls pertaining to the requirements for the proper closure of the boxed-out concrete slab opening underneath bathtubs. This opening is provided for the installation of the bathtub trap below. The question is, "Must the boxed-out concrete slab opening below the bathtub be filled in?"

N.J.A.C. 5:23-3.14, the Building Subcode, Section 1806.2.1, "Floors," and *N.J.A.C.* 5:23-3.21, One- and Two-Family Dwelling Subcode, Section R506.2.3, "Vapor Retarder," require that an approved vapor retarder be placed between the concrete floor slab and the base course, or the prepared subgrade where no base course exists. The building inspector must verify proper installation of the approved vapor retarder before the slab is poured.

The approved vapor retarder must still be intact below the installed trap and slab opening. This is the primary factor in determining whether the vapor retarder is code compliant. If the vapor retarder has been removed, punctured, or damaged, it must be repaired or replaced in the boxed-out area as required. The Building Subcode and the One- and Two-Family Dwelling Subcode are silent on the concrete slab opening, except in radon-prone areas.

Use Group R in radon-prone areas in a Tier 1 municipality [*N.J.A.C.* 5:23-10, Radon Hazard Subcode, Section 5:23-10.4(b)6] would require the opening to be "substantially sealed."

The concrete slab opening below the bathtub may be filled in. However, after researching this matter, it has been determined that it is common practice in the industry not to fill in the opening so as to provide access to the trap for future repair or replacement.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

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BUILDING SAFETY CONFERENCE OF NEW JERSEY 2003

The good weather was with the code enforcement community as we made our way to Bally's Park Place in Atlantic City for the 22nd Building Safety Conference of New Jersey. The annual conference increases public awareness of the life-safety services provided within New Jersey's municipalities. A wide variety of educational opportunities were offered to the participants to help them remain up to date with today's technology. The conference attracted over 600 people.

The awards luncheon was held in the new Traymore Ballroom. William Connolly, Director of the Division of Codes and Standards, along with the presidents or representatives of each association, presented awards to individuals for their outstanding achievements in their fields. The award recipients included the following:

John Scialla, Building Inspector, Saddle River Borough and Washington Township in Bergen County

Robert K. Rogers, Jr., Electrical Inspector, Guttenberg Town in Hudson County and Hackensack City, Hasbrouck Heights Borough, Little Ferry Borough, and Ridgefield Borough in Bergen County

John Leonardis, Fire Protection Inspector, Kearny Town in Hudson County

Jerry Tolomeo, Plumbing Inspector, Little Falls Township in Passaic County

Lynn Mizer, Technical Assistant, Millstone Township in Monmouth County

An additional attraction at the conference this year was the sale of the New Jersey editions of the 2000 International Building Code and the 2000 International Residential Code. Other activities included the 8th Annual Golf Outing, crackerbarrel round table discussions with 34 different topics, 22 seminar selections for continuing education credits, an awards reception, association meetings, and a spouse program. William Spiezio from the Township of Nutley in Essex County was selected as the inspector to receive a complimentary registration to the 2004 Building Safety Conference.

Throughout the conference, we were able to interact and enjoy learning and laughter with friends and acquaintances. We hope you will be able to join us next year for new educational opportunities. We will meet at Bally's Park Place on April 28-30, 2004. Mark your calendars. We hope to see you there!

Source: Susan H. McLaughlin
Bureau of Code Services



From left to right, Jerry Tolomeo, Plumbing Inspector; Robert K. Rogers, Jr., Electrical Inspector; Lynn Mizer, Technical Assistant; John Leonardis, Fire Protection Inspector; John Scialla, Building Inspector

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expeditiously when buildings present an actual and immediate hazard to building occupants and other members of the public. In addition, these adopted amendments make it clear that demolition is within the scope of the emergency work that may be undertaken by construction officials. Finally, these adopted amendments establish that emergency orders issued by construction officials are appealable only to a court of competent jurisdiction.

Date: May 19, 2003
Adoption: 35 *N.J.R.* 2208(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-4.3A modify the enforcing agency classifications of the UCC. These amendments are necessary as a result of the adoption of the IBC/2000.

Date: May 19, 2003
Adoption: 35 *N.J.R.* 2208(b)
Summary: The adopted amendment at *N.J.A.C.* 5:23-4.3A makes an administrative correction to reference the appropriate section for the definition of households of low or moderate income.

Date: May 19, 2003
Adoption: 35 *N.J.R.* 2209(a)
Summary: These adopted amendments to the Rehabilitation Subcode update cross-references to the IBC/2000, the IRC/2000, the 2000 edition of the International Mechanical Code, the 2000 edition of the International Fuel Gas Code, the NEC/2002, and the 1998 edition of the International Code Council/American National Standards Institute A117.1 standard for accessible design and construction. In addition, the adopted amendments delete terms in the UCC that are obsolete.

Date: June 2, 2003
Adoption: 35 *N.J.R.* 2494(b)
Summary: This adopted amendment at *N.J.A.C.* 5:23-3.18(b)4i makes an administrative correction to the Energy Subcode of the UCC to include a companion change at Note 4 in Table 502.2.1a that defines a high energy efficiency boiler as 85 percent AFUE.

Date: June 16, 2003
Adoption: 35 *N.J.R.* 2637(c)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.4 and 3.16 incorporate into the UCC rules a statutory requirement for automatic rain sensor devices for new lawn sprinkler systems, and assign inspection responsibility for these devices to electrical subcode officials.

Date: June 16, 2003
Adoption: 35 *N.J.R.* 2639(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-4.19 increase the UCC permit surcharge fee from $0.0019 per cubic foot or $0.96 per $1,000 of the value of construction to $0.00265 per cubic foot or $1.35 per $1,000 of the value of construction, respectively.

Source: Megan K. Sullivan
Code Development Unit

Correction to Division of Codes and Standards' Web Address

Please be advised, the web address provided in the article entitled "Did You Know the Division of Codes and Standards is on the World Wide Web?" which appeared in the Spring 2003 edition of the *Construction Code Communicator* is incorrect. The correct web address is http://www.state.nj.us/dca/codes/.

Source: Dana M. Yedwab
Division of Codes and Standards

DCA Seeks Clarification on Local Penalty Enforcement

In 1999, the New Jersey Legislature adopted a new Penalty Enforcement Law, P.L. 1999, c. 274, which is codified at *N.J.S.A.* 2A:58-10. This new law made a distinction between those penalty cases in which the underlying facts have already been adjudicated and those in which they have not. Thus, where the agency is a State agency and there has been an opportunity for a hearing before an administrative law judge, the new law eliminates the need for a court hearing and allows the agency to have a final order entered upon the Superior Court docket. In other cases, *where there has been no prior administrative adjudication*, a court hearing must be conducted and testimony taken.

The problem here is that P.L. 1999, c. 274 does not specifically deal with a case where there is a prior adjudication, but it is before a county or municipal construction board of appeals, rather than before an administrative law judge. The reality is that, when a local enforcing agency seeks to enforce a penalty after having given an opportunity for an administrative hearing before the construction board of appeals, the situation is no different from that of the Department of Community Affairs when *it* issues a penalty after having provided an opportunity for an administrative hearing. However, the expedited docketing procedure is only available by statute to the Department.

Therefore, it would seem contrary to the clear intent of the new Penalty Enforcement Law for a local enforcing agency to have to spend time and money to retry the underlying facts when it sues to enforce a penalty.

Nonetheless, some municipal courts are now requiring full factual hearings in these cases.

The Division of Codes and Standards has therefore written to the Administrative Director of the Courts to ask that the Supreme Court consider adoption of an amendment to the Rules of Court that would provide that, in any case where there is a statutory right of appeal to an administrative tribunal, the court shall not hear testimony on any issue that was subject to adjudication by such administrative tribunal, except in the context of an appeal from the decision of that tribunal. If such an amendment to the Rules of Court were to be adopted, it would make it unnecessary to change the statute, since the Supreme Court, and not the Legislature, has final authority in establishing court procedures.

In the meantime, if a local enforcing agency encounters any problems with its municipal court, the agency or its attorney should contact me at (609) 292-7899.

Source: Michael L. Ticktin
Chief, Legislative Analysis

Elevator Lobbies Are Back!

For those of you who enforced the 1984 Building Officials and Code Administrators Basic Building Code, you may remember (if you still have your memory) elevator lobbies. Well, they are back. This time, however, the scope of elevator lobbies is very limited.

Section 707.14.1 of the 2000 edition of the International Building Code (IBC/2000) requires elevator lobbies for elevators that open into fire-resistance-rated corridors in buildings having occupied floors greater than 75 feet above the lowest level of fire department access. Table 1004.3.2.1 of the IBC/2000 establishes the need for a fire-resistance-rated corridor based upon occupancy, occupant load, and the existence of a sprinkler system.

Simply stated, high-rise buildings that have rated corridors are required to have elevator lobbies. As you know, all newly constructed high-rise buildings are provided with a sprinkler system; therefore, only high-rise buildings occupied by Groups H-1, H-2, H-3, H-4, H-5, R, I-1, and I-3 are required to have elevator lobbies because they are the only occupancies that have a fire-resistance-rated corridor.

Should you have any questions on this issue, please feel free to contact me at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Haunted House Regulations Revised!

On April 21, 2003, the Department of Community Affairs adopted new rules regarding Special Amusement Buildings. The amendments to *N.J.A.C.* 5:23-2.6, "Change of Use;" 3.2, "Matters Covered; Exceptions;" and 6.31, "Change of Use" clearly provide that the construction official has enforcement responsibility for the temporary or permanent use of an existing structure as a "Special Amusement Building." The special amusement is required to comply with the change-of-use provisions of the Rehabilitation Subcode. It should be noted that this includes the temporary change of use of a Commercial Farm Building to a Special Amusement Building.

If these types of uses are occurring in your municipality, you should refer to *N.J.A.C.* 5:23-6.31(a)5x for the scoping requirements and the 2000 edition of the International Building Code, Section 411, Special Amusement Buildings, for the technical requirements.

Happy Halloween to all.

Source: John Terry
Code Assistance Unit

Kiosks -- Do They Comply?

The Department of Community Affairs has recently been made aware of several covered mall buildings that contain noncompliant kiosks. A covered mall is susceptible to specific hazards simply by the nature of its occupancy, and failure to require compliance with the code provisions for kiosks further compounds these hazards. Therefore, compliance with these code requirements is imperative. This article is intended to summarize such requirements.

Temporary or permanent kiosks are required to be constructed in accordance with the New Jersey edition of the International Building Code (IBC/2000), Section 402.10. The requirements contained in this section are the same as those set forth in Section 402.14 of the 1996 edition of the Building Officials and Code Administrators National Building Code.

Kiosks must be constructed either of noncombustible materials or of fire-retardant-treated wood. Additionally, they are required to be provided with approved fire suppression and detection. This means at least one sprinkler head is required to be dropped from the ceiling to protect a covered kiosk.

Sizing and spacing requirements for kiosks are being violated most frequently. Please be advised, IBC/2000 contains very specific requirements. The maximum

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Bonding Metal Gas Piping

QUESTION: How is it possible to bond a metal gas piping system without converting it to a grounding electrode?

BACKGROUND: The 2002 edition of the National Electrical Code (NEC/2002), Section 250.104(B), "Bonding of Piping Systems and Exposed Structural Steel," and the 2000 edition of the International Fuel Gas Code (IFGC/2000), Section 309.2, "Connections," provide that the above-ground portions of a metal gas piping system upstream from the equipment shut-off valve must be electrically continuous and bonded to the grounding electrode system. In addition, NEC/2002, Section 250.52(B), "Electrodes Not Permitted for Grounding," and IFGC/2000, Section 309.1, "Grounding," clearly prohibit the use of the underground portion of a metal gas pipe as a grounding electrode.

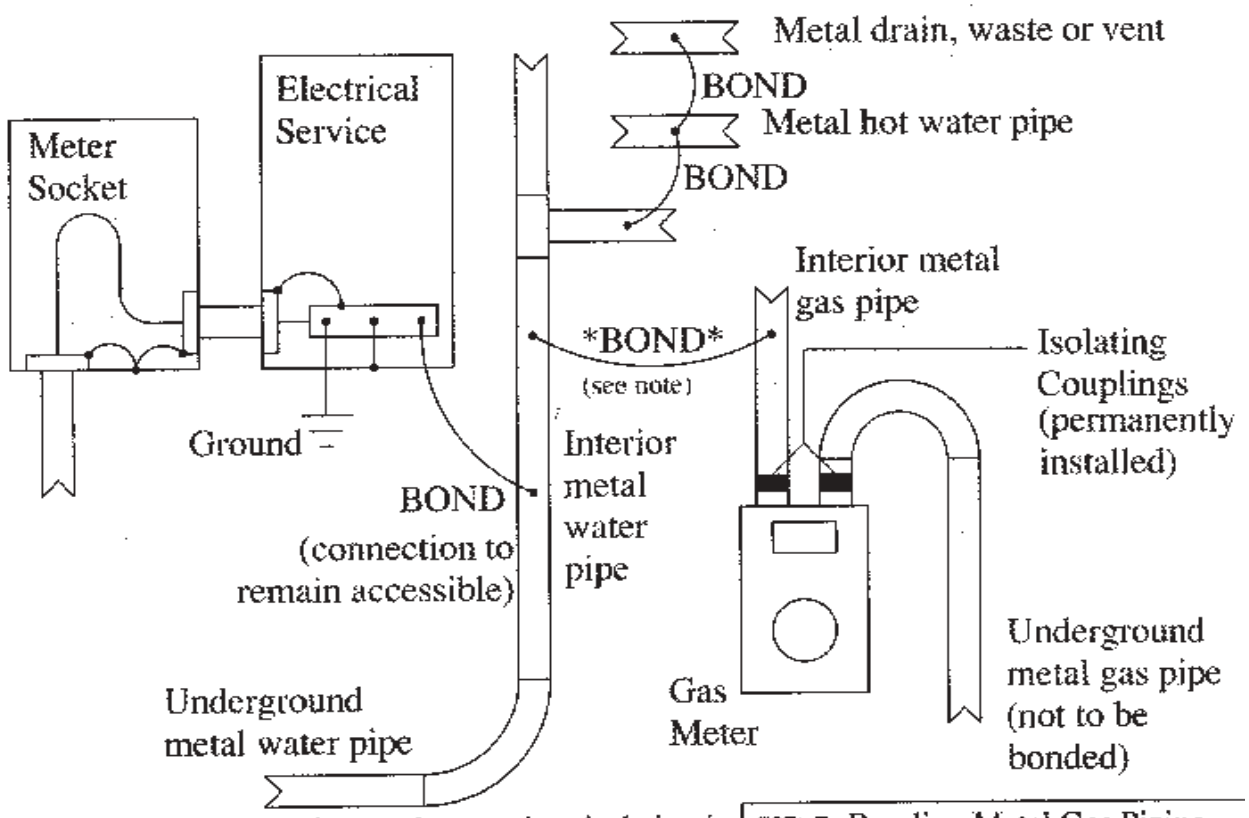
ANSWER: Permanently installed isolating bushings or couplings may be used to bond a metal gas piping system without converting it to a grounding electrode. Also, electrical equipment served by an electrical circuit containing an equipment-grounding conductor that adequately grounds an appliance would be considered the gas pipe bond. (See figure below.)

For sizing of conductors, refer to NEC/2002, Section 250.122, "Size of Equipment Grounding Conductors," and Table 250.122, "Minimum Size Equipment Grounding Conductors for Grounding Raceway and Equipment."

EXAMPLE: A fuel gas pipe supplying *only* a water heater without an electrical connection must be bonded. However, bonding a fuel gas pipe supplying a water heater and any electrical appliance is not required because the equipment grounding conductor of the electrical appliance serves as the bond for the gas piping system.

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

Source: Rob Austin
Code Assistance Unit



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area of a kiosk is 300 square feet and they must be placed so that they are a minimum of 20 feet from other structures within the mall, including other kiosks.

Concerning permits, permanent kiosks require construction permits; temporary kiosks require Type 1 fire permits [*N.J.A.C.* 5:70-2.7(a)3iv].

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

Source: John Terry
Code Assistance Unit

LP Gas Inspections – Temporary Installations

The Department of Community Affairs has been made aware that some local code officials are not performing inspections of temporary liquefied petroleum (LP) gas installations of 2,000 gallons aggregate water capacity or less. Please be advised, it is the responsibility of the local plumbing inspector to perform these inspections.

A temporary installation is one that is in place for less than 180 days. A "Plumbing Technical Section Application" is required for the installation of a vapor delivery system utilizing containers with an aggregate water capacity of 2,000 gallons or less. A plumbing inspection by the local plumbing inspector is also required.

The confusion may have arisen because a "Notice of LP Gas Installation" form must be submitted to the Department's Division of Codes and Standards, Bureau of Code Services, LP Gas Unit for any temporary LP gas vapor delivery system with an aggregate water capacity of 251 gallons or more. However, only LP gas systems utilizing containers with an aggregate water capacity over 2,000 gallons and all liquid transfers are subject to plan review and inspection by the Bureau.

All LP gas vapor delivery installations of 2,000 gallons or less aggregate water capacity are required to be filed for a permit and have inspections performed by the local municipal inspectors. (Note that this is not necessarily the total gallonage of propane per site. Tank and piping arrangements that are not interconnected are regarded as separate systems.)

The following are some items that must be inspected for a temporary LP gas installation:

1. The location and vehicular protection of the tank(s) outside the building
2. The proper label for the tank(s) for the intended use
3. The proper supports under the tank(s)
4. The proper shutoff valves and piping materials
5. The proper protection of the piping from the tank(s) to the piece of equipment or appliance in the building
6. The proper gas pressure regulators
7. The labeled equipment or appliance for the intended use
8. The rain cap over the pressure relief valve and inclusion of a dome cover on top of the propane tank
9. The LP gas supplier's name and emergency telephone number on the propane tank

The full requirements for these installations can be found in the National Fire Protection Association No. 58 – 1998 edition. Any piping must meet the requirements of the 2000 edition of the International Fuel Gas Code.

It is very important that all temporary LP gas vapor delivery installations with a water capacity of 2,000 gallons or less be inspected by the local inspectors for code compliance.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

New Forms Mirror New Rules . . . However, UCCARS Does Not

Administrative rule changes, which went into effect on May 19, 2003, coupled with a number of changes in field practices and experiences, have caused the Department of Community Affairs to revisit several of the Uniform Construction Code (UCC) standard forms recently. Notice of Imminent Hazard, Notice of Unsafe Structure, Notice of Violation and Order to Terminate, and Notice and Order of Penalty, which were formerly addressed by two dual-purpose forms (UCC F-240 and UCC F-210, respectively), are now addressed separately, each with its own form.

At the same time, the Stop Construction Order, though not directly affected by any particular rule change, was also modified in order to better align it with changing practices and with the four forms mentioned above.

In addition, and as a result of the May 19th rule changes concerning certificate requirements, the Application for Certificate standard form was amended as well.

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Adopted Rule to Extend Deadlines for Licensees Called to Active Duty

The Department of Community Affairs recognizes that, in conditions of war or other national emergency, situations may arise in which individuals who are called up for military service are unable, for that reason, to complete continuing education requirements, or other licensing or certification requirements, in a timely manner.

Accordingly, a rule has been adopted that was effective upon publication in the July 21, 2003 issue of the *New Jersey Register* providing that any deadline for compliance with any licensing or certification requirement that cannot be met because the individual is serving on active duty in the armed forces of the United States, or of a state, shall be extended until 60 days following the return of the individual from active duty, or such further time as may be necessary to allow a reasonable opportunity for compliance with the licensing or certification requirement. Existing licenses or certifications would be extended accordingly.

Source: Michael L. Ticktin
Chief, Legislative Analysis

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And finally, a handful of minor changes were made to the Certificate itself and to the Order to Vacate placard as well. However, no substantive change in the way these two forms are used need result.

Six of the eight new or modified forms are outputs of the Uniform Construction Code Administrative Records System (UCCARS). While the UCC standard forms themselves have been modified accordingly, and camera-ready art has already been provided to each municipal construction code enforcement office for the printing of such forms, due to the impending release of *PermitsNJ*, the UCCARS software has *not* been modified to incorporate the updated text on those six forms. In some instances, you may continue to use UCCARS to produce a Notice or an Order, but in others, it is not advisable. When you may or may not use UCCARS will depend upon the Notice or Order to be issued and the specific circumstances of each case. Refer to the following guidelines before issuing any of them.

Notice of Imminent Hazard Administrative rule changes concerning both the method by which a construction official may eliminate an actual and immediate danger, and the way in which the property owner must appeal the Notice of Imminent Hazard were the driving force in separating this Notice from its former partner, the Notice of Unsafe Structure. Thus, in the case of an imminent hazard, *the newly revised form must be used*.

Notice of Unsafe Structure Notwithstanding its separation from the Notice of Imminent Hazard, there are only two substantive changes to the Notice of Unsafe Structure, i.e., the addition of the Qualification Code and the addition of a place to indicate the Order was issued to a party other than an owner or owner's agent/contractor. Of the two, only the latter *requires* the use of the newly revised form, but even then, *only* if the party against whom the Order is being issued is *not* the owner or the owner's agent/contractor.

Notice of Violation and Order to Terminate Aside from the Notice being separated from the Notice and Order of Penalty, the only changes are the addition of the Qualification Code and the addition of a place to indicate the Order was issued to a party other than an owner or owner's agent/contractor. Of the two, only the latter *requires* the use of the newly revised form, but even then, *only* if the party against whom the Order is being issued is *not* the owner or the owner's agent/contractor.

Notice and Order of Penalty Again, aside from the Notice being separated out to a form of its own, of the four changes made to the language of UCC F-210 pertinent to the Notice and Order of Penalty, i.e., the addition of the Qualification Code, the clearer delineation of the circumstances for which the penalty was assessed, the check boxes to indicate daily or weekly penalties, and the addition of a place to indicate the Order was issued to a party other than an owner or owner's agent/contractor, only the last *requires* the use of the newly revised form, but even then, *only* if the party against whom the Order is being issued is *not* the owner or the owner's agent/contractor.

Stop Construction Order Of the four changes made to UCC F-250, i.e., the addition of the Qualification Code, the ability to indicate by discipline the work to be stopped, the addition of text warning that a certificate will not be issued until any penalties issued have been paid, and the addition of a place to indicate the Order was issued to a party other than an owner or owner's agent/contractor, again, only the last *requires* the use of the newly revised form, but even then, *only* if the party against whom the Order is being issued is *not* the owner or the owner's agent/contractor.

Application for Certificate The changes to this form are substantive and come as a result of amendments to the administrative rules; therefore, the newly revised UCC F-270 must be used. However, as the certificate application is *not* an output of UCCARS, from the UCCARS perspective, it is a non-issue.

Certificate Since there were only two simple changes made to UCC F-260 (the addition of a place for "Qualification Code" following "Block" and "Lot" under Identification, and deletion of the word "Occupant" after the phrase "Owner in Fee"), construction code enforcement offices may continue to produce Certificates from UCCARS.

Order to Vacate UCC F-245 is *not* an output of UCCARS. Therefore, in terms of UCCARS use, it too is a non-issue.

In conclusion, when producing:

- A Notice of Imminent Hazard -- *DO NOT* use the old, dual-purpose "Unsafe/Imminent Hazard" print violation notice feature of UCCARS.
- A Notice of Unsafe Structure -- if the intended recipient *is* the owner or the owner's agent/ contractor, then you may use the old, dual-purpose "Unsafe/Imminent Hazard" print violation notice feature of UCCARS, if you so choose.
- A Notice of Violation and Order to Terminate -- if the intended recipient *is* the owner or the owner's agent/contractor, then you may continue to use the old, dual-purpose "Violation/Penalty Notice" print violation notice feature of UCCARS, if you so choose.
- A Notice and Order of Penalty -- if the intended recipient *is* the owner or the owner's agent/ contractor, then you may continue to use the old, dual-purpose "Violation/Penalty Notice" print violation notice feature of UCCARS, if you so choose.
- A Stop Construction Order -- if the intended recipient *is* the owner or the owner's agent/contractor, then you may continue to use the old "Stop Construction Order" print violation notice feature of UCCARS, again, if you so choose.
- A Certificate -- you may continue to print this form from UCCARS.

If you have any questions, you may reach me at (609) 292-7899.

Source: Berit Osworth
Division of Codes and Standards

Rehabilitation Subcode

The Office of Regulatory Affairs continues to receive complaints from contractors, design professionals, and code officials who are enforcing new construction provisions on work in existing buildings, thereby illegally ignoring the Rehabilitation Subcode (*N.J.A.C.* 5:23-6). These complaints have been so pervasive that the presidents of each of the inspectors' associations have asked me to write this warning.

The Rehabilitation Subcode, which was adopted in 1998, as you all know, has won awards throughout the nation, and has been recognized as one of the most innovative and logical approaches in dealing with the rehabilitation of existing structures.

If you have a personal disagreement with a section or sections of the Subcode, your recourse as a code official is to submit a code change proposal to the Department of Community Affairs, which holds a hearing in March each year.

You do not have the authority to disregard a section of the Rehabilitation Subcode and substitute requirements which pertain to new construction, or create your own version of the Subcode. Acts of this nature will give rise to disciplinary actions before your peers.

Source: Louis J. Mraw
Supervisor
Office of Regulatory Affairs

Radon Gas Collection 

It has been brought to the attention of the Department of Community Affairs that the regulations for radon construction techniques are being misinterpreted. Please be advised, there are two methods in which *N.J.A.C.* 5:23-10, the Radon Hazard Subcode, provides for the collection of radon gas from underneath slabs in new home construction.

The first method, as set forth at *N.J.A.C.* 5:23-10.4(b)3, requires that an interior foundation pipe drain be installed in the subslab aggregate below the basement slab and be connected to the vent pipe through the roof. The connection to the vent pipe may be directly to the vent pipe or may be to a sump pit that is connected to the vent pipe (*N.J.A.C.* 5:23-10.4(b)8. However, *N.J.A.C.* 5:23-3.14, the Building Subcode, provides for the installation of exterior foundation drains in new construction with basements for subsoil drainage, which may be connected to a sump pit in the building's basement. These drains, which are placed outside of the foundation walls, will not collect radon gas from beneath a basement slab. In such instances, the underslab area must be vented using the second method, which is described below.

The second method is to be used only if the first method is not used, or for slab on grade designs. *N.J.A.C.* 5:23-10.4(b)4 provides for the installation of one vent pipe with a tee fitting in the subslab aggregate for every 1,500 square feet of subslab area.

Both of these methods allow for the collection of the radon gas from beneath the building's slab and its transmission up through the vent pipe to the exterior. The primary purpose is to collect the radon gas that accumulates in the aggregate course below the slab and conduct it to the exterior with the independent vent stack pipe.

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

Source: Jeffrey Applegate
Code Assistance Unit

Wind

The wind maps in the newly adopted 2000 editions of the International Building Code (IBC/2000) and International Residential Code (IRC/2000) are significantly different than the wind map provided in the 1996 edition of the Building Officials and Code Administrators National Building Code (BOCA/1996), and the 1995 edition of the Council of American Building Officials (CABO) One- and Two-Family Dwelling Code (CABO/1995).

The method used to measure wind speed has changed. In BOCA/1996 and CABO/1995, wind speed is measured according to the fastest mile; whereas, in the IBC/2000 and IRC/2000, wind speed was measured according to a three-second gust. Table 1609.3.1 of the IBC/2000 and Table R301.2.1.3 of the IRC/2000, which are entitled "Equivalent Basic Wind Speeds," provide a wind-speed conversion for the two distinct methods for measuring wind speed.

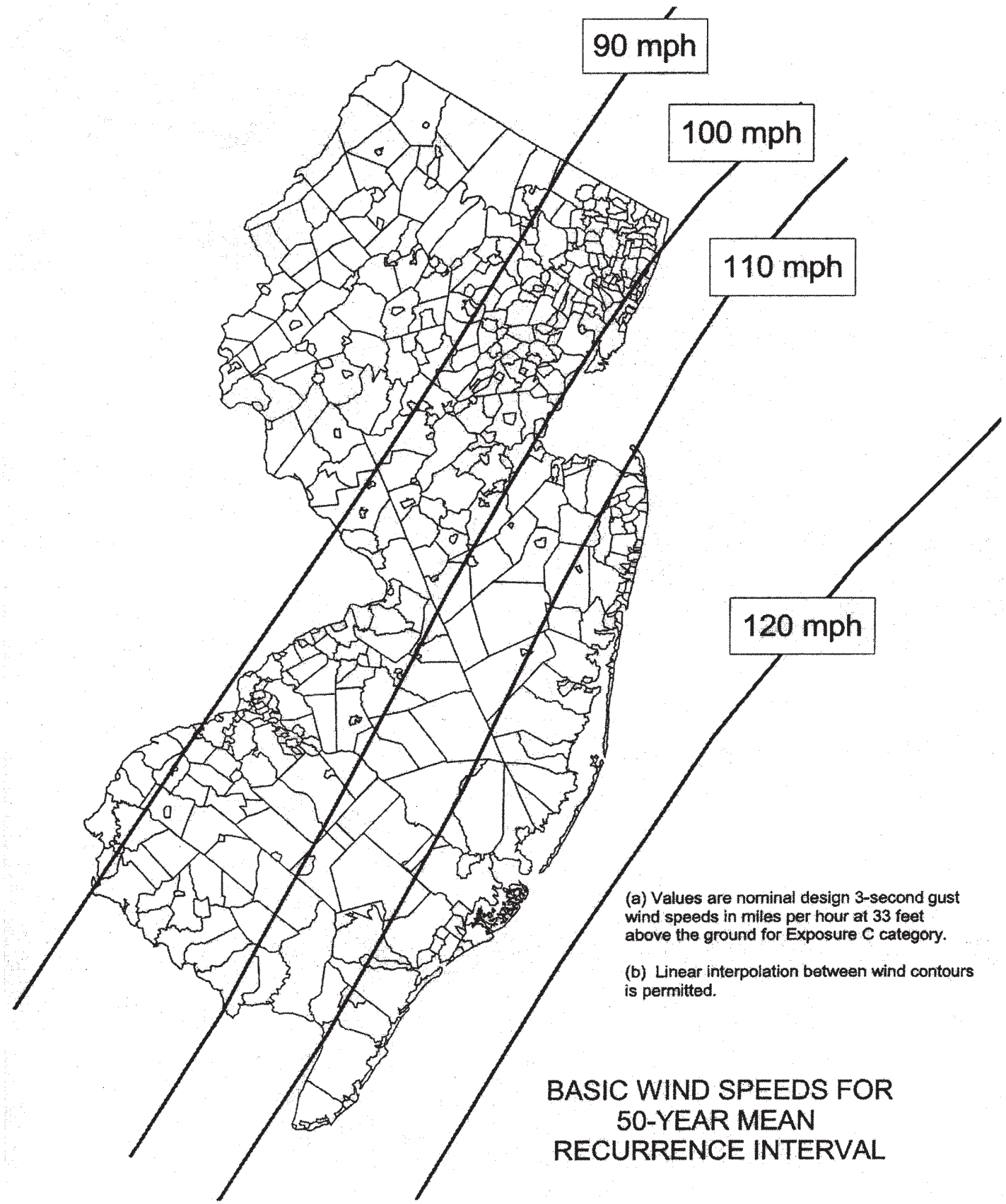
Another interesting change is that, for areas within one mile of the coastal mean high-water line where the wind speed is 110 mph or greater and within hurricane-prone regions, all building openings must be protected from wind-borne debris. Section 1609.1.4 of the IBC/2000, entitled "Protection of Openings," and Section R301.2.1.2 of the IRC/2000, entitled "Wind Limitations," address the wind-borne-debris area openings protection. These sections provide the criteria for compliance for opening protection in the regions where it is required.

In addition to these changes, interpolation is now allowed between the wind-speed contour lines.

The enlarged wind-speed map provides easier reading of the isolines of the Basic Wind Speed maps in the IBC/2000 and the IRC/2000. (This map is provided in Bulletin No. 03-4.)

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

Source: Marcel Iglesias
Code Assistance Unit


90 mph
100 mph
110 mph
120 mph
(a) Values are nominal design 3-second gust wind speeds in miles per hour at 33 feet above the ground for Exposure C category.
(b) Linear interpolation between wind contours is permitted.
BASIC WIND SPEEDS FOR 50-YEAR MEAN RECURRENCE INTERVAL

Stepped-Down Foundation Walls

(Reprinted from the Fall 1995 edition of the *Construction Code Communicator*, Volume 7, Number 3)

The practice of reducing the thickness of foundation walls once the wall is above grade is ever increasing.

The scope of this article is limited to the use of Tables 1805.5(1) for plain masonry and plain concrete walls, and Tables 1805.5(2), 1805.5(3), and 1805.5(4) for reinforced concrete and masonry walls of the 2000 International Building Code, which specify the minimum thickness of foundation walls for various building materials when calculations are not provided.

The wall thickness specified in these tables is based on the height of unbalanced backfill which the foundation is required to support. The wall is required to be this thickness from support to support, in most cases from the top of the footing to the bottom of the sill plate. If the thickness of the wall is reduced at any point in between supports, the depth of unbalanced backfill is limited to the tabular depth based on the reduced wall thickness.

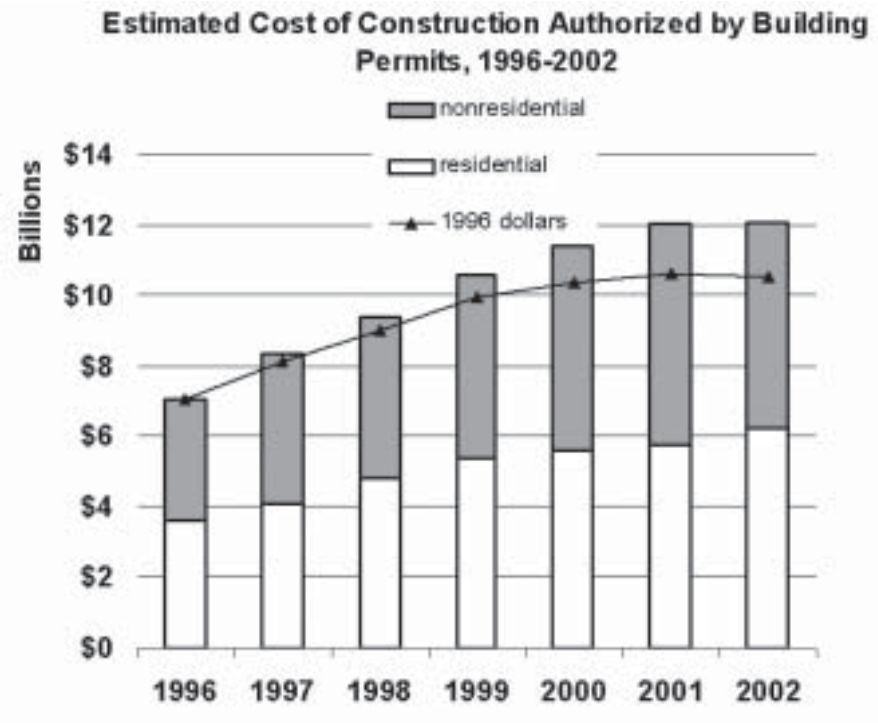
To demonstrate this point, envision the foundation wall on the horizontal plane. This wall is nothing more than a supported beam with the connections at the top of the foundation and the bottom of the plate being the end supports, and the unbalanced backfill being the distributed load. When viewing the wall in this plane, it is obvious that the thickness of the "beam" is required to be consistent from support to support. The same holds true for the vertical plane.

Should a design professional choose to use a design beyond the scope of Tables 1805.5(1) through 1805.5(4), calculations should be submitted for the code official's review and release.

Source: John N. Terry
Code Assistance Unit

2002 Highlights of the *New Jersey Construction Reporter*

New Jersey's construction industry had another strong year in 2002, but there are signs that the boom beginning in the late 1990s has peaked. Estimated construction costs authorized by building permits in 2002 reached $12.1 billion. This was $72 million more than the record level set last year, an increase of less than one percent. In real terms, assuming consumer prices increased by about 1.6 percent between 2001 and 2002, the estimated cost of construction authorized by building permits actually declined by about one percent.



Houses had a key role in the construction industry. Residential construction amounted to $6.2 billion, 51.4 percent of all activity. Office, retail, schools, and other nonresidential uses accounted for $5.9 billion, or 48.6 percent of the estimated construction costs reported on all building permits issued in 2002 for new structures, or additions and alterations to existing ones. In the seven years that the Department of Community Affairs has published construction statistics, the yearly increase in estimated construction costs had ranged between $600 million and $1.2 billion. This year, however, was the first time the annual increase was less than $100 million.

Two other important indicators of the State's construction industry were down in 2002. The number of new houses authorized by building permits declined by nearly 1,100 units compared to last year. There were 34,589 authorized housing units in 2002. This was 3.1 percent less than the 35,680 authorized last year and 9.1 percent less than the 38,065 authorized dwellings in the year 2000; the latter has been a high-water mark for over ten years.

New Jersey Construction Indicators: 1996-2002

	Estimated Construction Costs	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
1996	$7,028,424,990	27,577	6,229,515	4,880,139
1997	$8,346,533,144	30,017	10,409,171	5,688,955
1998	$9,396,755,517	35,676	12,703,824	7,921,892
1999	$10,584,167,530	37,536	13,237,891	6,229,471
2000	$11,387,683,514	38,065	15,531,039	6,063,412
2001	$12,007,456,630	35,680	19,134,533	7,244,833
2002	$12,079,942,099	34,589	9,261,054	7,560,913
Change between 2001 and 2002				
2001-2002	$72,485,469	-1,091	-9,873,479	316,080
Percent Change	0.6%	-3.1%	-51.6%	4.4%

Source: N.J. Department of Community Affairs, 5/7/03

The production of new office space declined sharply in 2002. Last year was a banner year for new office buildings. Construction officials issued permits for more than 19 million square feet of structures in the business use group, which includes commercial and public sector office buildings. Jersey City in Hudson County stood out with 4.1-million square feet, more than one-fifth of all the State's new office space. The Goldman Sachs tower on the Jersey City waterfront broke ground in 2001. The 1.5-million-square-foot building is across from New York City's financial district. When complete, the office tower will be reputedly the tallest man-made structure in New Jersey. In 2002, construction officials issued building permits for only about 9.2-million square feet of new office space. This was less than half the level of activity reported last year.

Retail uses showed modest gains in 2002. The amount of new retail area authorized by building permits for new construction or additions to existing buildings in the mercantile use group totaled 7,560,913 square feet. This was 4.4 percent more than last year.

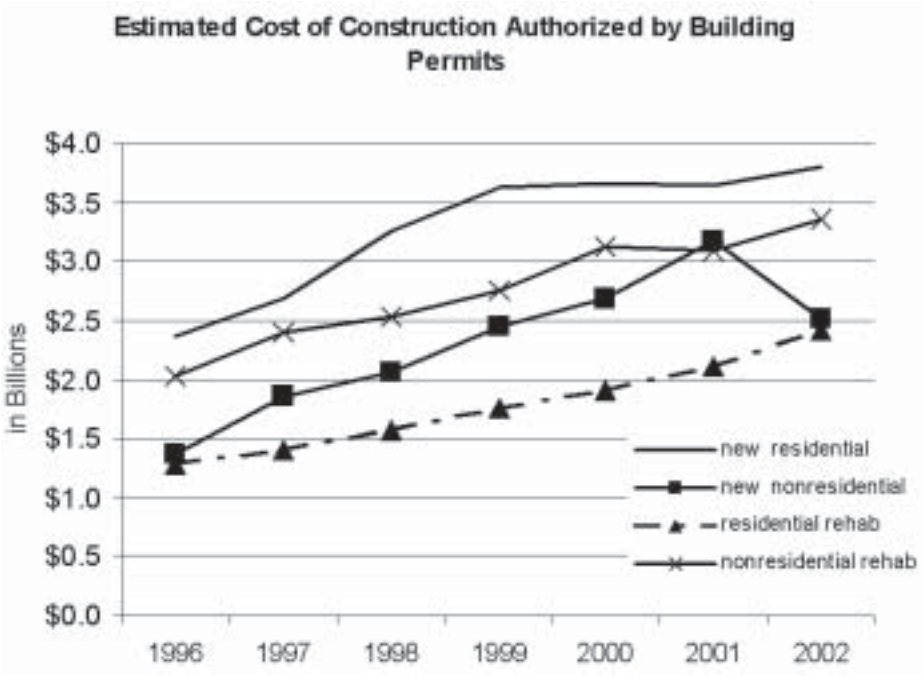
Although office and other business uses had large and significant declines in 2002, total activity measured by the estimated dollar amount of construction stayed at about the same high level reached last year because of strong performances in other sectors of the construction industry. The market for new houses remained strong and increases in the amount of

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money spent to add to or alter existing homes, as well as to make improvements to nonresidential structures, compensated for the decline in office production.

The estimated cost of all permits issued for office and other business uses declined by $780.7 million in 2002 compared to last year. Increases in residential construction ($453.9 million over 2001), educational uses (which include schools for students in grades K through 12 — $115.3 million more than last year), institutional uses (which cover such buildings as jails, hospitals, nursing homes, and assisted-living facilities — up by $131.1 million), and retail uses (up by $116.4 million) offset the decline in office construction.



The graph above tells several things about the dynamics of New Jersey's construction industry. New houses have a vital role in the industry's performance. In the late 1990s, the estimated cost of construction reported on building permits issued for new houses grew sharply, as did the number of new dwellings. In the early years of the 21st century, the number of new houses authorized for construction declined, but the cost of these houses continued to grow, albeit at a much slower pace, supporting the notion that the new houses that were approved were larger and more expensive. New housing construction increased by 3.8 percent over last year, a modest increase but still a force in the industry, considering the estimated cost of all new housing was nearly $3.8 billion.

The graph also shows the steep decline in building permits issued for new, nonresidential structures. As discussed earlier, the drop-off in new office buildings accounts for much of this loss. After experiencing five years of double-digit increases, the estimated cost of construction reported on new construction permits for nonresidential structures declined by nearly 21 percent between 2001 and 2002.

In contrast was the performance of that part of the industry devoted to the rehabilitation of existing buildings. Permits for additions and alterations include tenant fit-ups. No doubt this was an important part of the level of activity in 2002, as contractors built to customize the new office space constructed in past years. Addition and alteration permits also were issued to repair older houses and improve nonresidential structures. In 2002, the estimated cost of construction for additions and alterations totaled $5.8 billion. This was 48 percent of the estimated cost of all work reported on building permits. Last year, permits for additions and alterations accounted for only 43.2 percent of all work authorized. Between 2001 and 2002, rehabilitation work grew by $590.6 million, or 11.4 percent. Additions and alterations to existing houses were especially strong, increasing by 14.9 percent, while nonresidential rehab grew by 9 percent over the 2001 level. Rehabilitation of houses and other existing buildings had a much more prominent role in New Jersey's construction industry in 2002.

Activity by Region

The geography of New Jersey construction activity shows that the central part of the State accounted for most of the new houses, new office buildings, and new stores. But, viewed in terms of dollars, northern New Jersey communities rose to the top. The dominance of central New Jersey in the housing market has been a trend for many years. In 2002, three of the top four counties with the most new houses were in the central part of the State. Ocean County was at the top with 3,949 authorized units, 11.4 percent of all the new housing in New Jersey. Middlesex and Monmouth Counties had 2,500 and 2,468 authorized units, respectively. Over one in four new houses were in those three counties.

Major Construction Indicators by Region: 2002

Region	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
North	$4,958,039,635	12,557	2,655,202	1,815,521
Central	$4,233,550,469	13,549	4,313,927	3,817,621
South	$2,544,101,033	9,561	2,062,512	1,766,806
State Buildings	$344,250,962	13	229,413	160,965
New Jersey	**$12,079,942,099**	**34,589**	**9,261,054**	**7,560,913**
Percent Distribution by Region				
North	41.0%	33.2%	28.7%	24.0%
Central	35.0%	36.9%	46.6%	50.5%
South	21.1%	29.9%	22.3%	23.4%
State Buildings	2.8%	0.029%	2.5%	2.1%
New Jersey	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: N.J. Department of Community Affairs, 5/7/03

Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties

Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties

Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties

Nearly 47 percent of all new office space and more than half of all new retail space were in the central part of the State. Despite this concentration, a higher proportion of the estimated dollar amount of construction was in northern New Jersey. Communities in the northern part of the State had just under $5 billion of activity (41 percent), while central New Jersey had $4.2 billion (35 percent) and southern New Jersey accounted for $2.5 billion (21.1 percent). Northern New Jersey communities were the site of several of the bigger permits issued during the year. These included two new construction permits for light rail transit systems in Hudson County, one in North Bergen Township with an estimated cost of $150 million and the other in Weehawken Township with an estimated construction cost of $100 million. Three new medical facilities were among the other large developments in 2002. Work began on a new hospital in the City of Vineland, Cumberland County. The construction cost of the facility exceeded $125 million thus far. The Jersey City construction office issued a permit update for work begun last year for a new medical center. The estimated cost of construction in 2002 exceeded $98 million. The City of Hackensack in Bergen County reported an $80-million permit for a new medical center.

Big Cities Continue to Shine

The municipalities with the most work in 2002 were the State's largest cities. This continued a trend of recent years. Jersey City and the City of Newark (Essex County) ranked first and second with the most activity measured by the estimated

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cost of construction authorized by building permits. Jersey City had $314.2 million and Newark had $307.5 million. Strong housing markets were evident in both communities, only this time Newark ranked first with the most new houses (1,223 authorized units) and Jersey City was second among all localities with 907 authorized dwellings. In Jersey City, tenant fit-up work continued on the Goldman Sachs tower which, along with the new medical center, were among the largest projects in 2002. In addition to new housing, some of the larger developments in Newark included a new bank and several projects to expand facilities at the New Jersey Institute of Technology.

Construction Indicators
Top New Jersey Municipalities: 2002

Municipality	County	Estimated Cost of Construction (dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jersey City	Hudson	$314,154,029	907	157,198	430
Newark City	Essex	$307,466,068	1,223	479,267	21,413
Atlantic City	Atlantic	$256,518,474	201	972	8,000
Vineland City	Cumberland	$188,442,308	251	150,176	8,700
North Bergen Township	Hudson	$169,933,154	63	0	0
Montgomery Township	Somerset	$139,845,765	607	0	0
East Brunswick Township	Middlesex	$131,385,919	230	142,834	467,844
Hamilton Township	Mercer	$123,381,049	421	283,439	1,055,656
Weehawken Township	Hudson	$122,481,081	0	0	0
Jackson Township	Ocean	$117,257,632	599	0	20,951
Top Municipalities		$1,870,865,479	4,585	1,213,886	1,582,994
New Jersey		**$12,079,942,099**	**34,589**	**9,261,054**	**7,560,913**

Source: N.J. Department of Community Affairs, 5/7/03

Atlantic City in Atlantic County ranked third among localities with the most work in 2002. The Showboat Casino Hotel had a $55-million hotel addition. Work continued on the Borgata Hotel Casino and Spa. Other big permits reported for the year in Atlantic City were issued for a new thermal energy plant and a new middle school.

Vineland had $188.4 million of construction in 2002, ranking fourth among all communities. In February, work began on a new hospital that will be a regional center for much of southern New Jersey. Permit updates for the complex were still being reported in November 2002.

North Bergen had $169.9 million of construction. As mentioned earlier, excavation and construction of a light rail system for New Jersey Transit accounted for $150 million of this total.

In Montgomery Township, Somerset County new housing, much in the form of assisted living, along with a new high school, accounted for a large part of the $139.8 million of construction. The new high school will have 350,000 square feet and an estimated construction cost of over $35 million. The assisted-living complex will have nearly 200 units, and is part of a larger medical complex that will include a nursing home and hospital for seniors. Estimated costs to build these facilities also will exceed $35 million.

Construction activity in East Brunswick Township, Middlesex County was split between residential and nonresidential structures. Hamilton Township in Mercer County reported $123.4 million of construction. Much of this consisted of several large, new retail stores, like Kohl's department store and a Lowe's Home Improvement Warehouse. Hamilton issued building permits for over one-million square feet of new retail space in 2002, tops among communities. As mentioned earlier, $100 million of the $122.5 million reported in Weehawken was for a new light rail facility. Much of the work in Jackson Township, Ocean County was for new housing. Jackson had 599 authorized dwellings in 2002, ranking eighth among all municipalities. Of the $117.3 million reported for the year, nearly 72 percent was for residential work. Jackson also had a $12.3-million permit for a new elementary school.

In addition to Newark and Jersey City, two other New Jersey cities were among the top 20 communities with the most new houses: the City of Hoboken in Hudson County and the City of Camden in Camden County. Hoboken had 576 authorized housing units in 2002, ranking ninth among all municipalities. Most of this was multifamily housing. Camden had 534 authorized units, of which 340 will be new, market-rate apartments resulting from the conversion of the old RCA factory. Because these units are from a conversion of an existing building, they are not counted by the United States Census Bureau, which looks only at new construction to report authorized housing. The New Jersey Department of Community Affairs, however, includes these dwellings in its tally of authorized dwellings. All told, Newark, Jersey City, Hoboken, and Camden accounted for 3,240 authorized dwellings in 2002. This was 9.4 percent of all the new housing units authorized by building permits.

New House Prices

The median sales price of the 23,647 new houses that began enrollment in a new home warranty program in 2002 was $274,705. This was 8.3 percent more than the median sales price last year. Bergen County had the most expensive new houses. Half of the 1,122 new houses that started enrollment in a warranty program in 2002 cost more than $478,000. Hunterdon and Somerset Counties had median sale prices of $441,070 and $405,490, respectively. The least expensive new houses were in Cumberland County. Half of the 231 new houses that began enrollment in a warranty program cost more than $155,244. Most new houses built in New Jersey are required to enroll in a warranty program. The exceptions are apartments and other rental units, and new houses built by homeowners who acted as their own general contractors.

New House Prices

Period	Number of New Houses	Median Sales Price	Percent Change in Sales Price
1996	20,903	$183,300	
1997	21,640	$190,000	3.7%
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
2001	23,372	$253,670	9.5%
2002	23,647	$274,705	8.3%
1st Quarter 2002	5,645	$259,900	
2nd Quarter 2002	6,381	$274,612	5.7%
3rd Quarter 2002	5,894	$279,900	1.9%
4th Quarter 2002	5,737	$282,500	0.93%
1st Quarter 2003	4,018	$290,900	2.9%

Source: N.J. Department of Community Affairs, 5/7/03

NOTES

NOTES

Greetings from Governor James E. McGreevey and Commissioner Susan Bass Levin

One fundamental principle of the New Jersey State Uniform Construction Code (UCC) is that New Jersey citizens are provided with safe and affordable housing and buildings. This is achieved through local code enforcement agencies working in partnership with design professionals, builders and developers.

Three times per year, the Department of Community Affairs' (DCA) Division of Codes and Standards publishes the *Construction Code Communicator*. This newsletter provides subscribers - both public and private - with information on emerging construction issues. It also provides code officials with guidance on UCC administration and enforcement.

Through the *Construction Code Communicator* and all of our programs and services, we remain committed to providing safe and affordable housing and buildings to New Jersey citizens.

With all good wishes,

James E. McGreevey
Governor

Susan Bass Levin
Commissioner





James E. McGreevey
Governor
State of New Jersey

Susan Bass Levin
Commissioner
NJ Department
of Community Affairs

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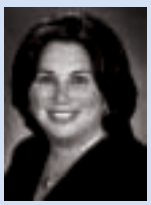


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James E. McGreevey
Governor



Susan Bass Levin
Commissioner

Discount on ASHRAE Standards and Availability of NFPA Standards

Since the adoption of the Energy Subcode, which references the 1999 edition of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 90.1, the Department of Community Affairs has received many telephone calls pertaining to the high cost of purchasing copies of the ASHRAE 90.1-1999 standard. For those who are not members of ASHRAE, the cost of the above standard is $20 higher than the member price.

We are happy to inform you that a "Code Official's Discount" for any of the ASHRAE standards has been negotiated with ASHRAE to provide a 30-percent discount off of the list price to eligible code officials. (Please note that prices do not include the cost of shipping.)

In order to receive the discount, "CODE OFFICIAL DISCOUNT" must be indicated clearly on the order form. All orders must be submitted on letterhead imprinted with the name of the municipality and title. A government purchase order and government check must also be included.

Please mail your order to:

ASHRAE
1791 Tullie Circle, NE
Atlanta, GA 30329

Attn: Phyllis Maurer, Customer Service Manager

Don't forget to indicate "CODE OFFICIAL DISCOUNT" on the order form!

Should you need to contact ASHRAE, the telephone number is 1 (800) 527-4723.

The Department has also received phone calls from code officials stating that back issues of the referenced National Fire Protection Association (NFPA) standards are unavailable. The Department has contacted NFPA to inquire about obtaining back issues of these standards and was informed that, for a fee, most back issues may be downloaded from the Internet. There are a limited number of certain standards available. Please call NFPA at (617) 770-3000 to verify which back issues are available.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

New Jersey Register Adoptions

Date: July 7, 2003
Adoption: 35 *N.J.R.* 2864(b)
Summary: This adopted amendment at *N.J.A.C.* 5:23-3.14(a)16x makes an administrative correction to include the correct abbreviation for compressive strength.

Date: July 7, 2003
Adoption: 35 *N.J.R.* 2865(a)
Summary: This adopted amendment at *N.J.A.C.* 5:23-9.2(b)3vi inserts text that describes software and prescriptive packages recognized by the Department of Community Affairs to demonstrate Energy Subcode compliance, which was omitted inadvertently in the May 19, 2003 code update.

Date: July 21, 2003
Adoption: 35 *N.J.R.* 3298(a)
Summary: This adopted amendment at *N.J.A.C.* 5:23-2.18 makes an administrative correction to revise a cross-reference to final inspection requirements and the codification of a subsection.

Date: August 4, 2003
Adoption: 35 *N.J.R.* 3608(a)
Summary: This adopted amendment at *N.J.A.C.* 5:23-2.24(g), entitled "Conditions of Certificate of Occupancy," makes an administrative correction to provide the correct name of the Bureau charged with enforcement of the Liquefied Petroleum Gas Code, which is the "Bureau of Code Services" of the Division of Codes and Standards, not the "Bureau of Codes and Services."

Date: September 2, 2003
Adoption: 35 *N.J.R.* 4051(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.14 and 3.17 reflect changes made necessary by the adoption of the 2000 edition of the International Building Code (IBC/2000) and the 2002 edition of the National Electrical Code (NEC/2002) as the Building and Electrical Subcodes of the Uniform Construction Code (UCC), respectively. All references to the 1996 edition of the Building Officials and Code Administrators National Building Code (BOCA/1996) and the NEC/1999 have been deleted, and the appropriate IBC/2000 and NEC/2002 references have been inserted in their place.

Date: September 15, 2003
Adoption: 35 *N.J.R.* 4281(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-4.5 delete the revision dates of the standard forms and logs listed in the UCC. In addition, the adopted amendments separate two existing dual-purpose forms (Notice of Violation and Order to Terminate/Notice Order to Pay Penalty and Notice of Unsafe Structure/Imminent Hazard) into their constituent parts. Finally, the adopted amendments delete the phrase "public inspection" because access to public records and files is addressed by the Open Public Records Act, *N.J.S.A.* 47:1A-1 et seq.

Date: October 6, 2003
Adoption: 35 *N.J.R.* 4712(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.8, 3.7, 3.8, and 3.8A require the use of field evaluation labels and reports, or letters from nationally recognized testing laboratories and reports of engineering findings issued by nationally recognized evaluation service programs, in approving the use of alternate materials. In addition, these adopted amendments recodify existing language on Departmental approval of systems for indirect apportionment of heating costs in multiple dwellings.

Date: October 6, 2003
Adoption: 35 *N.J.R.* 4713(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.23 and 4.5 define the inspection and enforcement responsibilities of construction and subcode officials with regard to buildings, structures, and projects that have received a Certificate of Occupancy or Certificate of Approval.

The *Construction Code Communicator* is published three times a year by the New Jersey Department of Community Affairs. Editor: Kristy Paolillo. Layout and design: Mary Ellen Handelman. Address: Division of Codes and Standards, New Jersey Department of Community Affairs, 101 South Broad Street, Post Office Box 802, Trenton, New Jersey 08625-0802. Address changes and subscription requests may be directed to the *Publications Unit*. Comments and suggestions should be sent to the attention of the *Code Development Unit*.

Date: October 6, 2003
Adoption: 35 *N.J.R.* 4714(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-9.1 revise previously adopted language at *N.J.A.C.* 5:23-9.1 to clarify that attached single-family dwellings in groups of three or more may be served by common water lines and sewer laterals provided a homeowners' association or other owners' entity ensures maintenance.

Date: October 20, 2003
Adoption: 35 *N.J.R.* 4861(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-2.18C, 6.6, and 6.7 make administrative corrections to include correct cross-references to *N.J.A.C.* 5:23-2.20(e), entitled "Tests and Special Inspections," and *N.J.A.C.* 5:23-6.6(k)2, "Alterations."

Date: October 20, 2003
Adoption: 35 *N.J.R.* 4861(b)
Summary: These adopted amendments delete the provisions requiring elevators in large multifamily residential buildings from *N.J.A.C.* 5:23-7.5, which governs residential buildings other than Group R-1 (hotels and motels). In addition, these adopted amendments change "Use Group" to "Group" and delete or replace the references to Group R-4 to reflect the residential definitions in the recently adopted IBC/2000, the Building Subcode of the UCC.

Date: November 3, 2003
Adoption: 35 *N.J.R.* 5073(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.14 and 3.21 retain the code requirements applicable to the height and area limitations for structures built to the One- and Two-Family Dwelling Subcode of the UCC. In addition, these adopted amendments incorporate the requirements of the previously adopted Building Subcode, BOCA/1996, which established the conditions for increasing the height or area of a one- or two-family dwelling. Finally, these adopted amendments to the Building Subcode of the UCC provide a single standard for means of egress components for one- and two-family dwellings and the interior of multifamily dwelling units regardless of whether the dwellings are constructed to the Building Subcode or the One- and Two-Family Dwelling Subcode.

Date: November 3, 2003
Adoption: 35 *N.J.R.* 5062(b)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.2, "Matters Covered, Exceptions," update the references to the Building Subcode of the UCC that concern commercial farm buildings.

Date: November 3, 2003
Adoption: 35 *N.J.R.* 5064(a)
Summary: These adopted amendments to *N.J.A.C.* 5:23-3.4 assign plan review and field inspection responsibilities for the requirements of the Building, Electrical, and One- and Two-Family Dwelling Subcodes of the UCC.

Date: December 1, 2003
Adoption: 35 *N.J.R.* 5371(b)
Summary: This adopted amendment at *N.J.A.C.* 5:18-1.3 would allow any person seeking a waiver or modification of the requirements set forth at *N.J.A.C.* 5:18 to submit a request in instances where strict adherence to the rules would pose a hardship, or where technical advances allow for an alternative that would provide equivalent protection.

Date: December 15, 2003
Adoption: 35 *N.J.R.* 5543(a)
Summary: These adopted amendments at *N.J.A.C.* 5:23-1.4, 2.2, 2.17A, and 9.3 allow the replacement of shower or combination bath/shower valves in bathrooms in single-family dwellings without obtaining a UCC permit. Also, these adopted amendments update the UCC by deleting terms that are unnecessary or obsolete.

Source: Megan K. Sullivan
Code Development Unit

Barrier Free Subcode: Large Building and Small Building No Longer Apply to Multifamily Residential Structures

Just a year ago (Winter 2002), I wrote an article in the *Construction Code Communicator* informing all readers the large building/small building distinction that had traditionally been applied to commercial buildings, as a result of an Appellate Court decision, also applied to multifamily residential structures. This year, I am writing to tell you that is no longer the case.

On May 5, 2003, Governor James E. McGreevey signed into law (P.L. 2003, c. 72) amendments to the Uniform Construction Code (UCC) Act specifying that the large building/small building distinction applies only to commercial structures and that townhouses, as they have been defined in the Barrier Free Subcode, are exempt. At the same time the UCC Act was amended, statutes that covered similar requirements were also amended, so there is now statutory agreement.

Amendments to the Barrier Free Subcode were proposed on July 7, 2003 and adopted on October 20, 2003 implementing the statutory change. Once and for all (we hope), the accessibility requirements for multifamily residential structures return to the 1995 Barrier Free Subcode requirements. In sum:

- In buildings with four or more dwelling units in a single structure, where there is elevator service, all (100 percent) of the dwelling units must be accessible.
- In buildings with four or more dwelling units in a single structure, where there is no elevator service, the ground-floor dwelling units must be accessible.
- When determining the number of dwelling units in a single structure, firewalls do not designate separate buildings.
- When determining whether a dwelling unit is a ground-floor dwelling unit, the following definition is critical: In a building containing dwelling units, the first floor containing a dwelling unit or a portion of a dwelling unit is considered the ground floor, regardless of whether that ground floor is at grade (*N.J.A.C.* 5:23-7.5).
- Townhouses are exempt from the Barrier Free Subcode. A townhouse is defined as: A single dwelling unit with two or more stories of living space, exclusive of basement or attic. The dwelling unit shall have an independent entrance that shall serve a single dwelling unit only and that is at or near grade; most or all of the sleeping rooms shall be on one story; and most of the remaining habitable space, such as kitchen, living, and dining areas, shall be on another story.
- When being applied to dwelling units, the terms "accessible" and "adaptable" are interchangeable. They mean that the building has an accessible building entrance; an accessible interior route into and through the dwelling unit; and required clear floor spaces, reach ranges, and maneuvering space. The kitchen and bathrooms may have adaptable features.

If you have questions about the Barrier Free Subcode, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development Unit

U.S. Census Bureau and DCA Monthly Data Collection

For those who don't know me, my name is Charlie Pierson, Jr. My job at the Department of Community Affairs is to collect all permit and certificate data that each town submits to the Department on a monthly basis, as well as provide technical support for the Uniform Construction Code Administrative Records System (UCCARS). I would like to begin by saying that you are all doing a wonderful job by submitting your data each month. This makes everything run much smoother at the Department.

Secondly, I would like to discuss census reports. Each month, *only* if you submit your reports to the Department on paper rather than through an electronic transmission or e-mail, you need to include a report to the Federal Census Bureau. It is very important that you *do not* send anything to the Census Bureau if you transmit your reports electronically or by e-mail because it will only cause confusion.

In addition, if you do not have form C-404, please call 1 (800) 845-8244 and request one. You must fill this form out for every month in which you send the Department a paper report. This form must also be submitted for any past months this year in which you have sent me a paper report.

If you do not send in your monthly building permit report to the Department, expect to hear from me. If you are sending paper reports to the Department, but forget to send in a paper report to the Census Bureau, you also can expect to hear from me because my job is to help the Census Bureau obtain its monthly reports, as well.

If you have questions about any of these monthly reports, please contact me at (609) 292-7899. You might have additional questions for the Census Bureau. Remember, you have monthly reporting obligations to both agencies.

Contact the U.S Census Bureau at:

U.S. Census Bureau
1201 East 10th Street
Jeffersonville, IN 47132-0001

Phone: 1 (800) 845-8244
Fax: 1 (800) 438-8040
E-mail: mcd@census.gov

Source: Charles Pierson, Jr.
UCCARS Product Support

Help Prevent the Illegal Development of Environmentally Sensitive Areas in Your Town

From the mountains of Sussex County to the shoreline of Cape May, New Jersey has several land-use laws and rules that impact many sites across the State. These laws are administered and enforced by the New Jersey Department of Environmental Protection (DEP) and include the Freshwater Wetlands Protection Act, the Flood Hazard Area Control Act, the Wetlands Act of 1970 (coastal wetlands), the Waterfront Development Act, the Coastal Area Facility Review Act, and the Riparian Lands Act (tidelands).

These laws regulate a broad range of construction and development activities, as well as many activities related to site preparation including filling, grading, excavation, and the clearing of vegetation in areas that have been determined to have special environmental value or sensitivity.

As municipal officials, particularly those charged with issuing permits for construction and/or land disturbances, it is important to become familiar with these laws. Many violations identified by the DEP's Bureau of Coastal and Land Use Compliance and Enforcement (BCLUCE) can be prevented at the local level by zoning or construction officials and/or municipal engineers by ensuring that the proper permits have been obtained before building permits are issued. Once projects are approved on the local level and construction activities begin, they are much harder to stop or reconfigure. Please ensure that, prior to projects being approved by you, all necessary State land-use permits are in place.

Some towns require the submittal of a State-verified freshwater wetland Letter of Interpretation, which identifies wetlands and buffers, as part of the building permit application. In addition, a DEP-issued permit may be required when development activity is to occur in a flood plain or in the vicinity of a stream. This permit is called a "Stream Encroachment Permit."

The DEP recognizes that the presence of freshwater wetlands or flood plains on a site is not always obvious. There are resources available to help you help us protect these important areas: iMap, found on the DEP web page at www.nj.gov/dep, is a mapping tool that can provide you with general information about various regulatory boundaries and much more. Wetlands should always be field verified for precise accuracy of location. The use of county soil surveys to identify poorly drained or very poorly drained soils is also helpful in locating areas that may contain wetlands. A caution is appropriate here. The maps that are available on iMap are up to ten years old. Therefore, they should not be regarded as definitive or accurate in their details, but should be used as a resource to provide more general land-use information.

If you suspect that a project may impact a sensitive environmental area, you may require the builder to obtain a determination from the DEP by calling the Land Use Regulation (permitting) Program at (609) 292-0060. For more information on these land-use laws and available permits, check out www.nj.gov/dep/landuse.

If you have any questions or concerns in regard to activities occurring on sensitive land areas, please call BCLUCE at (609) 292-1240 for Mercer County and north, and (732) 255-0787 for Monmouth County and south. For more information on BCLUCE, click onto www.nj.gov/dep/enforcement/clue.html.

Together we can ensure that these areas of beauty and benefit are managed in a responsible and intelligent way.

Source: Barbara Baus
Supervising Environmental Specialist
DEP BCLUCE

New Jersey Code Adoptions -- Elevator Safety Subcode

The following chart gives the adoption dates and the edition of the codes and standards used for the Elevator Safety Subcode.

Edition Date for Building Subcode	Effective Date for Model Codes	BOCA Article Number for Elevators, Dumbwaiters, and Conveyor Equipment	ANSI A17 Safety Standard for Elevators and Escalators	ANSI A90.1 Safety Standard for Belt Manlifts	ASME A18.1 and A18.1a Safety Standard for Platform Lifts and Stairway Chairlifts
1975	01/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973	A90.1-1969	
1976/S	12/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1978	10/01/78	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1981	05/07/81	21	A17.1 - 1978	A90.1 - 1976	
1983/AS	02/22/83*	21	A17.1 - 1981	A90.1 - 1976	
1984	08/06/84	21	A17.1 - 1981; A17.1a - 1982	A90.1 - 1976	
1985/S	04/01/85	21	A17.1 - 1984	A90.1 - 1976	
1986/AS	09/22/86	21	A17.1 - 1984	A90.1 - 1976	
1987	04/01/87	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1988/S	06/20/88	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1989/AS	11/01/89	26	A17.1 - 1987	A90.1 - 1985	
1990	07/01/90	26	A17.1 - 1987	A90.1 - 1985	
1991/S	03/04/91	26	A17.1 - 1987		
1993	05/01/93	Chapter 30	A17.1 - 1990	A90.1 - 1985	
1996	07/06/98	Chapter 30	A17.1 - 1993 and 1994, 1995 Supplements	A90.1 - 1992	
IBC-2000 New Jersey Edition	05/05/03	Chapter 30	A17.1 - 1996 and 1997, 1998 Supplements	A90.1 - 1997	A18.1 - 1999 and A18.1a - 2001

Note: The grace period is covered at *N.J.A.C.* 5:23-1.6(a).

1) Consult construction files to determine under which code the permit was taken out;

2) If code information is not available, apply the previous code. For example, when performing cyclical inspections, if the permit — or installation — date precedes or is within the grace period, apply the code edition immediately preceding the adoption of the new subcode. Example: A permit was issued on May 15, 1987. If the construction file does not have the information about the edition of the standard used, then ANSI A17.1 - 1984 is enforced. If the permit was issued on November 16, 1987, the ANSI A17.1 - 1984 with the 1985 supplement apply.

S = Supplement
AS = Accumulative Supplement
A = Amendments
* = Operative date

If you have questions about the Elevator Safety Subcode, you may reach the Elevator Safety Unit at (609) 984-7833.

Source: Paulina Caploon
Elevator Safety Unit

Vent Piping Size for Fuel Oil Tanks

The Department of Community Affairs has received questions pertaining to the vent piping size requirements for fuel oil storage tanks smaller than 660 gallons.

The 1992 edition of National Fire Protection Association (NFPA) 31 requires vents for tanks smaller than 660 gallons to be 1 1/4". In 1997, NFPA 31 increased the vent piping size requirement to 2". However, in 2001, NFPA 31 reverted to the smaller size requirement.

The 1997 edition of NFPA 31 is referenced in the 2000 edition of the International Mechanical Code (IMC/2003), the Mechanical Subcode of the Uniform Construction Code.

The Department is reviewing IMC/2003, which will be proposed for adoption early in 2004. Because IMC/2003 references the 2001 edition of NFPA 31, which requires the 1 1/4" vent, the Department advises that, in the interim, code officials allow the use of the smaller vent.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Local Government Ethics Law – Acceptance of Gifts

Code officials and inspectors, like all local government officials and employees, must bear in mind their obligations under the Local Government Ethics Law, specifically the prohibition in *N.J.S.A.* 40A:9-22.5, paragraph f, against soliciting or accepting any gift, favor, or other thing of value based upon an understanding that it was given or offered for the purpose of influencing the official or employee in the performance of his or her official duties. Code officials and inspectors may reasonably assume that ***any*** gifts given or offered to them by someone with whom they may have contact in an official capacity is being offered or given with the intent of influencing them in that official capacity, and all said gifts should therefore not be accepted, no matter how small they may be.

Any questions concerning this requirement may be addressed to the municipal ethics board, if there is one, or to the Local Finance Board of the Department of Community Affairs, which is responsible for enforcement of the Local Government Ethics Law in municipalities that do not have their own board.

If you have any questions regarding the Local Government Ethics Law, please call Dave Nenno of the Division of Local Government Services at (609) 292-4537, or e-mail dnenno@dca.state.nj.us.

Source: Michael L. Ticktin
Chief, Legislative Analysis

Changes in Testing

There are three important changes in the test administration of the exams produced by the National Certification Program for Construction Code Inspectors (NCPCCI), which is administered by Experior Assessments, Inc. There are changes in test sites and examination fees, and in January all exams except electrical are being updated to the 2003 code editions.

1. TEST SITES: For the past few years, the exams used in licensing code officials have been offered in testing sites owned by Prometric, Inc., a test administration company. The tests have often been given in Sylvan Learning Centers. Effective in January 2004, test administration sites will change from those owned by Prometric to those that are part of the Experior Testing Network. There is currently only one Experior Testing Network site in New Jersey. It is in West Orange. In approximately six months, there will be an additional testing site in Princeton. There are also testing sites in Philadelphia and Manhattan. Information on these sites is available on the Experior web site, www.experioronline.com. For convenience, the Department of Community Affairs is in the process of establishing a link to Experior's web site on the Division's web site.

2. EXAM FEES: Also effective in January, the cost of taking a test will change. Each exam will be $120. The cost of taking linked exams will also change: two linked exams will be $195; three linked exams will be $290. The linked exams are those listed in the Candidate Information Bulletin that is published by Experior. Remember: when the exams are linked, there is no break at all between the exams. The second (or third) exam begins the instant the first (or second) exam has been completed.

3. UPDATED EXAMS: Beginning in January 2004, all exams except electrical (which is on a different code-change cycle) will be updated to the 2003 code editions. **There will be a testing black-out period from January 1, 2004 through January 19, 2004. No exams will be given during this period.** This black-out period will enable Experior to load the new exams onto the computers in the test centers. All registrations received after December 19, 2003 will be processed for the 2004 exam dates that begin January 20, 2004. (This is because there is not enough time between December 19 and the end of the year to receive and process registrations, and to schedule examinations for a 2003 exam date.)

For information on the testing sites or test registration, please contact Experior at 1 (800) 864-5309, or access the Experior web site at www.experioronline.com. The most recent Candidate Information Bulletin is available on the Experior web site.

ICC Exams

At this time, the Department will accept the results of the exams offered by the International Code Council (ICC). The ICC offers exams for building and mechanical, will offer plumbing exams that are compatible with the National Standard Plumbing Code shortly, and are developing exams for fire protection officials. Information about the ICC exams may be found on its web site, www.iccsafe.org. Exams that are eligible in New Jersey are listed under "New Jersey Legacy Exams."

For information on licensing requirements for code officials in New Jersey, please contact the Licensing Unit in the Bureau of Code Services at (609) 984-7834.

If you have problems with the exams themselves, or if you have problems with Experior, please contact me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Health Care Facilities Plan Review Authority

It has come to the Department of Community Affairs (DCA), Bureau of Construction Project Review's attention that the authority for the review of projects to be undertaken at licensed health care facilities may be unclear to some local officials. Several design firms have called or e-mailed the DCA regarding this subject after having been told by construction officials and subcode officials throughout the State that their plans are not required to be reviewed by the DCA because Class I municipalities are permitted by law to review and approve construction plans for licensed health care facilities.

This is incorrect!

The Uniform Construction Code (UCC) at *N.J.A.C.* 5:23-3.11(a)8, "Enforcement Activities Reserved to the Department," clearly provides that the DCA shall be the sole plan review agency for all health care facilities.

The Health Care Plan Review Unit, which is now at the DCA and was formerly at the New Jersey Department of Health and Senior Services, has been the sole plan review agency for health care facilities for over 30 years. The unit was given this responsibility due to the complexity of these types of projects, and because of the numerous codes and standards -- including both State and Federal licensing

standards -- that must be applied in the review of such projects. Local officials, unfamiliar with these standards or how they must be applied, might miss these important items. This could result in noncompliance of these facilities with the noted standards, which in turn would result in the loss of funding to such facilities under several Federal programs.

The DCA does allow the return of some small, non-patient care projects in health care facilities (e.g., employee offices, staff lounges on non-patient floors, administrative offices, staff dining areas, etc.) to local jurisdiction, but only after the DCA has performed a cursory evaluation of the proposed project. Upon completion of this evaluation, written permission in the form of a letter from either David B. Uhaze, Chief, Bureau of Construction Project Review, or Farivar Kiani, Supervisor, Health Care Plan Review, must accompany the plans sent to the municipality's building department.

Further guidance on this matter for construction officials or subcode officials can be found in UCC Bulletin No. 98-3, "Health Care Facilities Plan Review," or by calling our offices at (609) 984-7850.

Source: David B. Uhaze, RA
Chief
Bureau of Construction Project Review

Single-Family Homeowner Plans

A number of callers have asked the Code Assistance Unit of the Department of Community Affairs whether a homeowner may submit his or her own plans to the local construction department for a detached accessory structure (e.g., garage, barn) for personal vehicles, pets, and/or storage on the same property of a single-family home.

The answer is "Yes."

Based upon the provisions set forth at *N.J.A.C.* 5:23-2.15(e)1ix, "Construction Permits – Application," a single-family homeowner may prepare his or her own plans for the construction, alteration, or repair of a structure that will be used ***exclusively*** as the homeowner's private residence and/or accessory structure. These provisions also require that the structure be constructed by the homeowner or homeowner's agent. The home and/or accessory structure must be intended for personal use, not business or commercial purposes.

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

Source: Rob Austin
Code Assistance Unit

IRC Height and Area Issue is Resolved

As most of you know, upon adoption of the International Residential Code (IRC), the Department of Community Affairs reserved the old height and area limitations of the 1996 edition of the Building Officials and Code Administrators (BOCA) National Building Code for additional public comment. The Department has received several comments and, upon review, concluded that the height and area limitations of BOCA/1996, which were incorporated into the One- and Two-Family Dwelling Subcode, would better serve the citizens of the State. The purpose of this article is to explain the impacts of these amendments.

☐ At *N.J.A.C.* 5:23-3.14(b)3, the Building Subcode, the definition of Group R-3 has been changed to clarify that all detached one- and two-family dwellings beyond the design parameters of the IRC must be designed and constructed in accordance with the International Building Code (IBC) as an R-3.

☐ At *N.J.A.C.* 5:23-3.14(b)10, Chapter 10 of the IBC, "Means of Egress," has been amended to reflect all of the residential stair, guardrail, and handrail issues that were changed in the IRC. Because there are more residential buildings required to be constructed in accordance with the IBC, it was necessary to incorporate the residential stair, guardrail, and handrail requirements into the IBC.

☐ At *N.J.A.C.* 5:23-3.21(b), the One- and Two-Family Dwelling Subcode, the parameters of the IRC have been clearly established as all detached one- and two-family buildings or single-family townhouses that are not more than three stories in height (Group R-5). Additionally, the definition of the term "townhouse" is incorporated into the Uniform Construction Code (UCC).

☐ At *N.J.A.C.* 5:23-3.21(c)3, a new section has been added establishing height and area limitations for Group R-5 buildings. These height and area limitations include the concepts of "Increase in Height" and "Increase in Area."

This is a brief summary of the changes that have been promulgated. Please take the time to amend your New Jersey editions of both the IRC and the IBC to reflect these amendments. The full text of the amendments follows and subscribers to the UCC have received this amendment through the subscription service. Should you have any further questions, please contact me directly at (609) 984-7609.

The following is provided so it can be inserted easily on page 25 of the IBC for Section 310.1 R-3 and R-5, and page 14 of the IRC for Section R.300.

(continued on page 10)

(continued from page 9)

310.1 (page 25 of NJ IBC)

R-3 Detached one- and two-family dwellings greater than three stories in height, multiple single-family townhouses greater than three stories in height, attached two-family dwellings separated from adjacent units by firewalls, and other single-family dwellings that are outside the scope of the One- and Two-Family Dwelling Subcode. Group R-3 includes:

- Single residential occupancies, accessory to a dwelling unit, having no more than five roomers or lodgers. (Single occupancies, accessory to a dwelling unit, having more than five roomers or lodgers shall be classified as Group R-2 or I-1, as appropriate.)
- Adult and child day-care facilities, accessory to a dwelling unit, serving five or fewer persons of any age for less than 24 hours.
- Rooming houses with five or fewer residents.
- Therapeutic residences with five or fewer residents.

310.1 (page 25 of NJ IBC)

R-5 Detached one- and two-family dwellings not more than three stories in height, and multiple single-family townhouses not more than three stories in height, designed and constructed in accordance with the One- and Two-Family Dwelling Subcode.

R300 (page 14 of NJ IRC)

R300 Height and Area Limitations Buildings of VB, unprotected, wood-framed construction, as that term is defined in Section 602 of the Building Subcode, shall be not more than two stories, not more than 35 feet in height, and not more than 4,800 square feet in area per floor. For the purpose of applying this section, a habitable attic shall not constitute a story. A habitable attic shall be an attic that has a stairway as a means of access and egress, and in which the ceiling area at a height of seven feet above the attic floor is not more than one-third the area of the next floor below.

R300.1 Increases in Height The building shall be not more than three stories and not more than 55 feet in height where the building is equipped throughout with an automatic sprinkler system installed in accordance with the National Fire Protection Association (NFPA) Standard 13 or 13R, and where the system is monitored by an approved supervising station in accordance with NFPA 72.

R300.2 Increases in Area The area of a building may be increased as provided in Sections R300.2.1 and R300.2.2 below.

R300.2.1 The area limitation shall be permitted to be increased 200 percent for one- and two-story buildings, and 100 percent for buildings more than two stories in height where a building is equipped throughout with an automatic sprinkler system installed in accordance with NFPA Standard 13.

R300.2.2 The area limitation shall be permitted to be increased 2 percent for each 1 percent of excess frontage where a building has more than 25 percent of the building perimeter fronting on a street or other unoccupied space. The unoccupied space shall be on the same lot or dedicated for public use, shall be not less than 30 feet in width, and shall have access from a street by a posted fire lane that is not less than 18 feet in width.

R300.3 Buildings of VA Construction Buildings of VA, protected, wood-framed construction, as that term is defined in Section 602 of the Building Subcode, shall be not more than three stories, not more than 40 feet in height, and not more than 10,200 square feet in area per floor.

R300.3.1 Buildings of VA construction greater than three stories in height shall be designed and constructed in accordance with the Building Subcode.

R300.3.2 Buildings of VA construction shall be permitted to be increased in area in accordance with R300.2.

R300.4 Buildings of Other Types of Construction The height and area limits allowable for buildings of construction type VA shall apply to other construction types, as they are defined in Section 602 of the Building Subcode, provided that the fire ratings of building elements meet or exceed the requirements for type VA in Tables 601 and 602 of the Building Subcode.

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

Source: John N. Terry
Code Assistance Unit

Packaged Spa/Hot Tub

A number of callers have asked the Code Assistance Unit of the Department of Community Affairs whether the use of nonmetallic, sheathed cable is an acceptable wiring method for a packaged spa/hot tub with factory-installed and wired luminaries, and whether this type of wiring method can be used for a disconnect switch or breaker enclosure (no additional poles and not a sub-panel, but the breaker for the unit only).

The 2002 edition of the National Electrical Code, Section 680.2, entitled "Swimming Pools, Foundations, and Similar Installations, Definitions," defines a packaged spa or hot-tub equipment assembly as a factory-fabricated unit consisting of water-circulating, heating, and control equipment mounted on a common base. (Equipment may include pumps, air blowers, heaters, lights, controls, sanitizer generators, etc.)

Section 680.42(C), "Outdoor Installations, Interior Wiring to Outdoor Installations," states that any wiring method set forth in Chapter 3, "Wiring Methods and Materials," containing a copper equipment-grounding conductor that is insulated or enclosed within the outer sheath of the wiring method and not smaller than 12 AWG shall be permitted to be used.

Section 680.42 shall comply with Part 1, "General," and Part II, "Permanently Installed Pools." Single-family dwellings under Section 680.21(A)(4) are permitted the use of wiring methods set forth in Chapter 3. Section 680.25, "Feeders," must be applied for feeders that supply panelboards (sub-panels) for the spa/hot-tub equipment.

Therefore, nonmetallic, sheathed cable is an acceptable interior wiring method in a single-family dwelling, or in the interior of another building or structure associated with a single-family dwelling, for a packaged spa or hot tub. If the disconnect is located on the interior of a building or structure, nonmetallic, sheathed cable is allowable on the line and load side. If the disconnect is located at the exterior of the building or structure, nonmetallic, sheathed cable may be used on the line side of the disconnect and an approved exterior wiring method with an insulated copper equipment-grounding conductor from Chapter 3, and as applicable under Sections 680.42 and 680.42(A), on the load side. In any case, if the light is factory-installed, the wiring requirements of Section 680.23, "Underwater Luminaries (Lighting Fixtures)," or Section 680.33, "Luminaries (Lighting Fixtures)," do not apply. If you have any questions on this matter, you may reach me at (609) 984-7609.

Source: Suzanne Borek
Code Assistance Unit

Energy – Can't Download? No Problem!

The RES*check*, New Jersey edition and COM*check* EZ Energy Subcode compliance tools can be downloaded FREE from the U.S. Department of Energy's web site at www.energycodes.com.

If the user is unable to download the compliance tools, he or she may use the ONLINE compliance tools. No downloading is required — just use the compliance tool as it appears on your computer screen.

The link for the new online RES*check* Package Generator compliance tool is:

http://bldgcode.pnl.gov/REScheckPkgGen/PkgGen.html

The link for the new online COM*check* Package Generator compliance tool is:

http://bldgcode.pnl.gov/COMcheckPkgGen/PkgGen.html

RES*check* Package Generator has the following features:

- Requires no download or installation of software on your desktop.
- Demonstrates compliance with 1992, 1993, and 1995 Mechanical Energy Code; 1998 International Energy Conservation Code (IECC); and 2000 IECC (state-specific code versions are available as of late 2003).
- No additional downloads required for code changes.
- Performs the same UA calculation as the desktop software.
- Saves your projects online for easy access from work or home.

COM*check* Package Generator has the following features:

- Is a cross between two currently available tools: the COM*check* EZ Software and the COM*check* Prescriptive Packages.
- Allows you to generate your own custom prescriptive packages on the web without downloading software or PDF versions of prescriptive packages.
- Allows you to generate your own code-compliant packages based on your building location and window-to-wall ratio.

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

Source: Rob Austin
Code Assistance Unit

Replacement Windows in Wind-Borne Debris Regions

With the adoption of the International Residential Code (IRC), there have been numerous inquiries regarding replacement windows in high-wind regions.

By definition, a wind-borne debris region is an area within a hurricane-prone region that is within one mile of the coastal mean high water line where the basic wind speed is 110 miles per hour or greater.

According to the Rehabilitation Subcode (*N.J.A.C.* 5:23-6), the replacement of windows is considered a renovation and must comply with *N.J.A.C.* 5:23-6.8, "Materials and Methods." The provision of the IRC that requires windows to be protected from impact resistance is NOT contained in *N.J.A.C.* 5:23-6.8. Therefore, replacement windows in wind-borne debris regions are NOT required to be protected.

Should you have further questions regarding this issue, please contact me at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Windows in Wind-Borne Debris Regions

The section of the International Residential Code that has been the root of the largest number of code assistance inquiries is Section R301.2.1.2, "Internal Pressure." The purpose of this article is to provide a clear summary of the requirements of this code section.

Section R301.2.1.2 requires windows in *wind-borne debris regions* to be protected from wind-borne debris; otherwise, the building must be designed as a partially enclosed building in accordance with the International Building Code. An exception to this rule is provided that allows the use of 7/16-inch wood structural panels precut to cover the glazed opening with the attachment hardware provided. But, what triggers this requirement?

According to Section R202, "Definitions," a *wind-borne debris region* is an area within a *hurricane-prone region* that is within one mile of the coastal mean high water line where the basic wind speed is 110 miles per hour or greater. Contained in this definition is another defined term: *hurricane-prone region.* As per R202, a *hurricane-prone region* is an area vulnerable to hurricanes, defined as the U.S. Atlantic Ocean and the Gulf of Mexico coasts. But, what does all this mean?

Short version: Buildings constructed within one mile of the mean high water line of the Atlantic Ocean and having a wind speed of 110 miles per hour are required to have windows that are protected from wind-borne debris. This protection may be in the form of impact-resistant glazing or by means of 7/16-inch thick plywood to protect openings. This plywood does not need to be installed in order for the approval to be granted; it needs to be precut and provided with attachment hardware.

This should solve many of the problems associated with this new code section; however, should you need additional clarification, please call me at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Stacked Washers and Dryers

Recently, the Code Assistance Unit has received a number of questions concerning whether stacked washers and dryers may be installed in accessible/adaptable dwelling units. Provided that the laundry equipment meets the reach-range requirements of International Codes Council/American National Standards Institute (ICC/ANSI) A117.1-1998, the answer is "Yes."

At *N.J.A.C.* 5:23-7.5, the Barrier Free Subcode references ICC/ANSI A117.1-1998, Section 1002.10, entitled "Laundry Equipment," which sets forth requirements for clear floor space and reach ranges of washers and dryers in a dwelling unit. The laundry units are to be centered on the clear floor space with a parallel approach and each must have its operable parts within the code-specified reach ranges in accordance with ICC/ANSI A117.1-1998, Section 309, entitled "Operable Parts."

Operable parts include all controls and any movable parts that a user would need to operate in the normal course of the equipment's use. Such parts include the doors on a front-loading machine or the lid of a top-loading machine; the lint screen; the various dispensers for detergent, bleach, fabric softeners, etc.; and the knobs, switches, and levers. Please note that Section 309 indicates the maximum reach ranges for both the forward and the parallel approaches. However, since Section 1002.10 requires only the parallel approach for washers and dryers, the forward approach may be disregarded.

In short, if all operating mechanisms on stacked laundry units are within the required reach ranges, then the stacked units are acceptable. However, if they are outside of the reach-range requirements, then they do not meet the Barrier Free Subcode and the units may not be installed.

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

Source: Jeffrey Applegate
Code Assistance Unit

Residential Site Improvement Standards Now on the DCA Web Site

The Department of Community Affairs is announcing the most recent addition to its web site: the Residential Site Improvement Standards (RSIS). These rules, developed by the Site Improvement Advisory Board and codified at *N.J.A.C.* 5:21, establish technical standards for the infrastructure of residential development — streets, parking, water supply, sanitary sewers, and stormwater management.

This set of standards can be accessed at http://www.nj.gov/dca/codes/nj-rsis/index.shtml. If you have any questions regarding the RSIS, please feel free to contact Melinda Reisner or myself at (609) 292-7898.

Source: Mary Ellen Handelman
Office of Planning and Program Development

The Redevelopment Handbook

The Department of Community Affairs and the New Jersey Chapter of the American Planning Association have jointly published *The Redevelopment Handbook: A Guide to Rebuilding New Jersey's Communities*. Written by Stan Slachetka, AICP, P.P. and David G. Roberts, AICP, P.P., ASLA, CLA, the *Handbook* contains a summary and explanation of laws and regulations that impact redevelopment in New Jersey.

Part of Governor James E. McGreevey's Smart Growth initiative, this publication provides an overview of redevelopment issues in New Jersey. The *Handbook* emphasizes public/private partnerships and encourages municipalities to develop a practical, realistic redevelopment plan. By including an analytical framework for making redevelopment decisions and evaluating proposals, the *Handbook* provides the underpinnings for a thoughtful, comprehensive, and creative review of municipal assets.

The *Handbook* is divided into four distinct parts.

Part 1, entitled "An Introduction to Redevelopment," provides an overview of legal authority -- constitutional, statutory, and regulatory; it gives direction on framing and identifying the problems involved in redevelopment; and it summarizes the redevelopment process in New Jersey by identifying the participants, providing information on the required public hearing, and including guidance on how to select a redeveloper.

Part 2, entitled "The Redevelopment Planning Process," is the heart of the book. It discusses all kinds of areas that are eligible for redevelopment, such as areas with deteriorated buildings, areas with abandoned commercial or industrial structures, areas where the layout and design need to be changed, and areas that are underutilized. Part 2 details how to designate a redevelopment or rehabilitation area; it emphasizes the pieces of a redevelopment plan.

Part 3, entitled "Implementation," discusses the power and authority that result from the adoption of a redevelopment plan, including tax abatements and tax exemptions. It also gives direction on how to select a redeveloper.

Part 4, entitled "Brownfields," addresses this very specific kind of redevelopment challenge.

Government officials may obtain this comprehensive, informative, and practical *Handbook* by contacting me at (609) 984-7609. Others may obtain the *Handbook* through the American Planning Association web site at www.njapa.org by downloading a form containing all pertinent information for ordering the *Handbook*.

Source: Emily W. Templeton
Code Development Unit

Solar Energy – Not Exempt from Fees

N.J.S.A. 52:27D-130.2 (P.L. 1985, c. 85) of the Uniform Construction Code (UCC) Act exempts "solar energy heating and cooling systems" from construction permit fees and surcharges. This type of system is defined in the statute as "a system which is certified as eligible for an exemption from property taxation by the Department of Community Affairs, pursuant to P.L. 1977, c. 256 (C. 54:4-3.113 et seq.). This is an obsolete provision in the UCC Act. Since the expiration of P.L. 1977, c. 256 on December 31, 1987, no solar energy heating or cooling systems have been certified as eligible for a property tax exemption, thereby no longer exempting these systems from construction permit fees and surcharges.

If you have questions on this matter, feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Not Using Green Is Not a Violation

There has been some confusion as to whether the wire connector used for equipment grounds has to be the color green.

The answer is "No."

Wire connectors that are green in color should be listed and labeled by the manufacturer for use as "grounding and bonding wire connectors." If green wire connectors are to be used, they shall be used only on equipment-grounding conductors.

The 2002 edition of the National Electrical Code (NEC/2002), Section 250.148, "Continuity and Attachment of Equipment Grounding Conductors to Boxes," states that, where circuit conductors are spliced within a box or terminated on equipment within or supported by a box, any separate equipment-grounding conductors associated with those circuit conductors must be spliced or joined within the box, or to the box with devices suitable for the use. Splices must be made in accordance with Section 110.14(B), "Electrical Connections: Splices," which provides that conductors must be spliced or joined with splicing devices identified for use, except that insulation shall not be required.

The fault on the equipment-grounding conductor will not be greater than that of the phase conductors. Therefore, wire connectors other than green can be used for equipment-grounding conductors, provided that the connector is listed and labeled for the number and size of the conductors being spliced.

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

Source: Suzanne Borek
Code Assistance Unit

Rain-Tight or Not?

Underwriters Laboratories, Inc. (UL) has pulled the listing and labeling of electrical metallic tubing (EMT) compression connectors and couplings that characterize the fittings as "rain-tight." This is because water penetrates the fittings and accumulates in the enclosures to which the conduit is connected.

The 2002 edition of the National Electrical Code, Section 358.42, "Couplings and Connectors," provides that, when installed in wet locations, couplings and connectors shall be of the rain-tight type.

UL has explained that, if the manufacturer's installation instructions state that the fitting is rain-tight, then it can be used for such application. However, UL has recently provided information that Bridgeport EMT compression fittings in ½ inch, ¾ inch, and 1 inch only are listed and labeled as rain-tight for wet locations.

Therefore, if the compression fittings are not included in the list above, even if they are listed and labeled as rain-tight, then they shall not be approved for installation in a wet location.

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

Source: Suzanne Borek
Code Assistance Unit

The following article was printed in November 2003 by UL Regulatory Authorities for www.ul.com *and has been reprinted by permission here for readers of the* Construction Code Communicator.

Does UL List Any "Raintight" Compression Type EMT Fittings for Use in Wet Locations?

(Updated November 13, 2003)

UL offers Listing service for "raintight" compression type EMT fittings under the product category Electrical Metallic Tubing (EMT) Fittings (FKAV) located on page 32 of the 2003 General Information Directory for Electrical Equipment (White Book).

However, UL recently conducted a study to determine the reliability of "raintight" compression fittings to consistently comply with the wet location test criteria. Based on the results of the study, UL initiated a more stringent follow up test program to assure these products consistently exclude water to maintain their "rain tight" marking.

Effective March 2002, manufacturers of UL Listed "raintight" (wet location) compression type EMT fittings were required to comply with the more stringent follow up test requirements. If the manufacturers of these fittings did not comply with the new requirements, they were no longer authorized to mark their UL Listed fittings with the "Raintight" marking.

As of November 2003, only one manufacturer is authorized to mark its Listed compression type EMT fittings with the "Raintight" marking. Bridgeport Fittings Inc. has its 250 and 260 Series with RT Suffix connectors and

couplings in the ½, ¾, and 1 inch trade size Listed for raintight applications.

These fittings are provided with additional sealing rings to exclude water. The instructions on the carton must be followed for proper installation. Look for the "Raintight" marking on the container and the UL Mark on the fitting.

The availability of "raintight" fittings may change as manufacturers redesign their fittings to comply with UL's new follow-up "raintight" testing. It is imperative to always look for the proper marking on the product and container. If the product is not marked with the UL Listing Mark and the container is not marked "Raintight", then the fittings have not been Listed for raintight applications. As new "Raintight" Listings are promulgated, www.ul.com will be updated with that information.

Fittings manufactured prior to March 2002 may be used, provided that the manufacturer's installation instructions state that they are suitable for use as "raintight." The manufacturer's instructions must be supplied.

For further information, please contact UL at (631) 271-6200 or go to www.ul.com/regulators.

Source: Suzanne Borek
Code Assistance Unit

Greetings from Governor James E. McGreevey and Commissioner Susan Bass Levin

One fundamental principle of the New Jersey State Uniform Construction Code (UCC) is that New Jersey citizens are provided with safe and affordable housing and buildings. This is achieved through local code enforcement agencies working in partnership with design professionals, builders and developers.

Three times per year, the Department of Community Affairs' (DCA) Division of Codes and Standards publishes the *Construction Code Communicator*. This newsletter provides subscribers - both public and private - with information on emerging construction issues. It also provides code officials with guidance on UCC administration and enforcement.

Through the *Construction Code Communicator* and all of our programs and services, we remain committed to providing safe and affordable housing and buildings to New Jersey citizens.

With all good wishes,



James E. McGreevey
Governor



Susan Bass Levin
Commissioner



Susan Bass Levin
Commissioner
NJ Department
of Community Affairs



James E. McGreevey
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State of New Jersey

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State of New Jersey
James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

Volume 14 Number 1 ***Spring/Summer 2002***

Happy Anniversary, Uniform Construction Code

by Commissioner Susan Bass Levin

When New Jersey adopted a statewide building code 25 years ago, it represented an important step forward in protecting public safety and enhancing economic development. It also represented a unique partnership between State and local government.

New Jersey's Uniform Construction Code may have been established by the State, but its enforcement, and its ultimate success, rested with local code officials.

We now know it couldn't have been in better hands.

New Jersey today is recognized as having among the best construction code officials in the nation. Thanks to the training and professionalism of these men and women, New Jersey's system of code enforcement is regarded as a national model.

This was confirmed several years ago when the insurance industry undertook a nationwide evaluation of local building codes and code enforcement.

The Insurance Services Organization developed a rating system to compare local building departments from state to state on a scale of one to ten. Nationwide, 57 percent of local building departments in America scored five or better. In New Jersey, *100 percent* of our building departments scored five or better. That's an amazing statistic and every local code official should take pride in it.

As Mayor of Cherry Hill for 14 years, I gained a firsthand appreciation for the men and women of local code enforcement by observing Township Director of Code Enforcement Anthony Saccamanno, a true professional. Tony taught me a great deal about the technical expertise of code officials and the many demands of the job.

As we wish our Uniform Construction Code a Happy 25th Anniversary, let us renew our commitment to the strong State and local partnership that made our system so successful. Let us also salute the local code officials in all our towns and cities who have dedicated themselves to protecting the health, safety, and welfare of our communities.

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Accessible Dwelling Units Revisited 

Once again, the rumor seems to be traveling around that the Uniform Construction Code requires a percentage of dwelling units to be fully accessible. Sometimes the rumor is two percent; sometimes it is four percent. This is not true. These percentages were eliminated in 1990 because they did not work. Let me take this opportunity to straighten out the requirements for accessible dwelling units.

Which dwelling units are required to be accessible?

1. In a building with four or more dwelling units, if the building has an elevator, all (100 percent) of the dwelling units must be adaptable. [*N.J.A.C.* 5:23-7.5(b)]

2. In a building with four or more dwelling units, if there is no elevator, all (100 percent) of the ground-floor dwelling units must be adaptable. [*N.J.A.C.* 5:23-7.5(b)]

3. Ground-floor dwelling units: In a building with dwelling units, the first floor containing dwelling units must be accessible and must contain adaptable dwelling units, regardless of whether that floor is at grade. [*N.J.A.C.* 5:23-7.5(b)1]

4. Townhouses, which are an exemption to the rules, are exempt from the Barrier-Free Subcode. Townhouses are dwelling units with two or more stories of living space, with all or most of the sleeping areas on one story and all or most of the living areas on another story, and with an independent entrance at or near grade. [*N.J.A.C.* 5:23-7.3(b)1]

What is the difference between accessible and adaptable?

An adaptable dwelling unit is an accessible dwelling unit with adaptable features. An adaptable dwelling unit must have (1) an accessible entrance, (2) an accessible interior route, (3) one full adaptable bath on an accessible route, (4) maneuvering space at all doors, and (5) adaptable features in the kitchen and bathroom.

What features in the kitchen may be adaptable?

1. Adaptable counter: There must be a 30-inch length of counter that can be adjusted to an accessible height. The base cabinets in this section must be removable and the floor must be finished all the way to the wall. The 30-inch section itself does not have to be pre-cut; it can be "replaceable as a unit." This means that it must be able to be cut in place and either lowered or replaced.

2. Kitchen cabinets: Kitchen cabinets that are installed at the accessible height do not allow for even a toaster underneath. The kitchen cabinets may be installed at the standard height as long as they are attached in such a manner that they can be lowered without damaging the wall.

What features in the bathroom may be adaptable?

1. Grab bars do not have to be installed, but the wall must be reinforced to permit their later installation.

2. The threshold in a transfer shower may be adaptable as long as the adaptation can be made easily without undertaking a construction project.

3. The mirror may be installed at a standard height as long as it is attached in such a way that it can be lowered without damaging the wall.

4. A vanity may be installed underneath the lavatory as long as it can be removed without requiring the removal or replacement of the lavatory.

Maneuvering Space at Doors

There have been some projects that have been brought to the Department of Community Affairs' attention in which no maneuvering space is provided at doors. Maneuvering space is critical to the usability of the dwelling unit. The requirements are:

1. For a front approach to the pull side of a swinging door, 18 inches of clear space must be provided on the latch side. (CABO/ANSI A117.1-92, Section 4.13.6.1)

2. For a front approach to the push side of a swinging door that is equipped with both a closer and a latch, 12 inches must be provided on the latch side of the door. (CABO/ANSI A117.1-92, Section 4.13.6.2)

A wider door is not necessarily better. It is important for the wheelchair user to be able to *maneuver* the wheelchair. The maneuvering space is required in both dwelling units and commercial buildings. This is one of those items that should be checked in plan review and checked again at the framing inspection. It is nearly impossible to fix once the building is built.

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

Source: Emily W. Templeton
Code Development

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Affidavits of Consent

Construction and subcode officials should be aware of the requirements of *N.J.A.C.* 5:23-2.15, Construction Permits – Application, regarding deviations from released plans.

N.J.A.C. 5:23-2.15(e)3.v requires a new affidavit of consent if there has been a substantial deviation from the original construction application. Consequently, questions have arisen regarding who should submit the affidavit and what constitutes a "substantial" deviation.

The individual in charge of the construction work should submit the affidavit of consent. Depending upon how the certification section in the construction permit application was completed, the responsible party would be either the owner, or his or her agent.

"Substantial" deviations usually involve situations where there have been structural changes on the project. Concerning electrical and plumbing changes, substantial deviations may often be addressed through a permit update, rather than a new affidavit of consent.

If you have any questions regarding these matters, do not hesitate to contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Robert Hilzer
Office of Regulatory Affairs

Time Frame to File Appeals

In 1996, the regulations governing construction boards of appeal were amended. As a result, the time frames for Uniform Construction Code (UCC) appeals were made consistent with the statutory requirement for Uniform Fire Code appeals. However, there has been confusion regarding the allotted time frame for applicants to file their requests.

Pursuant to *N.J.S.A.* 52:27D-206 of the Fire Safety Act, the application for hearing with the board shall be filed "by the 15th day after receipt by the person of the ruling, action order, or notice complained of."

UCC officials and board members are reminded that the time frame to file an appeal for a violation notice is 15 calendar days, *not* 15 business days. This is reaffirmed in the standard notice of violation form that allows the applicant to file his appeal.

The construction board of appeal must strictly enforce the 15-calendar-day time frame. If a board does not follow this time frame, the enforcing agency can successfully appeal the board's decision to the Superior Court. UCC officials who believe any request to be untimely should move for the dismissal of the appeal by the board. The enforcing agency, either on its own or through its attorney, can move for dismissal prior to the hearing.

If you have any questions regarding the content of this article, you are invited to contact me at (609) 984-7672.

Source: Robert Hilzer
Office of Regulatory Affairs

Building Area -- How Is It Measured?



The other day, I received a telephone call from a well-respected colleague who asked a question that, at the time, seemed very basic. I found the question quite humorous, until I realized that this issue was being misinterpreted throughout the State. The question was, "How is the area of a building measured?"

According to Section 502 of the 1996 Building Officials and Code Administrators (BOCA) National Building Code, the term "area, building" is defined as the "area included within surrounding exterior walls (exterior walls and fire walls) exclusive of vent shafts and courts." Therefore, the area of a building is that which is measured from the inside of the exterior walls. This is further exemplified in a BOCA interpretation on this issue. According to No. 34/305/81R, the measurement of a building's area does not incorporate the thickness of exterior walls.

I hope this eliminates any confusion on how the area of a building is measured and for determining compliance with Table 502. Should you have any questions regarding this issue, feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Utility Sheds and Other Similar Structures



It's spring! Sheds will soon be blooming, which always brings up the question, "What is a garden-type utility shed or similar structure?" Sheds come in many shapes and sizes. Utility sheds are designed to enclose materials such as garden tools, lawn mowers, pool supplies, or personal belongings. The term "similar structure" has a broader meaning. It can include a gazebo; a trellis; an independent, free-standing platform; or a deck not attached to a building.

(continued on page 4)

(continued from page 3)

Some garden utility sheds or similar structures are pre-constructed; brought to the site on a truck; and set in place by a light crane on the truck, forklift, or tractor. Some consist of components with wood frames onto which the siding and the roof are added. Some are composed of metal panels with structural members screwed together at the site and mounted on a base. Others are constructed the old-fashioned way — from materials purchased from lumberyards.

There are three thresholds for permit and foundation requirements:

- The first is when a garden-type utility shed or similar structure is 100 square feet or less in area, 10 feet or less in height, and is accessory to a building of a residential use group (R-2, R-3, R-4). In this case, no permit is required by the Uniform Construction Code (UCC). The installation of the shed, including anchorage, is the owner's responsibility. The code official does not inspect the installation of a garden-type utility shed or similar structure of this size.
- The second threshold is when this type structure is greater than 100 square feet, but does not exceed 200 square feet; is 10 feet or less in height; and is accessory to buildings of a residential use group (R-2, R-3, R-4). When a structure falls within this category, a permit is required. The structure must have a minimum four-inch-deep bed of stone to provide some protection from frost heaving, or it must have another frost-protected design. The construction must be dimensionally stable. At *N.J.A.C*. 5:23-9.9, Foundations Systems for Garden-Type Utility Sheds and Similar Structures, the UCC states that a structure is considered dimensionally stable if the walls are tied together with a floor system. Finally, the shed or garden structure must be either heavy enough to stay in place in strong winds, or it must be anchored.
- The third threshold exists by exception. If a garden-type utility shed or similar structure exceeds any of the criteria established at *N.J.A.C.* 5:23-9.9, Foundation Systems for Garden-Type Utility Sheds and Similar Structures, or *N.J.A.C.* 5:23- 2.14(b)8, Construction Permits -- When Required, the construction is treated as it would be for any other building. For example, if the shed is greater than 200 square feet; or if the height of the shed is greater than 10 feet; or if the shed is accessory to any use group other than R-2, R-3, or R-4, the structure may not be constructed using the special provisions in Sections 9.9 or 2.14 of the UCC. This would indicate that, if a shed were constructed on the property of a business building (Use Group B) and if it were identical to a garden shed (100 square feet and 9 feet, 11 inches high) at someone's home, it would require the installation of a foundation system that extends to below the frost line.

The Code Assistance Unit has become aware of some informational brochures provided by several municipalities that contain inaccurate information. This article should be provided in their place. If there are questions about this issue, please contact the Code Assistance Unit at (609) 984-7609.

Source: Jeffrey Applegate
Code Assistance Unit

Duct Tape - Duct Tape - Duct Tape  

For years, old, reliable duct tape has been used for just about everything, including its use as a sealant for ducts. However, with two new code adoptions, duct tape's acceptable code-related uses may be altered.

The Department of Community Affairs has recently adopted the Council of American Building Officials Model Energy Code (CABO MEC)/1995 for residential buildings and the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) 90.1-1999 for commercial buildings. The grace period for the new adopted energy subcodes expires on July 16, 2002, at which time they are fully enforceable. According to these standards, duct tape *is not* an approved sealant on any supply or return ducts.

CABO MEC/1995, Section 503.8.2, Duct Sealing, states, "all low-pressure supply and return ducts shall be sealed using mastic with fibrous backing tape. For fibrous ducts, pressure-sensitive tape may be used, if installed in accordance with Standard RS-45. Other sealants may be approved by the subcode official. Duct tape is not permitted as a sealant on any ducts."

ASHRAE 90.1-1999, Section 6.2.4.3, Duct Sealing, states "ductwork and plenums shall be sealed in accordance with Table 6.2.4.3A, Minimum Duct Seal Level, and Table 6.2.4.3B, Duct Seal Levels, as required to meet the requirements of Section 6.2.4.4, Duct Leakage Tests, and with standard industry practice." Please refer to these tables to determine the level of sealing required. (Please note, as stated in Table 6.2.4.3B for seal levels A and B, pressure-sensitive tape shall not be used as the primary sealant.)

There are many other products, other than duct tape, that are manufactured for this purpose. Some of these products include liquid sealants, mastic-type sealants,

gaskets, pressure-sensitive tapes, and heat-applied materials.

Please be advised that the sealing of ductwork is an Energy Subcode requirement.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Grace Periods

When new codes are adopted, there is often confusion regarding the date of enforcement. Many people ask whether new codes must be enforced immediately after their operative date, or if there is a time frame when the previously enforced code may be used. I have provided two examples below that should clarify any confusion.

Example 1: Tom brings a complete permit application for a project that complies with the Building Officials and Code Administrators (BOCA) National Mechanical Code/1993 to a construction office. All prior approvals are included. However, the State has recently adopted the International Mechanical Code/2000 and the International Fuel Gas Code/2000, which were adopted to replace the BOCA National Mechanical Code/1993. Should the construction office approve Tom's documents, even though they don't comply with the newly adopted codes?

The answer is "Yes." The Uniform Construction Code (UCC) contains provisions at *N.J.A.C.* 5:23-1.6(b) that allow for new projects submitted within the grace period to be reviewed. A grace period is that period of time by which previously enforced codes may be used. Therefore, Tom's construction documents may be reviewed for compliance with the BOCA National Mechanical Code/1993.

Example 2: Rob comes to the construction office with documents for plumbing review approval. These documents comply with the National Standard Plumbing Code (NSPC)/1996; however, the State adopted the NSPC/2000 five months ago. Can the construction office issue a permit for documents that comply with the NSPC/1996, even five months since the adoption of the NSPC/2000?

Again the answer is "Yes." *N.J.A.C.* 5:23-1.6(a) provides that the applicant may submit a completed permit application, including all prior approvals, to be reviewed under the code in force immediately preceding the subcode adoption. The grace period is in effect for the six months after the new subcode has been adopted. Therefore, Rob would be allowed to commence construction work on the plumbing portion of the project.

If you are still confused, or more confused than you were before reading this article, please feel free to call me at (609) 984-7609 and we can discuss your particular situation.

Source: Marcelino Iglesias
Code Assistance Unit

Unrated Corridor Wall Requirements



Lately, there has been an influx of telephone inquiries regarding Tables 1011.4 and 602 of the Building Officials and Code Administrators (BOCA) National Building Code/1996, which do not require corridor walls to be fire-resistance rated. The callers have asked, "When the required fire-resistance rating of a corridor wall is zero hours, is the wall considered a 'fire partition?' If so, must it be constructed in accordance with Section 711.0 of BOCA/1996?"

The intent of fire-resistance-rated fire partitions is to prevent the spread of fire from adjacent rooms and spaces into the corridor that is serving as an occupant's means of egress. When fire partitions are required to be fire-resistance rated, they must also meet the requirements of Section 711.0 of BOCA/1996 for opening protectives, continuity, penetrations, and joints. By requiring the fire-resistance-rated wall to comply with these provisions, the necessary separation and protection is achieved.

However, if the walls are not required to be rated, there is no need to comply with any of these sections. As long as the material used to construct the wall is consistent with the construction type of the building, the walls could, in effect, be "cyclone fencing."

If you have any questions regarding this matter, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Kudos to the Staff Who Wrote the Uniform Construction Code!

This 25th anniversary celebration of the Uniform Construction Code (UCC) should not pass without applauding the effort of the Department of Community Affairs staff who wrote and rewrote the rules we now call "The Code."

Chuck Decker: Chuck Decker had the singular ability to see the logical result of each piece of the UCC as it was being developed — and of the whole as those pieces were combined. More than once, Chuck advocated a rewrite because "we don't want to be where that could take us." The fact that the UCC is technically clear and enforceable is due in large part to Chuck Decker's contributions.

Lisa Farrell: Lisa Farrell set up the first training program for code officials. Seminars were offered in every discipline all across New Jersey. Her efforts established the standard toward which the educational program continues to strive today.

Sol Metzger: The UCC itself and the members of the UCC team benefited from Sol Metzger's legal savvy. Clarity and precision were twin goals that Sol set — and made sure we reached. The UCC itself is enforceable from a legal standpoint because of Sol Metzger's contributions.

Jim Sinclair: Jim Sinclair was the UCC "idea man." As we struggled to determine how to make this State-local partnership work, Jim had a myriad of suggestions, each one valuable and each one worth considering. We would not have the system we have now were it not for Jim's understanding of how things work — and his innovative approach to how to make them work better.

Paul Staudt: From a purely practical standpoint, the UCC works because the field activities were well set up. Paul Staudt organized the plan review unit and the local code enforcement team. He set the standard for sensible, efficient code enforcement; his work was rock solid.

Cynthia Wilk: Cindy Wilk spearheaded the licensing program. Working in concert with the training initiative, Cindy ensured the development of a series of licenses in each technical discipline that was both reasonable and effective. This part of the UCC has required little "tinkering" over the years and the framework of licenses for the UCC has been used as a basis for other licensing initiatives.

One of the hallmarks of code enforcement in New Jersey is teamwork. There is the large State-local team in which we all work together for safe buildings. There is the reliance by the Department on local officials when a large rule-making project is undertaken. Two projects spring to mind. The Rehab Code is an award-winning document because of the work of the code officials and the other interested parties who participated in its development. The review of the International Code Council's International Building Code and International Residential Code that was just completed is the most thorough and careful review of these codes that has been conducted by any jurisdiction in this country. This review and analysis was possible only because code officials, architects, and representatives of professional associations and trade organizations were willing to volunteer their time and expertise.

The teamwork that has informed the UCC process from the very beginning carries over to our work today. The open, comprehensive, collegial process in which the UCC was created — and through which it is changed — makes my job challenging and satisfying. The people with whom I worked in the past — and with whom I work today — make it rewarding.

Source: William M. Connolly
Director
Division of Codes and Standards

25th Anniversary of the Adoption of the UCC

There would be no Uniform Construction Code in New Jersey without Bill Connolly and Chuck Decker. Bill Connolly, Chuck Decker, and later, Cindy Wilk, did dozens of "dog-and-pony" shows in countless municipalities trying to convince the local mayors, unions, and associations of the logic of one statewide code.

For years, Chuck's name was the noun for every expletive adjective in the English language. He was the point man on this endeavor; and you know what happens to point men!

He and our entire team did a magnificent job. I am proud to have been a member of that team.

Source: Joan Van Camp

NOTE: Joan Van Camp was Chuck Decker's secretary from when he began with DCA, in 1974, until his untimely death in 1993.

Code Advisory Board Members – 2002

The Uniform Construction Code Advisory Board was formed in 1976 to advise the Department of Community Affairs Commissioner on the Uniform Construction Code. There are fifteen members – nine named seats and six public members, one of whom represents disabilities, and two of whom represent consumers. The current Board members and the seats each holds are:

Robert Lemon *(Chair)*: Mr. Robert Lemon has served on the Board since 1987. Currently in a public seat, he represented building inspectors and served as the Chair of the Building Subcode Committee from 1986 - 1995. He is the Construction Official and Building Subcode Official for Egg Harbor City and Mullica Township in Atlantic County.

Albert Turek, P.E. *(Vice-Chair)*: Mr. Albert Turek has served on the Board in the seat for licensed professional engineer, mechanical since 1988. Initially appointed as the Chair of the Energy Subcode Committee, he became Chair of the Mechanical/Energy Subcodes Committee when those disciplines were merged in 1993.

Linda Aiello: Ms. Linda Aiello has served on the Board since 1998. She holds a public seat and she represents the interests of technical assistants who run the local enforcing agency offices around the State.

Jung Cho, V.M.D., Dr.P.H.: Dr. Jung Cho has been a member of the Board since 1980. He is the County Health Officer/Public Health Coordinator for Camden County and holds the seat designated for a public health official.

John D. Del Colle: Mr. John Del Colle has been a member of the Board since 1991. He is the Chair of the Barrier-Free Subcode Committee and was involved in the development of the first Barrier-Free Subcode in 1977. He holds the public seat designated for the representative of people with disabilities.

Stephen E. Frame: Mr. Stephen Frame has been a member of the Board since 1995. He represents building inspectors and is the Chair of the Building Subcode Committee. He is the Building Subcode Official for Atlantic City.

George Hrin: Mr. George Hrin has served on the Board since 1999. He serves as a public member representing elevator inspectors and is the Chair of the Elevator Safety Subcode Committee.

William J. Lynn: Mr. William Lynn has served on the Board since 1992. He serves as the Chair of the Fire Protection Subcode Committee and represents licensed fire prevention inspectors.

Robert A. McCullough: Mr. Robert McCullough has served on the Board since 1990. He serves as the Chair of the Electrical Subcode Committee and represents licensed electrical inspectors.

Michael J. Mills, FAIA: Mr. Michael Mills has served on the Board since 1988. In his initial appointment, he was a public member, but was transferred to the seat representing architects in 1992.

Gregory Moten, AIA: Mr. Gregory Moten joined the Board in 2002 as a public member. He served on the International Code Council Advisory Committee, which was charged with reviewing the International Building Code and the International Residential Code for possible adoption in New Jersey.

Beth A. Pochtar, P.E.: Ms. Beth Pochtar has been a member of the Board since 1995. She holds the seat of licensed professional engineer, structural.

Leonard Sendelsky: The only remaining charter member of the Board, Mr. Leonard Sendelsky represents the building industry.

James Sinclair, P.E., DPA: Dr. James Sinclair has served on the Board since 1993. He holds a public seat that is designated for consumers.

Alexander Tucciarone: Mr. Alexander Tucciarone has served on the Board since 1995. He serves as the Chair of the Plumbing Subcode Committee and represents licensed plumbing inspectors.

Code Advisory Board members may be contacted through the Department at:

Division of Codes and Standards
Department of Community Affairs
Post Office Box 802
Trenton, New Jersey 08625
Telephone: (609) 984-7609
Fax: (609) 984-7717

Those who would like to speak to a staff member to deliver a message to a member of the Board should direct their requests to Megan Sullivan or me. We can each be reached at the address and telephone numbers provided above.

Source: Emily W. Templeton
Code Development

NEW JERSEY UNIFORM CONSTRUCTION CODE ADVISORY BOARD

Seats Held and Terms of Service

Seat Held	Name	Dates of Service
Chair	Joel Wiesenfeld, P.E., Ph.D. Robert Lemon	1975 - 1995 1995 - Present
Vice-Chair	Richard S. Magee, P.E. Robert Lemon Albert Turek, P.E.	1975 - 1988 1988 - 1995 1995 - Present
Registered Architect	Eleanore Pettersen, AIA (Charter Member) William Brown, AIA (transferred from Public Member seat in 1980) Michael Mills, FAIA (transferred from Public Member seat in 1992)	1975 - 1979 1980 - 1992 1992 - Present
Licensed Professional Engineer (Structural)	Joel Wiesenfeld, P.E., Ph.D. (Charter Member) Beth Pochtar, P.E., W.B.E.	1975 - 1995 1995 - Present
Licensed Professional Engineer (Mechanical) (serves as Chair of the Mechanical/Energy Subcodes Committee)	Richard S. Magee, P.E. (Charter Member) Albert Turek, P.E.	1975 - 1988 1988 - Present 1988 - 1993 (Chair of the Energy Subcode Committee) 1993 - Present (Chair of the Mechanical/Energy Subcodes Committee)
Municipal Building Official (serves as Chair of the Building Subcode Committee)	Wilbur Lind (Charter Member) Clarence Boorman Robert Lemon (transferred from Public Member seat in 1986; transferred to Public Member seat in 1995) Stephen E. Frame	1975 - 1980 1980 - 1986 1986 - 1995 1995 - Present
Member of the Building Industry	Leonard R. Sendelsky (Charter Member)	1975 - Present
Public Health Official	Walter R. Lezynski (Charter Member) Jung H. Cho, D.V.M.	1975 - 1980 1980 - Present

Seat Held	Name	Dates of Service
Licensed Plumbing Inspector (serves as Chair of the Plumbing Subcode Committee)	Raymond A. Hopkins (Charter Member)	1975 - 1982
	John P. Muldowney	1982 - 1987
	Donald Metcalf	1987 - 1991
	Fred Miller	1992 - 1995
	Alexander Tucciarone	1995 - Present
Licensed Fire Prevention Inspector (serves as Chair of the Fire Protection Subcode Committee)	H. Raymond Vliet (Charter Member)	1975 - 1984
	Michael R. Townley	1984 - 1992
	William J. Lynn	1992 - Present
Licensed Electrical Inspector (serves as Chair of the Electrical Subcode Committee)	Clinton Casterline (Charter Member)	1975 - 1980
	Thomas Santamaria	1980 - 1989
	Robert A. McCullough	1990 - Present
Public Member Representing Consumers (in 1980, this seat was designated as Consumer Representing the Handicapped) (serves as Chair of the Barrier-Free Subcode Committee)	Norman Kempson (Charter Member)	1975 - 1980
	Ina White	1980 - 1991
	John D. Del Colle	1991 - Present
Public Member Representing Consumers (serves as Chair of the Elevator Safety Subcode Committee, which was created in 1990)	George Feddish (Charter Member)	1975 - 1977
	Donald H. Woodward	1980 - 1985
	Gustav Caspar	1985 - 1990
	Russell Bauer	1990 - 1994
	Kenneth Faerber	1994 - 1997
	Jon Evans	1997 - 1999
	George Hrin	1999 - Present
Public Member Representing Consumers (serves as Chair of the Mechanical Subcode Committee) (the Mechanical Subcode Committee merged with the Energy Subcode Committee in 1993)	Peter Heintz (Charter Member)	1975 - 1978
	Louise Friedman	1980 - 1983
	Robert C. Hoffman, P.E.	1983 - 1993
	Jim Sinclair, D.P.A., P.E.	1993 - Present

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Seat Held	Name	Dates of Service
Public Member	Catherine A. Costa (Charter Member)	1975 - 1977
	Marvin Schold	1981 - 1982
	Salvatore J. Mauro	1982 - 1990
	Vera Bacwyn-Holowinsky, RA	1998 - 2001
	Gregory Moten, AIA	2001 - Present
Public Member	William Brown, AIA (transferred to Registered Architect seat in 1980)	1978 - 1980
	Joseph Helfrich	1980 - 1983
	Ezra Bixby	1983 - 1985
	Robert Lemon (transferred to Municipal Building Official seat in 1986)	1985 - 1986
	Carl Blumenthal	1990 - 1991
	Fred Hillier	1991 - 1994
	Samuel Wheeler	1994 - 1997
	Linda Aiello	1998 - Present
Public Member	Theodore L. Primas, Sr.	1978 - 1988
	Michael Mills, AIA (transferred to Registered Architect seat in 1992)	1988 - 1992
	Daniel Millen, AIA	1992 - 1995
	Robert Lemon (transferred from Municipal Building Official seat in 1995)	1995 - Present

The Code Advisory Board — A Perspective

Looking back on the development of the Uniform Construction Code, I can see how important the Code Advisory Board was to the initial acceptance and continued success of the Uniform Construction Code as a working — and evolving — regulatory system. The Code Advisory Board, which represents the collective experience and technical insight of professionals from all segments of the construction process, has guided New Jersey construction code development from its inception to its current status as a nationally recognized regulatory program.

On January 1, 1977, New Jersey implemented an up-to-date, statewide construction code. The New Jersey Uniform Construction Code superseded all state and municipally adopted construction ordinances and regulations. The adoption of this rule, which was grounded in national model codes, was the culmination of twenty-five years of effort by government officials, contractors, design professionals, and builders to eliminate conflicting and outmoded building regulations and to replace them with a single, uniform set of standards for construction in New Jersey.

The Uniform Construction Code Act (P.L. 1975, c. 217) was signed into law by Governor Brendan Byrne on October 7, 1975. In less than 15 months, the staff of the New Jersey Department of Community Affairs designed a new regulatory system from the ground up, selected the

national model codes that provide the technical content of the Uniform Construction Code, and saw the resulting rule proposal through the regulatory process. The code development process and its final product were ultimately accepted by all of the key organizations in building design and construction in both the public and private sectors. In addition, because of the hard work, leadership, and peer outreach of local code officials such as Wilber Lind from Hackensack, the professional associations representing the trades and inspector groups endorsed the final product. I am proud to have been part of the development team. This was a spectacularly good piece of work and is a credit to all of the staff of the Department of Community Affairs who worked on this project under the direction of Division Director William Connolly.

Interestingly, the creation of a Code Advisory Board was not in the original version of the legislation that was proposed during Governor Cahill's administration. The Code Advisory Board was added in the bill that was considered in the Byrne administration. Not a regulatory board, the Code Advisory Board is a friendly technical and policy consultant to the Department of Community Affairs, which is responsible for the implementation and administration of the Uniform Construction Code Act. This citizen advisory board and its technical subcode committees were formed to advise and recommend procedures for administration of the Uniform Construction Code and to assist in the selection of subcodes. The Code Advisory Board is comprised of 15 members who represent: the building industry; architects; engineers (structural and mechanical); consumers; public health officials; people with disabilities; building, electrical, elevator, fire prevention, and plumbing inspectors; and the people of New Jersey.

As the Uniform Construction Code was developed, the regulatory design team worked in an area of great administrative, technical, and political uncertainty. Each political and technical constituency had its own agenda and raised issues that required resolution. Constructing a workable management system was a highly charged process whose outcome impacted every municipality, inspector, and builder in this "home rule" state. The Uniform Construction Code, in its final form, required a redefinition and restructuring of roles and responsibilities at many levels. From the beginning, the code development staff looked to the Code Advisory Board as a forum for discussing — and diffusing — the demands of the special interest groups that had not fully understood the intent of the legislation.

Prior to the first meeting of the Code Advisory Board in February 1976, the staff prepared procedural rules for the operation of the Board. The rules were drafted to provide a place for the Board as a vital cog in the code development and implementation process. These rules have held up for over 25 years. The Code Advisory Board, chaired by Dr. Joel Wiesenfeld, and its individual members, including Leonard Sendelsky who has represented builders on the Code Advisory Board since its first meeting, quickly became the mediating mechanism for solving complex turf issues and for drawing bright lines between conflicting subcode requirements. The Code Advisory Board itself — and any one of the groups represented on the Board — could have fatally disrupted the implementation of this project. In the end, everyone had to be on "the same page" for the Uniform Construction Code to be adopted. To their credit, and to the benefit of the citizens of the State, Board members were able to look at the big picture and worked together to resolve the most difficult issues.

The Code Advisory Board has established itself as the primary defender of the Uniform Construction Code process and has been a vital support mechanism for the Department's oversight and management of the Code. The Board conducts its deliberations in a highly professional manner. The Code Advisory Board recommends changes only after a thorough technical review by an active subcode committee process and vigorous Board discussion. Many times documents are returned to Department staff for rework and then, in an iterative process, are returned to the subcode committees for additional review. This process has built the most professional code enforcement system in the nation and it continues to provide the public with the most effective life-safety protection in building construction.

Source: James Sinclair, PE, DPA
Member Representing Consumers
Code Advisory Board

Delivering the Dream

Today, after 25 years, New Jersey's Uniform Construction Code (UCC) is generally taken for granted. There is broad-based support for its framework of private sector initiative that is supervised by municipally employed, State-licensed professionals who rely upon a statewide code. It has resulted in a public/private partnership that is committed to producing safe, healthful, accessible housing that middle-income families can afford.

Given the common sense principles that are the foundation of the UCC, its success might not seem surprising, but it was by no means inevitable. The success of the UCC is testimony to the foresight, flexibility, and good faith of several individuals who shared the common goal of providing all of New Jersey's citizens with an adequate supply of affordable places to live and work.

Without meaning to slight the many individuals who have made the UCC a success, there are a few who deserve

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special attention. First and foremost were Assemblyman Ozzie Pelecchia, the prime sponsor of the legislation, and Senator Martin Greuber, who moved the legislation through the Senate; they gave a political voice to a practical policy.

No matter how well written, however, a law is only as effective as its implementation. Among all of those who transformed the UCC Act into an effective program, none contributed as much as Bill Connolly of the Department of Community Affairs (DCA). Among the private sector's most influential representatives is Andy Cattano, who grew up with the UCC.

For 25 years, I have had the honor of serving on the Code Advisory Board, which is responsible for maintaining the balance of affordable protection. In that time, I have served with many distinguished housing advocates. The most notable was Dr. Joel Wiesenfeld, the Board's long-time chairman whose professionalism and patience knew no bounds.

As I look back over the past three decades – from the days when the UCC was merely a legislative draft to today's compendium of technical standards – I can identify a few key themes that have shaped our thinking and, I think, transformed the UCC into today's working success. Just a few words on each.

The UCC starts from the premise that, because the places where we live and work – the buildings that are the focus of the codes – serve multiple functions, the codes that regulate them must address multiple objectives. Accordingly, the UCC is informed by the principle that we cannot let any single "perfect" serve as the enemy of the general "good." Instead, we must balance as many "goods" as is reasonably possible.

The UCC recognizes, for example, that while we might be able to concoct a code for a perfectly "safe" building, the resulting structure would be so unappealing, so uncomfortable, and so unaffordable that few would be able to occupy it. Consequently, while the "perfect" code's safety potential might be considerable, its actual benefits would be few.

Instead of reaching for the "perfect," the UCC approach has been attentive to balancing benefits and costs in ways that would keep housing affordable to middle and modest income households. We have devised standards that give New Jerseyans the nation's safest housing, without unduly inflating the costs of their shelter.

Key to the informed balancing of the UCC's multiple objectives has been the tradition of the consensus-oriented deliberations that have characterized the code development process from the outset. It is a tradition that is richly evident in the vigorous debates of the Code Advisory Board, where representatives from all perspectives – regulators, consumers, builders, and advocates for those with special needs – resolve differences out of a commitment to the common goal of housing New Jersey's workers and their families in structures that are safe, healthful, and affordable.

Finding solutions that balance the Uniform Construction Code Act's multiple objectives sometimes requires a rethinking of its basic approach. With the oldest housing stock in the nation, New Jersey faced a dilemma in which the cost of meeting contemporary health and safety standards tended to discourage making improvements to older buildings. Clearly, when code compliance costs make renovations economically untenable (thereby forcing the continued use of outmoded structures), the net effect is a reduction in public health and safety. In the code's sphere, we resolved the dilemma by developing the nation's first building rehabilitation code – a code that encourages us to replace something "bad" with an affordable "good," an outcome far superior to retaining a "bad" because the "perfect" is unaffordable.

The UCC takes advantage of the comparative strengths of different sectors and institutions to optimize the balance between protection and affordability. It is clear that health and safety concerns vary more by building type than by where buildings are located. Accordingly, we achieve considerable economies through a uniform statewide code governing the types and uses of buildings. Enforcement, on the other hand, must be done where the building is located. Given enforcement's local nature, the UCC assigns those responsibilities to licensed code enforcement professionals who are employed by municipalities.

Under the lens of public oversight, the private sector has considerable flexibility to build housing and workplaces that meet the widely varied needs of different segments of the State's diverse population. While other State and local regulations severely impede where and how we address the State's housing crisis, the UCC is a model of cooperative flexibility in search of solutions.

Over the past 25 years, the UCC has been about one thing: providing people with safe, healthful, affordable places to live and work. The premise of the UCC is that housing is more than just one of life's basic necessities, it is essential to our dignity as human beings. The Uniform Construction Code Act and those who have made it a success proceed from a simple principle: without housing, an individual's survival is in jeopardy, and without decent housing, an individual's dignity is diminished.

It has been an honor and a pleasure to have participated in this undertaking to give our fellow citizens adequate places to work and affordable places to live. In other words, to give them the American Dream.

Source: Leonard Sendelsky
Charter Member, UCC Advisory Board
Member of the Building Industry

UCC -- 25 Years of Change

What a glorious 25 years it has been since the enactment of the Uniform Construction Code. At the same time the UCC was put into place, the State also passed legislation expanding the provisions for accessibility. This new legislation was extremely important since it defined public buildings as those used by the general public and not just those facilities built with federal, state, or local funds. This resulted in a better statewide code and, more importantly, created provisions for accessibility that have made New Jersey a leader in providing independence for an untold number of people with disabilities.

I remember quite vividly the many obstacles facing me some thirty years ago when I first reentered the world in a wheelchair. I realized that life would be much more difficult using a wheelchair, but I was amazed by the number of places I could not even enter. In those days, it was routine to be denied access due to stairs, the lack of an elevator, or even something as small as a curb. This was before the state building code laws and well before the Americans with Disabilities Act. One's rights were limited, and, to be honest, even new buildings were obstacles. It is amazing how far we have all come from those difficult days. The choices of going to a store or even a restaurant were extremely limited. I could almost bet I would not be able to get into a building. Even if I did get into the building, the chance of using the restroom was almost nonexistent. These were very difficult days to be a wheelchair user and the frustration level was extremely high. But like everyone else who is different, you learn to adapt to the existing environment, as tough as it sometimes could be. What a glorious difference 25 years makes!

I am very proud to have played a small part in the changes that have occurred over the years. I remember my first barrier free meeting in 1976. At that time, the Department of the Treasury was responsible for the Code, and, to be honest, no one was really sure what direction we should be taking to implement the law. It took a lot of dedication and arguments to move forward, but we did, and the Code has been amended numerous times since then to reflect changes and needs. This is what makes the Code so effective; it is not a static document, but one that is constantly monitored and improved. To do so takes an enormous amount of work by a lot of people. I know that at times change comes slowly. It is also true that patience, a trait I have learned to develop from the early days, and hard work produce results.

The impact of the Code has been felt throughout the State. Although I still have to check out a building, it is now very rare for me to find one that is totally inaccessible. Malls, transportation facilities, and office buildings are all accessible. This has meant freedom of choice, integration, and opportunity for all of our citizens. When you see young boys and girls attending grammar schools, young adults in high school and college, and men and women seeking employment, regardless of disability, you know we have made a difference in their lives.

At this point in time, in my opinion (but since I am the Chairman of the Barrier Free Subcode, you could argue that I am somewhat biased), New Jersey has the best access provisions in the country. This has happened not by accident, but by a conscientious effort on behalf of the State and the disability community to work together. This ongoing commitment to change allows us to continuously review and update the Code to keep us up to date on new technology as well as responsive to the needs of people. We have definitely come a long way, but we still need to go further. It is imperative to keep the Code updated to reflect the needs of all our citizens and, in doing so, provide a safe and secure environment. I look forward to the next 25 years of change and am committed to do all I can to see New Jersey continue the leadership role it has achieved.

Source: John Del Colle
UCC Advisory Board
Public Member Representing the Handicapped

State of New Jersey Training Fee: A New Name . . . and a New Rate

Effective August 5, 2002, the State of New Jersey training fee will have a new name *and* a new rate. Rule amendments proposed in the May 6th issue of the *New Jersey Register* change what has always been referred to as the "training fee" from "State of New Jersey Training Fee" to "New Jersey State Permit Fee."

In addition, the fee's rates have changed *from* $0.0016 *to* $0.0019 per cubic foot volume of new buildings and additions, and *from* $0.80 *to* $0.96 per $1,000 of value of construction for all other construction.

The Department of Community Affairs anticipates adoption of these amendments on August 5 of this year. The new rates will require changes to: 1) your Uniform

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Showing Compliance with the Energy Code for Residential Structures



A proposal will soon appear in the *New Jersey Register* that will make it necessary to show compliance with the Energy Code as part of the permit application process. There will be three ways to show residential structures comply with the 1995 Council of American Building Officials (CABO) Model Energy Code (MEC).

The first way to show compliance would be with calculations. This has been the traditional way that compliance with energy codes has been shown. Unless the building is very unusual, this is probably the least attractive method and we don't expect many people to use it. It involves calculating the "U" value (thermal conductance) of the various building components (such as walls, floors, and roofs) and showing that the values are less than the code-specified maximum value for the components. Tradeoffs, between components that exceed the code and those that are less than the code requires, are allowed provided that the overall building is as efficient as it would have been if each component met code. Guidance on how to perform the calculations can be found in the Appendix of the 1993 version of the Building Officials and Code Administrators National Energy Conservation Code.

The second way to comply is through the use of prescriptive packages. On the following pages are six tables that correspond to the three degree-day heating zones in the State. Each table lists several different combinations of wall insulation, floor insulation, and percentage and efficiency of glazing. Applicants are permitted to use any one of these "packages" to show compliance with the code. In order to use a package, the applicant must provide insulation "R- values" equal to or greater than listed on the table, and must have percentages of glazing and window U values equal to or less than listed on the table. The applicant need only submit the package that was chosen and show details that correspond to that package on the plans.

The third way of showing compliance is with MEC*check* software. The software is available from the website at www.energycodes.gov; **it can be downloaded for free**. Be sure to download the New Jersey version of the software. The software simply requires that you input the areas of the various components, the R value of insulation, and the U value of windows to be provided. The software automatically gives tradeoffs. It allows you to use components where the insulation level exceeds code to make up for those components that do not meet code. The software must be manipulated a little if you want to take advantage of the basement insulation tradeoff that is allowed in New Jersey's Energy Subcode.

Under the Energy Subcode, applicants are allowed to trade off high-efficiency heating equipment for basement wall insulation. The software can be tricked into allowing the tradeoff. If you are using the tradeoff, do not enter an area for the basement or the high-efficiency equipment in the mechanical section. Then use the software as you normally would. When submitting the printout for the program, just indicate that the tradeoff is being used and that high-efficiency equipment will be provided.

If you have questions, please call (609) 984-7609.

Source: Michael Baier
Office of Program Development

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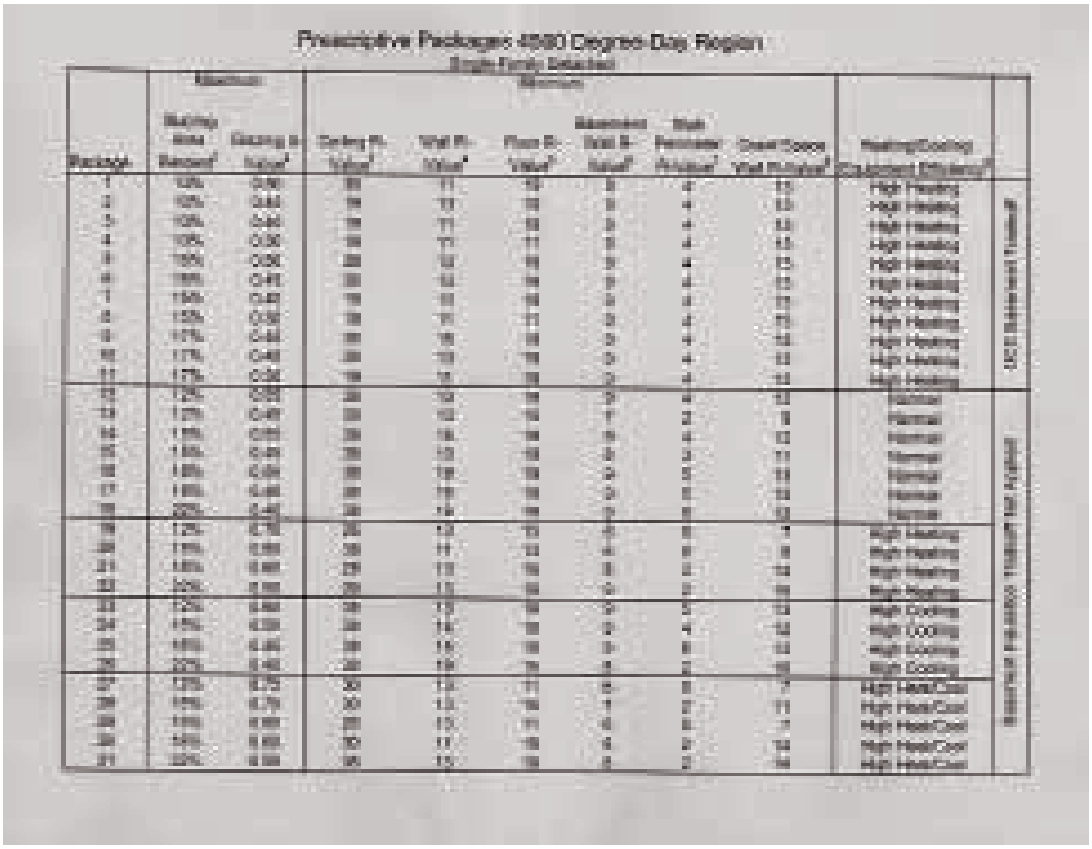
Construction Code Administrative Records System (UCCARS) or UCCARS-equivalent software setup and 2) the posted fee schedules in municipal construction code enforcement offices.

With regard to changing your computer software setup, a letter of instruction to construction officials is being written and will be mailed sometime early in July. The letter will provide detailed, step-by-step instructions to UCCARS users to ensure the proper recording and accounting for New Jersey State permit fees during the transition quarter. In addition to that instruction, an upgrade diskette will be provided later in July.

If your town uses a software other than UCCARS for permit tracking, the letter simply advises you to contact your software vendor to ensure that: 1) fees are calculated based upon the new rates for permits and permit updates issued on or after August 5, 2002; 2) the State Permit (formerly known as Training) Fee report for the third quarter of 2002 is produced in two parts, the first summarizing activity from July 1, 2002 through August 4, 2002, and the second summarizing activity from August 5, 2002 through September 30, 2002; and 3) the name of the fee is changed from "State Training Fee" to "State Permit Fee" on all pertinent system-generated outputs.

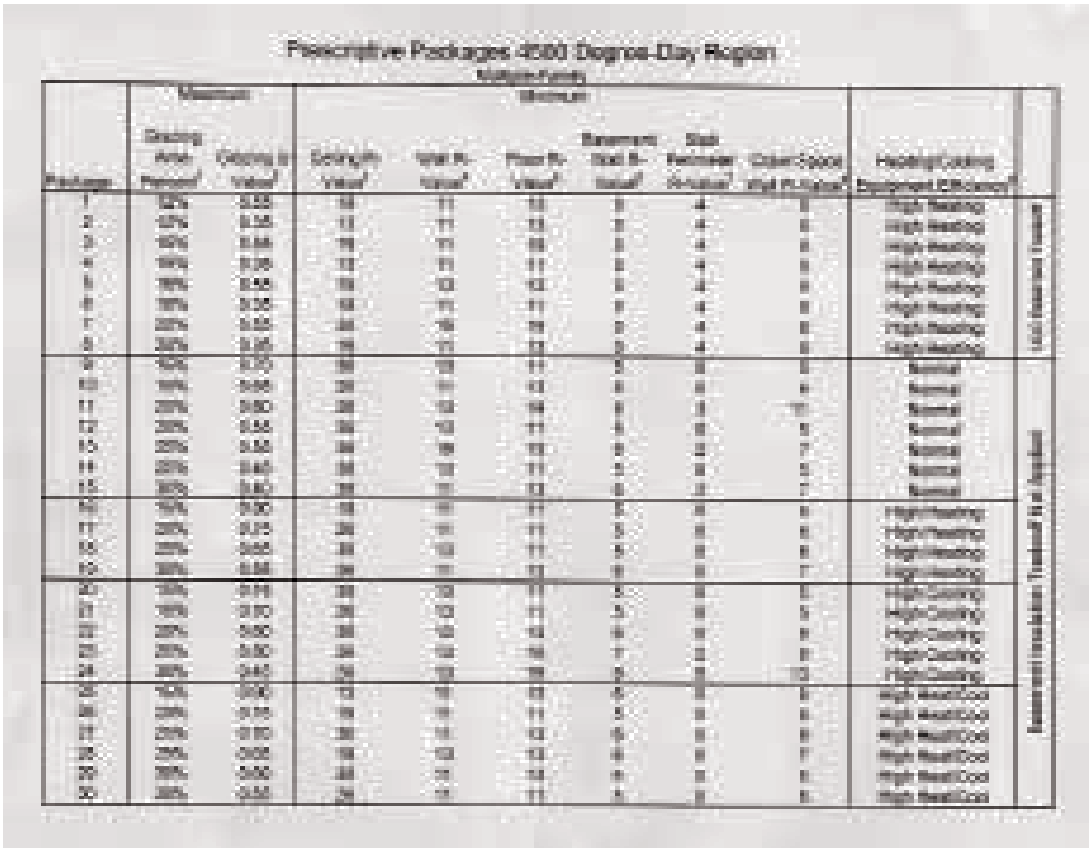
With regard to changing your posted fee schedule, please ensure that the new rates are properly reflected on it and on any counter forms your office provides relevant to fees. If you have questions, please contact Richard Byrne at (609) 292-7898.

Source: Team UCCARS
Director's Office



Prescriptive Packages 4500 Degree-Day Region

Package	Glazing Area Percent	Glazing U-Value	Ceiling R-Value	Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab Perimeter R-Value	Crawl Space Wall R-Value	Heating/Cooling Equipment Efficiency
1	15%	0.40	49	21	30	8	4	13	High Heating
2	15%	0.40	38	21	30	8	4	13	High Heating
3	15%	0.40	38	21	30	8	4	13	High Heating
4	15%	0.35	38	21	30	8	4	13	High Heating
5	15%	0.35	38	21	30	8	4	13	High Heating
6	15%	0.40	38	21	30	8	4	13	High Heating
7	15%	0.40	38	21	30	8	4	13	High Heating
8	15%	0.35	38	21	30	8	4	13	High Heating
9	15%	0.40	38	21	30	8	4	13	High Heating
10	15%	0.40	38	21	30	8	4	13	High Heating
11	15%	0.35	38	21	30	8	4	13	High Heating
12	15%	0.35	38	21	30	8	4	13	Normal
13	15%	0.40	38	21	30	8	4	13	Normal
14	15%	0.35	38	21	30	8	4	13	Normal
15	15%	0.40	38	21	30	8	4	13	Normal
16	15%	0.40	38	21	30	8	4	13	Normal
17	15%	0.35	38	21	30	8	4	13	Normal
18	15%	0.35	38	21	30	8	4	13	Normal
19	15%	0.40	38	21	30	8	4	13	High Heating
20	15%	0.40	38	21	30	8	4	13	High Heating
21	15%	0.35	38	21	30	8	4	13	High Heating
22	15%	0.35	38	21	30	8	4	13	High Heating
23	15%	0.40	38	21	30	8	4	13	High Cooling
24	15%	0.35	38	21	30	8	4	13	High Cooling
25	15%	0.40	38	21	30	8	4	13	High Cooling
26	15%	0.40	38	21	30	8	4	13	High Cooling
27	15%	0.35	38	21	30	8	4	13	High Heat/Cool
28	15%	0.35	38	21	30	8	4	13	High Heat/Cool
29	15%	0.40	38	21	30	8	4	13	High Heat/Cool
30	15%	0.40	38	21	30	8	4	13	High Heat/Cool
31	15%	0.35	38	21	30	8	4	13	High Heat/Cool

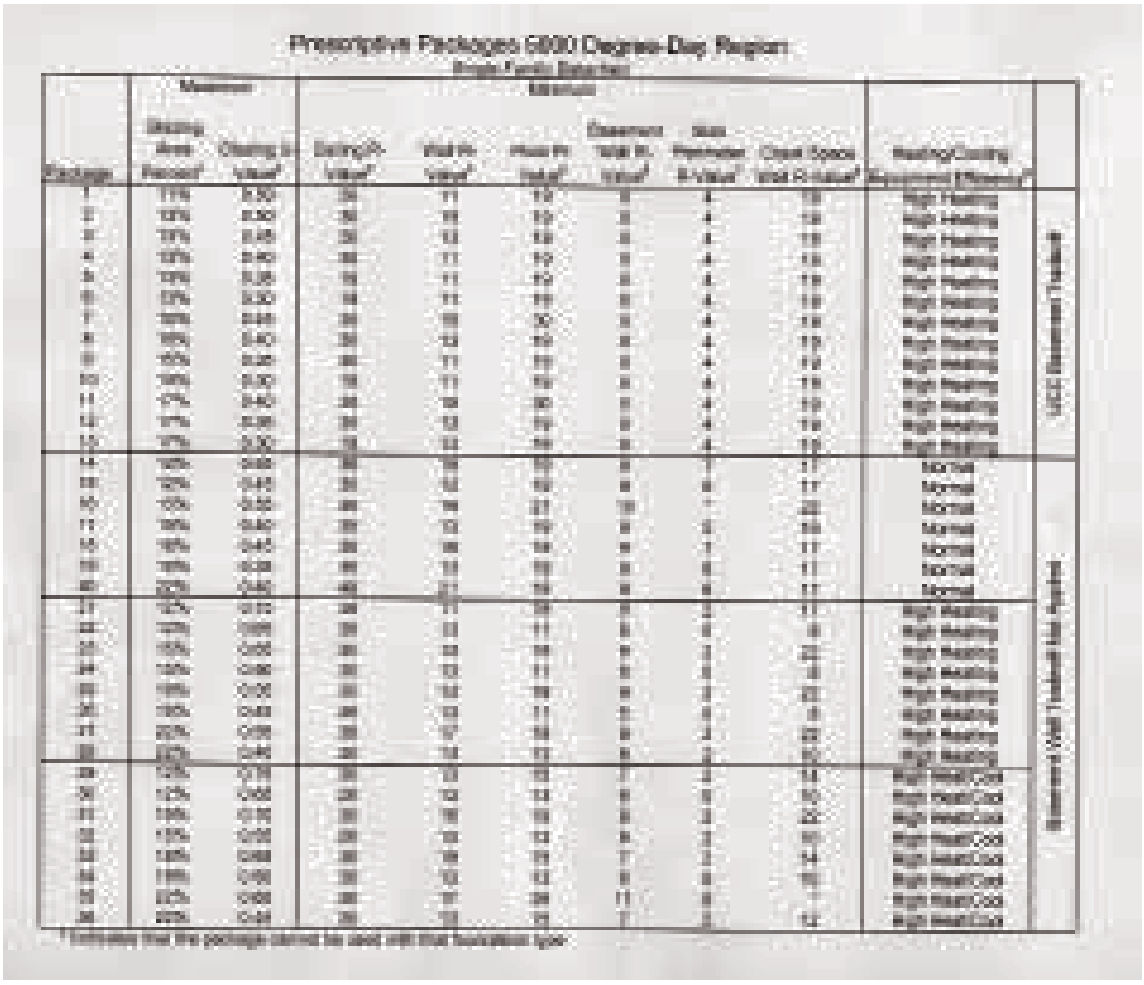


Prescriptive Packages 4500 Degree-Day Region

Package	Glazing Area Percent	Glazing U-Value	Ceiling R-Value	Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab Perimeter R-Value	Crawl Space Wall R-Value	Heating/Cooling Equipment Efficiency
1	15%	0.40	49	21	30	8	4	13	High Heating
2	15%	0.35	38	21	30	8	4	13	High Heating
3	15%	0.40	38	21	30	8	4	13	High Heating
4	15%	0.35	38	21	30	8	4	13	High Heating
5	15%	0.40	38	21	30	8	4	13	High Heating
6	15%	0.35	38	21	30	8	4	13	High Heating
7	15%	0.40	38	21	30	8	4	13	High Heating
8	15%	0.35	38	21	30	8	4	13	High Heating
9	15%	0.35	38	21	30	8	4	13	Normal
10	15%	0.40	38	21	30	8	4	13	Normal
11	15%	0.35	38	21	30	8	4	13	Normal
12	15%	0.40	38	21	30	8	4	13	Normal
13	15%	0.40	38	21	30	8	4	13	Normal
14	15%	0.35	38	21	30	8	4	13	Normal
15	15%	0.35	38	21	30	8	4	13	Normal
16	15%	0.40	38	21	30	8	4	13	High Heating
17	15%	0.35	38	21	30	8	4	13	High Heating
18	15%	0.35	38	21	30	8	4	13	High Heating
19	15%	0.40	38	21	30	8	4	13	High Heating
20	15%	0.40	38	21	30	8	4	13	High Cooling
21	15%	0.35	38	21	30	8	4	13	High Cooling
22	15%	0.35	38	21	30	8	4	13	High Cooling
23	15%	0.40	38	21	30	8	4	13	High Cooling
24	15%	0.40	38	21	30	8	4	13	High Cooling
25	15%	0.40	38	21	30	8	4	13	High Heat/Cool
26	15%	0.35	38	21	30	8	4	13	High Heat/Cool
27	15%	0.35	38	21	30	8	4	13	High Heat/Cool
28	15%	0.40	38	21	30	8	4	13	High Heat/Cool
29	15%	0.40	38	21	30	8	4	13	High Heat/Cool
30	15%	0.35	38	21	30	8	4	13	High Heat/Cool

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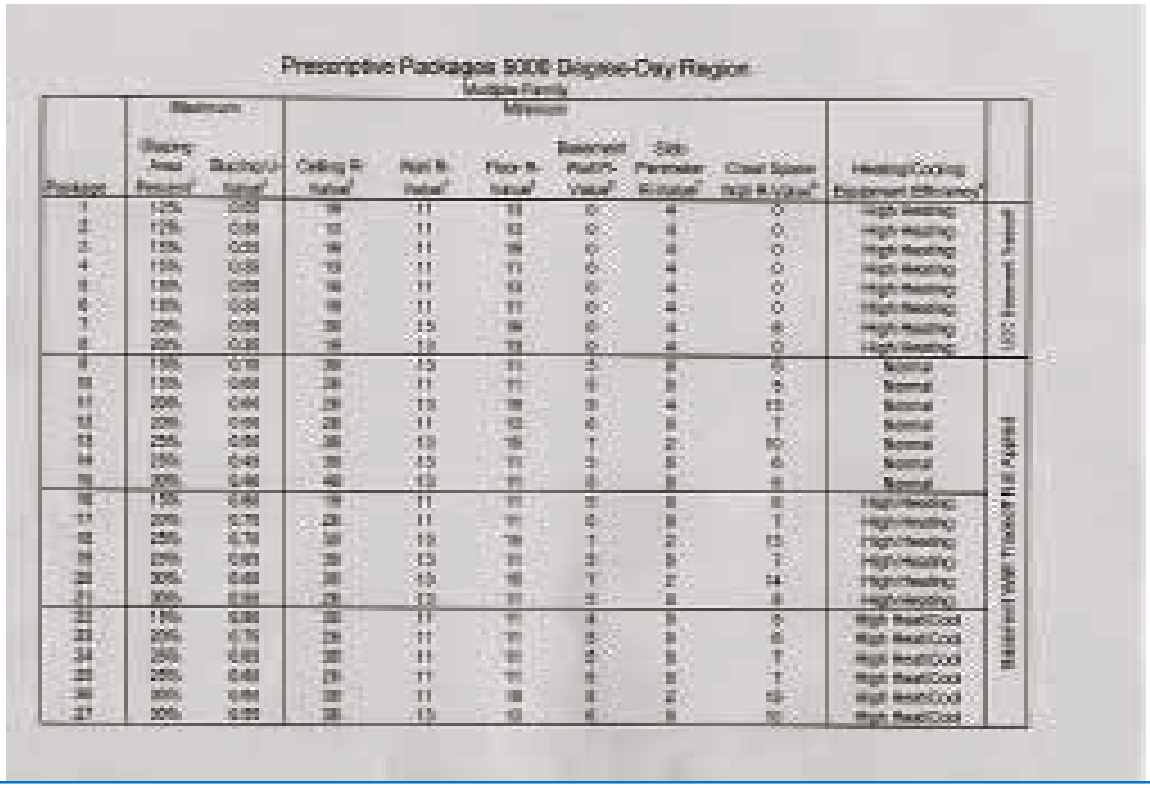


Prescriptive Packages: 6000 Degree-Day Region

Single Family Detached

Package	Maximum Glazing Area Percent[1]	Maximum Glazing U-Value[2]	Minimum Ceiling R-Value[3]	Minimum Wall R-Value[4]	Minimum Floor R-Value[5]	Minimum Basement Wall R-Value[6]	Minimum Slab Perimeter R-Value[7]	Minimum Crawl Space Wall R-Value[8]	Minimum Heating/Cooling Equipment Efficiency[9]	
1	15%	0.60	38	21	19	0	4	10	High Heating	UCC Minimum Trade-off
2	15%	0.60	38	21	19	0	4	10	High Heating	
3	15%	0.60	38	21	19	0	4	10	High Heating	
4	15%	0.60	38	21	19	0	4	10	High Heating	
5	15%	0.60	38	21	19	0	4	10	High Heating	
6	15%	0.60	38	21	19	0	4	10	High Heating	
7	15%	0.60	38	21	19	0	4	10	High Heating	
8	15%	0.60	38	21	19	0	4	10	High Heating	
9	15%	0.60	38	21	19	0	4	10	High Heating	
10	15%	0.60	38	21	19	0	4	10	High Heating	
11	15%	0.60	38	21	19	0	4	10	High Heating	
12	15%	0.60	38	21	19	0	4	10	High Heating	
13	15%	0.60	38	21	19	0	4	10	High Heating	
14	15%	0.60	38	21	19	0	4	10	Normal	Balanced Wall Tradeoff Not Applied
15	15%	0.60	38	21	19	0	4	10	Normal	
16	15%	0.60	38	21	19	0	4	10	Normal	
17	15%	0.60	38	21	19	0	4	10	Normal	
18	15%	0.60	38	21	19	0	4	10	Normal	
19	15%	0.60	38	21	19	0	4	10	Normal	
20	15%	0.60	38	21	19	0	4	10	High Heating	
21	15%	0.60	38	21	19	0	4	10	High Heating	
22	15%	0.60	38	21	19	0	4	10	High Heating	
23	15%	0.60	38	21	19	0	4	10	High Heating	
24	15%	0.60	38	21	19	0	4	10	High Heating	
25	15%	0.60	38	21	19	0	4	10	High Heating	
26	15%	0.60	38	21	19	0	4	10	High Heating	
27	15%	0.60	38	21	19	0	4	10	High Heating	
28	15%	0.60	38	21	19	0	4	10	High Heating	
29	15%	0.60	38	21	19	0	4	10	High Heating	
30	15%	0.60	38	21	19	0	4	10	High Heating	
31	15%	0.60	38	21	19	0	4	10	High Heating	
32	15%	0.60	38	21	19	0	4	10	High Heating	
33	15%	0.60	38	21	19	0	4	10	High Heating	
34	15%	0.60	38	21	19	0	4	10	High Heating	
35	15%	0.60	38	21	19	0	4	10	High Heating	
36	15%	0.60	38	21	19	0	4	10	High Heating	

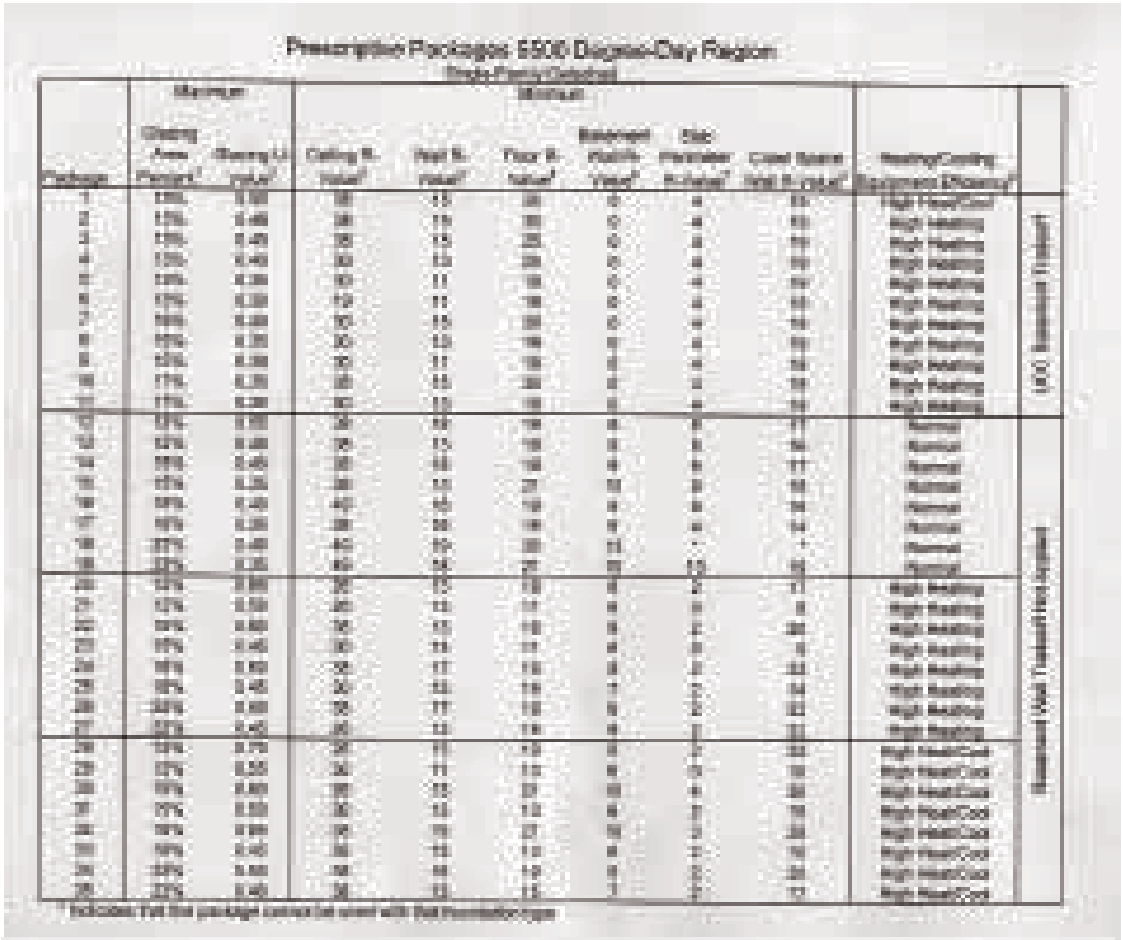
[1] Indicates that the package cannot be used with that fenestration type.



Prescriptive Packages: 5000 Degree-Day Region

Multiple Family

Package	Maximum Glazing Area Percent[1]	Maximum Glazing U-Value[2]	Minimum Ceiling R-Value[3]	Minimum Roof R-Value[4]	Minimum Floor R-Value[5]	Minimum Basement Wall R-Value[6]	Minimum Slab Perimeter R-Value[7]	Minimum Crawl Space Wall R-Value[8]	Minimum Heating/Cooling Equipment Efficiency[9]	
1	15%	0.60	38	21	19	0	4	0	High Heating	UCC Minimum Trade-off
2	15%	0.60	38	21	19	0	4	0	High Heating	
3	15%	0.60	38	21	19	0	4	0	High Heating	
4	15%	0.60	38	21	19	0	4	0	High Heating	
5	15%	0.60	38	21	19	0	4	0	High Heating	
6	15%	0.60	38	21	19	0	4	0	High Heating	
7	20%	0.60	38	21	19	0	4	0	High Heating	
8	20%	0.60	38	21	19	0	4	0	High Heating	
9	15%	0.60	38	21	19	0	4	0	Normal	Balanced Wall Tradeoff Not Applied
10	15%	0.60	38	21	19	0	4	0	Normal	
11	20%	0.60	38	21	19	0	4	0	Normal	
12	20%	0.60	38	21	19	0	4	0	Normal	
13	20%	0.60	38	21	19	0	4	0	Normal	
14	20%	0.60	38	21	19	0	4	0	Normal	
15	15%	0.60	38	21	19	0	4	0	High Heating	
16	20%	0.60	38	21	19	0	4	0	High Heating	
17	20%	0.60	38	21	19	0	4	0	High Heating	
18	20%	0.60	38	21	19	0	4	0	High Heating	
19	20%	0.60	38	21	19	0	4	0	High Heating	
20	15%	0.60	38	21	19	0	4	0	High Heat/Cool	
21	20%	0.60	38	21	19	0	4	0	High Heat/Cool	
22	20%	0.60	38	21	19	0	4	0	High Heat/Cool	
23	20%	0.60	38	21	19	0	4	0	High Heat/Cool	
24	20%	0.60	38	21	19	0	4	0	High Heat/Cool	
25	20%	0.60	38	21	19	0	4	0	High Heat/Cool	
26	20%	0.60	38	21	19	0	4	0	High Heat/Cool	
27	20%	0.60	38	21	19	0	4	0	High Heat/Cool	



Prescriptive Packages 5500 Degree-Day Region

Single-Family Detached

Package	Minimum Glazing Area (Percent)[1]	Minimum Glazing U-Value[2]	Minimum Ceiling R-Value[3]	Minimum Wall R-Value[4]	Minimum Floor R-Value[5]	Minimum Basement Wall R-Value[6]	Minimum Slab Perimeter R-Value[7]	Minimum Crawl Space Wall R-Value[8]	Minimum Heating/Cooling Equipment Efficiency[9]	
1	15%	0.65	38	15	30	0	4	10	High Heat/Cool	Basement With Thermal Mass Applied
2	15%	0.46	38	15	30	0	4	10	High Heating	
3	15%	0.46	38	15	30	0	4	10	High Heating	
4	15%	0.46	38	15	30	0	4	10	High Heating	
5	15%	0.46	38	11	19	0	4	10	High Heating	
6	15%	0.58	38	11	19	0	4	10	High Heating	
7	15%	0.58	38	15	30	0	4	10	High Heating	
8	15%	0.58	38	15	30	0	4	10	High Heating	
9	15%	0.58	38	11	19	0	4	10	High Heating	
10	15%	0.58	38	11	19	0	4	10	High Heating	
11	15%	0.58	38	15	30	0	4	10	High Heating	
12	15%	0.58	38	15	30	0	4	10	High Heating	
13	15%	0.58	38	11	19	0	4	10	High Heating	
14	15%	0.58	38	11	19	0	4	10	High Heating	
15	15%	0.58	38	15	30	0	4	10	High Heating	
16	15%	0.58	38	15	30	0	4	10	High Heating	
17	15%	0.58	38	11	19	0	4	10	High Heating	
18	15%	0.58	38	11	19	0	4	10	High Heating	
19	15%	0.58	38	15	30	0	4	10	High Heating	
20	15%	0.58	38	15	30	0	4	10	High Heating	
21	15%	0.58	38	11	19	0	4	10	High Heating	
22	15%	0.58	38	11	19	0	4	10	High Heating	
23	15%	0.58	38	15	30	0	4	10	High Heating	
24	15%	0.58	38	15	30	0	4	10	High Heating	
25	15%	0.58	38	11	19	0	4	10	High Heating	
26	15%	0.58	38	11	19	0	4	10	High Heating	
27	15%	0.58	38	15	30	0	4	10	High Heating	
28	15%	0.58	38	15	30	0	4	10	High Heating	
29	15%	0.58	38	11	19	0	4	10	High Heating	
30	15%	0.58	38	11	19	0	4	10	High Heating	
31	15%	0.58	38	15	30	0	4	10	High Heating	
32	15%	0.58	38	15	30	0	4	10	High Heating	
33	15%	0.58	38	11	19	0	4	10	High Heating	
34	15%	0.58	38	11	19	0	4	10	High Heating	
35	15%	0.58	38	15	30	0	4	10	High Heating	
36	15%	0.58	38	15	30	0	4	10	High Heating	
37	15%	0.58	38	11	19	0	4	10	High Heating	
38	15%	0.58	38	11	19	0	4	10	High Heating	
39	15%	0.58	38	15	30	0	4	10	High Heating	
40	15%	0.58	38	15	30	0	4	10	High Heating	
41	15%	0.58	38	11	19	0	4	10	High Heating	
42	15%	0.58	38	11	19	0	4	10	High Heating	
43	15%	0.58	38	15	30	0	4	10	High Heating	
44	15%	0.58	38	15	30	0	4	10	High Heating	
45	15%	0.58	38	11	19	0	4	10	High Heating	
46	15%	0.58	38	11	19	0	4	10	High Heating	
47	15%	0.58	38	15	30	0	4	10	High Heating	
48	15%	0.58	38	15	30	0	4	10	High Heating	
49	15%	0.58	38	11	19	0	4	10	High Heating	
50	15%	0.58	38	11	19	0	4	10	High Heating	
51	15%	0.58	38	15	30	0	4	10	High Heating	
52	15%	0.58	38	15	30	0	4	10	High Heating	
53	15%	0.58	38	11	19	0	4	10	High Heating	
54	15%	0.58	38	11	19	0	4	10	High Heating	
55	15%	0.58	38	15	30	0	4	10	High Heating	
56	15%	0.58	38	15	30	0	4	10	High Heating	
57	15%	0.58	38	11	19	0	4	10	High Heating	
58	15%	0.58	38	11	19	0	4	10	High Heating	
59	15%	0.58	38	15	30	0	4	10	High Heating	
60	15%	0.58	38	15	30	0	4	10	High Heating	
61	15%	0.58	38	11	19	0	4	10	High Heating	
62	15%	0.58	38	11	19	0	4	10	High Heating	
63	15%	0.58	38	15	30	0	4	10	High Heating	
64	15%	0.58	38	15	30	0	4	10	High Heating	
65	15%	0.58	38	11	19	0	4	10	High Heating	
66	15%	0.58	38	11	19	0	4	10	High Heating	
67	15%	0.58	38	15	30	0	4	10	High Heating	
68	15%	0.58	38	15	30	0	4	10	High Heating	
69	15%	0.58	38	11	19	0	4	10	High Heating	
70	15%	0.58	38	11	19	0	4	10	High Heating	
71	15%	0.58	38	15	30	0	4	10	High Heating	
72	15%	0.58	38	15	30	0	4	10	High Heating	
73	15%	0.58	38	11	19	0	4	10	High Heating	
74	15%	0.58	38	11	19	0	4	10	High Heating	
75	15%	0.58	38	15	30	0	4	10	High Heating	
76	15%	0.58	38	15	30	0	4	10	High Heating	
77	15%	0.58	38	11	19	0	4	10	High Heating	
78	15%	0.58	38	11	19	0	4	10	High Heating	
79	15%	0.58	38	15	30	0	4	10	High Heating	
80	15%	0.58	38	15	30	0	4	10	High Heating	
81	15%	0.58	38	11	19	0	4	10	High Heating	
82	15%	0.58	38	11	19	0	4	10	High Heating	
83	15%	0.58	38	15	30	0	4	10	High Heating	
84	15%	0.58	38	15	30	0	4	10	High Heating	
85	15%	0.58	38	11	19	0	4	10	High Heating	
86	15%	0.58	38	11	19	0	4	10	High Heating	
87	15%	0.58	38	15	30	0	4	10	High Heating	
88	15%	0.58	38	15	30	0	4	10	High Heating	
89	15%	0.58	38	11	19	0	4	10	High Heating	
90	15%	0.58	38	11	19	0	4	10	High Heating	
91	15%	0.58	38	15	30	0	4	10	High Heating	
92	15%	0.58	38	15	30	0	4	10	High Heating	
93	15%	0.58	38	11	19	0	4	10	High Heating	
94	15%	0.58	38	11	19	0	4	10	High Heating	
95	15%	0.58	38	15	30	0	4	10	High Heating	
96	15%	0.58	38	15	30	0	4	10	High Heating	
97	15%	0.58	38	11	19	0	4	10	High Heating	
98	15%	0.58	38	11	19	0	4	10	High Heating	
99	15%	0.58	38	15	30	0	4	10	High Heating	
100	15%	0.58	38	15	30	0	4	10	High Heating	

[1] Indicates that this package cannot be used with that foundation type.

Prescriptive Packages 5500 Degree-Day Region

Multiple-Family

Package	Minimum Glazing Area (Percent)[1]	Minimum Glazing U-Value[2]	Minimum Ceiling R-Value[3]	Minimum Wall R-Value[4]	Minimum Floor R-Value[5]	Minimum Basement Wall R-Value[6]	Minimum Slab Perimeter R-Value[7]	Minimum Crawl Space Wall R-Value[8]	Minimum Heating/Cooling Equipment Efficiency[9]	
1	15%	0.65	38	11	19	0	4	6	High Heating	All Basement Types
2	15%	0.46	38	11	19	0	4	6	High Heating	
3	15%	0.46	38	11	19	0	4	6	High Heating	
4	15%	0.46	38	11	19	0	4	6	High Heating	
5	15%	0.58	38	11	19	0	4	6	High Heating	
6	15%	0.58	38	11	19	0	4	6	High Heating	
7	20%	0.65	38	11	19	0	4	6	High Heating	
8	20%	0.58	38	11	19	0	4	6	High Heating	
9	15%	0.70	38	13	30	0	4	6	Normal	Basement With Thermal Mass Applied
10	15%	0.65	38	13	30	0	4	6	Normal	
11	20%	0.65	38	13	30	0	4	6	Normal	
12	20%	0.58	38	13	30	0	4	6	Normal	
13	20%	0.58	38	13	30	0	4	6	Normal	
14	20%	0.46	38	13	30	0	4	6	Normal	
15	20%	0.46	38	13	30	0	4	6	Normal	
16	20%	0.46	38	13	30	0	4	6	Normal	
17	15%	0.70	38	11	19	0	4	6	High Heating	
18	15%	0.65	38	11	19	0	4	6	High Heating	
19	20%	0.65	38	11	19	0	4	6	High Heating	
20	20%	0.58	38	11	19	0	4	6	High Heating	
21	20%	0.58	38	11	19	0	4	6	High Heating	
22	20%	0.46	38	11	19	0	4	6	High Heating	
23	20%	0.70	38	13	30	0	4	6	High Heat/Cool	
24	20%	0.65	38	13	30	0	4	6	High Heat/Cool	
25	20%	0.58	38	13	30	0	4	6	High Heat/Cool	
26	20%	0.46	38	13	30	0	4	6	High Heat/Cool	

[1] Indicates that this package cannot be used with that foundation type.

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FOOTNOTES:

1. Glazing area is the ratio of the area of the glazing assemblies (including sliding glass doors, skylights, and basement windows, but excluding opaque doors) to the gross wall area, expressed as a percentage. Up to 1% of the total glazing area may be excluded from the U-value requirement. For example, 3 ft.^{2} of decorative glass may be excluded from a building design with 300 ft.^{2} of glazing area.

2. Glazing U-values must be tested and documented by the manufacturer in accordance with the National Fenestration Rating Council (NFRC) test procedure. Center-of-glass U-values cannot be used.

3. The ceiling R-values do not assume a raised or oversized truss construction. If the insulation achieves the full insulation thickness over the exterior walls, R-30 insulation may be substituted for R-38. Ceiling R-values represent the sum of cavity insulation plus insulating sheathing (if used). For ventilated ceilings, insulating sheathing must be placed between the conditioned space and the ventilated portion of the roof.

4. Wall R-values represent the sum of the wall cavity insulation plus insulating sheathing (if used). Do not include exterior siding, structural sheathing, and interior drywall. For example, an R-19 requirement could be met *EITHER* by R-19 cavity insulation *OR* R-13 cavity insulation plus R-6 insulating sheathing. Wall requirements apply to wood-frame or mass (concrete, masonry, log) wall constructions, but do not apply to metal-frame construction.

5. The floor requirements apply to floors over unconditioned spaces (such as unconditioned crawl spaces, basements, or garages). Floors over outside air must meet the ceiling requirements.

6. Walls of conditioned basements below uninsulated floors must be insulated from the top of the basement wall to a depth of 10 ft. below ground level or to the level of the basement floor, whichever is less. The entire opaque portion of any individual basement wall with an average depth less than 50% below grade must meet the same R-value requirement as above-grade walls. Windows and sliding glass doors of conditioned basements must be included with the other glazing. Basement doors must meet the door U-value requirement described in Note b.

7. The R-value requirements are for unheated slabs. Add an additional R-2 for heated slabs. For packages with a slab insulation requirement, the insulation must extend a total linear distance of at least 24 in. The insulation must extend 1) down from the top of the slab; 2) down from the top of the slab to the bottom of the slab and then horizontally underneath the slab; or 3) down from the top of the slab to the bottom of the slab and then horizontally away from the slab, with pavement or at least 10 in. of soil covering the horizontal insulation.

8. The crawl space wall R-value requirements are for walls of unventilated crawl spaces. The crawl space wall insulation must extend from the top of the wall (including the sill plate) to at least 12 in. below the outside finished grade. If the distance from the outside finished grade to the top of the footing is less than 12 in., the insulation must extend a total vertical plus horizontal distance of 24 in. from the outside finished grade.

9. *High Heating* means a furnace AFUE of 90% or more, or a heat pump HSPF of 7.8 or more. *High Cooling* means a SEER of 12 or more. *High Heat/Cool* means both heating and cooling equipment must meet these minimum efficiencies. If you plan to install more than one piece of heating equipment or more than one piece of cooling equipment, the equipment with the lowest efficiency must meet or exceed the efficiency required by the selected package.

NOTES:

a) Glazing areas and U-values are maximum acceptable levels. Insulation R-values are minimum acceptable levels. R-value requirements are for insulation only and do not include structural components.

b) Opaque doors in the building envelope must have a U-value no greater than 0.35. Door U-values must be tested and documented by the manufacturer in accordance with the NFRC test procedure. If a door contains glass and an aggregate U-value rating for that door is not available, include the glass area of the door with your windows and use the opaque door U-value to determine compliance of the door. One door may be excluded from this requirement (i.e., may have a U-value greater than 0.35).

c) If a ceiling, wall, floor, basement wall, slab edge, or crawl space wall component includes two or more areas with different insulation levels, the component complies if the area-weighted average R-value is greater than or equal to the R-value requirement for that component. Glazing or door components comply if the area-weighted average U-value of all windows or doors is less than or equal to the U-value requirement (0.35 for doors).

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New Jersey Register Adoptions

Date: January 7, 2002
Adoption: 33 *N.J.R.* 267(a)
Summary: *N.J.A.C.* 5:23-2.4, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, and 6.31: The adopted amendments at *N.J.A.C.* 5:23-2.4 ensure unequivocally that the provisions of any other code, standard, rule, or ordinance that is more stringent than the provisions of the Rehabilitation Subcode shall not apply.

At *N.J.A.C.* 5:23-6.4(d)6, 6.5(d)7, 6.6(d)7, and 6.7(d)6, the adopted amendments require that, other than in dwelling units of Use Group R-2, R-3, or R-4, mirrors shall not be hung in or adjacent to any means of egress. In addition, the adopted amendments require that, other than in dwelling units of Use Group R-2, R-3, or R-4, draperies or similar hangings shall not obscure an exit.

At *N.J.A.C.* 5:23-6.4(e)7, 6.5(e)8, and 6.6(e)14, the adopted amendments require the installation of fireblocking when the work being performed exposes the framing of any wall, floor, ceiling, or roof that would otherwise require fireblocking in accordance with the Building Subcode.

At *N.J.A.C.* 5:23-6.5(e)9, 6.6(e)15, and 6.7(e)11, the adopted amendments require the installation of carbon monoxide detectors in locations specified in the Mechanical Subcode.

At *N.J.A.C.* 5:23-6.8(b)5.iv, the adopted amendment provides requirements for exit signs that would make the Rehabilitation Subcode consistent with the Building Subcode.

At *N.J.A.C.* 5:23-6.9(a)10.i, the adopted amendment clarifies when newly installed elevators are exempt from the seismic requirements of Section XXIV of the American Society of Mechanical Engineers (ASME) A17.1, which is referenced in the Building Subcode.

At *N.J.A.C.* 5:23-6.9(a)23, the adopted amendment provides that newly created stairs that are not a required means of egress comply with the Building Subcode.

At *N.J.A.C.* 5:23-6.9(a)24, the adopted amendment requires that newly created passageways, aisle accessways, and aisles in buildings of Use Group M comply with the minimum width requirements of the Building Subcode.

At *N.J.A.C.* 5:23-6.31(b)3.iv, the adopted amendment addresses the change of an existing building to an open parking structure, which is currently not covered in the Rehabilitation Subcode.

At *N.J.A.C.* 5:23-6.31(b)3.vii, the adopted amendment includes Use Group I-3 in the list of special uses and occupancies that need to comply with the Building Subcode. Any change in the condition or character of the use of a building or structure of Use Group I-3 requires compliance with the referenced section of the Building Subcode.

At *N.J.A.C.* 5:23-6.31(c)1.i and (c)2.iii, the adopted amendment specifies that occupant load must be calculated as five square feet of occupiable floor space per occupant for any change of use to Use Group A-2.

Date: January 22, 2002
Adoption: 34 *N.J.R.* 521(a)
Summary: *N.J.A.C.* 5:23-3.20, 6.25A, 6.26A, and 6.31: These adopted amendments provide an exemption to the provision that requires single-station carbon monoxide alarms at guestrooms or dwelling units. Single-station carbon monoxide alarms shall not be required, given that the building is equipped with a monitored carbon monoxide alarm system. In addition, these adopted amendments clarify what constitutes "open parking areas" as defined in the Building Subcode.

Date: January 22, 2002
Adoption: 34 *N.J.R.* 523(a)
Summary: *N.J.A.C.* 5:23-5.21: This adopted amendment provides for a mandatory continuing education seminar on framing for all holders of a building RCS, ICS, or HHS license. This provision applies to those licenses renewed on or after January 1, 2002.

Date: February 4, 2002
Adoption: 34 *N.J.R.* 732(a)
Summary: *N.J.A.C.* 5:23-4.19 and 4.20: These adopted amendments eliminate the training fee for construction or rehabilitation work that is done as a result of a natural disaster when the local enforcing agency has waived its fees. Fees shall be eliminated altogether when the Department of Community Affairs is the local enforcing agency.

Date: February 4, 2002
Adoption: 34 *N.J.R.* 732(b)
Summary: *N.J.A.C.* 5:23-12.12: This adopted amendment adds four retrofit items to the Elevator Safety Subcode. *N.J.A.C.* 5:23-12.12(b) requires that, in each building with more than one elevator, each elevator be numbered. *N.J.A.C.* 5:23-12.12(c) requires each existing elevator to be retrofitted with skirt obstruction and step level devices. Finally, *N.J.A.C.* 5:23-12.12(d) prohibits floating platforms, which allow the operation of an elevator device when the door or gate is open.

Source: Megan K. Sullivan
Code Development Unit

PermitsNJ . . . What Will It Require?

Many of you have recently asked, "What kind of computer equipment and communications service must our offices purchase in order to use *PermitsNJ*?" In turn, we have asked our application development team. Here's what they said . . .

PermitsNJ will be a web-based application accessed through a web browser on the desktop. Because all files and screens will be stored at the system level and processing will *not* be done on the desktop, a number of PCs of various sizes and configurations will do.

The more important aspect to consider when using a web-based application is transmission speed. The speed at which you will transmit and receive information is influenced by three components: 1) your connection mode, 2) your Internet Service Provider (ISP), and 3) your modem.

With regard to your connection mode, the best choice is a Digital Subscriber Line (DSL), which may be ordered through your telephone company. Second to a DSL is a cable connection. This is *much* faster than an ordinary dial-up phone line, which of course would be your last choice.

In terms of selecting an ISP, Giga Information Group®, a leading global information technology advisory firm, suggests asking the following questions before committing to one of the many companies that offer this service:

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1. What is the ISP's busy-free dial rate? (This is the ratio of subscribers to the number of the ISP's server ports; the lower the ratio of subscribers to server ports, the better.)
2. Does the ISP have tiered services and is there a business class available? (*Yes* is the answer you'll want to hear.)
3. Does the ISP prioritize traffic for customers? (Again, *Yes* is the correct answer.)
4. Does the ISP have asynchronous dial bonding inverse multiplexing? (This is a device on the ISP's end that doubles the speed of the line. Again, the correct answer is *Yes*.)

Concerning your modem, we have found that a better modem than that provided with most new PCs may be very helpful in increasing the speed of the transmission of information. A good choice on today's market is the US Robotics 56K external modem, which retails for around $86.

Thus, if you are considering or are in the process of purchasing the components necessary for participation in *PermitsNJ* this fall, please consider the foregoing, as well as the following guidelines:

PC

Current industry standard, which at present is:
-Pentium 4
-128 MB RAM
-20 GB hard drive
-MS Windows 98 or higher operating system.

Internet Browser

Microsoft's Internet Explorer 4.0 or higher. MS Internet Explorer comes packaged with MS Windows.

Modem

Minimum 56K. The size and quality of the modem affects the speed of the transmission. A modem of better quality than the one typically bundled with a PC would be a wise investment.

Monitor

17" is now standard, but larger (19", 21") or smaller (15") will work, too.

Telephone Line or Cable Connection

Again, a DSL is the best alternative. If DSL is not an option, however, remember that cable is about 10 to 20 times faster for transmission than a phone line with a 56K modem.

ISP

If a cable connection is used, the cable company becomes your ISP; otherwise, select wisely based upon the answers to those questions outlined above.

Printer(s)

Laser printers are now fairly standard and fairly common; you may even already have one, as many municipalities do. Any relatively new printer, however, should work. Whether a given model is adequate depends more upon your office's level of activity, i.e., how much printing you expect to do.

So, there you have it. Again, if you are in the process of purchasing computer equipment and are planning to use it with *PermitsNJ*, consider this advice.

On a related note, if your office is presently equipped with a late-model PC, it may also be adequate for use with *PermitsNJ*. We are presently testing application performance with various combinations of memory, speed, and operating systems. The results will enable us to identify minimum system requirements. We expect to report those results in the next issue of the *Construction Code Communicator*.

In the meantime, if you have further questions concerning equipment and/or communications requirements, as always, please telephone us at (609) 292-7898. We may also be reached via e-mail at: dyedwab@dca.state.nj.us or bosworth@dca.state.nj.us.

Source: Dana Yedwab and Berit Seiple Osworth
Division of Codes and Standards

Building Inspectors, Footings, and Grounding Revisited

The Department of Community Affairs is still receiving questions on how to create a grounding electrode system made of concrete-encased rebars in the footings of a new structure in accordance with Section 250-50 of the Electrical Subcode.

If you are still having difficulties understanding this, please dig out your old *Construction Code Communicator* articles. Volume 13, Number 1 (Spring 2001) contains the article "Building Inspectors, Footings, and Grounding." Still not helping? Then grab your Uniform Construction Code and find Bulletin No. 02-2, "Availability of Concrete-Encased Electrodes." This should clear up most of your questions.

Still got questions? See if this helps! (Keep in mind, these situations are only where a conductive rebar of one-half inch or more in diameter is used in the foundation design of the building.)

(1) *Partial Permit:* If a partial permit is issued for a foundation only or where no electrical portion of the permit has been issued, the Electrical Subcode

Technical Section needs to be filled out prior to the inspection. This technical section is to be filled out under "Technical Site Data" in the blank space at the bottom. Also, the building subcode official/ inspector is to initial for the inspection under the "Job Summary" section in the space for "Other."

(2) *Placement of Conductor:* The building subcode official/inspector should recommend that the free end of the grounding electrode conductor is left inside of the foundation to prevent physical damage to the wire during backfilling. Also, the rebar chosen for clamping should preferably be placed on the outer edge of the foundation or footings to ensure that the rebar is in direct contact with the moist soil.

(3) *Additions: N.J.A.C.* 5:23-6.32 requires additions to comply with new construction standards. However, the rebar requirement under Section 250-50(c) of the Electrical Subcode is enforceable only where a concurrent permit exists for the installation, upgrading, or relocation of any service equipment.

If you have questions on this matter, feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Technical Assistant College Course Fall 2002

With over 300 graduates, the Technical Assistant (TA) Certification Program has been very popular throughout New Jersey. When the program began in 1997 with continuing education seminars, the curriculum consisted of nine core courses, three electives, and a ten- to fifteen-page Capstone paper.

Since then, the core courses have been rewritten and we are about to introduce a new curriculum, consisting of 45 credit hours, that will be offered at our participating community colleges throughout the State. This new course will be available to anyone who is interested in learning about working in a construction code office as a TA to the construction official.

The TA is a key player in the Code Enforcement Office. The TA works hand in hand with the construction official to ensure all of the administrative duties of the Uniform Construction Code are met. This multifaceted position is demanding and very rewarding.

Certified TAs who have completed a "train-the-trainer" program are eligible to teach the college course. This course will be offered under the Construction Code Enforcement Program, which allows students who successfully complete it to apply for up to 50 percent tuition reimbursement. A schedule of course offerings will be available by August 1, 2002.

We are enthusiastic about the conversion of the program. It will allow more individuals to consider the TA position and enable completion of the required courses in a shorter period of time.

If you have any questions or would like to enroll, please call the Education Unit at (609) 984-7820, or visit our website at www.state.nj.us/dca/codes.

Source: Susan H. McLaughlin, Supervisor
Education Unit
Bureau of Code Services

Temporary Certificates of Occupancy

The Department of Community Affairs has recently adopted amendments to *N.J.A.C.* 5:23-2.23(g) that clarify the rules governing Temporary Certificates of Occupancy (TCOs). Accordingly, a bulletin has been issued for additional clarification purposes. The regulations now provide that, if requested by the owner, TCOs must be issued when buildings are safe for occupancy.

TCOs allow building occupancy when incomplete construction work does not affect the health or safety of the occupants. For example, let's say in a single-family home (Use Group R-3 or R-4) the landscaping, sidewalks, powder room, and carpeting are incomplete, but the carpeting and the powder room fixtures are on back order. In addition, the landscaping and sidewalks cannot be completed until spring. Since none of these instances are detrimental to the occupant's health, the issuance of a TCO is appropriate.

Incomplete construction work should be finished within a reasonable time frame. In the example above, since the work on the landscaping and sidewalks cannot be started until spring, a time constraint of 120 days would be appropriate. This would allow enough time for all landscaping and sidewalk labor to be completed efficiently. If, for instance, the backordered items for the powder room do not arrive at a sufficient time within the 120-day period (because, as you know, one can never tell how long a back order may take), it would be appropriate to renew the TCO for an additional 120 days.

There are several circumstances other than health and safety issues that preclude the issuance of a TCO. First, a TCO may not be issued if the applicant has outstanding Uniform Construction Code (UCC) fees or

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penalties associated with the project, unless those fees or penalties are being appealed. Secondly, a TCO may not be issued if the project does not have a warranty or other required registrations. For example, if a home is required to have a New Home Warranty, a TCO may not be issued until the warranty is in place. Similarly, for elevator-serviced buildings, the elevator must be installed, inspected, and operational (although the registration need not have been completed) before a TCO may be issued.

The Department has provided code officials with the option to charge a fee no greater than $30 for the extra work an office may incur by issuing a TCO. However, if the Certificate of Occupancy fee is paid in full when the first TCO is issued, the office cannot collect a TCO fee for that issuance. If a TCO is renewed, then a fee may be collected.

All code officials make judgment calls every day on the job and the decision whether or not to issue a TCO is just another one in their daily routine. Before a TCO is issued or denied, some questions need to be considered, which include:

- Will the occupants be safe in the structure?
- Can the structure be used as it is intended?
- Have all UCC fees, penalties, and judgments been paid?
- Is the building registered or warranted as required by the UCC?

To further exemplify a judgment call, let's consider a place of assembly. A place of assembly, such as a church, theater, or restaurant, has been constructed and is ready for occupancy. The project is completed in January; however, the sidewalks and landscaping remain unfinished, and cold temperatures prevent this work from being completed until spring. In such a situation, a TCO should not be issued UNLESS a code-compliant accessible route (which may be temporary) is provided.

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

Source: Jeffrey Applegate
Code Assistance Unit

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Department of Community Affairs
Susan Bass Levin, Commissioner

Volume 14 Number 2 ***Fall 2002***

Multi-Tenant Buildings

Recently, the Code Assistance Unit received a letter that raised a number of questions concerning the issuance of construction permits and Certificates of Occupancy (CO) for a multi-tenant building. The letter indicated that the building in question was a multiple-tenant building, similar to a "strip shopping center," with individual tenant spaces or "vanilla boxes" that would be finished at a later date. The building would be supplied with services such as water, gas, electric, and suppression complying with the various subcodes for each tenant space.

The following four questions were raised and answered in the order presented:

1. "Should the building provided in the example above be constructed under the issuance of a single permit for the entire structure; or may a 'footing, foundation, and shell' permit be issued for the main structure, with subsequent individual permits for each tenant fit-up or 'vanilla-box' space?"

Either approach is acceptable. When applying for permits for a multiple-tenant building, there are two options for permit issuance. 1) The owner may apply for a single permit and submit a permit update for each tenant fit-up that is completed. 2) The owner could apply for a permit for the common elements of the building (shell) and require the tenants to apply for individual permits for each of the tenant spaces.

2. "If the building is constructed under a single permit, can permits be issued to start work in tenant spaces before the 'footing, foundation, and shell' of the structure are complete?"

As stated in the response to #1 above, if the building owner has chosen to use the single-permit option, construction on tenant spaces may be performed, provided a permit update is submitted for each space. Under a single permit, separate permits are not to be issued for construction of tenant spaces. However, if the building owner has chosen to use the multiple-permit option, individual permits may be issued to start work on the tenant spaces in the building as long as the shell is ready to receive construction in the specified areas.

3. "How should a Certificate of Approval (CA) or CO be issued for the base building and the tenant spaces?"

This depends on the permit option selected. For the single-permit option, a CO is issued when the project is complete and all tenant spaces are occupiable. A Temporary Certificate of Occupancy is issued for each tenant space as it becomes occupiable throughout construction.

For the multiple-permits option, a CA would be issued for the base building to indicate the intended work ("footing, foundation, shell, and services") is finished and to indicate all construction under that permit is

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complete. In doing so, the permit for the base building permit is closed. Then, when the construction for each of the tenant fit-ups is complete, a CO is issued for the individual tenant space.

4. "Can the square footage of the original 'vanilla-box' spaces be altered while construction is in progress?"

Yes. Since the building has not yet received a CO, tenant fit-ups may be issued permit updates, which could address any modifications to the original design. This may include the moving of tenant demising walls, or the addition of new area or volume to the original building.

If there are any questions on this issue, please contact the Code Assistance Unit at (609) 984-7609.

Source: Jeffrey Applegate
Code Assistance Unit

Cutting, Notching, and Boring of Engineered Lumber 

Rob, the inspector, is performing a framing inspection. He notices that the plumbing, electrical, and mechanical contractors have cut, notched, and bored some of the framing members. All of the cutting, notching, and boring comply with the Building Officials and Code Administrators National Building Code/1996, Section 2305.0. As he proceeds with the inspection, he also notices that the project has both conventional and engineered lumber.

All appears to be well. Just as he is about to pass the inspection, Rob suddenly remembers something he had heard at one of the continuing education seminars: "Cutting, notching, and boring of engineered lumber must be in accordance with the manufacturer's specifications."

When Rob completes the inspection, he notifies the owner that the project has failed due to the absence of specifications from the engineered lumber manufacturer on the cutting, notching, and boring of the engineered structural members used in the project. He tells the owner that, if he provides the inspector with this information, he will reinspect the structure.

Right away, the owner conveys this message to the architect and asks him to please address the inspector's concerns.

The architect must obtain the cutting, notching, and boring specifications from the engineered lumber manufacturer. Once these specifications are obtained, the inspector may reinspect the structure. If a violation is found after reinspection, the architect must either provide a method to correct the violation (if any), or tell the contractor to remove and replace all damaged members.

If you don't want to run into this, remember that cutting, notching, and boring of engineered lumber must be in accordance with the manufacturer's specifications.

Some other things to keep in mind:

- Different engineered lumber may have different criteria for cutting, notching, and boring.
- Different manufacturers may have different specifications.
- The architect must provide the manufacturer's information on all engineered lumber when the project is submitted for review.
- If this issue is addressed in plan review, then the inspector is required only to verify that it was built according to the released plans.

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

Source: Marcel Iglesias
Code Assistance Unit

Boiler Low-Water Cutoffs 

With the adoption of the 2000 International Mechanical Code comes a requirement for a low-water cutoff on all steam and hot-water boilers. Section 1007.1, General, now states, "All steam and hot-water boilers shall be provided with a low-water cutoff control." This requirement includes boilers that are installed for residential use.

Coil-type/watertube boilers require forced circulation to prevent the coil or tube from overheating. Since low-water cutoff controls do not sense flow, they cannot protect a forced circulation coil-type/watertube boiler from overheating when loss of circulation occurs. Consequently, a flow-sensing device, which detects flow and verifies that the boiler and system are full of water, is required.

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Since a swimming pool heater is classified as a forced-circulation-type boiler, a flow-sensing device is required. A relief valve must be installed as well. The manufacturer's instructions should be checked for any additional requirements.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Elevator Car Size Regulations Adopted



Recently, regulations were adopted that provide a minimum size requirement for elevator cars in newly constructed multiple dwellings. *N.J.A.C.* 5:23-3.14, the Building Subcode, has been amended to provide that elevator cars must be large enough to accommodate a 24-inch by 76-inch ambulance stretcher.

The regulations also provide that these elevators be identified with the international symbol for emergency medical services, or the "Star of Life." The size requirement for this sticker is no less than three inches.

These requirements pertain to elevators with access to residential floors in newly constructed multiple dwellings. They do not require the installation of an elevator in buildings where an elevator would not otherwise be required.

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

Source: Kristy Paolillo
Code Development Unit

Mike Needs Energy Training



Jeff, the homeowner, decides to build his new home. He goes to the local construction code enforcing agency to apply for a construction permit so that he can begin his mission as soon as possible.

Jeff's project consists of a two-story, Use Group R-3 building of Type 5B construction. The plans indicate 2'-by-4' stud walls. Rob, the building subcode official, completes the plan review on the architectural plans and releases them for construction.

About three months later, with the help of MEC*check* and numerous drawings, Jeff is able to submit the energy calculations. Rob reviews the documents and determines that the R19 insulation to be installed will result in energy code compliance. Upon approval, Rob releases the construction documents.

Approximately eight months after the date on which the first set of plans were submitted, Jeff calls for a framing inspection. Rob assigns the inspection to Mike, the building inspector, who goes out to do the inspection using the released plans. He finds that the wall studs are all 2' by 4' and comply with the released documents. Mike passes the inspection.

Now, Jeff is really excited and he is ready to install the R19 insulation in the walls of his future home. Looking at the walls skeptically, he notices that the R19 has a thickness of about six inches, while the wall cavity is only about four inches in depth.

Well, he wasn't counting on that, but Jeff proceeds nonetheless – nothing is going to get in the way of completing his new house. He decides to compress the insulation into the wall cavity. Voila!

Jeff looks at his creation triumphantly. But suddenly (uh-oh), he wonders whether the compressed R19 insulation still qualifies as R19. He is afraid that it is likely this structure now does not comply with the energy code.

What is the moral of the story?

The architectural plans must correlate with the insulation plan. When there is conflict, the reviewing agency must notify the parties involved and have them revise the documents accordingly.

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

Source: Marcel Iglesias
Code Assistance Unit

Building Safety Conference of New Jersey 2002

The Building Safety Conference of 2002 is now history. The awards have been presented and the seminars are over - what remains are the memories. This year, there were over 600 participants and I'm sure each one has some special thoughts of our days at the conference.

One of the activities included an awards luncheon, at which Rodney Blane, representing the International Code Council, provided the audience with an overview of the new "I Codes."

Also at the luncheon, Inspector of the Year awards were presented to the following individuals:

Dominic D. Demico, Plumbing Inspector, Township of East Brunswick, Middlesex County
Anthony J. Cermele, Building Inspector, Township of Lawrence, Mercer County
James J. McGlynn, Electrical Inspector, City of Margate, Atlantic County
David A. Maas, Fire Protection Inspector, Township of Springfield, Union County

In addition, the Technical Assistant of the Year award was presented to:

Dawn Neil, Technical Assistant, Township of Bernards, Somerset County

A wide variety of "cracker-barrel" subjects and seminar topics provided everyone with a good selection of themes that broadened their educational qualifications. Some of the activities included a golf outing (which had the largest number of participants to date), an awards reception, various association meetings, and a spouse program. Plus, David J. Pangaldi, a licensed plumbing inspector, was selected to receive a complimentary registration to the 2003 Building Safety Conference.

I hope that each of you can join us next year at Bally's Park Place, April 30 – May 2, 2003. Mark your calendars now!

Source: Susan H. McLaughlin
Education Unit
Bureau of Code Services



Dominic D. Demico, Jr. (right), Plumbing Inspector, East Brunswick Township, presented by Richard Adams, President, New Jersey Plumbing Inspectors Association



Anthony J. Cermele (right), Building Inspector, Lawrence Township, presented by John Scialla, President, Building Officials Association of New Jersey



James J. McGlynn (left), Electrical Inspector, Margate City, presented by Robert K. Rogers, Jr., President, Municipal Electrical Inspectors Association

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David A. Maas (left), Fire Protection Inspector, Springfield Township, presented by John Lightbody, President, New Jersey Fire Prevention and Protection Association



Dawn M. Neil (right), Technical Assistant, Bernards Township, presented by Kali Tsimboukis, Vice-President, Northwest Jersey Technical Assistants Association

'Tis the Season for Haunted Houses

Last October, William Connolly, Director of the Division of Codes and Standards, sent the following notice to New Jersey construction officials outlining the requirements for the temporary use of existing buildings as haunted houses. The notice is reprinted here as a reminder of such requirements for the upcoming season.

Attention: Construction Officials
Temporary Use of Existing Buildings as Haunted Houses

At this time of year, many existing buildings are used as haunted houses. The use of barns and other existing buildings as haunted houses on a temporary basis requires permits and inspections, as follows:

The local fire official may issue a permit under the Uniform Fire Code (UFC) at N.J.A.C. *5:70-2.7. If the local fire official does not assume jurisdiction, then these haunted houses should be treated as a temporary use under the Uniform Construction Code (UCC). The building owner must apply for a permit and obtain a Certificate of Occupancy (CO) for the temporary use. No haunted house or similar temporary amusement should be operated without either a valid permit issued under the UFC or a valid CO for the temporary use issued under the UCC.*

Prior to issuing a CO, the construction official should ensure that the building, as modified for the haunted house, complies with the special amusements provisions of the UCC, or that approved alternatives are in place. Particular attention should be paid to the presence of combustibles and the flame-spread rating of materials used. Relief should not be granted on these items.

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

Source: John N. Terry
Code Assistance Unit

History Lesson: Adoption of New Jersey's Model Codes

Updating the Uniform Construction Code has kept the Department of Community Affairs on its toes for many years and now some of New Jersey's most familiar model code books will be swapped for new ones.

Regulations proposing the use of the 2000 International Building Code (IBC), the 2000 International Residential Code (IRC), and the 2002 National Electrical Code will be published soon. These editions will be in place in the near future and the preceding codes will no longer be enforced. (Reminder: A previously enforced code has a six-month grace period after the adoption of a new code. During this grace period, the old code may continue to be used and enforced.)

Please reference the chart labeled "New Jersey Model Code Adoptions" for the history of all of New Jersey's model code adoptions.

PS – Due to the significant number of changes to the IBC and IRC, the Department is planning to contract with Building Officials and Code Administrators International to have New Jersey editions printed of both the codes.

Source: Rob Austin
Code Assistance Unit

Home Inspector Regulations Adopted

On June 3, 2002, regulations were adopted at *N.J.A.C.* 13:40-15 promulgating the requirements for State licensing of home inspectors. This applies to any person licensed as a home inspector who inspects the condition of an existing residential building for a fee. The purpose of this article is to assist enforcing agencies in providing information to the residents of their towns so that they may direct individuals to the appropriate department.

Information on these new requirements may be obtained from the Department of Law and Public Safety, Division of Consumer Affairs, State Board of Professional Engineers and Land Surveyors.

Please be advised that home inspectors must be licensed by May 29, 2003.

If you have any inquiries regarding these regulations, please contact the Division of Consumer Affairs for additional information at (973) 504-6460 or 1 (800) 242-5846.

Source: John N. Terry
Code Assistance Unit

New Jersey Register Adoptions

Date: July 1, 2002
Adoption: 34 *N.J.R.* 2312(a)
Summary: *N.J.A.C.* 5:23-3.14: This adopted amendment requires that elevators installed in newly constructed multiple dwellings be designed to accommodate an ambulance stretcher that is 24 inches by 76 inches.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2781(c)
Summary: *N.J.A.C.* 5:23-4.19, 4.20, 8.4, 8.9-8.11: These adopted amendments increase fees for hotel and multiple dwelling inspections; for carnival/amusement ride permits; for lead evaluation and abatement certifications; and for plan review, licensing, and asbestos regulation performed by the Department of Community Affairs.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2783(a)
Summary: *N.J.A.C.* 5:23-2.6 and 6.31: These adopted amendments provide that a group overnight stay does not trigger a change in the use group of a building if the facility holds six or fewer within a calendar year. Whenever these overnight stays take place, however, the building owner is required to comply with the applicable provisions of the Uniform Fire Code (*N.J.A.C.* 5:70). If the facility holds seven or more overnight stays, the building is then considered to have undergone a change in use to Use Group R-1 and a new Certificate of Occupancy is required.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2784(a)
Summary: *N.J.A.C.* 5:23-5.20: This adopted amendment raises the educational and examination requirements for licensure of building inspectors at the RCS, ICS, and HHS levels; and plumbing inspectors at the ICS and HHS levels.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2787(a)
Summary: *N.J.A.C.* 5:23-7.5: This adopted amendment establishes a threshold of 10,000 square feet or greater for requiring elevator service in multifamily residential buildings.

Source: Megan K. Sullivan
Code Development

OPD Valve Requirement

Effective in April 2002, Liquefied Petroleum Gas (LPG) cylinders must be equipped with an Overflow Prevention Device (OPD) -fitted valve. This valve prevents propane cylinders from overfilling, thereby enhancing safety.

OPD valves are required for all cylinders manufactured after October 1, 1998. By law, effective in April 2002, older cylinders and cylinders without OPD valves cannot be refilled. While construction officials do not enforce this requirement, it might be helpful to have this information to answer questions.

Please note, it is crucial that all old cylinders are properly disposed of and recycled. If disposed of haphazardly, used cylinders pose a serious threat to public safety and to the environment. Many companies will accept old cylinders for a minor fee and some will do so at no cost. For a list of places to recycle used LPG cylinders, residents should contact the county recycling coordinator.

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

Source: Kristy Paolillo
Code Development

Irrigation Sprinkler System Fees

It has been brought to the Code Assistance Unit's attention that some municipalities are charging a fee per head for irrigation sprinkler systems. The Uniform Construction Code (UCC) fee schedule does not provide for a charge for irrigation sprinkler systems, with the exceptions of the water connection and backflow preventer components. In such instances, a Plumbing Technical Section would be required.

UCC sprinkler fees based upon the number of sprinkler heads pertain to fire sprinkler systems, not irrigation sprinkler systems. Any municipality that is charging this fee should please discontinue the practice, unless the municipal fee ordinance specifically provides otherwise.

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

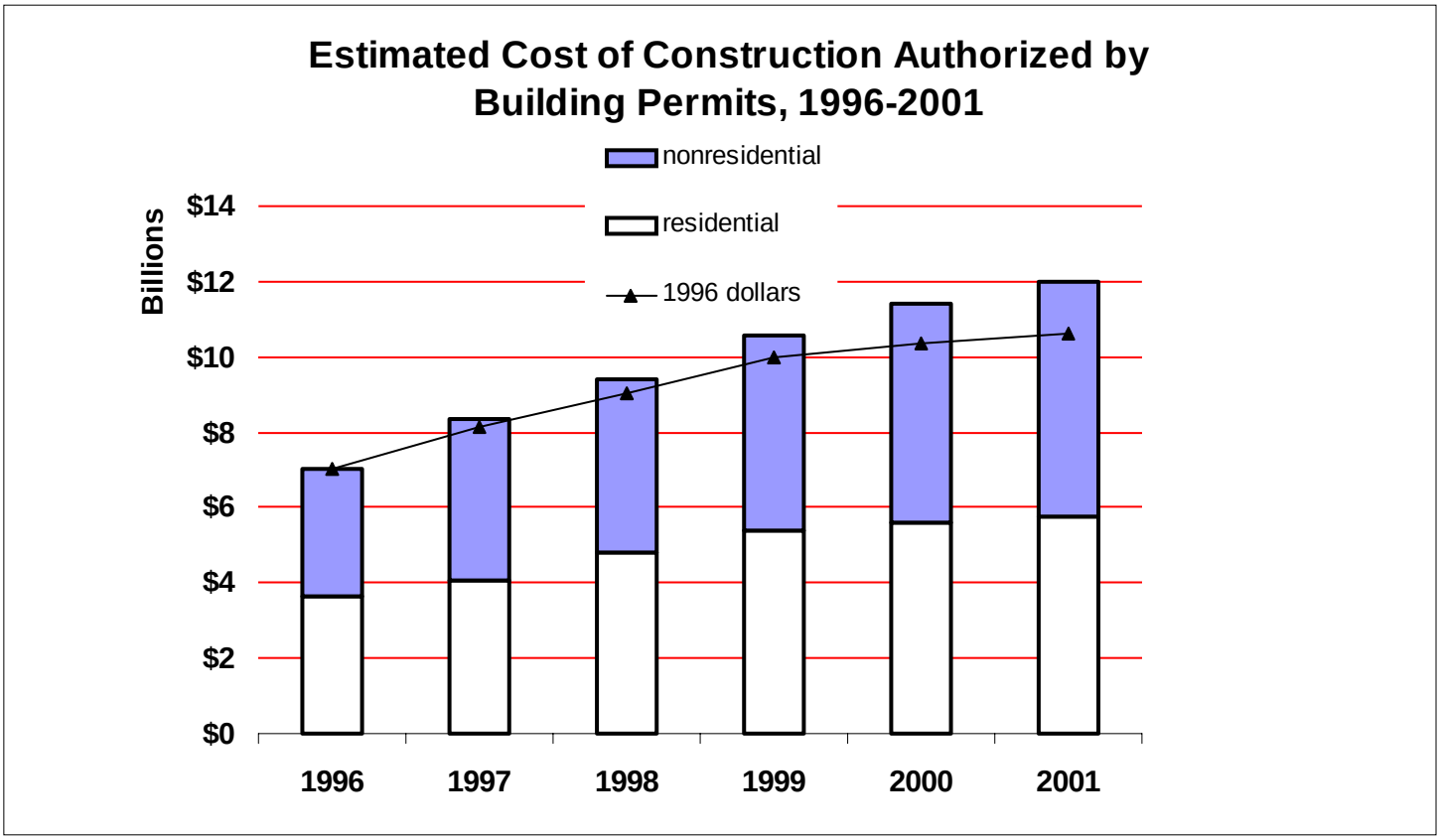
Source: Thomas C. Pitcherello
Code Assistance Unit

Highlights of the 2001 *New Jersey Construction Reporter*

The following contains highlights of the 2001 *New Jersey Construction Reporter*. The publication contains information on building activity in the State. Construction officials who are interested in obtaining a complimentary copy should contact John Lago at jlago@dca.state.nj.us, or call (609) 292-7898.

2001 HIGHLIGHTS

Despite a national recession that started in March, New Jersey's construction industry performed strongly in 2001. The estimated cost of work authorized by building permits reached $12 billion, $619.8 million more than last year. This was an increase of 5.4 percent. In real terms, assuming the value of a dollar declined by 2.8 percent, authorized work grew by 2.5 percent.



Building permits were issued for 35,680 new houses, 2,385 units fewer than last year, for a decline of 6.3 percent. New office and retail space were up significantly. Office space increased by nearly 3.6 million square feet, 23.2 percent compared to last year. New retail space grew by 1.2-million square feet, an increase of 19.5 percent.

Activity by Region

Northern and central New Jersey had nearly 80 percent of the work authorized by permits. The amount in the northern part of the State was $5.1 billion. In central New Jersey, it was $4.3 billion. Nearly $2.6 billion was authorized for new office buildings or renovations to existing offices. Central and northern New Jersey issued permits for 8.8-million and 8.4-million square feet of new office space, respectively. Jersey City in Hudson County accounted for over 4.1-million square feet, nearly 22 percent of all the new office space in the State.

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New Jersey Construction Indicators: 1996-2001				
	Estimated Construction Costs	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
1996	$7,028,424,990	27,577	6,229,515	4,880,139
1997	$8,346,533,144	30,017	10,409,171	5,688,955
1998	$9,396,755,517	35,676	12,703,824	7,921,892
1999	$10,584,167,530	37,536	13,237,891	6,229,471
2000	$11,387,683,514	38,065	15,531,039	6,063,412
2001	$12,007,456,630	35,680	19,134,533	7,244,833
2000-2001	$619,773,116	(2,385)	3,603,494	1,181,421
Percent Change	5.4%	-6.3%	23.2%	19.5%
Source: N.J. Department of Community Affairs, 5/13/02				

Central New Jersey had 38 percent of all the new houses built in the State. Three central New Jersey counties (Ocean, Middlesex, and Monmouth) had about 26.5 percent of all new houses.

Major Construction Indicators by Region: 2001				
Region	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
North	$5,125,936,607	12,557	8,384,715	2,916,595
Central	4,339,933,807	13,549	8,840,389	3,121,272
South	2,141,943,546	9,561	1,286,408	1,206,546
State Buildings	399,642,670	13	623,021	420
New Jersey	$12,007,456,630	35,680	19,134,533	7,244,833
Percent Distribution by Region				
North	42.7%	35.2%	43.8%	40.3%
Central	36.1%	38.0%	46.2%	43.1%
South	17.8%	26.8%	6.7%	16.7%
State Buildings	3.3%	0.037%	3.3%	0.01%
New Jersey	100.0%	100.0%	100.0%	100.0%
Source: N.J. Department of Community Affairs, 5/13/02 Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties				

Urban Development

Among municipalities, New Jersey's two largest cites stood out. Jersey City had the most work: $867 million. The City had the most new houses (2,009 units) and the most new office space in 2001 (4.1 million square feet). The City of Newark in Essex County issued permits for an estimated $213.6 million of construction, second among localities. Newark had 606,320 square feet of new office space in 2001 (fifth among all municipalities). Like Jersey City, Newark is in the midst of a housing boom and had 1,066 new houses in 2001, second among municipalities. But unlike Jersey City, where most of the new houses are market-rate units in high-rise structures, Newark had an increase in low-rise, single-family houses, duplexes, and three-family units for low- or moderate-income households. Together, Jersey City and Newark accounted for just over 8.6 percent of all the new houses in New Jersey in 2001.

Construction Indicators
Top New Jersey Municipalities: 2001

Municipality	County	Estimated Cost of Construction (Dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jersey City	Hudson	$867,048,392	2,009	4,111,027	245,585
Newark City	Essex	213,559,984	1,066	606,329	7,906
Hopewell Township	Mercer	137,656,814	52	409,311	0
Rahway City	Union	135,594,569	38	261,471	6,111
Bridgewater Township	Somerset	128,127,081	82	844,664	153,379
Hoboken City	Hudson	126,770,013	207	191,304	0
Elizabeth City	Union	124,829,161	432	5,737	3,576
Atlantic City	Atlantic	115,140,513	33	2,331	0
Dover Township	Ocean	114,092,636	481	99,956	261,691
South Brunswick Township	Middlesex	110,566,696	139	196,053	6,209
Top Municipalities		2,073,385,859	4,539	6,728,183	684,457
New Jersey		$12,007,456,630	35,680	19,134,533	7,244,833

Source: N.J. Department of Community Affairs, 5/13/02

Other cities with a high level of activity were the Cities of Rahway and Elizabeth in Union County, the City of Hoboken in Hudson County, and Atlantic City in Atlantic County. Most of the work in Rahway was for office development for Merck & Company, Inc., a pharmaceuticals firm. The other big projects were for public school additions and the construction of a new library. Elizabeth had 432 authorized units (15th among localities) and also issued permits for two new hotels. Hoboken had 207 authorized dwellings in 2001 and 191,304 square feet of new office space. In Atlantic City, casino development and new parking structures accounted for most of the work. The Atlantic City construction office also issued permits for two new elementary schools, each with an estimated construction cost of $13 million.

Spotlight on Jersey City and Newark

One of the reasons construction activity was so strong in 2001 was because of development in Jersey City and Newark. Jersey City is in the midst of a housing and office boom. This trend began in the late 1990s and grew sharply this year. Newark also benefited from increased demand for housing and office development. The City has seen major renovations of existing buildings advanced in part by the State's adoption of the Rehabilitation Subcode, which reduces regulatory impediments to the reuse of existing structures.

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The biggest project in Jersey City was the Goldman Sachs office tower. The 1.5-million-square-foot building sits on the Hudson River waterfront, across from New York City's financial district. The picture to the right shows the tower which, when complete, will be the tallest in the State. The estimated construction cost reported on the initial permit was $242 million. This is the largest amount on a single permit in the more than six years that the Department of Community Affairs has published building permit data.



Goldman Sachs Tower and parking deck on Hudson Street, Jersey City –photo by John Lago, New Jersey Department of Community Affairs



Liberty Towers East and West, 33 Hudson Street, Jersey City -- the Goldman Sachs office building is on the left; the two buildings to the right are the apartment complex.
—photo by John Lago, New Jersey Department of Community Affairs

Next to Goldman Sachs is Liberty Towers, an apartment complex that broke ground in 2001. Two buildings make up the complex. They will have 648 market-rate units, parking facilities, and a gymnasium.

Along with the Goldman Sachs tower, two other new office buildings under construction were Harborside Financial Center Plaza Five and Newport Office Center VII. Plaza Five, a 34-story office building, is on Morgan Street. North of Plaza Five, on Washington Boulevard, is Newport Office Center VII, a 32-story office. All told, both buildings will have nearly 2-million square feet of office space. All of these office developments were well underway prior to the destruction of the World Trade Center on September 11.



Harborside Financial Center, Plaza Five, 20 Morgan Street, Jersey City —photo by John Lago, New Jersey Department of Community Affairs



Newport Office Center VII, 480 Washington Boulevard, Jersey City —photo by John Lago, New Jersey Department of Community Affairs

Newark also reported a high level of activity this year. Several large office and housing developments were built or started. In May 2001, the City's construction office issued a permit authorizing $51.8 million of work on a 516,000-square-foot building that will have a mix of retail and office uses. The main use of the structure will be to house a branch office of the Federal Bureau of Investigation.

Newark issued building permits for 1,066 new houses. The City demolished old public housing apartments in high-rise buildings, and replaced them with affordable townhouses, duplexes, and apartments. The picture below shows townhouses in a 206-unit development under construction by the New Community Corporation, a nonprofit housing and community development agency. These affordable units were funded by a grant from the United States Department of Housing and Urban Development, and are located in the City's south ward.



Community Hills Townhouses, 206-unit development in Newark's south ward -- in the background is an old public housing development that the City will demolish. —photo by Chester Chinsky, New Jersey Department of Labor

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Community Hills Townhouses, Newark south ward
—photo by Chester Chinsky, New Jersey Department of Labor



Three-family homes under construction in Newark's iron-bound district
—photo by Chester Chinsky, New Jersey Department of Labor



Buy-and-rent housing in Newark's north ward -- home buyers are able to live in one of the units and rent the other.
—photo by Chester Chinsky, New Jersey Department of Labor

New House Prices

A total of 23,372 new houses were completed and began enrollment in a new home warranty program in 2001. The median sale price of these houses was $253,670. This was nearly 10 percent more than last year. Bergen and Somerset Counties had the most expensive new homes. Half of the 1,055 new houses in Bergen County that began enrollment in a new home warranty program in 2001 cost more than $452,900. In Somerset County, the median sale price was $435,960.

New House Prices			
Period	**Number of New Houses**	**Median Sale Prices**	**Percent Change in Sale Prices**
1996	20,903	$183,300	
1997	21,640	$190,000	3.7%
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
2001	23,372	$253,670	9.5%
1st Quarter 2001	5,305	$243,696	
2nd Quarter 2001	6,136	$251,530	3.2%
3rd Quarter 2001	6,225	$259,000	3.0%
4th Quarter 2001	5,606	$260,925	0.7%
Source: N.J. Department of Community Affairs, 5/13/02			

Source: John Lago
Office of Planning and Program Development

Pull-Down Stairs

During a recent Uniform Construction Code Advisory Board meeting, the following question was asked: "When an attic is finished as living space, can a pull-down stair be used to provide the means of egress?"

Finishing an attic is considered an alteration under the Rehabilitation Subcode, provided that it does not increase the height or number of stories. *N.J.A.C.* 5:23-6.3, entitled "Definitions," states that any term not defined herein which is defined in any of the other subcodes of the Uniform Construction Code (UCC) shall have the meaning as defined in that subcode. Habitable attic is not defined in the Rehabilitation Subcode, but is defined at *N.J.A.C.* 5:23-3.14(b)2.vi, Building Subcode, or *N.J.A.C.* 5:23-3.21(b), One- and Two-Family Dwelling Subcode, and must therefore comply with *N.J.A.C.* 5:23-3.14(b)vi or *N.J.A.C.* 5:23-3.21(b).

With that in mind, a "habitable attic," according to the UCC, is "an attic which has a stairway as a means of access and egress, and in which the ceiling area at a height of seven feet above the attic floor is not more than one-third of the area of the next floor below."

A pull-down stair, however, is considered a ladder. It is not a stairway and a stairway is required by definition. Therefore, a stairway would need to be installed to provide a means of access and egress. In addition, the stairway is considered a new building element as per *N.J.A.C.* 5:23-6.9(a)8, New Building Elements. Therefore, it must comply with Section 1014.0 of the Building Officials and Code Administrators National Building Code/1996.

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

Source: Marcel Iglesias
Code Assistance Unit

Showers and Hot Water

About seven years ago, an article appeared in the *Construction Code Communicator* that addressed the recurring question, "What is the code requirement for hot-water outlet temperatures for showers?"

The 2000 National Standard Plumbing Code (NSPC) definition of hot water is, as many of us know, 120 to 140 degrees Fahrenheit. With that definition in mind, please note NSPC Section 10.15.1 provides that "hot water shall be supplied to all plumbing fixtures . . . ." This means that the hot-water temperature supplied to the fixtures must meet the requirement set forth in the NSPC definition of "hot water."

This includes showers. At Section 10.15.6, the required "outlet" temperature to a shower is a maximum of 120 degrees Fahrenheit, the key word being "maximum."

Therefore, since NSPC Section 10.15.6 provides a maximum outlet temperature for showers, not a minimum, a shower with a hot-water outlet temperature of less than 120 degrees Fahrenheit would not fail an inspection.

On the other hand, if the outlet hot-water temperature exceeds 120 degrees Fahrenheit, the shower cannot pass inspection.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

When Does a Storage Building Need to Have an Elevator?

In recent months, questions about large, self-storage buildings have become a hot item in the Code Assistance Unit. We have received quite a few calls on whether installation of an elevator is required in a self-storage building of 10,000 square feet or more that is more than one story.

The answer is "yes." *N.J.A.C.* 5:23-7.4(a)1 of the Barrier-Free Subcode provides that "large buildings, defined as those with a total gross enclosed floor area of 10,000 square feet or more, shall have elevator(s) to provide accessible, vertical access between floors." However, *N.J.A.C.* 5:23-7.3(a)3 exempts floors and mezzanines of less than 3,000 square feet from being required to be served by an elevator.

So, in short, self-storage building + total enclosed floor area of 10,000 square feet or more + more than one story = ELEVATOR! On the other hand, self-storage building + total enclosed floor area of 10,000 square feet or more + mezzanine of less than 3,000 square feet = NO ELEVATOR!

Source: Rob Austin
Code Assistance Unit

Technical Assistant Graduation

We had a "hot" time on June 26th during the fifth Technical Assistant graduation. The ceremony was held in the picturesque Masonic Temple on Barrack Street, which was built around the 1920s. No, there was no air conditioning, so we relived those old times when large fans were used to blow hot air around, producing a sound similar to that of airplanes taking off for flight.

Everyone endured the heat for the ceremony, in which the successful completions of numerous certification courses were celebrated. William Connolly, Director of the Division of Codes and Standards at the Department of Community Affairs, spoke about the many "firsts" in code enforcement of which we in New Jersey can be proud. Charles Richman, Assistant Commissioner of the Department, also gave his congratulations to the graduates.

The class consisted of 101 Technical Assistants, 48 of whom attended with guests. This brought the total number of certified Technical Assistants in New Jersey to 260.

Certificates and pins were presented at the ceremony. Afterwards, cool, light refreshments were served.

This was the last Department-sponsored graduation for Technical Assistants. The Technical Assistant Certification Program will continue as a 45-hour, evening college course. Courses will be offered starting this fall at community colleges.

If you would like further information on dates and college locations, please call the Education Unit at (609) 984-7820.

We offer our best wishes to all the Technical Assistants!

Source: Susan McLaughlin
Supervisor, Education Unit
Bureau of Code Services



NOTES

NOTES

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS

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Susan Bass Levin, Commissioner

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HAPPY NEW YEAR

Corrections to the CABO One- and Two-Family Dwelling Code

The Code Assistance Unit of the Department of Community Affairs recently received a telephone call that created quite a stir. The caller indicated that he had constructed a home with a spiral stair that has a riser height of 9½ inches, in accordance with Section 314.5 of the 1995 edition of the Council of American Building Officials One- and Two-Family Dwelling Code (CABO/1995). However, upon inspection, the code official cited the builder for having a spiral stair with a riser height of greater than 7¾ inches, in accordance with Section 314.5 of CABO/1995.

By now, you have noticed that both the builder and the code official referenced the same section of the same edition of the code. However, the builder is quoting language from the *first printing* of CABO/1995 and the code official is citing from the *second printing* of the code.

The Department has determined that, when the second printing was published, an error was made and the wrong dimension was given. Therefore, the first printing is accurate and the correct dimension for the riser height of a spiral stair is 9½ inches. This has been confirmed through an errata sheet provided by Building Officials and Code Administrators (BOCA) for the second printing.

If you own the *second printing*, please make this correction to your copy of the code. Those who have a copy of the first or third printing do not need to do anything, because these printings were correct upon publication.

One more correction, which needs to be made in both the first and second printing, should be noted. This is also on the errata sheet. On page 26, in Note 5 of Figure 403.1a, "Concrete and Masonry Foundation Details," the code states, "Bolts shall extend a minimum of 15 inches into masonry or 7 inches into concrete." This statement should read, "Bolts shall extend a minimum of 7 inches into masonry or concrete." If you own either the *first printing* or *second printing*, please make this correction to your copy of the code.

If you have questions about code requirements, please contact the Code Assistance Unit at (609) 984-7609. If you have questions about the errata sheet, or about which edition or which printing you have, please contact BOCA at (708) 799-2300.

Sources: Jeffrey Applegate and Marcel Iglesias
Code Assistance Unit

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Pressure-Assisted Water Closets

The purpose of this article is to remind Uniform Construction Code officials that, as of December 16, 2002, the requirement at *N.J.A.C.* 5:23-3.15(b)8.ii, Plumbing Subcode, for the installation of pressure-assisted water closets in commercial buildings of Use Groups A, E, B, and M that require more than two water closets to be connected to the building sewer is no longer mandatory. This provision was deleted, as adopted in the *New Jersey Register* on December 16th. The type of water closets to be used for a project is at the discretion of the design professional.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Egress Door Hardware

The Code Assistance Unit of the Department of Community Affairs has become aware that some clarification concerning the use of egress door hardware is necessary in respect to panic hardware, and manually operated flush bolts and surface bolts.

One of the most frequently asked questions about egress door hardware is: "If the egress door is a double-leaf door (e.g., two 3' 0" doors in the same frame), may there be an inactive leaf? We would like to have a 6' 0" opening, but only a 3' 0" door is required for egress."

The answer is "NO." This would entail the use of manually operated flush bolts on the egress doors, which is prohibited by Section 1017.4.1.1, "Flush and Surface Bolts," of the 1996 edition of the Building Subcode, the Building Officials and Code Administrators National Building Code/1996. People who are exiting during an emergency should not be required to determine which door of a pair is the active egress door.

The appearance of an inactive leaf can be accomplished through the use of automatic flush bolts. These are designed to unlatch when the active door leaf is opened and latch automatically when the active door leaf is closed. Of course, the installation of panic hardware on one door with an automatic flush bolt or both doors is also code compliant.

Panic hardware is used to allow quick and easy operation of egress doors in a time of panic during emergencies from places that normally have a large occupancy, such as assembly halls. If no one is able to operate the latching mechanism, the force of the crowd will eventually cause the panic hardware to be activated. The automatic flush bolt allows the inactive leaf to open when the panic hardware on the active leaf is operated.

Please note, in order to prevent confusion during an emergency, no hardware of any type (e.g., a door knob) is permitted on the door that is equipped with the automatic flush bolt.

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

Source: Jeffrey Applegate
Code Assistance Unit

Energy – Enforce Only What Is Referenced

N.J.A.C. 5:23-3.18, Energy Subcode, adopts the 1995 edition of the Council of American Building Officials (CABO) Model Energy Code with technical amendments. Chapter 7 of CABO references the American Society of Heating, Refrigeration, and Air-Conditioning Engineers 90.1, the1999 edition (ASHRAE 90.1-1999) as the standard for "Building Design For All Buildings Other Than Residential Buildings." In other words, ASHRAE 90.1-1999 is a referenced standard and is to be used for the design of all buildings except residential buildings of three or fewer stories in height.

It is important to remember that only those portions of the referenced standard that address building design are applicable. This applies to the building itself, including the building envelope, percent glazing, R-values, and U-values. This does not include the performance of the equipment installed. Equipment is required to be listed and labeled with a percentage AFUE (furnaces and boilers), HSPF (air source heat pumps), and/or SEER (air-conditioning) efficiency; however, it does not require "system commissioning" (ASHRAE 90.1-1999, Section 6.2.5.4). An inspector must make sure the equipment is listed and

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labeled as required by the Energy Subcode, but does not need to ensure that the owner/operator is aware of the operating and maintenance requirements for the equipment. Requirements for Use Groups B and E are different. *N.J.A.C.* 5:23-2.23(h)7, "Certificate Requirements," does require a "Test and Balance" report for mechanically ventilated Class I and II buildings of Use Groups B and E, but other portions of the commissioning process are outside of the scope of the Uniform Construction Code.

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

Source: Rob Austin
Code Assistance Unit

Opening Communication on NJDEP's Septic Rules 

The Department of Community Affairs (DCA) and the New Jersey Department of Environmental Protection (DEP) initiated a dialogue to increase communication between the two agencies to better enforce regulations that pertain to similar technical issues.

Items that were discussed included a review of inconsistencies between the Uniform Construction Code (*N.J.A.C.* 5:23) and the Standards for Individual Subsurface Sewage Disposal Systems (*N.J.A.C.* 7:9A). Mechanisms to increase communication between the Departments and local building and health officials were also explored. Specifically, the following issues were discussed:

- When accepting a building permit application, the code official should verify whether the facility utilizes a public sewer, or if it is connected to a septic system. If a project is on a property that is connected to a septic system, it is important the local or county health office that reviews septic plans is involved. This is fundamental to ensure that all applicable requirements are met including the required capacity of the septic system, the maintenance of any required setbacks, and the protection of the septic system from construction activities (such as heavy equipment rolling over and crushing components, excavating near another utility line, etc.). This is of greater concern in areas where local building officials must coordinate with county-level health departments. The above require prior approval per *N.J.A.C.* 5:23-1.4, "Definitions."
- There is a difference in the separation distance required between a building sewer to a septic system and potable water service lines from a public water service main. Currently, DEP septic and water supply rules at *N.J.A.C.* 7:9A require a five-foot separation. However, the Plumbing Subcode at *N.J.A.C.* 5:23-3.15 only requires a one-foot separation. Plumbing subcode officials have jurisdiction in this matter; therefore, a one-foot separation should be enforced.
- If a project entails reconfiguring existing space to incorporate an additional bedroom(s) or constructing an addition that includes bedrooms, then the septic system typically requires an evaluation. Further, additions to the structure outside the existing footprint may require relocation of the system to maintain the required setbacks. The local health office responsible for septic system review must be contacted when any of the noted activities are proposed.

By opening the dialogue between State agencies and continuing communication lines to all building and health officials, we hope to make everyone's job a little easier by promoting the exchange of information. If you have any questions, please contact the Code Assistance Unit at (609) 984-7609, or the DEP's Bureau of Non-Point Pollution Control at (609) 292-0407.

Sources: Thomas C. Pitcherello
Code Assistance Unit

and

Mark Miller
DEP, Bureau of Non-Point Pollution Control

Duct Tape — What a Sticky Mess! 

This is a follow-up to the duct tape article that appeared in the Spring/Summer 2002 edition of the *Construction Code Communicator*. The Code Assistance Unit of the Department of Community Affairs has received many telephone calls pertaining to this article. The most frequently asked question is, "What is the proper type of pressure-sensitive (duct) tape sealant that would be permitted to be used on ductwork for residential installations that would comply with the 1995 Council of American Building Officials Model Energy Code (CABO MEC)?"

As stated in Section 503.8.2, "Duct Sealing," of the 1995 CABO MEC (residential), "Duct tape is not permitted as a sealant on any ducts." In other words, the everyday, run-of-the-mill, "You-can-buy-me-at-any-hardware-section-of-many-home-improvement-or-discount-centers" gray duct tape is not permitted as a sealant on any ductwork.

However, there has been some confusion with the use of the term "duct tape," because some products that actually do meet the duct sealant requirements of

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Underwriters Laboratories (UL) 181, "Standard for Factory-Made Air Ducts and Air Connectors," are labeled "duct tape," even though CABO MEC/1995 prohibits the use of duct tape as a sealant on ductwork.

There are two specific UL 181 standards for different types of ductwork: UL 181B-FX, "Standard for Closure Systems for Use with Flexible Air Ducts and Air Connectors," which is the appropriate testing standard for flex ducts; and UL 181A-P, "Closure Systems for Use with Rigid Air Ducts and Air Connectors," which is the appropriate testing standard for rigid fiberglass air ducts. UL 181A-P can also be used for flex ducts. In addition, although UL 181A-P is not specifically tested for metal ductwork, it is the appropriately labeled tape to use for metal ducts. (Please keep in mind that the UL label must be visible at all times – it should be printed directly on the face of the sealant.)

Therefore, if a duct tape has a visible label that "certifies" it meets either of the UL 181 requirements, then it is acceptable to use as a duct sealant.

Please note, this article pertains to pressure-sensitive tapes only. There are many other types of sealant products that are permitted as well. Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Escalators as Building Stairs

On November 4, 2002, the Department of Community Affairs proposed an amendment that would enhance the level of public safety for individuals using escalators. This proposal, at *N.J.A.C.* 5:23-12.12, Special Safety Equipment, requires a sign at the top and bottom landings of each escalator to prohibit standing escalators from being used as building stairs.

The Department is aware that, prior to 1987 (when the Building Officials and Code Administrators National Building Code was revised to prohibit it), an escalator was allowed to be part of a second means of egress, provided it was enclosed. The Department believes that there are not many (possibly not any) enclosed escalators that were constructed prior to 1987 as part of a second means of egress. Those that do exist, however, must be regarded as hazardous because the escalator device was not designed to support the loads that result from a fully loaded escalator being used as stairs. In those cases where there is an enclosed escalator that is part of a second means of egress, the fire official must identify/require another second means of egress.

If you have questions on this issue, please contact John Terry, Jeffrey Applegate, Marcel Iglesias, or Rob Austin of the Code Assistance Unit. They may be reached at (609) 984-7609.

Source: Emily Templeton
Code Development Unit

Gas Piping Protection – Above and Below Ground

Since the adoption of the 2000 edition of the International Fuel Gas Code (IFGC/2000), there have been questions on the proper means of protection for ferrous metal gas piping that is installed outdoors above ground.

Section 404.8, "Protection Against Corrosion," states in the third sentence: "Ferrous metal exposed in exterior locations shall be protected from corrosion in a manner satisfactory to the code official." This provision is intended to allow the use of a rust-prohibitive primer and paint to protect gas piping from corrosion. Zinc coatings (galvanizing) are allowed to be used to protect gas piping above ground, provided the exposed threads are properly painted to protect against corrosion. However, zinc coating is not an adequate means of protection for gas piping underground.

Factory-applied protective coatings and wrappings, per Section 404.8.2, must be approved for application, and shall be used for gas piping installed underground. Approved factory-applied protective coatings and wrappings may be used for above-ground gas piping as well.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

New Jersey Model Code Adoptions

On page 9 is a chart that provides the history of all of New Jersey's model code adoptions. This was intended to accompany the article printed in the Fall 2002 edition of the *Construction Code Communicator* entitled "History Lesson: Adoption of New Jersey's Model Codes." The chart was inadvertently omitted; however, it has been printed in this issue for your convenience.

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

Source: Rob Austin
Code Assistance Unit

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Fire Escapes -- Signing and Sealing of Construction Documents

There have been a number of inquiries as to when a licensed design professional is required to sign and seal construction documents for a fire escape. Guidelines for this requirement are provided in Formal Technical Opinion (FTO) 3, "Fire Escapes."

According to FTO-3, the two methods that may be used to comply with the Building Officials and Code Administrators (BOCA) National Building Code/1996 requirements are: a specification methodology and a design methodology.

1. Specification Methodology
Construction documents submitted to show compliance with the specification methodology are not required to be signed and sealed by a design professional licensed in the State of New Jersey. The specification methodology provided in FTO-3 standardizes the requirement to indicate compliance with BOCA/1996.

For example, FTO-3, "Method One (Specification Methodology), Part B, Landing Platform Components," states, "Floor surface support members shall be a minimum of 2½-inch x 2½-inch x ¼-inch steel plate angles, 50 inches in length maximum, and not spaced over 24 inches on center." The specification methodology identifies the components of the fire escape that are needed to comply with BOCA/1996. Therefore, when using the specification method in FTO-3, the construction documents are not required to be signed and sealed.

2. Design Methodology
Construction documents submitted under the design methodology must be signed and sealed by a licensed design professional. This method requires a design professional to apply the code requirements specified in FTO-3 to design the fire escape.

For example, FTO-3, "Method Two (Design Methodology), Part A, Construction," states, "The fire escape shall be designed to support a live load of 100 pounds per square foot." Because the design methodology provides the criteria necessary to design a fire escape that would comply with the applicable requirements, documents are required to be signed and sealed when utilizing the design methodology.

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

Source: Marcel Iglesias
Code Assistance Unit

ICC/ANSI A117.1-98 – What's New?

On November 4, 2002, the Department of Community Affairs adopted amendments to the Barrier Free Subcode at *N.J.A.C.* 5:23-7, which included a change of the edition of the Accessible and Usable Buildings and Facilities Standard that is referenced in the regulations. Specifically, the reference to the Council of American Building Officials/American National Standards Institute (CABO/ANSI) A117.1-1992 has been replaced with a reference to the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-1998. The purpose of this article is to highlight the major differences between these two standards.

1. The first major difference between the two editions of the Accessible and Usable Buildings and Facilities Standard is the format. CABO/ANSI A117.1-1992 contains text in the front of the publication and the illustrations are located in the back. In ICC/ANSI A117.1-1998, each illustration is contained next to the text that it depicts. However, the role of the illustrations has not changed. Remember, the illustrations do not contain additional requirements that are not contained within the text. Should there be a difference between the text and the illustration, the text applies.

2. Another formatting difference is the chapter styles of the standards. Take one look at the ICC/ANSI A117.1-1998 table of contents, and you will see the numbering is much easier to use and to cite than that provided in CABO/ANSI A117.1-1992.

3. Chapter 3 of ICC/ANSI A117.1-1998, "Building Blocks," is a new concept to the Barrier Free Subcode. This chapter contains the dimensions that are repeated and unchanged throughout the remainder of the standard. For example, the clear floor space for a wheelchair is 30 inches by 48 inches. This dimension remains the same throughout the standard, regardless of the subject matter; the clear floor space is the same for accessible routes, building elements, and plumbing fixtures. Therefore, each section that contains a requirement for clear floor space refers to the "Building Blocks" chapter. This is intended to be only one example of the many fundamental dimensions contained in Chapter 3.

4. From a technical standpoint, in ICC/ANSI A117.1-1998, the side-reach range is consistent with the front-reach range, both being 48 inches, whereas these ranges differed in CABO/ANSI A117.1-1992. (The side-reach range was 54 inches and the front-reach range was 48 inches.)

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5. It is important to note that the requirements for maneuvering clearance at doors are the same in both standards. However, a table has been provided in ICC/ANSI A117.1-1998 for easy understanding. Please refer to Table 404.2.4.1, Maneuvering Clearances for Manual Swinging Doors.

6. ICC/ANSI A117.1-1998 provides that doors are not permitted to swing into the clear floor space or clearance for toilet and bathing facility fixtures. Although this provision is not different from the requirement of CABO/ANSI A117.1-1992, the exception differs. In the 1992 edition, toilet rooms designed for individual use (known as "knock-and-locks"), or toilet rooms with a 30-inch by 48-inch space provided outside of the swinging door, were permitted to have the door swing in. In the 1998 edition, both of these conditions must be present. That is, the room must be a knock-and-lock, and a 30-inch by 48-inch space must be provided outside of the swinging door.

7. The requirements for clearances around water closets differ dramatically between the two standards. CABO/ANSI A117.1-1992 requires 48 inches of clearance in front of the water closet. Instead of the 48-inch dimension, ICC/ANSI A117.1-1998 requires a minimum of 56 inches of clearance perpendicular to the rear wall. This dimension is consistent with toilet compartment spacing required for wall-hung fixtures. Impact: The room is smaller by approximately one foot.

8. One of the biggest differences between the 1992 and 1998 editions of the standard is a difference of only two inches. However, the two inches in question involve the 16-inch to 18-inch range that is now allowed for the required distance between the centerline of the water closet and the adjacent wall. The two-inch range provides some flexibility for this very important dimension.

9. Section 604.3.1, "Clearance," of ICC/ANSI A117.1-1998 makes it very clear that no fixtures are permitted to impinge upon the water closet clearance. This issue has been the Number One source of Code Assistance calls since July 1, 1995, the day the Department adopted CABO/ANSI A117.1-1992.

10. Section 604.6, "Flush Controls," of ICC/ANSI A117.1-1998 provides that flush controls may be located on either side of the water closet. This issue accounts for the Number Two source of Code Assistance calls over the last seven years.

11. ICC/ANSI A117.1-1998 provides dimensions for alternate roll-in shower stalls in Section 608.2.3, "Alternate Roll-In-Type Shower Compartment."

12. ICC/ANSI A117.1-1998 sets forth requirements for "Special Rooms and Spaces" in Chapter 8. These spaces include assembly areas, dressing and fitting rooms, and most importantly, kitchens. This pertains to kitchens that are not contained within dwelling units. CABO/ANSI A117.1-1992 did not have requirements for kitchens, other than those located in dwelling units. Therefore, the Department had advised that required clear floor space and reach ranges must be provided for all fixtures and appliances contained within kitchens provided in buildings and spaces other than dwelling units. With the adoption of ICC/ANSI A117.1-1998, this has changed; the standard now clearly requires knee space at sinks and work spaces in kitchens that are provided with a conventional range or cook top (see Section 606.2, exception number one).

13. The requirements for adaptable dwelling units are contained in Chapter 10. It is important to know that the Department deleted the requirements for "Type B" dwelling units upon adoption. This means that there is only one type of adaptable dwelling unit in the State of New Jersey – a Type A dwelling unit.

14. The requirements for Type A dwelling units provided in ICC/ANSI A117.1-1998 are similar to the dwelling unit requirements set forth in CABO/ANSI A117.1-1992. The biggest difference is the requirements for residential bathrooms, which are provided in Section 1002.11.5.2, "Clearance," of ICC/ANSI A117.1-1998. As with nonresidential toilet rooms, the clearance around the water closet has been reduced. The 48-inch dimension in front of the water closet is not required in the 1998 edition of the standard. However, in Section 1002.11.5.2, there is a requirement for a five-foot turning radius within the residential bathroom. The end result is a bathroom that is almost the same size as required by CABO/ANSI A117.1-1992, with more flexibility for the design professionals as to where to provide the clear floor space.

This list is not intended to be all-inclusive; rather, it provides a list of the "big-ticket" differences between the two editions of the A117.1 Accessible and Usable Buildings and Facilities Standard. Should you have any questions regarding the requirements contained in ICC/ANSI A117.1-1998, please feel free to call the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

ISO is Reevaluating: What You Should Remember

The Department of Community Affairs has recently learned that the Insurance Services Office (ISO) is reevaluating code enforcement offices in New Jersey. During the initial evaluation, local code enforcement offices scored very well. We have discovered that, during the reevaluation, municipalities are not faring nearly as well. There are two main reasons for the lower scores during the reevaluation.

First, the State has not yet adopted the building and residential codes published by the International Code Council. This is a temporary situation. On December 16, 2002, the proposal to adopt the International Building Code (IBC)/2000, International Residential Code (IRC)/2000, and National Electrical Code (NEC)/2002 was published in the *New Jersey Register*. Following a 60-day public comment period, these codes will be published as an adoption in the *New Jersey Register* early in the spring of 2003. The Department plans to meet with representatives of the ISO to determine whether the reevaluations could be scheduled to follow, rather than precede, the adoption of the IBC/2000 and IRC/2000.

Second, in the evaluations that we have seen, local code officials are responding to some of the questions in terms of the Uniform Construction Code and not in the broad-based terms of the Building Code Effectiveness Grading System (BCEGS) questionnaire. For example, there is a question about "training." The BCEGS specifies 96 hours of training in a year. The questionnaire does not explain that, in the BCEGS system, "training" includes discussions about codes and code enforcement. According to this definition, any meeting (on the telephone or in person) where code requirements are discussed or explained, any code discussions within the office among code enforcement personnel, and any meetings of professional associations for code enforcement personnel all count as training. By this broad definition, it is hard to imagine that there is a code enforcement office in the State of New Jersey that does not exceed 96 hours each year!

Following the meeting with the ISO, we plan to publish in the *Construction Code Communicator* a guide to answering the BCEGS questionnaire. This guidance will be similar to that provided in the *Communicator* in 1996 and 1997, when the first evaluations were performed.

In the meantime, if you have any questions about the ISO, please contact Lou Mraw at (609) 984-7672 or me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Barrier Free Subcode: Large Building/Small Building

On August 5, 2002, a revision to the Barrier Free Subcode, Subchapter 7 of the Uniform Construction Code, was published in the *New Jersey Register*. The result of a decision by the Appellate Division of the Superior Court of New Jersey, this rule applies to multifamily residences the same large building/small building requirements that have applied to commercial buildings since 1986.

For multifamily residential buildings, the large building/small building distinction applies to buildings with four or more dwelling units. The rule provides that, in small buildings (which are less than 10,000 square feet total gross enclosed floor area), an accessible route and accessible building features are required for ground-floor dwelling units. In large buildings (which are 10,000 square feet or more total gross enclosed floor area), an accessible route (an elevator) and accessible building features are required throughout the building.

The rule further provides that, when deciding whether a building is a large building or a small building, firewalls that are penetrated for human passage do not designate separate buildings. This distinction is important when determining whether an elevator is needed to provide an accessible route.

Also, the rule provides that, for either a large building or a small building, when counting the number of dwelling units in a structure, firewalls do not designate a separate building. This distinction is important when determining whether the multifamily residential structure is subject to the Barrier Free Subcode.

The Barrier Free Subcode continues to require that [unless exempted by *N.J.A.C.* 5:23-7.3(b), "Exemptions"], in an elevator-serviced building, all (100 percent) of the dwelling units must be accessible. In a building without an elevator, ground-floor dwelling units must be accessible. The Barrier Free Subcode also now specifies that an accessible dwelling unit is one with an accessible entrance, an accessible interior route, one full accessible bathroom on an accessible route, required clear floor spaces and reach ranges, and maneuvering spaces at doorways. Adaptable features are permitted in the kitchen and in the accessible bathroom that is on the accessible route.

NOTE: Although an elevator is not required in a small building, if one is provided, all dwelling units must be accessible. Multifamily residential structures with fewer than four dwelling units in a single structure are exempt.

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A chart summarizing the requirements for large buildings and small buildings as they apply to the accessibility of multifamily residential structures might help.

Category of Residential Building	Size of Building	Number of Dwelling Units	Accessible Route	Required Accessible Dwelling Units
Large Building	10,000 square feet or more*	4 or more dwelling units**	elevator required	100%
Small Building	less than 10,000 square feet*	4 or more dwelling units**	no elevator required	ground floor
*When determining square footage of a building, firewalls not penetrated for human passage designate separate buildings. **When counting the number of dwelling units in a single structure, firewalls do not designate separate buildings.				

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

Source: Emily W. Templeton
Code Development

New Jersey Register Adoptions

Date: August 19, 2002
Adoption: 34 *N.J.R.* 2965(a)
Summary: This adopted amendment corrects several cross-references. At *N.J.A.C.* 5:23-2.14(b)4, "Construction Permits – When Required," the cross-references to the provisions of *N.J.A.C.* 5:23-3.14(b)22 have been updated to *N.J.A.C.* 5:23-3.14(b)23, which provides amendments to the Building Subcode pertaining to "Special Construction."

Date: October 7, 2002
Adoption: 34 *N.J.R.* 3497(b)
Summary: This adopted amendment at *N.J.A.C.* 5:23-9.1, "Interpretations: Plumbing Subcode," allows attached, single-family dwelling units in groups of three or more to be served by common water lines and building sewers, provided the common water service is located on a property that is subject to an (association) easement or is located on common property. Also, a homeowner's association or some other entity must be responsible for maintenance.

Date: November 4, 2002
Adoption: 34 *N.J.R.* 3771(b)
Summary: This adopted amendment corrects a typographical error in the codification of a provision in the Building Subcode regarding elevator car size and accommodation of a 24-inch by 76-inch ambulance stretcher.

Date: November 4, 2002
Adoption: 34 *N.J.R.* 3772(a)
Summary: These adopted amendments revise the Barrier Free Subcode, Subchapter 7 of the Uniform Construction Code, by adopting the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-1998 as the technical standard for accessible design and construction. In addition, the adopted amendments recodify and clarify the accessibility requirements for large buildings, small buildings, and multifamily residences.

Source: Megan K. Sullivan
Code Development Unit

(continued from page 4)

New Jersey Model Code Adoptions

(Revised 11/4/02)

Building Subcode		Electrical Subcode	Energy Subcode			Fire Subcode		Mechanical Subcode		Fuel Gas Subcode	Plumbing Subcode	1 & 2 Family	Barrier Free (Sub 7)		Rehab (Sub 6)	Effective Date
BOCA	IBC	NEC	BOCA	CABO MEC	ASHRAE Std. 90.1	BOCA/ NFPA	IBC/ NFPA	BOCA	IMC	IFGC	NSPC	CABO IRC	CABO/ ANSI A117.1	ICC/ ANSI A117.1		(date when six month grace period began)
1975		1975				1975					1975					01-01-77
1976/S						1976/S										12-01-77
1978		1978				1978					1978					10-01-78
1981		1981				1981					1980					05-07-81
1983/AS						1983/AS					1981/82/S					02-22-83
1984		1984				1984		1984			1983					08-06-84
1985/S						1985/S		1985/S								04-01-85
												1983				07-01-85
											1984/85/S					02-03-86
1986/AS						1986/AS		1986/AS								09-22-86
1987		1987				1987		1987								04-01-87
											1987	1986				09-21-87
1988/S						1988/S		1988/S								06-20-88
												1987/88/A				08-15-88
			1987													09-06-88
											1988/S					02-06-89
1989/AS						1989/AS		1989/AS			1989/S					11-01-89
												1989				05-21-90
1990		1990	1990			1990		1990			1990					07-01-90
1991/S						1991/S		1991/S								03-04-91
											1991/S	1990/91/A				05-20-91
1993		1993	1993			1993		1993			1993	1992				05-01-93
					1989								1992			07-01-95
															1998	01-05-98
1996		1996	1993			1996		1993			1996	1995				07-06-99
		1999														02-07-00
															Revised	12-18-00
									2000	2000						06-18-01
											2000					09-17-01
															Revised	01-07-02
				1995	1999											01-16-02
														1998		11-04-02

S = Supplement AS = Accumulative Supplement A = Amendments

Licensing Update

On August 5, 2002, the Department of Community Affairs adopted new regulations at *N.J.A.C.* 5:23-5.20, "Standards for Educational Programs," concerning the subjects to be covered in the Building Inspector RCS, ICS, and HHS courses, and the Plumbing Inspector ICS and HHS courses. These changes are the result of a comprehensive review of the prior standards by broad-based committees comprised of active code officials, instructors, and the respective inspector associations. The result of the committees' work is a much more standardized and specific course of study in areas that are vitally important to students pursuing a career in construction code enforcement. Additional items of importance that have presented themselves since the initial standards were promulgated have also been developed and incorporated into the course standards.

The Department is currently evaluating the fire protection inspector courses. Changes in course requirements are anticipated to be proposed in the spring or summer of 2003. After the fire protection course review is completed, we will move on to a review of the standards for the electrical inspector licensing courses.

The most notable change in the courses for building and plumbing inspectors is the number of course hours required. The Building Inspector RCS course will require a minimum of 90 hours of instruction, as opposed to the former 60-hour requirement. The Building Inspector ICS course will now require a minimum of 75 hours of instruction, whereas the former standard required 90 hours of instruction. Also, the Plumbing Inspector ICS course now requires a minimum of 120 hours of instruction, as opposed to the former 90-hour requirement. Finally, the Building Inspector HHS and Plumbing Inspector HHS courses remain unchanged at a minimum of 60 hours of instruction each. These changes will be in effect for the Spring 2003 semester. Anyone who completes any of the affected courses prior to the Spring 2003 semester will continue to receive credit for the course, subject to the five-year limitation on the validity of construction code courses.

As a result of the changes in course standards, changes to which examinations are required for licensure were also necessary. These changes were based upon the duties of inspectors at the various levels of licensure. The Building Inspector RCS level will require examinations in "building, one- and two-family dwellings," as well as "mechanical, one- and two-family dwellings." The Building Inspector ICS level will require examinations in "building, general" and "mechanical, general." The Plumbing Inspector ICS license will now require examination in "plumbing, general" and "mechanical, general."

The changes in required examinations will take effect February 5, 2003. Those who have completed the examinations required under the old regulations must submit an application for the affected license before this date. Those who apply for licensure on or after February 5th will be required to complete the examinations as noted above.

If you have any questions regarding the above changes, please contact me at (609) 984-7834, or by e-mail at codeslicensing@dca.state.nj.us.

Source: John A. Delesandro
Supervisor of Licensing

Prohibited Paint Removal Methods

The Department of Community Affairs has a chapter of regulations (*N.J.A.C.* 5:17, Lead Hazard Evaluation and Abatement Code) which deals specifically with lead paint testing and abatement by licensed abatement and evaluation contractors. A permit for lead abatement is obtained from the local construction official. All inspections of lead abatement work are performed by State inspectors. In order to close out the permit for the abatement work, a clearance certificate must be obtained from the local construction official.

Sometimes, however, the Department receives questions about work practices in buildings where there is no "lead abatement" under *N.J.A.C.* 5:17. There are questions about whether there is too much paint debris or dust generated and whether anything can be done. Under the Rehabilitation Subcode of the Uniform Construction Code (UCC), *N.J.A.C.* 5:23-6, there are certain paint removal methods which are prohibited in buildings in certain use groups.

In all Use Group R buildings built prior to 1978, in all Use Group E buildings, and in Use Group I-2 buildings used for childcare, there can be no uncontained water blasting or power washing, open flame burning, use of high-temperature (more than 1100°F) heat guns, or dry scraping or sanding more than two square feet per room. (Proposed amendments to the Rehabilitation Subcode would prohibit dry scraping or sanding more than two square feet per room, interior; and ten square feet or more per building, exterior.) Please see *N.J.A.C.* 5:23-6.4(d)5 for prohibitions in repairs, *N.J.A.C.* 5:23-6.5(d)6 for renovations, *N.J.A.C.* 5:23-6.6(d)6 for alterations, and *N.J.A.C.* 5:23-6.7(d)5 for reconstruction.

If officials observe violations of these code sections, violators should be cited under the UCC. If there is a problem that involves a State-licensed lead abatement contractor,

please inform the Asbestos/Lead Unit at (609) 984-7815 of any action you take.

Source: Chrystene Wyluda
Asbestos/Lead Unit

Park Model Trailers Support and Stabilizing System

The Department of Community Affairs has recently been informed that several manufacturers of park model trailers and owners/residents of campgrounds are claiming park model trailers are not required to have any type of support or stabilizing (anchoring) system. This is not accurate.

Uniform Construction Code (UCC) Bulletin No. 93-6, "Label Requirements for Park Models," states that, wherever park model trailers are located, they are subject to the requirements of the UCC. It does not matter whether they are used for vacation purposes or as permanent residences. Therefore, properly designed foundation stabilization systems must be provided for each park model trailer.

A construction permit is required to initiate the work to be completed and all applicable inspections must be conducted to ensure the anchoring system is compliant with the code. A Certificate of Occupancy must be issued before the park model trailer can be occupied.

When applying for the construction permit, the applicant is required to submit designs and specifications for the foundation and stabilization systems, based upon the applicable requirements of Section 1609, Wind Loads; Section 1804.1, "Loadbearing Value of Soils, Soils Report;" and Section 1806.1, "Depth of Footings, Frost Protection" of the Building Officials and Code Administrators National Building Code/1996. The designs and specifications must be signed and sealed by a professional engineer or an architect licensed in New Jersey, and must also clearly indicate the type, make, model, etc. of the anchoring equipment so that the construction code official can verify conformance in the field.

I hope this will clear up any confusion. If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva
Bureau of Code Services

Manufactured Homes: Permanent Foundations

Uniform Construction Code Bulletin No. 88-2, "Manufactured Housing," identifies four specific conditions for a manufactured home (formerly called "mobile homes") to be located on a private property. One condition is the requirement for a permanent foundation for the manufactured home. The Department of Community Affairs has received several inquiries regarding the definition and guidelines for these permanent foundations. The following information should be useful in the enforcement of this provision:

- The use of straps and anchors (whether concrete or soil anchors) does not constitute a permanent foundation.
- Permanent foundations are required to be constructed of durable materials, i.e., concrete, mortared masonry, or treated wood, and must be site-built. Permanent foundations are required to have attachment points to anchor and stabilize the manufactured home in order to transfer all loads to underlying soil or rock.

Please note, *N.J.A.C.* 5:23-2.15(e)1.vi, "Construction Permits – Application," provides that the foundation and stabilizing system must be designed by a New Jersey licensed professional engineer or registered architect. The structural design of the foundation system is required to be developed in accordance with the manufacturer's instructions for permanent foundation and must take into consideration the following:

- Vertical Stability:
  1. Rated anchorage capacity must prevent uplift and overturning due to wind forces. Screw-in anchors are <u>not</u> acceptable.
  2. Footing size must prevent overloading the soil-bearing capacity and must avoid soil settlement. Footing shall consist of reinforced concrete and shall be considered permanent.
  3. Base of footing is required to be below maximum frost-penetration depth.
  4. The crawl space, when provided, shall be enclosed with a continuous wall. The wall may be bearing or non-bearing.
- Lateral Stability:
  Rated anchorage capacity must prevent sliding due to wind forces.
- Design:
  The design of a permanent foundation must be based on the applicable requirements of Section 1609, "Wind Loads," in the 1996 edition of the Building Officials and Code Administrators National Building Code.

(continued on page 12)

(continued from page 11)

For more detailed information relating to this subject, please refer to the US Department of Housing and Urban Development publication entitled, "Permanent Foundations Guide for Manufactured Housing."

If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva
Bureau of Code Services

Summary of Changes to the Rehabilitation Subcode – 2002

The proposed amendments to *N.J.A.C.* 5:23-6, the Rehabilitation Subcode, incorporate changes from the adoptions of the International Code Council editions of model codes by incorporating the updated model code section numbers into the Uniform Construction Code (UCC). These include references to the International Building Code 2000, International Residential Code 2000, International Mechanical Code 2000, International Fuel Gas Code 2000, National Electrical Code 2002, and International Code Council/American National Standards Institute (ICC/ANSI) standard for accessible design A117.1-1998. All of the existing model code references would be deleted and the new, updated references would be inserted in their place.

In addition to these revisions, the following amendments are being proposed in an effort to update the UCC by deleting terms and references that are obsolete. A section-by-section summary of the proposal follows:

1. At *N.J.A.C.* 5:23-6.1, Introduction, using this subcode, references to several cites have been amended to provide the code user with more precise references.

At *N.J.A.C.* 5:23-6.1(f)5iii, the reference to *N.J.A.C.* 5:23-6.12, Basic Requirements – Use Group A-1, would be deleted and replaced with *N.J.A.C.* 5:23-6.11, Basic Requirements in All Use Groups.

At *N.J.A.C.* 5:23-6.1(g)4ii, the reference to *N.J.A.C.* 5:23-6.31, Change of Use, would be changed to *N.J.A.C.* 5:23-6.31(c), which specifically pertains to means of egress.

At *N.J.A.C.* 5:23-6.1(g)4vii, the reference to *N.J.A.C.* 5:23-6.31(h), (i), and (j) would be changed to cite only *N.J.A.C.* 5:23-6.31(h) and (i), which provide for the installation of fire alarm systems and automatic fire detection systems in a building that has undergone a change of use. The reference to *N.J.A.C.* 5:23-6.31(j), Single- and Multiple-Station Smoke Detectors, is a typographical error.

2. At *N.J.A.C.* 5:23-6.4(d)5iv, *N.J.A.C.* 5:23-6.5(d)6iv, *N.J.A.C.* 5:23-6.6(d)6iv, and *N.J.A.C.* 5:23-6.7(d)5iv, restrictions would be added to limit dry scraping or sanding of painted surfaces of pre-1978 structures to two square feet per room for interior surfaces and ten square feet per building for exterior surfaces.

3. At *N.J.A.C.* 5:23-6.25(b)5 and *N.J.A.C.* 5:23-6.26(a)7, which prescribe basic requirements for Use Groups R-1, R-2, and R-4, the word "not" would be deleted to correct a typographical error. Also, the term "opening protection" would be deleted and replaced with "opening protectives" for use of a more accurate term.

4. *N.J.A.C.* 5:23-6.31(a)8, Change of Use, would provide for the installation of single- or multiple-station smoke detectors and a fire separation assembly between dwelling units when an existing single-family dwelling is converted to a two-family dwelling.

Source: John N. Terry
Code Assistance Unit

Code Change Proposals for the Rehabilitation Subcode (*N.J.A.C.* 5:23-6)

Once again, it is time to submit code change proposals for the Rehabilitation Subcode. Code changes may be aimed at improving the Rehabilitation Subcode by recommending a requirement that is not currently there, or they can address a requirement that seems unclear. Since its adoption in 1998, the Department of Community Affairs has encouraged code users to submit Rehabilitation Subcode code changes. This process, through which code changes based on the experience of the code users are presented and discussed, has been very successful.

To be considered this year, code changes must be submitted to the Department by March 10, 2003. The code change must be specific — the citation and the exact language change must be given. An explanation must be provided and any companion changes (other sections of the Rehabilitation Subcode that would also need to be changed) must be identified.

The code changes will be collated and presented to the Uniform Construction Code Advisory Board. A public hearing will be held at 9:30 a.m. on April 11, 2003 in Conference Room 129 of the Department of Community Affairs at 101 South Broad Street in Trenton. The public hearing will give code change proponents a chance to present — and explain — their proposals to the members of the Code Advisory Board.

A code change proposal form is included on the next page for your convenience. If you have any questions about this process, please contact the Code Development Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
CODE CHANGE PROPOSAL 2003
REHABILITATION SUBCODE (*N.J.A.C.* 5:23-6)

Due: **March 10, 2003**
Proposals must be presented with language proposed for deletion in brackets [ ].
Proposals must be presented with language proposed for addition underlined ____.

Mail code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625

Fax code change proposals to:
Code Development Unit
(609) 984-7717 or
(609) 633-6729

Direct questions to the Code Development or Code Assistance Units at (609) 984-7609.

Section (citation) proposed for change: _____

Sections (companion changes) that might also need to be changed: _____

_____

NAME: _____

ORGANIZATION (if any): _____

ADDRESS: _____

_____

TELEPHONE: _____ FAX: _____ E-mail: _____

Proposed Code Change:

_____

_____

Supporting Statement (reason for code change):

_____

_____

_____

_____

Swimming Pool Etiquette 

Ok, here it is . . . the official scoop on all you've ever wanted to know about the Uniform Construction Code (UCC) requirements applicable to a private swimming pool. Specifically, this article explains provisions for swimming pool sizes, materials, barriers, and electrical requirements.

Building Components:

Identifying the point at which a swimming pool is regulated by the 1996 edition of the Building Officials and Code Administrators National Building Code (BOCA/1996), the Building Subcode, has been confusing for several enforcing agencies. This article should clarify these uncertainties.

Section 421.1 of BOCA/1996 states that all swimming and bathing facilities are regulated by BOCA/1996, except for those that are less than 24 inches in depth or those that are less than 250 square feet in surface area (18 feet in diameter). These two conditions are written as exceptions to the initial requirement and they are independent. This means that if the swimming/bathing facility is either less than 24 inches in depth or less than 250 square feet in surface area, then the facility is exempt from the BOCA/1996 requirements. For example, a pool that is 23 inches in depth and 500 square feet in surface area is exempt from the requirements. A pool that is 54 inches in depth and 240 square feet in surface area is also exempt.

Additional exceptions to BOCA/1996 further complicate the issue. BOCA/1996 also states pools that are less than the required dimension or depth mentioned above are not exempt when they are constructed of structural materials, or are permanently equipped with water recirculation equipment. The standard interpretation of a pool that does not involve structural materials is a pool that relies on water or air to remain upright. This type of pool is usually made of nonmetallic, molded polymeric or inflatable walls.

Another point that has been confusing for many enforcing agencies is whether installed water recirculation equipment is considered permanent. There are two primary conditions of the water recirculation equipment that should be observed to determine its permanence. If the equipment is permanently connected to the electrical service, or if the equipment is cord-and-plug type but is required to be bolted to a foundation, then the equipment should be considered permanent. In such instances, the equipment should be regulated by the Building Subcode.

Moving beyond the pool itself, swimming pool barriers have also been a topic of discussion. Simply stated, if a swimming pool is not exempted by the above requirements, it is regulated by the Building Subcode, in which case a swimming pool barrier is required. The definition of a swimming pool barrier can be found in Section 421.2 of BOCA/1996, where it is defined as a fence, a wall, a building wall, the wall of an above-ground swimming pool, or a combination thereof which completely surrounds the swimming pool and obstructs access. The requirements for construction of a swimming pool barrier can be found in Section 421.10 of BOCA/1996 (note: 421.10.1, #9, is deleted). Please keep in mind that the primary purpose of a barrier is to protect the safety of small children, particularly those five years old or younger, by limiting or delaying access to a pool.

A swimming pool barrier may be placed anywhere up to the property line, provided a local ordinance does not say otherwise, and as long as the pool is completely surrounded. The barrier must be independent of any neighboring barrier. Neighboring barriers are not to be shared for purposes of meeting pool barrier requirements. If sharing pool barriers were allowed, a neighboring property owner could decide to remove his barrier. This would leave a pool without a barrier on all sides, which would be in violation of the Building Subcode.

Two conforming pool barriers may be placed back to back, provided the barriers are not climbable from either side. However, if a neighboring property contains a climbable fence or barrier, the barrier for the new pool should be placed a sufficient distance away in order to limit access to the pool. This distance should be based upon the topography of the properties. Separation distances between the fence and the barrier may range from two feet to four feet. Smaller or greater ranges may be appropriate, based upon specific circumstances.

When determining whether a building permit is necessary for installation, the following statement applies: If the swimming pool is not exempted by Section 421.1 of BOCA/1996, a building permit is required.

The Department of Community Affairs is proposing an amendment to the International Building Code and the International Residential Code to keep swimming pool requirements the same as those in BOCA/1996, as described above.

Electrical Components:

The Code Assistance Unit has also heard some confusion about whether an electrical permit is

required for the installation of a swimming pool. Typically, there are two scenarios that would trigger the need for an electrical permit: 1) if a swimming pool is capable of holding water to a depth of greater than 42 inches, or a pool has nonmetallic, molded polymeric walls or inflatable fabric walls, regardless of dimension; or 2) if a swimming pool is equipped with permanent recirculation equipment, regardless of dimension. Please note, the requirements for electrical permits are completely independent of building permit requirements.

The chart below further clarifies when an electrical or building permit would be required for the installation of swimming pools.

If you have questions on this matter, feel free to contact the Code Assistance Unit at (609) 984-7609.

Sources: John N. Terry and Rob Austin
Code Assistance Unit

Permit Application for Swimming Pools -- When to File

	Permit Application Required	
	Building Subcode	**Electrical Subcode**
A - Maximum Water Capacity -- A Pool That Is:		
24 inches or greater depth and 250 square feet or greater area	Y	N[1]
Less than 24 inches deep and 250 square feet or greater area	N	N[1]
24 inches or greater depth and less than 250 square feet area	N	N[1]
[ð]Less than 24 inches deep and less than 250 square feet area	N	N[1]
B - Pool above or on ground with nonmetallic, molded polymeric or inflatable walls	N[2]	N[1]
C - Pool involving structural materials, regardless of dimension	Y	N[1]
D - Pool equipped with permanent water recirculation system, regardless of dimension	Y	Y[3]

Notes:
1. Required where mandated by the conditions in Item D.
2. Required where mandated by the conditions in Item A.
3. Not mandated if all of the following conditions are met:
--Motor/filtration pump unit is portable (no foundation/not bolted down) and can be readily disassembled from the water circulation system;
--Motor/filtration pump unit is listed (UL, etc.) as double insulated and has a cord with a minimum of 25 feet in length;
--[ð]Pool is capable of holding water to a maximum depth of 42 inches; and
--Pool has no underwater lighting.

REMINDER: Swimming pools receive a Certificate of Approval (not a Certificate of Occupancy).

Technical Assistant/Permit Technician

If you are working in a municipality as a Technical Assistant (TA), if you have completed the certification course offered through the Department of Community Affairs' continuing education program, or if you have just completed the Department's TA college course, then the International Code Council is offering a test that would give you national recognition and help to enhance your credibility in your profession.

New Jersey offers certification courses to support staff working in the Office of the Construction Official. Over 110 students have already taken advantage of the college courses that were offered during the fall semester, bringing the total of certified TAs to over 400 throughout the State. You may want to take the next step!

The first TA to successfully complete the Permit Technician Examination (P2) and receive this national recognition is Ede DeLuca. With 20 years of experience, Ms. DeLuca is currently working in Vernon Township, Sussex County and is teaching the TA course at Sussex County College. She is also active in the Bergen-Passaic TA Association, where she holds the position of Secretary.

Please be advised that the P2 is not mandatory. If you would like more information on the P2 or the practice course, please contact Building Officials and Code Administrators International at (708) 799-2300. If you are interested in the availability of college courses, please call the Education Unit of the Department at (609) 984-7820.

Source: Susan H. McLaughlin
Supervisor, Education Unit
Bureau of Code Services

UCC Standard Forms – Inspection of LPG Installations



In May 2001, amendments to *N.J.A.C.* 5:23-3.4 were adopted assigning responsibility for inspection of liquefied petroleum gas (LPG) installations up to 2,000 gallons aggregate water capacity to the plumbing subcode official. However, the Uniform Construction Code standard form for the Fire Protection Subcode Technical Section has not yet been amended to reflect this change. Please disregard the LPG item on this form. Inspection of these systems is the responsibility of the plumbing subcode official only.

Source: Kristy Paolillo
Code Development Unit

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS

Division of Codes and Standards
101 South Broad Street
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Trenton, NJ 08625

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Construction Code Communicator

State of New Jersey
Donald T. DiFrancesco, Acting Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

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Private Garages Below Living Spaces

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 407.3 of the 1996 Building Officials and Code Administrators (BOCA) National Building Code, 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 which are considered acceptable methods of providing a one-hour fire-resistance-rated assembly. FTO-13 does not, however, supersede the Building Subcode. FTO-13 provides examples of acceptable ways to meet the requirements of the Building 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

Bachelor Degrees Available On-Line

An agreement benefiting code enforcement professionals has been made between Building Officials and Code Administrators (BOCA) International and Central Michigan University (CMU). BOCA and CMU, a comprehensive university dedicated to providing a broad range of educational programs and services, are offering an on-line degree program that gives students a chance to obtain a Bachelor of Science degree in Business Administration with an area of concentration in Code Administration.

On-line learning provides code enforcement professionals with an opportunity, based on their own schedules, to obtain a degree wherever there is Internet access. The degree program combines traditional education courses associated with a business degree — accounting, economics, management, and technology — with specific code-related courses. Students can enroll in the program as new students, or credits may be transferred from other schools or universities.

If you would like to learn more about obtaining a degree of this kind, you may call BOCA at 1-800-214-4321, extension 355.

Source: Susan H. McLaughlin, Supervisor
Education Unit
Bureau of Code Services

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Basements vs. Crawlspaces

As local officials, do you know the difference between basements and crawlspaces? Well, if you are not sure, don't worry because you are not alone. Recently, the Department received a call from a local official asking about this difference. The official had received a set of plans indicating that a space below the first floor was a crawlspace. The space in question was below grade, had a height of 12 block courses (12 x 8 inches = 96 inches) below the first floor joist, and was served by a stair from the first floor. It appeared that this space was a basement. However, the house in question was built in a flood zone and, according to the 1996 Building Officials and Code Administrators (BOCA) National Building Code's standards, was not permitted to have a space with a floor below the base flood elevation, so the applicant called the area a "crawlspace." Why does it matter if the house was built in a flood zone? The answer is simple.

Both the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program and the Uniform Construction Code's (UCC) regulations contain provisions regarding these particular uses of a space. First, let's consider FEMA's regulations, which are very simple. According to FEMA, any space below the first floor is considered a basement and a floor below grade is not permitted in a flood zone.

Now, let's consider the UCC.

1. Since BOCA has been adopted as the Building Subcode (BOCA/1996), the definition of a basement is "that portion of a building which is partly or completely below grade." BOCA does not define the term crawlspace, so let's turn to Webster's dictionary. In the dictionary, crawlspaces are, "low, narrow spaces that provide access to plumbing, wiring, and heating systems."

2. A basement is below the first or ground floor. Crawlspaces can be located below the first or ground floor, but they can also be found in other areas of the building.

3. According to BOCA Section 502.0, a basement equals a story. It can be considered as if it were a "story above grade" or as a "windowless story." A crawlspace, on the other hand, cannot be considered a story.

4. Crawlspaces, according to BOCA Section 1211.1, follow the minimum access requirement. A basement must comply with the building's egress requirements.

5. In the UCC, basements are considered "usable spaces" and may even be habitable. Therefore, basements require a fire separation. A crawlspace, on the other hand, is considered "unusable" and requires no fire separation.

In conclusion, according to BOCA, any space, even a crawlspace, below the first or ground floor is a basement. And, according to FEMA's National Flood Insurance Program, any space below the first or ground floor is considered a basement and a building or a house may not have a floor elevation below grade in a flood zone. When a space is designated as a crawlspace, it can only be used for access to building utilities and framing elements.

I'm not sure who said this but, "If it looks like a duck, walks like a duck, and quacks like a duck, then it's a duck." In flood zones, ducks might be okay, but basements constituting floors below grade are not allowed.

Source: Jeffrey Applegate
Code Assistance Unit

Certified Contractors for Unregulated Heating Oil Tanks

This article is intended as a follow-up to the original article entitled, "Certified Contractors for Unregulated Heating Oil Tanks," which appeared in the Volume 12, Number 2, Summer 2000 edition of the *Construction Code Communicator*. The article states that anyone performing services including installation, removal, abandonment, and testing on "unregulated heating oil tanks" is to be certified by the Department of Environmental Protection (DEP). As of yet, the DEP has not developed the certification program. Therefore, Uniform Construction Code (UCC) code officials, until otherwise notified, should not require contractors to be certified to perform this type of work on unregulated heating oil tanks. This does not affect services performed on regulated tanks.

Should you have any questions, you may contact the DEP, Bureau of Underground Storage Tanks at (609) 292-8761, or the Code Assistance Unit at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

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Recording Housing Demolitions

Most construction officials and technical assistants have little difficulty recording useful and accurate information about demolitions. There is confusion among a few, however, who mix up the loss of a building with the loss of a house or apartment. While it is true all houses are buildings, not all buildings are houses. Too many times, I see a demolition permit issued for an office building, a store, or a warehouse and a number is inserted telling me one or more dwellings were lost. Unless there was an apartment over the store that was razed or that public storage building slated for demolition has a residence for the facility's manager, no dwellings are lost as a result of the demolition. Please do not record a loss of either a rental or a for-sale unit if the demolished building had none.

Some make this mistake with residential accessory structures, like garages or storage tanks. A demolition permit is issued for their removal and then we're told a dwelling unit was lost. This is only true if the garage had an apartment over it, or if Aunt Sally lived in a 1,000-gallon oil tank outfitted with a cot, a bathroom, and a kitchenette.

If computers are used to record demolitions, keep in mind demolitions should be categorized as follows. For demolitions of residential buildings, use one of the following Census item numbers depending on the number of **housing units**, *not buildings*, **lost**. Item number 645 is for the demolition of a residential structure with one dwelling, a single-family house, for example. This should be the most common number used. Item number 646 is for a residential building with two dwellings, a duplex, for example; 647 denotes the demolition of a residential building with three or four dwelling units; and 648 is for a residential building with five or more houses or apartments. Whenever one of the item numbers is used from this series, we are going to assume this is a demolition of a residential structure. We will expect to see the loss of one or more dwellings, either for-sale or rental units.

Demolitions of all *nonresidential* structures fall under Census item number 649. This includes accessory structures to residential buildings, like garages and storage tanks. Most of the time, houses or apartments are not lost in this situation. I realize that, in very rare instances, there may be exceptions. When they occur, I might call your office for the story. Please be patient. Do not confuse the loss of a dwelling with the loss of a building. We're only asking for the number of dwelling units lost.

One person asked about a "partial" demolition, where part of a house is obliterated. This isn't a demolition; it's an alteration. Use Census item number 434.

If you have any questions, I may be reached at (609) 292-7898.

Source: John Lago
Planning and Program Development

International Codes Under Review

The State of New Jersey is working hard to review and to consider adopting the International codes. An advisory committee, comprised of representatives from the construction industry, code officials, and consumer and safety advocates, has been formed, and committee members have been divided into subject-specific, technical working groups to take a closer look at different aspects of the codes. These working groups include:

- Administrative Issues and Appendices;
- Unlimited area buildings, height and area, and sprinkler provisions;
- Wood frame construction, firewalls, open stairs, egress, and other fire safety issues;
- Use Group R-4 (group homes and assisted living);
- Engineered Wood Frame Construction; and
- Residential Affordability Issues.

The charge to the International Code Council (ICC) Advisory Committee is to review the International codes for consistency with the intent and purpose of the Uniform Construction Code (UCC) Act. The UCC Act was signed into law in 1975 for the express purpose of controlling the cost of construction while allowing the use of new technologies, and protecting public health and safety. The working groups are identifying areas of change in the International Residential Code (IRC) and International Building Code (IBC) from the current Building Subcode (the Building Officials and Code Administrators (BOCA) National Building Code/1996 and the CABO One- and Two-Family Dwelling Code/1995). They have the ability to recommend amendments to the International codes to ensure consistency with the UCC Act. As the working groups complete their reviews, a report will be made to the entire ICC Advisory Committee, which will, in turn, make recommendations to the Department.

Another aspect of the charge to the ICC Advisory Committee is the request to come up with a timely, efficient, and reliable process for the review of new model code editions in the future. The model codes are amended on a three-year code change cycle. Upon the publication of each new edition of the adopted model codes, the Department conducts a technical review for consistency with the UCC Act. The reviews are lengthy and time consuming. The ICC Advisory Committee has been asked to recommend to the Department a code review process that will hasten the adoption of the newest code edition without diminishing the quality of the technical review.

The ICC Advisory Committee is scheduled to meet on the fourth Tuesday of every month at 10:00 a.m. in Conference Room 129 at the Department of Community Affairs, 101 South Broad Street, Trenton. In the event that there is no new information to share with the full ICC Advisory Committee, scheduled meetings will be cancelled. If you wish to attend, please contact the Code Development Unit at (609) 984-7609 to confirm meeting dates.

Source: Lauren Sturm
Code Development Unit

NCPCCI EXAMS SUSPENDED

The National Certification Program for Construction Code Inspectors (NCPCCI) is suspending all exams from April 1 - July 1, 2001.

Due to insurmountable problems with test development, the exams will not be available from April 1 through July 1, 2001. When the exams come back on-line on July 2, 2001, they will have been updated to the International Code Council's (ICC) family of codes.

This means that, beginning April 2, 2001, the exams will be based on the following model codes.

1A	Building One- and Two-Family	International Residential Code (IRC)/2000
2A	Building General	International Building Code (2000)/2000
3A	Building Plan Review	IBC/2000
2A	Electrical One- and Two-Family or National Electrical Code	International Residential Code (IRC)/2000 (NEC)/1999
2B	Electrical General	NEC/1999
2C	Electrical Plan Review	NEC/1999
3B	Fire Protection General	IBC/2000
3C	Fire Protection Plan Review	IBC/2000
4A	Mechanical One- and Two-Family	IRC/2000
4B	Mechanical General	International Mechanical Code (IMC)/2000
4C	Mechanical Plan Review	IMC/2000
5A	Plumbing One- and Two-Family	IRC/2000
5B	Plumbing General	National Standard Plumbing Code (NSPC)/2000
5C	Plumbing Plan Review	NSPC/2000
6B	Elevator General	IBC/2000

This list provides only the applicable model codes; it does NOT include any technical standards that might also be required to take specific exams. Questions may be addressed to Experior at 1-800-280-3926, or to me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Acceptable Practices for the Cleaning of Underground Storage Tanks

It has come to the attention of the Department of Community Affairs that the article entitled, "Abandonment of Underground Residential Heating Oil Tanks Under 2001 Gallons," which appeared in Volume 12, Number 4, Winter 2000 *Construction Code Communicator*, has caused some confusion. With regard to the acceptable practices for the cleaning of an underground storage tank (UST) set forth in Bulletin 95-1B, the Department of Environmental Protection (DEP) has determined that any liquid and/or sludge generated from cleaning a UST is considered solid waste. Prior to abandoning a UST, all contents of the tank, including any materials introduced into the tank for the purpose of cleaning, shall be removed and recycled or disposed of properly. Therefore, **all absorbent materials, if used, must be removed prior to the introduction of an inert material, such as petrofill foam or cement slurry.**

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

Source: Thomas C. Pitcherello
Code Assistance Unit

New Jersey Register Adoptions

Date: December 18, 2000 Rehabilitation Subcode Amendments

In addition to the amendments summarized below, the Department has corrected cross-references to the Uniform Fire Code throughout the Rehabilitation Subcode. These corrections are found in N.J.A.C. 5:23-6.2, 6.12A, 6.13A, 6.14A, 6.15A, 6.16A, 6.17A, 6.18A, 6.19A, 6.20A, 6.21A, 6.22A, 6.23A, 6.24A, 6.25A, 6.26A, and 6.28A.

Adoption: 32 N.J.R. 4437(b)

Adopted Amendments: N.J.A.C. 5:23-3.14; 3.17; 6.1; 6.3; 6.4; 6.5; 6.6; 6.7; 6.8; 6.9; 6.12(e) and (o); 6.13(f) and (p); 6.14(a), (f) and (p); 6.14A; 6.15(e) and (o); 6.16(e) and (o); 6.17(e) and (o), 6.18(e) and (o); 6.19(o); 6.20(p); 6.21(g) and (s); 6.22(f) and (r); 6.23(f) and (q); 6.24(e) and (o); 6.25(g) and (u); 6.25A(e); 6.26(f) and (u); 6.27(i); 6.28(o); and 6.31(a), (f), and (i).

Summary: **N.J.A.C. 5:23-3.14:** This adopted amendment eliminates the reference to historic buildings in the Building Subcode. The Rehabilitation Subcode contains special provisions applicable to buildings that meet the standards for historic structures.

N.J.A.C. 5:23-3.17: This adopted amendment changes the referenced National Electrical Code (NEC) from 1996 to 1999.

N.J.A.C. 5:23-6.1: This adopted amendment corrects the statement that no requirements in the Rehabilitation Subcode are based on the cost of work. With regard to accessibility improvements, the extent of the improvement for accessibility is proportionate to the overall cost of the construction project. In an alteration or reconstruction project, the building owner decides what improvements will be made to the path of travel to the altered area. The improvements to the path of travel cannot be required to exceed 20% of the cost of the overall alteration or reconstruction project. In addition, this amendment corrects a cross-reference.

N.J.A.C. 5:23-6.3: This adopted amendment includes the Building Subcode's definition of the term "height", which is "the vertical distance from the grade plane to the average height of the highest roof surface," in the definition of the term "addition."

N.J.A.C. 5:23-6.4: First, this adopted amendment requires existing smoke control and emergency power systems to remain in operating condition. This requirement is found in N.J.A.C. 5:23-6.4(c)2, 6.5(c)2, 6.6(c)2, 6.7(c)2, and 6.31(a)4.

Second, this amendment prohibits work practices that expose building occupants to lead-based paint hazards. This requirement is found in N.J.A.C. 5:23-6.4(d)5, 6.5(d)6, 6.6(d)6, and 6.7(d)5.

Third, this amendment reflects the adoption of the 1999 edition of the National Electrical Code. This revision is found in N.J.A.C. 5:23-6.4(e)2iii and v, 6.5(e)6iii and v, 6.6(e)8iii and v, 6.7(e)8iii and v, 6.8(d)2, 3, 4, and 9, and 6.9(a)19.

Finally, this adopted amendment incorporates section 1512.3 of the Building Subcode, which provides requirements for roof covering replacement when it is a repair. This amendment is not made in other sections of the Rehabilitation Subcode because it is included in Materials and Methods (N.J.A.C. 5:23-6.8).

N.J.A.C. 5:23-6.5: This adopted amendment deletes the term "listed" because it is redundant.

N.J.A.C. 5:23-6.6: This adopted amendment requires the utilization of materials consistent with the existing construction type or the allowable construction type, whichever is less restrictive, when undertaking an alteration project. In addition, this amendment corrects a cross-reference.

N.J.A.C. 5:23-6.8: First, this adopted amendment incorporates the need for preservative-treated or naturally durable lumber when wood is installed in direct contact with, or in close proximity to, exposed earth.

Second, this adopted amendment deletes the reference to the code section regarding preservative-treated or naturally durable lumber for newly constructed balconies, decks, or porches because it is now incorporated in N.J.A.C. 5:23-6.8(b)15.

Third, this amendment deletes Section 3107.6 from the "Materials and Methods" requirements of the Rehabilitation Subcode because this section exceeds the Federal Flood Plain Management rules.

Finally, this adopted amendment adds a new subsection to address rehabilitation projects in manufactured homes.

N.J.A.C. 5:23-6.9: This adopted amendment requires newly created dwelling units and guestroom separation assemblies to comply with the rating and continuity requirements of the Building Subcode.

This amendment also provides requirements for places of assembly where fixed seating or assembly aisles are added.

Finally, this amendment requires compliance with the exterior wall maximum permitted openings and protected opening requirements of the Building Subcode for newly created openings in exterior walls.

N.J.A.C. 5:23-6.12(e), 6.13(f), 6.14(f), 6.15(e), 6.16(e), 6.17(e), 6.18(e), 6.21(g), 6.22(f), 6.23(f), 6.24(e), 6.25(g), and 6.26(f): These adopted amendments incorporate the Uniform Fire Code requirement for exit discharge lighting.

N.J.A.C. 5:23-6.12(o), 6.13(p), 6.14(p), 6.15(o), 6.16(o), 6.17(o), 6.18(o), 6.19(o), 6.20(p), 6.21(s), 6.22(r), 6.23(q), 6.24(o), 6.25(u), 6.26(u), 6.27(i), and 6.28(o): These adopted amendments require the installation of fire blocking and/or draft stopping when a reconstruction project exposes wall, floor, ceiling, or roof framing spaces that would otherwise require the installation of fire blocking or draft stopping in accordance with the Building Subcode.

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N.J.A.C. 5:23-6.12(o), 6.13(p), 6.14(p), 6.15(o), 6.16(o), 6.17(o), 6.18(o), 6.19(o), 6.20(p), 6.21(s), 6.22(r), 6.23(q), 6.24(o), 6.25(u), 6.26(u), 6.27(i), and 6.28(o): These adopted amendments require the installation of fire blocking and/or draft stopping when a reconstruction project exposes wall, floor, ceiling, or roof framing spaces that would otherwise require the installation of fire blocking or draft stopping in accordance with the Building Subcode.

N.J.A.C. 5:23-6.14: This adopted amendment serves to clarify the existing provisions by specifying, that, in order for a suppression system to be triggered, the work area must be 12,000 square feet or more gross floor area. In this adoption, there are two exceptions to the suppression requirements. These exceptions apply to auditoriums or participant sports arenas where the main floor is the level of exit discharge. The exceptions are adopted at NJAC 5:23-6.14(a)1ii and iii.

N.J.A.C. 5:23-6.25: This adopted amendment changes the term "carbon monoxide alarm" to "carbon monoxide detector." These terms had been used interchangeably in the Rehabilitation Subcode. All references to "carbon monoxide alarms" have been changed to "carbon monoxide detectors," the proper term for a single station device, for consistency and clarity.

N.J.A.C. 5:23-6.31: First, this adopted amendment changes the second section of the table at NJAC 5:23-6.31(f)2 to reflect the Building Subcode requirements for protected and unprotected openings. The Building Subcode provides that walls with a separation distance of 10 feet or less may have unprotected openings with an aggregate area not exceeding 10 percent of the area wall. Openings that exceed 10 percent of the aggregate wall area must be protected.

Second, the note at the bottom of the table in paragraph NJAC 5:23-6.31(f)2 requiring protection for newly created openings in Use Groups R-2, R-3, and R-4 with a fire separation distance of three feet or less, is relocated to N.J.A.C. 5:23-6.9, New building elements, at subparagraph (a)22i.

Third, this adopted amendment incorporates the requirements contained in the Basic Requirements for Use Group E so the possibility of a change in use group to E without the appropriate fire protection systems is eliminated.

Fourth, this amendment states more clearly the requirement for local exhaust from newly introduced devices when equipment or operations produce irritating or injurious fumes.

Finally, the ventilation rate for corridors and utilities is corrected from .5 to .05, which is reflected in Table N.

Source: John N. Terry
Code Assistance Unit

Paperwork, Paperwork, Paperwork

One of my many duties as a construction code official for the Bureau of Regulatory Affairs is to conduct inspections to ensure that projects comply with the Uniform Construction Code (UCC). I know having to complete all that paperwork associated with the UCC – signing the technical section of the permit when a plan review is complete, filling out the inspection section every time an inspection is conducted, signing the approval section – can be very time consuming.

It is apparent that many people think this way. How does the Bureau of Regulatory Affairs know this? It's easy. It is not uncommon for our investigators to find a lack of documentation in construction files. Subcode technical sections are required forms and therefore are to be used. In addition, the regulations require a written record of inspections, including failed inspections, to be maintained. Oftentimes, inspection request forms or other assorted pieces of paper intended to schedule inspections and reflect the status of the inspection are used, and not the appropriate form. What happens if this paperwork is lost? Was the inspection performed? Did it pass or fail? These are just some of the questions the public asks when required information such as plan review, inspection, and sign-off information is missing. It is also a question you, as a code official, might be expected to answer in court should the public believe the plan review or inspection was not conducted properly. The Bureau of Regulatory Affairs will also expect an answer.

As a reminder, any licensed code official is permitted to perform a plan review that is within his or her technical license limits (RCS, ICS, and HHS). The inspector is permitted to sign the plan review section of a subcode technical section provided the subcode official initials the inspector's signature. By initialing the signature, the subcode official is taking responsibility for the plan review.

The inspector who performs the various inspections must also sign the appropriate section of the technical section and indicate "pass" or "fail." The subcode official, and only the subcode official, is authorized to sign the subcode approval section of the technical section. The subcode official is responsible for ensuring that ALL required inspections have been approved, as well as making sure that a plan review has been completed before signing off.

Because the paperwork portion of the UCC provides documentary evidence of specific construction activities, it acts as your protection when questions are asked and evidence is sought. So, it is important that it is done right. If you have any questions, I may be reached at (609) 984-7672.

Source: Gerry Grayce
Bureau of Regulatory Affairs

2000 International Mechanical and Fuel Gas Codes

The Department will be adopting the 2000 International Mechanical and Fuel Gas Codes this spring. Once adopted, these two codes may be used in projects in existing buildings. The Rehabilitation Subcode will be amended to include references to these codes. In addition, expanded pipe-sizing tables for new materials are included in the new model codes.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Shut-Off Switch Required for Public Pools

The New Jersey Department of Health and Senior Services (DOHSS) has recently adopted new public recreational bathing regulations at N.J.A.C. 8:26-3.24 applicable to existing swimming pools and wading pools that have a single drain, with or without a skimmer. These regulations are based, in part, on guidelines issued by the U.S. Consumer Product Safety Commission in Publication #363 009801, and are intended to make pools and spas safer from entrapment hazards.

Although not required by the Electrical Subcode, accessible pump shut-off switches within sight of swimming pools and wading pools are required in accordance with N.J.A.C. 8:26-3.24(e).

Electrical subcode officials are advised to issue a construction permit under the Electrical Subcode in accordance with N.J.A.C. 5:23-2.4(c) and perform inspections based on the requirements set forth in N.J.A.C. 8:26-3.24(e). The requirement for a pump shut-off switch comes from the Public Recreation Bathing regulations of the DOHSS. It does not fall within the scope of the Annual Certificate of Compliance for a pool outlined in N.J.A.C. 5:23-2.18C. In other words, the Electrical Subcode official does not enforce this requirement. However, when a pool owner is ordered by the local health department to install a pump shut-off switch, the pool owner must obtain a permit and the Electrical Subcode official must ensure that the installation complies with the Uniform Construction Code.

If you have further questions on this issue, please call John E. Sharp of the DOHSS at (609) 588-3124, or the Code Assistance Unit at (609) 984-7609.

Source: Ashok K. Mehta
Code Assistance Unit

Raising the Bar - Review and Revision of Educational Standards

The Bureau of Code Services has begun the exciting process of updating the educational standards for obtaining licensure as an inspector in the State of New Jersey. The Building Inspector RCS, ICS, and HHS courses have already been revised, as well as the Plumbing Inspector ICS and HHS courses. Upcoming projects include the Fire Protection Inspector courses, the Electrical Inspector courses, and finally the Elevator Inspector courses. A broad-based committee of representatives from their respective fields including instructors, code officials, and representatives of the code officials' organizations undertook this review and revision process. The project will be completed over a two-year period and will result in changes to the regulations and improvements to college course content and material.

The overall goal of this project is to modernize the current regulations governing course content to reflect changes that have taken place since those standards were last revised. For example, specific elements of the Barrier Free Subcode and the Rehabilitation Subcode are now required elements for all of the license courses mentioned above. Another goal of this updating process is to make the regulations more uniform and based on specific code issues. For instance, the current regulations speak to the need to instruct students in structural design and analysis techniques, whereas the new regulations require instruction in the relevant sections of the Building and Mechanical Subcodes. The new standards also require field inspection exercises and plan review exercises. Thus far, it has been the consensus of the committee that the courses need more uniformity and more specific subject matter. We are hopeful that we have achieved our goals to this point and I hope to hear from anyone with questions or concerns once the specific regulations are proposed.

If you have any questions, you may contact me by e-mail at jdelesandro@dca.state.nj.us, or by telephone at (609) 984-7834.

Source: John Delesandro
Program Administrator
Licensing Unit
Bureau of Code Services

Special Seminar Approvals

From time to time, the Education Unit receives requests for Continuing Education Units (CEU) to be awarded for attending seminars other than those in the regular schedule. The only seminars considered for credit are those offered by nonprofit educational, training, or model code organizations; and for a seminar to be approved, a course outline with time allotments along with the instructor's résumé must be submitted for review at least 60 days prior to the scheduled date of the seminar. This way, the Education Unit has enough time to review and evaluate the instructor's credentials and the seminar's content. Credit will not be awarded for requests submitted after the scheduled date of the seminar.

If you have any questions on this policy or procedure, please call the Education Unit at (609) 984-7820, or e-mail me at smclaughlin@dca.state.nj.us.

Source: Susan McLaughlin
Bureau of Code Services

Submitting Monthly Reports

It's time once again for our annual production of the *New Jersey Construction Reporter*. To date, we've published five annual reports. Now is a good time to remind everyone of their obligation each month to send in building permit and certificate reports. Most do the right thing. Each and every month, the appropriate time-important information on all the building permits and certificates issued is sent to us. If you are among the conscientious, you're doing a good job; keep it up. If you fall under the "delinquent" category, read on.

Many fail to meet the monthly requirement because of technical difficulties. Your communication software is incompatible. Your modem has the wrong baud rate. Your Pentium has thrown a rod. The network administrator skipped town. I can't really describe these problems, nor can I help you with them. But, we have a very good technical staff that may be of assistance. If you have computer problems, call Charles Pierson, Jr. or Richard Byrne of the Department of Community Affairs at (609) 292-7898. They may be able to point you in the right direction. They also might be able to rig up a stopgap measure, whereby the monthly deadline is met and we receive the required information — or a summary of it — by some temporary means, so we can meet our monthly publication schedule.

Some may not even know what a monthly permit and certificate report is, or what we do with them. After all, you're busy with the day-to-day job of running a construction office. I know this because I see the amount of work that is reported and it has increased each year over the last five by at least one billion dollars.

The monthly reports are a byproduct of vital and useful work. They're like hot dogs: left over from the main task at hand, but important nonetheless. Building permits and certificates are one of the few indicators available for *every* municipality *every* month. Unless you're a demographer, the significance of this last sentence may not be apparent. Demographers are people interested in numbers and trends. They're like accountants, only with less personality, and the information you provide really excites them. They use it to make observations about where people live and other settlement patterns. Other people find construction statistics useful, as well. School administrators use them to anticipate demand for new schools. Planners analyze the numbers to see where and what kind of development occurs. Business people view the data for telling signs of the economy.

Another use of the information is that it is a source of great civic pride. Mayors and other politicians love to track how they are doing. Construction statistics help them keep score. Last year, Jersey City was tops in three of the four major construction indicators we publish. It had the most work ($354.4 million), the most new houses (1,783 units), and the most new office space (1,435,573 square feet). In terms of new retail space, our fourth indicator, New Jersey's second largest city, Jersey City, ranked fifth, with 218,315 square feet. How do I know all this? From the monthly reports you send. Space and time do not permit me to tell you about the town councilman who wanted to verify his town as New Jersey's warehouse capital. Suffice it to say that, thanks to the information from the monthly reports, I was able to show his community's good standing.

If you're still not convinced, let me add that monthly reports can be important to a town's pocketbook. Every ten years, the U.S. Census Bureau counts everyone in the country. These numbers are used to apportion political representation and to divvy public funds. In the off years, when the federal government does not count everyone, they guess. Building permits are one of the key ingredients in these estimates. The funds for that library your town wants to build may depend on your monthly reports.

So, if these monthly reports are being sent to us on time, thank you and keep up the good work. If they're not, remember that this is a requirement of the Uniform Construction Code. But more importantly, the information is vital and useful to a lot of people, so please make every effort to get off — and stay off — our delinquency list.

If you would like to see how we use this information and want a complimentary copy of the *Construction Reporter*, call, write, or send me an e-mail, and I would be glad to send you an issue. I can be reached at (609) 292-7898 (telephone); at (609) 633-6729 (fax), or at jlago@dca.state.nj.us (e-mail).

Source: John Lago
Planning and Program Development

Third-Party Agency Bills

The Bureau of Regulatory Affairs has been receiving complaints from third-party agencies that are finding it hard to collect permit fees from municipalities for services rendered under an executed contract. Under the Uniform Construction Code (UCC) at N.J.A.C. 5:23-4.5A(j), third-party agencies are required to bill a municipality for 20 percent of the permit fee upon issuance of the construction permit, 60 percent of the fee 30 days later, and the remaining 20 percent upon completion of the work covered by the permit. If a municipality does not reimburse the agency within 30 days of billing, it is in clear violation of the UCC.

As construction officials, you are the municipal experts in all aspects of the UCC. Therefore, it is your responsibility to inform your administrator of these requirements if a third-party agency notifies you of a billing problem.

Source: Louis J. Mraw
Bureau of Regulatory Affairs

UCCARS - The Next Generation Performance Requirements

The Uniform Construction Code Administrative Records System - the Next Generation (UCCARS-NexGen) will feature a relational database structure that will expand the querying and reporting functions available to local construction offices. A familiar menu-driven environment, with automatic error checks and data entry prompts, will create a user-friendly interface. Overall, UCCARS-NexGen shall bring local construction offices improved searching and reporting features, as well as easier, more efficient permit processing and data storage.

The proposed construction office automation software will require an industry standard PC of a Pentium III-800 megahertz processor speed. A total of 256 megabytes of RAM and a 20-gigabyte hard drive (larger if intending to store images such as property photos and blueprints) is recommended. A commercial web browser, either Netscape 4.7 or Internet Explorer 5.0 or higher, is sufficient to access UCCARS-NexGen. A cable modem and a T1/T3 network connection via TCP/IP (or similar networking communications protocol), or a 128K internal or external modem with dial-up connectivity offers maximum speed in Internet access. On average, a PC with these capabilities costs approximately $1,200.

Source: Team UCCARS
Division of Codes and Standards

UCC Standard Forms On-Line

For your convenience, select Uniform Construction Code (UCC) standard forms, including the Construction Permit Application, can now be accessed on-line. These forms may be found at the following URL:

http://www.state.nj.us/njbiz/f_list.shtml#community

To access the UCC standard forms via the State website, point your browser and click on Business Info and Services, then click on Forms, and then click on Community Affairs Forms.

Source: Team UCCARS
Division of Codes and Standards

Building Inspectors, Footings, and Grounding



Currently, the Department is in the process of issuing a bulletin that will provide guidelines on how to create a more effective grounding electrode system by bonding together the concrete-encased rebars of the footings of a new structure and the grounding electrode conductor.

In order for a rebar to be considered a concrete-encased electrode, it must

a) Be encased by at least 2 inches of concrete,
b) Consist of at least 20 feet of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods, and
c) Be 1/2 inch or more in diameter.

A building subcode official/inspector shall have sole responsibility for field inspection and shall share joint responsibility with an electrical subcode official/inspector for plan review of the bonding connections to the rebars. Building subcode officials are required to make sure that, where applicable, a construction permit is issued for the bonding clamp prior to the clamping of conductive steel rebars and an inspection is conducted in accordance with the guidelines of this bulletin.

If you have questions on this matter, feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: Ashok Mehta
Code Assistance Unit

Construction Code Communicator

State of New Jersey
Donald T. DiFrancesco, Acting Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

Volume 13 Number 2

Summer 2001

Manufactured (HUD) Homes: Installation & Assembly

It has been brought to the Department's attention that many in the field are under the impression that manufactured homes, which are a type of certified pre-manufactured construction, need not be inspected. This is untrue. The Uniform Construction Code, at N.J.A.C. 5:23-2.22, spells out the responsibilities of code officials with regard to pre-manufactured construction inspections and approval processes. Specifically, the responsibilities of code officials are:

1. To inspect the unit(s) to ensure that they are properly certified. A Federal Department of Housing and Urban Development (HUD) label is proof of certification. This HUD certification is a 2"x4" label that is located at the tail-light of each transportable section, approximately one foot from the floor, and one foot in from the road side;
2. To inspect the unit(s) for any visible signs of damage;
3. To inspect the unit(s) for any visible code violations;
4. To perform nondestructive tests (optional); and
5. To inspect the installation of the manufactured home and all work installed or completed on site in order to determine compliance with the regulations (manufacturer's installation instructions for the manufactured home) and the approved plans for the site work. It would be prudent at this time to emphasize that the manufacturer's installation instructions are to be filed with the local code enforcement agency at the time of the construction permit application. The on-site work includes, but is not limited to, the foundation and support system, gas lines, sewer/water lines, electrical wiring, utility connections, partial shingle and siding installations, and the assembly of the unit(s). For doublewide units, the on-site work also includes connections at the roof, wall, and floor.

Another issue that has arisen is that certificates of occupancy have been issued for manufactured homes even though certain portions of the on-site work associated with the assembly and installation of the homes were not inspected. One conclusion might be drawn from this fact: there is confusion in the field as to who has the responsibility of inspecting those assembly and installation-related portions of work.

The confusion about the responsibility for inspection is created by the fact that certain portions of work, such as the assembly of roof jack/vents of gas furnaces, the assembly of water heaters, and the assembly of fireplaces, are completed at the construction site, not in the manufacturing facility. This is permitted by HUD's "Alternative Construction" approval. This approval is comprised of many requirements, such as design approval, performance of work, inspection, and approval. With regard to inspections, the approval stipulates that on-site work shall be inspected by the manufacturer's Inplant Inspection Agency (IPIA), or by a qualified and experienced independent inspector acceptable to the IPIA. HUD's approval, however, does not stipulate a time frame for these inspections. Invariably, the inspection is not conducted during the installation, but is conducted much later. This raises two concerns: 1) Work might be covered up, which makes adequate and proper inspections nearly

(continued on page 2)

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impossible; and 2) a certificate of occupancy cannot be issued without the inspection and approval of this work. As a result, the Bureau of Code Services has come across many situations where inspection reports have indicated substandard conditions. Serious fire hazards have gone undetected for years at a time, which is a growing problem.

We have expressed our concerns regarding this issue to HUD. HUD is currently looking into the issue, but because of the Federal government's lengthy rulemaking process, changes might not occur quickly enough. The Department has decided that the local code officials shall be responsible for the inspection of all on-site work associated with the assembly and installation of manufactured homes, including alternative construction items. The inspection(s) shall be performed before a certificate of occupancy is issued. Inspections are to be performed to ensure compliance with the manufacturer's installation instructions, approved drawings and details, and/or the applicable provisions of the Federal Manufactured Home Construction and Safety Standards (MHCSS).

Additional information regarding manufactured homes may be found in DCA Bulletins Nos. 80-6 and 88-2. If you have questions about this issue, you may contact me by telephone at (609) 633-6865.

Source: Paul Sachdeva
Bureau of Code Services

Kudos to the Technical Assistants!

The Department would like to congratulate the third graduating class of Technical Assistants. Twenty-eight proud recipients gathered at the Trenton Club on April 19, 2001 for the presentation of the certificates. Department of Community Affairs' Deputy Commissioner Anthony Cancro, together with William M. Connolly, Director of the Division of Codes and Standards, presided over the ceremony.

The role of the Technical Assistants is an important one. They are the main supporting staff in the offices of construction officials throughout New Jersey's municipalities. It is with their help that the effectiveness of the Uniform Construction Code is ensured.

If you are interested in obtaining more information about the Technical Assistant program, please contact the Education Unit in the Bureau of Code Services at (609) 984-7820.

Source: Susan H. McLaughlin
Education Unit
Bureau of Code Services

New Energy Codes are Here

By the time this Communicator reaches you, unless something drastic happens, New Jersey will have new energy codes in place. The code for residential construction will be the 1995 CABO Model Energy Code. The code for commercial construction will be the 1999 version of ASHRAE 90.1. These codes are significantly different from the previous energy codes.

The CABO Model Energy Code is more stringent than the 1993 BOCA National Energy Conservation Code, which was based on the 1980 edition of ASHRAE 90A. The code will require thicker insulation than was required by BOCA. The rules of thumb for what is acceptable may change based on where you are in the State. In addition, the CABO code contains a provision that requires insulation on basement walls, even those below grade. The proposed New Jersey adoption of the CABO code contains an exception, which will allow builders to install high efficiency equipment in lieu of insulating the basement.

The 1999 version of ASHRAE 90.1 has been billed as a more "user friendly" version of the standard. The technical requirements of the standard remain substantially the same with some modifications to the lighting provisions.

Computer software to help comply with both codes is available. We expect the use of this software to make verifying energy compliance quicker and easier.

As with all adoptions of subcodes, there will be a six-month grace period. Therefore, the effective date of these codes should be on or about January 16, 2002. To help you learn the new rules of thumb, the new computer software, and the nuances of the new code, seminars will be offered in the fall of 2001. The Education Unit will be issuing a special mailing to alert you of the times, dates, and locations of these seminars.

Source: Michael Baier
Office of Planning and Program Development
Division of Codes and Standards

The *Construction Code Communicator* is published quarterly by the New Jersey Department of Community Affairs and the Center for Government Services at Rutgers, The State University. Editor: Megan Sullivan. Address changes and subscription requests may be directed to the **DCA Publications Unit, P.O. Box 802, Trenton, NJ 08625-0802.** Comments and suggestions should be sent to the **Code Development Unit, P.O. Box 802, Trenton, NJ 08625-0802.**

Construction Permit Application Forms Now on the Web

Throughout New Jersey, there is a movement afoot among State and local government agencies to improve the delivery of important government services to construction code enforcement offices by using information technology and the Internet.

As a recent graduate from the Technical Assistant Certification Program, I was very excited to hear about a change made to New Jersey's website that will help with the delivery of services to those seeking construction permits. The Uniform Construction Code Administrative Records System (UCCARS) software that most use today was written well before widespread access and use of the Internet. Although UCCARS was ahead of its time in 1987, users were not able, and are still not able, to participate in e-government. But, all of that is about to change. In fact, the availability of the construction permit application and related subcode technical sections files from the State's website as portable document format (.PDF) files is the first step in that direction.

Electronic forms now available on New Jersey's website offer a new, convenient service. With the click of the mouse, permit applicants can simply print out the forms they need at their convenience and in the comfort of their own homes. Though the forms must still be completed by hand and mailed or delivered in person to your local construction office, members of the public no longer have to make the first trip in to pick up the blank forms.

Looking ahead, UCCARS - Next Generation (NG), when in full production, will ultimately enable permit applicants to submit permit applications, construction plans, and pay the associated fees over the Internet.

For now, however, the offering of printable blank construction permit application forms is our first step through the "Gateway to the Future." Imagine the services we'll be providing the public in 2002 when UCCARS-NG is in production!

To view the Construction Permit Application and related forms on the Internet, check out New Jersey Open for Business at www.state.nj.us/njbiz/.

Source: Lynn Ferrara
Team UCCARS
Division of Codes and Standards

National Exams

"National exams" are the licensing exams that are required by the Department of Community Affairs for licensure as a Uniform Construction Code (UCC) inspector. The exam program has been known as the ETS (Educational Testing Service) exams, the Chauncey Group exams, and (now) the Experior exams. These names refer to the group that has developed and administered the exams. The official name of the testing program is the National Certification Program for Construction Code Inspectors.

When the exams were first offered—and for approximately 10 years thereafter, the edition of the codes being tested coincided with New Jersey's adoption of the most recent edition of national model codes. This is no longer true.

Effective July 2, 2001, the national exam program will be offering updated exams based on the International Code Council (ICC) model codes for the building, elevator, fire protection, and mechanical codes.

The plumbing exams will be based on both the International Plumbing Code (IPC) 2000 and the National Standard Plumbing Code (NSPC) 2000; test takers may take either the IPC or the NSPC into the exam and will be able to answer all the questions from either code. Test takers do not need both codes.

The 2A electrical exam will be based on both the International Residential Code 2000 and the National Electrical Code (NEC) 1999. The other electrical exams will continue to be based on the NEC 1999.

At this time, only two of the ICC codes have been adopted in New Jersey. The International Mechanical Code (IMC) and the International Fuel Gas Code (IFGC) were recently adopted as subcodes of the UCC on June 4. The other International codes are not adopted subcodes of the UCC.

For the foreseeable future, there will continue to be a difference between the editions of the model codes used in the courses that deal with the UCC and those used for the national exams.

For questions about which exams are required for which licenses, please contact the Licensing Unit at (609) 984-7834. For questions about the national testing program itself, please contact me at (609) 984-7609.

Source: Emily Templeton
Code Development

We're Looking for a Few Good Men or Women

to tell their stories about the Uniform Construction Code (UCC). As many of you know, January 1, 2002 is the 25th anniversary of the adoption of the UCC. We would like to mark the occasion by publishing a special issue of the *Communicator*. Please submit any thoughts, reflections, or anecdotes that you would like to share to Megan Sullivan, Division of Codes and Standards, Department of Community Affairs, PO Box 802, Trenton, NJ 08625 or e-mail them to msullivan@dca.state.nj.us.

Source: Amy Fenwick Frank
Office of Planning and Program Development

New Jersey Register Adoptions

Formal Technical Opinion (FTO)-3 – Fire Escapes

The Department has revised and reissued FTO-3, Fire Escapes. The provisions of this FTO provide code users with a methodology for the design and construction of fire escapes as a second means of egress.

Bulletin No. 01-1 – Railroad Facilities and Superfund Sites

This bulletin resulted from a court decision that addressed whether local enforcing agencies have the authority to issue permits and conduct inspections on certain federally regulated facilities and construction projects.

Date: April 16, 2001 BOCA Corrections — Corrections to the Model Code Adoption
Adoption: 33 N.J.R. 1195(a)

Summary: **N.J.A.C. 5:23-3.11:** This adopted amendment corrects an outdated cross-reference to the Barrier Free Subcode's Recreation Standards.

N.J.A.C. 5:23-3.11A: This adopted amendment applies to the plan review of public school facilities. The term "unit" is replaced with the more exact term "instructional spaces."

N.J.A.C. 5:23-3.14: This adopted amendment deletes Section 1021.2, exception #3, in its entirety from the Building Subcode. In the Building Officials and Code Administrator's (BOCA) National Building Code/1996, this section establishes guardrail height requirements along open-sided floor areas that are less than 30 inches above the floor or grade. The deletion makes this section of the Building Subcode consistent with other sections of the Building Subcode.

N.J.A.C. 5:23-4.3A: This adopted amendment requires that the installation or alteration of a fire protection system, or an addition that changes the classification of a building, be reviewed by an agency with the appropriate level of classification. This amendment also deletes outdated references.

N.J.A.C. 5:23-9.8: This adopted amendment provides that a single exit condition is permitted in buildings of Use Group R-1 or R-2 that are "not more than two stories in height from floors that are not more than 16 feet above exterior grade."

Date: May 7, 2001 Liquefied Petroleum Gas Installations
Adoption: 33 N.J.R. 1399(d)

Summary: **N.J.A.C. 5:23-2.24, 3.11:** These adopted amendments assign jurisdiction over vapor delivery liquefied petroleum gas installations utilizing containers with an aggregate water capacity of 2,000 gallons or less to the plumbing subcode official.

Date: June 18, 2001 2000 International Mechanical and Fuel Gas Codes
Adoption: 33 N.J.R. 2090(a)

Summary: **N.J.A.C. 5:23, 3.17, 3.20, and 3.22:** The Department has adopted, with modification, the 2000 International Mechanical Code and 2000 International Fuel Gas Code.

Date: June 18, 2001 Training Fees
Adoption: 33 N.J.R. 2097(a)

Summary: **N.J.A.C. 5:23-4.19 and 4.20:** These amendments exempt housing units that are legally restricted to residents of low or moderate incomes and demolition work from training fees. Required fees are to be forwarded to the Division of Codes and Standards' Fiscal Office.

Source: Megan K. Sullivan
Code Development
Division of Codes and Standards

Building Safety Conference of New Jersey 2001

Bright sun and warm temperatures greeted attendees at the 20th anniversary celebration of the New Jersey Building Safety Conference, which was held at Bally's Park Place in Atlantic City. Over 650 participants from the code enforcement community, including inspectors, technical assistants, annual permit holders, and their guests took advantage of the activities offered.

The first order of business was the presentation of a special award to William M. Connolly, Director of the Division of Codes and Standards, given by the associations who originally comprised the Building Safety Conference. These associations include the Building Officials Association of New Jersey, the Municipal Electrical Inspectors Association, the New Jersey Fire Prevention and Protection Association, and the New Jersey Plumbing Inspectors Association. Mr. Connolly was recognized for his commitment and dedication, his many years of service, and most importantly, his innovative ideas in code enforcement.

The Department of Community Affairs' Deputy Commissioner, Anthony Cancro, was next to address the audience. He emphasized the importance of the services provided by those in code enforcement. Mr. Connolly then shared his heartfelt appreciation while also making the point that there is still much to learn and put into action.

Recognition was also given to the inspectors and the technical assistant of the year, selected by their respective associations for outstanding accomplishments and achievements in their fields. The recipients were:

- Thomas J. Pelaia, Bloomfield Township, Fire Protection Inspector
- Richard K. Adams, Old Bridge Township, Plumbing Inspector
- Thomas Millar, West Windsor Township, Building Inspector
- Michael Jahn, Asbury Park City, Long Branch City, Neptune Township, Neptune City Borough, Spring Lake Borough, West Long Branch, Electrical Inspector
- Brenda Sirkis, West Windsor Township, Technical Assistant

Other activities included a "crackerbarrel" session with a long list of topics, which is an activity where a subject of interest is selected, and is presented in ten minutes. The audience then has ten minutes to ask questions. This is always a very popular part of the conference because it allows an opportunity to make new contacts and interact with one's peers. The 21 training seminars offered on different aspects of the codes were filled near to capacity with interested attendees.

New friends were made and old rivalries renewed at the sixth annual golf outing, held at the Mays Landing Country Club. The tournament began with a continental breakfast and tee off. Range balls, golf carts, and lunch were provided.

While the code enforcement personnel were enjoying their experiences, those who brought their "significant others" were enjoying the planned activities. Participants in the floral design activity held for the spouses of code enforcement officials created the flower arrangements on each table at the luncheon. Some other activities included a day trip to Hereford Inlet Light House in North Wildwood, and historic Cape May with a luncheon at the Pelican Club and some time for shopping.

On behalf of the entire Building Safety Conference Committee, we thank you for your participation and hope that you had a very enjoyable time. We hope that you will be able to join us again next year.

Source: Susan H. McLaughlin
Supervisor, Education Unit
Bureau of Code Services

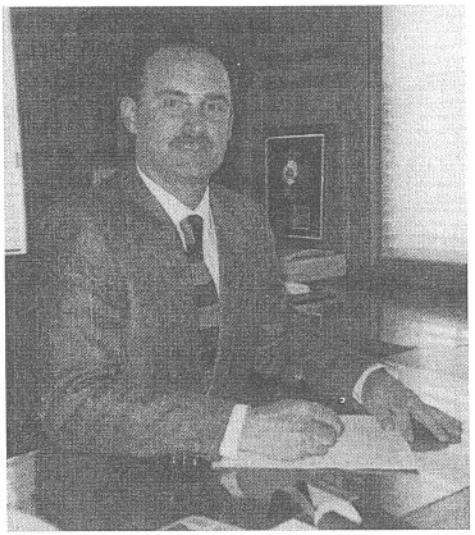


Award Winners
(L-R) Richard Adams (Plumbing Inspector of the Year), Thomas Millar (Building Inspector of the Year), William M. Connolly (Service Award), Brenda Sirkis (Technical Assistant of the Year), Thomas J. Pelaia (Fire Protection Inspector of the Year), Victor Timpanaro for Michael Jahn (Municipal Electrical Inspector of the Year)

20th Annual Building Safety Conference



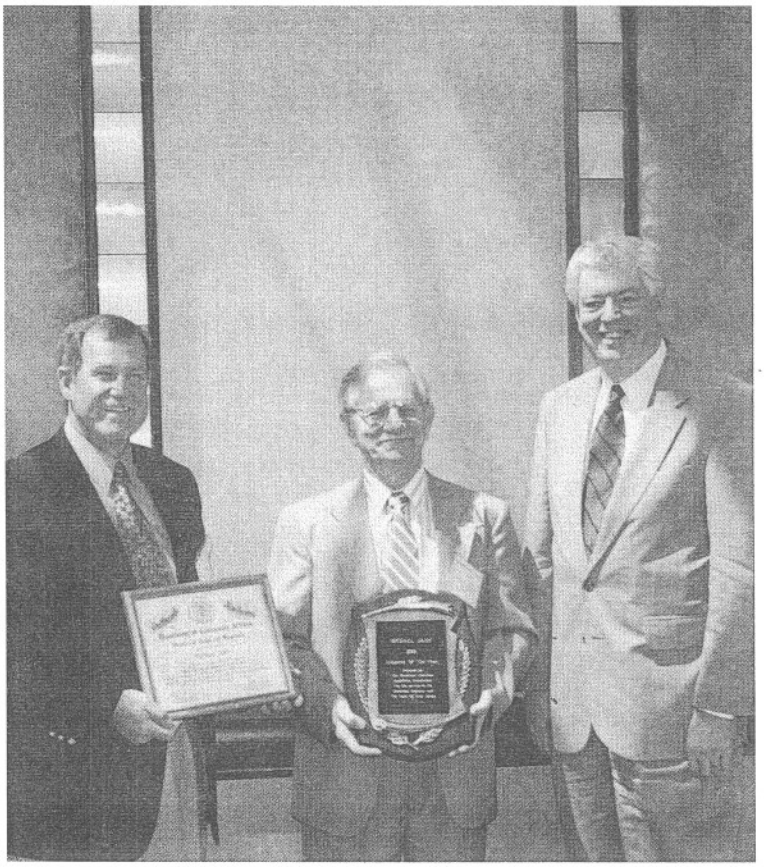
Technical Assistant of the Year
(L-R) William M. Connolly (Director, Division of Codes and Standards), Brenda Sirkis (Technical Assistant of the Year), Linda Aiello (Presenter, NJ Association of Technical Assistants)



Michael Jahn, Electrical Inspector of the Year



Plumbing Inspector of the Year
(L-R) Anthony Falasco (Presenter, Plumbing Inspectors' Association), Richard K. Adams (Plumbing Inspector of the Year), William M. Connolly (Director, Division of Codes and Standards)



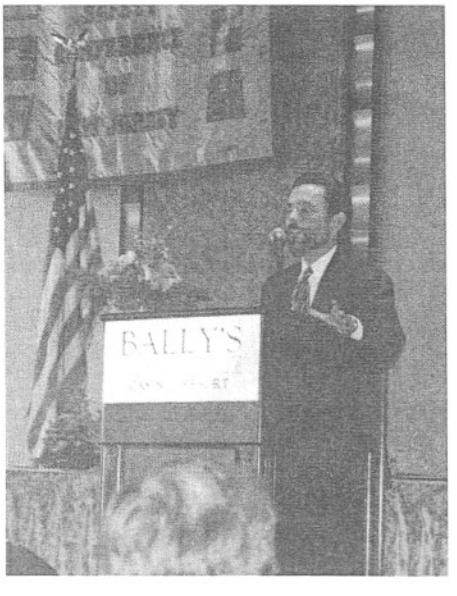
Electrical Inspector of the Year
(L-R) Richard Marshall (Presenter, Municipal Electrical Inspectors Association), Victor Timpanaro accepting for Michael Jahn (Electrical Inspector of the Year), William M. Connolly (Director, Division of Codes and Standards)



Building Inspector of the Year 2001
(L-R) John Scialla (Presenter, President, BOANJ), Thomas Millar (Building Inspector of the Year), William M. Connolly (Director, Division of Codes and Standards)



Fire Protection Inspector of the Year
(L-R) John Lightbody (Presenter, President, NJ Fire Prevention and Protection Association, Thomas Pelaia (Fire Protection Inspector of the Year), William M. Connolly (Director, Division of Codes and Standards)



Department of Community Affairs Deputy Commissioner Anthony Cancro addresses the audience at the Awards Luncheon.



William M. Connolly Service Award for the Associations
(L-R) John Lightbody (NJ Fire Prevention and Protection Association), John Scialla (Building Officials Association of NJ), William M. Connolly (service award), Richard Adams (NJ Plumbing Inspectors Association), and Robert Rogers, Jr. (Municipal Electrical Inspectors Association)

UCCARS the Next Generation

The Uniform Construction Code Administrative Records System - the Next Generation (UCCARS-NG) advisory committee has been essential in identifying the overall UCCARS-NG software components. The Office of Information Technology has offered, and the Division of Division of Codes and Standards accepted, a project plan for the development and implementation of UCCARS.

The new and innovative technical infrastructures of UCCARS-NG will not only improve upon the functionality of the existing software, but will create the avenue for e-government transactions. The main modules of the proposed UCCARS-NG software comprise system administration: permit application, inspections, feedback, query tools, and payments and reporting. System administration module values that are unique to each municipality, such as fee schedules, are established within the software. The permit application module performs routine construction document processing and provides for on-line data entry of permits. The inspection module manages the scheduling and tracking of inspections. The feedback module provides applicants and residents with a means for tracking the progress of a permit. Querying tools offer users improved reporting functions using UCCARS data. The payment module records and tracks payment information. This feature is readily available for review by a permit applicant. User defined reports and ad hoc reports may be generated from the reporting module.

UCCARS-NG will provide pop-up windows and drop down menus that will deliver a functionally rich environment to the desktop user community. A high-end database management protocol will provide users with robust searching capabilities, reliability, and security when accessing data. UCCARS-NG will benefit users by improving data quality and automating routine tasks.

We welcome your suggestions for improving UCCARS. Comments may be directed to Team UCCARS at UCCARS@dca.state.nj.us.

Source: Team UCCARS
Division of Codes and Standards

New Support Option for UCCARS-TOP Users

The Division of Codes and Standards is offering a new support option for UCCARS-TOP users. Symantec, a broad-based enterprise specializing in Internet security technology, produces a remote access program called pcAnywhere. If installed, this software will allow the Division to connect to your computer, view your screen, and perform the following services over the phone:

- Troubleshoot and fix program errors;
- Upgrade the UCCARS program;
- Assist with the transmission of data in the event the CrossTalk program fails; and
- Analyze and correct database errors.

If you wish to utilize this option, your town will need Windows 95, 98, ME, NT 4.0 or 2000, a modem that works in Windows (many newer computers have modems that do not work with the CrossTalk program, but work fine with the Windows programs, such as AOL or other Internet access programs), and the phone number of the line to which your modem is connected.

Network users: If you use UCCARS on a networked computer, pcAnywhere may already be installed on your server. Many towns use a network administration company to run their networks and many of these companies use pcAnywhere to remotely manage the servers. If this is the case in your town, access to the server needs to be set up in order for the Division to access your UCCARS program. Contact your network administrator to see if pcAnywhere version 8.0 or later is installed on your server and is running on Windows NT or 2000.

The pcAnywhere program may be purchased directly from Symantec at http://www.symantec.com for $179 or from Microwarehouse for $169.

If you have any questions about this service, or if you would like to set up access to the program, contact Richard Byrne at (609) 292-7899.

Source: Team UCCARS
Division of Codes and Standards

Down in the Basement

It has been brought to the Department's attention that the article, "Basements vs. Crawlspaces," which appeared in the Spring 2001 edition of Construction Code Communicator has caused some misunderstanding in the field. Item #5 in the article stated, "basements require a fire separation." That is incorrect. It is more accurate to say, "basements may require a fire separation." For example, in a mixed-use building with a business use in the basement and a residential use on the first floor, a fire separation might be required for the floor/ceiling assembly.

Thanks to all the code officials who noticed the omission of the word "may" for bringing it to our attention so that we can take this opportunity to clarify the original article.

If you have any questions, please do not hesitate to contact the Code Assistance Unit at (609) 984-7609.

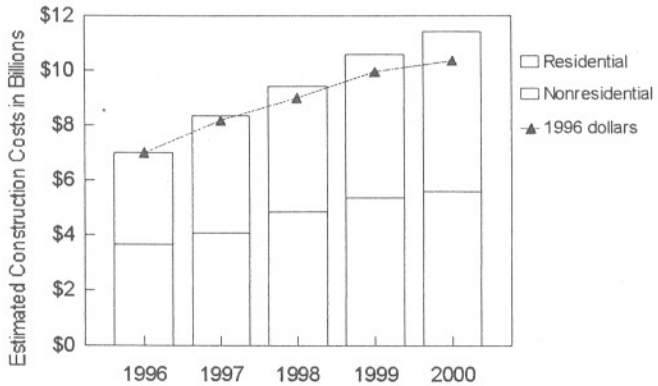
Source: Jeffrey Applegate
Code Assistance Unit

2000 HIGHLIGHTS

The following is a reprint of the New Jersey Construction Reporter. The New Jersey Department of Community Affairs publishes the Reporter each month, providing information on residential and commercial construction activities. For information from other issues go to www.state.nj.us/dca/codes/cr/conrep.html

New Jersey's construction economy reached high levels in 2000, but the rate of growth was a little slower compared to 1999. The estimated cost of all work authorized by building permits was $11.4 billion. This was 7.6 percent more than last year. In real terms, based on an average inflation rate of 3.4 percent, the estimated cost of construction grew by 4.1 percent, less than half the yearly rate of growth for 1998-99.

Estimated Cost of Construction
Authorized by Building Permits, New Jersey 1996-2000



Residential construction totaled $5.6 billion, or 49 percent of the total amount of activity. Office, retail, and other nonresidential structures accounted for $5.8 billion, 51 percent all work. Compared to 1999, residential activity increased by only 3.7 percent. The rate of growth for 1998-99 was 11.7 percent. Nonresidential work grew by about the same rate between 1999-2000 and 1998-99, 11.6 percent and 13.6 percent, respectively.

Major Construction Indicators

Three of the four major indicators published by the Department of Community Affairs exceeded last year's levels. The exception was new retail space. New retail space in 2000 totaled nearly 6.1 million square feet, 2.7 percent below last year's total. The estimated cost of work authorized by building permits was $803.5 million more than last year. This was the first time in five years, however, that the annual increase was less than one billion dollars. The number of new dwellings in 2000 reached a level exceeded only by those in the late 1980s. New Jersey communities authorized 38,065 new housing units in 2000. This was over 10,000 units more than in 1996, but only 529 units more than last year. The amount of new office space grew by nearly 2.3 million square feet, or 17.3 percent, compared to 1999.

Major Construction Indicators, New Jersey: 1996-2000

Year	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
1996	$7,028,424,990	27,577	6,229,515	4,880,139
1997	$8,346,533,114	30,017	10,409,171	5,688,955
1998	$9,396,755,517	35,676	12,703,824	7,921,892
1999	$10,584,167,530	37,536	13,237,891	6,229,471
2000	$11,387,683,514	38,065	15,531,039	6,063,412
Difference Between 1999 and 2000				
1999-2000	$803,515,984	529	2,293,148	-166,059
Percent Change	7.6%	1.4%	17.3%	-2.7%

Source: N.J. Department of Community Affairs, 6/11/01

Construction by Region

Northern and central New Jersey each accounted for about 38 percent of all work authorized by permits. Southern New Jersey had about 20 percent of all activity. ("State Buildings," which include structures under construction for State colleges and universities, turnpike and economic development authorities, and other instruments of the State, accounted for 4.2 percent of all work.) Most new housing was built in central New Jersey communities. This region accounted for over 16,000 new dwellings. Two central New Jersey counties, Ocean and Monmouth, had the most new houses in 2000, with 5,688 and 3,563 authorized units, respectively.

Major Construction Indicators by Region: 2000

Region	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
North	$4,311,533,675	12,640	6,843,466	2,179,721
Central	4,306,040,162	16,064	6,716,941	2,477,626
South	2,294,848,823	9,361	1,674,053	1,406,065
State Buildings	475,260,854	0	323,579	0
New Jersey	$11,387,683,514	38,065	15,558,039	6,063,412
Percent Distribution by Region				
North	37.9%	33.2%	44.0%	35.9%
Central	37.8%	42.2%	43.2%	40.9%
South	20.2%	24.6%	10.8%	23.2%
State Buildings	4.2%	0.0%	2.1%	0.0%
New Jersey	100.0%	100.0%	100.0%	100.0%

Source: N.J. Department of Community Affairs, 6/11/01

Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties

Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties

Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties

Boom Towns

Three New Jersey cities were among the municipalities with the most activity. Atlantic City in Atlantic County had $304 million of construction. More than two-thirds was for a casino, hotel, and parking complex that broke ground late in December. The 40-story hotel will have 2,000 rooms and has an estimated construction cost of $202 million. This is the largest permit issued for a single building in the more than five years that the Department has published construction statistics.

New Jersey's largest city, Newark in Essex County, had $192.9 million of construction. A lot of different types of development between one and ten million dollars broke ground. These included several college and university dormitories, and youth shelters. Newark had 685 new homes in 2000, ranking fifth among all localities. Jackson Township in Ocean County had the most new dwellings: 1,137 authorized units. A new county library and a new elementary school, as well as several new assisted-living facilities, were among the big projects in Jackson. Residential construction, however, accounted for more than 75 cents of every dollar authorized by building permits. Jersey City in Hudson County, which in 1999 led all municipalities with the most construction, the most new houses, and the most new office space, ranked fourth among all localities with $158.3 million in estimated construction costs. The new projects included a ten-story hotel, 646,000 square feet of new office space (third among all localities), and 203 new homes.

Major Construction Indicators, Top New Jersey Municipalities: 2000						
Rank	Municipality	County	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
1	Atlantic City	Atlantic	$304,044,063	28	3,280	0
2	Newark City	Essex	192,875,093	685	223,654	67,525
3	Jackson	Ocean	175,537,803	1,137	205,198	6,806
4	Jersey City	Hudson	158,266,183	203	645,532	324
5	West Windsor	Mercer	153,090,750	274	223,037	28,727
6	Bridgewater	Somerset	139,450,022	126	760,164	1,680
7	Hopewell Twp.	Mercer	138,093,008	84	902,111	0
8	Monroe	Middlesex	134,978,217	435	29,004	0
9	Franklin	Somerset	129,676,437	1,054	382,012	0
10	Parsippany-Troy Hills	Morris	129,032,043	302	1,011,124	6,500
	Top Municipalities		1,655,043,619	4,328	4,385,116	111,562
	New Jersey		**$11,387,683,514**	**38,065**	**15,558,039**	**6,063,412**

Source: N.J. Department of Community Affairs, 6/11/01

New House Prices

The cost of a new house in New Jersey increased in 2000. Just over 25,000 new houses were completed, occupied, and began enrollment in a new home warranty program. Most new houses must enroll in a warranty program. The exceptions are rental units and houses built by homeowners who acted as their own general contractors. The median sales price of all the new houses that were completed in 2000 was $231,728. This was 3.2 percent more than the median sales price last year. Bergen County had the most expensive homes. Half of the 1,006 new houses that were completed, occupied, and enrolled in a new home warranty program in 2000 cost more than $423,630. Hunterdon and Somerset Counties had median sales prices of $374,900 and $367,759, respectively.

New House Prices			
Year	Number of New Houses	Median Sales Price	Percent Change from Previous Year
1996	20,930	$183,000	
1997	21,640	$190,000	3.8%
1998	23,884	$209,900	10.5%
1999	24,479	$224,496	7.0%
2000	25,058	$231,728	3.2%

Source: N.J. Department of Community Affairs, 6/11/01

Rehabilitation Subcode

In 1997, New Jersey became the first State in the country to adopt a separate building code for the rehabilitation of existing structures. The purpose of the Rehabilitation Subcode was to remove regulatory barriers that added cost, and discouraged repair and renovation of existing buildings. Since its adoption, New Jersey's Rehabilitation Subcode has received national attention and honors. In the fall of 1999, the subcode was cited as one of ten winners in the "Innovations in American Government Award" sponsored by the Ford Foundation, the John F. Kennedy School of Government at Harvard University, and the Council for Excellence in Government.

How has the subcode fared three years later? The estimated cost of construction for additions and alterations to existing buildings totaled $5 billion in 2000, or about 44 percent of the estimated cost of all construction work authorized by building permits. While the estimated cost of construction authorized by permits issued for new construction grew by 4 percent between 1999 and 2000, the estimated cost of all additions and alterations to existing structures increased by nearly three times that much (11.9 percent). Rehab work is especially important to New Jersey's cities. Newark and Jersey City had the most renovation work in 2000 ($127.6 million and $59.3 million, respectively).

Source: John Lago
Office of Planning and Program Development

Applications for Certificates of Occupancy

The Department has been made aware of the fact that code officials are misinterpreting Section 5:23-2.23(h) of the Uniform Construction Code, "Applications for certificates of occupancy," in the field.

One might ask, "Why is the application so confusing?" When a certificate of occupancy is needed, a form is filled out, the proper fees are submitted, and hopefully, an applicant receives his or her certificate of occupancy within ten days. It seems pretty straight forward, right? Well, not so fast.

Oftentimes officials request that the application for a certificate of occupancy be submitted with the permit application. By following this procedure, all required fees are paid up front, which at first may seem logical, but actually defeats the purpose of applying for a certificate of occupancy.

Here's why: Application Form No. 270 requires that applicants submit a written certification stating that he or she has not deviated from the approved construction plans (insignificant deviations need not be noted). By submitting this form, the applicant also certifies that the construction plans are in conformance with all the adopted subcodes.

The Department understands the difficulties inspectors face when trying to ensure absolute code compliance, as well as strict conformance with the approved plans. Therefore, applications for a certificate of occupancy are a way to place the burden of compliance on the shoulders of the person who is responsible for the work covered under the permit – the contractor.

Unless an application for a certificate of occupancy is submitted prior to the completion of the work covered by the permit, which guarantees true certification, neither the permit applicant nor the code official will be protected when deviations and/or violations are uncovered. Therefore, it is imperative that applications for certificates of occupancy be submitted after the work covered by the permit is complete.

If you have any questions, please contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Louis J. Mraw
Supervisor
Office of Regulatory Affairs

THE STATE UNIVERSITY OF NEW JERSEY
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Construction Code Communicator

State of New Jersey
Donald T. DiFrancesco, Acting Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

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When is a Demolition Permit Required?

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.

As a reminder, when UCCARS is used to record demolitions, special census item numbers indicate the type of structure demolished. For more information on how to determine census item numbers, please refer to the article entitled, "Recording Housing Demolitions," which appeared in the Spring 2001 edition of the *Construction Code Communicator*.

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

Source: Marcel Iglesias
Code Assistance Unit

Group Overnight Stays

The Division of Fire Safety has adopted new rules regarding group overnight stays. Group overnight stays are best described as follows: when a structure that was not designed or constructed as a residential use houses a group (like the Boy Scouts or Girl Scouts) for an overnight slumber party. Recently, I had the distinct pleasure of sleeping on the floor at the Liberty Science Center with my son and 300 of my "closest" friends.

According to this Fire Code regulation, a group overnight stay does not trigger a change in the use group of the building if the facility holds six or fewer of these "slumber parties" within a calendar year. Even though there is no change in use, the building owner is required to register the building with the fire official having jurisdiction. The fire official should refer to section F-709.1 for the requirements associated with this temporary use of the building.

If the facility holds seven or more overnight stays, the building is then considered to have undergone a change in use and a Certificate of Occupancy is needed. In this instance, an application for a change of use is required to provide sufficient documentation to the Construction Department to verify compliance with the Rehabilitation Subcode for the new R-1 use.

We, as code officials, need to be aware that temporary uses do not always trigger a change in use group. Should you have any questions regarding this requirement, please feel free to contact me. I may be reached at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

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Reminder: How Rehabilitation Subcode Requirements are Established through Categories of Work

The provisions of the Rehabilitation Subcode, or "Rehab Code," move away from the strict dimensional requirements of the building code, which is oriented toward new construction, and instead focus on work in existing structures. Since its adoption in 1998, the Rehab Code has made the reuse of buildings safer, cheaper, and easier; in doing so, it has encouraged the preservation of historic buildings and the reuse of other structures.

In the fall of 1997, just prior to adoption, the Department of Community Affairs launched a statewide effort to train local officials in the Rehab Code's fundamental principles and common sense provisions. Recently, it has been brought to the Department's attention that many in the field believe that, because it has been nearly four years since this initial training, it would be beneficial to have a refresher course. In the meantime, the following is intended to serve as a brief reminder of how to recognize the Rehab Code's categories of work, which is the first step when applying the code to a particular project. Once the category of work is established, the code requirements are applied:

Repair: "Repair" means to fix a building component or material that is worn or damaged with a component or material that is the same or nearly the same. Examples of repair are patching drywall, fixing a stair tread or a handrail, and re-roofing. In most cases, the Rehab Code allows a repair to be made with the same material, fixing "like with like," even if the material is no longer used in new construction.

Renovation: "Renovation" work includes the replacement of interior finishes, doors, windows, trim, or other materials with new materials that serve the same purpose. Renovations differ from repairs in that the replacement is not "like with like." To ensure that the use of these materials does not make the building less safe, the materials and the methods of installation must comply with the material standards listed and the installation criteria given in the construction code.

Alteration: An "alteration" involves reconfiguring interior space by adding or removing walls, doors, stairs, or windows, or by changing the height of a ceiling. The primary concern with an alteration project is that it not adversely impact egress. The Rehab Code establishes a set of minimum standards for egress and fire protection in its "basic" requirements, which are based on the use group of the building or space. An alteration project cannot make a building less compliant with the basic requirements.

Reconstruction: A "reconstruction" project is a combination of repair, renovation, and alteration work that is so extensive that the building – or an entire tenancy – cannot be occupied during the project. Also, the project must be so significant that, upon completion, the building or tenancy needs a new Certificate of Occupancy. The work area must meet the basic requirements, which establish minimum egress, fire safety, ventilation, plumbing, and accessibility requirements. The basic requirements do not extend the work beyond the original work area planned by the building owner. Supplemental requirements, which may apply to a reconstruction project, are an exception to the general rule that the Rehab Code does not extend the applicant's scope of work. These requirements apply to building systems that are best installed on a floor-by-floor or building-wide basis. Fire suppression systems and fire alarms, which are covered in supplemental requirements, are required only when the area of the reconstruction work is sufficiently large to justify them. One example of a reconstruction project is the "gut rehab" of a row house.

Change of Use: A "change of use" involves changing the purpose of – or primary activity in – a building. The Rehab Code applies a measure of the relative hazard associated with the proposed use as compared to the existing use to determine whether the change in the use of a building means that the building must be upgraded. For example, if a building is to be changed from an office to a storage building, the loads associated with the storage may require the upgrading of the structural system. Similarly, if a building is changed from a warehouse (low occupancy) to a theater (higher occupancy), the exitways will need to be changed to accommodate the additional people in the building.

Addition: An "addition" is the extension of the area or height of a building. The addition itself must meet code requirements for new construction. The Rehab Code minimizes the amount of work required in the existing portion of the building. It ensures that the addition does not adversely impact the existing portion of the building from a structural, exiting, and fire protection standpoint.

If you have any questions about the categories of work listed above, or if you have questions in general, contact the Code Assistance Unit at (609) 984-7609.

Source: Megan Sullivan
Code Development Unit

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New Jersey Department of Community Affairs/Division of Codes and Standards

Rehabilitation Subcode (NJAC 5:23-6)

Code Change Proposal

Due: Code changes must be submitted by **January 25, 2002**
Proposals must be presented with language proposed for deletion in brackets [ ].
Proposals must be presented with language proposed for addition underlined __.

Mail code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625

FAX code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
(609) 633-6729 or
(609) 984-7717

Direct questions to the Code Development or Code Assistance Units at (609) 984-7609.

Section (Citation) proposed for change: _____
Sections (companion changes) that may also need to be changed: _____
_____

NAME:_____
ORGANIZATION: _____
ADDRESS: _____
_____
TELEPHONE:_____FAX:_____E-mail:_____

Proposed Code Change:

_____
_____
_____
_____

Supporting Statement (Reason for Code Change):

_____
_____
_____
_____

Department of Community Affairs
Division of Codes and Standards
Rehabilitation Subcode
Code Change Proposal 2002

Latest Code Adoptions

On June 18, 2001, the Department of Community Affairs adopted, with modifications, the 2000 International Mechanical Code (IMC) and the 2000 International Fuel Gas Code (IFGC) to replace the 1993 edition of the Building Officials and Code Administrators (BOCA) National Mechanical Code. As with all adoptions of new model codes, there is a six-month grace period in which the BOCA code may still be used. If design professionals opt to use BOCA, the permit application must be submitted prior to the end of this six-month grace period.

On July 16, 2001, the Department adopted new model energy codes. The code for residential construction is the 1995 Council of American Building Officials Model Energy Code (CABO MEC) and the code for commercial construction is the 1999 version of ASHRAE 90.1. The operative date for these codes is January 16, 2002. This means that the six-month grace period does not begin until January 16, 2002, which enables the Department to provide training on the codes before they are required.

Finally, on September 17, 2001, the Department adopted the 2000 edition of the National Standard Plumbing Code (NSPC).

For your convenience, the 2000 editions of the IMC, IFGC, and NSPC are available on CD ROM. If you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Turbine Generators

Turbine generators are used in the production of power in electrical generating stations. In accordance with N.J.A.C. 5:23-3.11(a)1, the plan review of these facilities is reserved exclusively for the Department of Community Affairs to perform; the local municipality typically performs the inspections.

Recently, the Department has received several calls regarding fire protection systems installed by the turbine manufacturer within the contained turbine box. According to N.J.A.C. 5:23-9.7(b)1, turbine generators are classified as process equipment. Any equipment or devices attached to the turbine by the turbine manufacturer are also process equipment.

The Department considers these systems part and parcel of the turbine and, by extension, of the process equipment. Even if the extinguishing agent container sits outside the turbine box, the fire protection system installed by the turbine manufacturer is process equipment and, therefore, is not subject to the Uniform Construction Code.

If you have any questions, please contact me at (609) 633-6966.

Source: Robert Hedden
Bureau of Construction Project Review

New Jersey Register Adoptions

Date: July 16, 2001

Adoption: 33 N.J.R. 2471(a)

Summary: N.J.A.C. 5:23-3.4 and 3.18: The Department of Community Affairs has adopted, with modifications, new model energy codes. The code for residential construction is the 1995 Council of American Building Officials (CABO) Model Energy Code. The code for commercial construction is the 1999 version of ASHRAE 90.1.

Date: September 4, 2001

Adoption: 33 N.J.R. 2989(a)

Summary: N.J.A.C. 5:23-3A, 5.19B, 5.19C: These adopted amendments provide for the licensure of State inspectors who enforce rules regulating carnival/amusement rides, ski lifts, boilers, pressure vessels, and refrigeration systems.

Date: September 17, 2001

Adoption: 33 N.J.R. 1245(a)

Summary: N.J.A.C. 5:23-3.15: The Department has adopted the 2000 edition of the National Standard Plumbing Code (NSPC).

Source: Megan Sullivan
Code Development Unit

Central Sprinkler on the Recall...Again!

On June 19, 2001, the United States Consumer Product Safety Commission (CPSC) and Central Sprinkler Corporation announced the recall of approximately 33 million "wet" sprinklers and 2 million "dry" sprinklers, all with O-ring seals. The wet sprinklers were manufactured from 1989 to 2000 and are installed in piping that is filled with water. The dry sprinklers were manufactured from the mid-1970s to June 2001 and are installed in piping that is not filled with water. Along with Central, Gem and Star Sprinkler Companies have also recalled 167,000 sprinkler heads with the same condition. Wet and dry sprinklers can be found nationwide in a variety of buildings, including houses, apartments, hospitals, day-care facilities, schools, dormitories, nursing homes, supermarkets, parking garages, warehouses, and office buildings.

A similar situation occurred in 1998. Central Sprinkler recalled 8.4 million Omega sprinkler heads. Omegas were cited for failing in at least 20 fires, unlike the new sprinkler recall where only 4 wet and 9 dry sprinklers had failed.

The recall of the O-ring fire sprinklers includes the following models:
Central "Wet" — GB, GB-J, GB-1, GB-ALPHA, GB4, GB-QR, GB-QR, GB-2, GB-EC, GB-FR, GB4-EC, GB4-QREC, GB-20, GB-20 QR, GB-LO, LF, GBR, GB-R1, GB-RS, GB-R, ROC, BB1 17/32, BB2 17/32, BB3 17/32, BB1, BB2, BB3, SD1, SD2, SD3, HIP, WS, ELO-LH, ELOC, ESLO, ELO SW-20, ELO SW-24, ESLO-20 GB, ELO-231 GB, ELO-GB, ELO-231 GBQR, ELO-GB QR, LD, K17-231, Ultra K17, ELO-16 GB, GB MULTILEVEL, QB-QR MULTILEVEL, ELO-16 GB FR;
Central "Dry" — A-1, H-1, J, K, GB, GB-QR, GB4, GB4-FR, GB4-EC, GB4-QREC, ELO-231 GB, ELO-GB QR, ELO-16 GB, ELO-16 GB FR;
Gem "Wet" — F927; and
Star "Dry" — ME-1, SG-QR, Q-QR, SG, Q.

Central Sprinkler is offering a voluntary replacement program in which the corporation will provide free parts and labor to replace all defective sprinklers. This replacement program has a very specific protocol to follow. The first step for participating in the replacement program is to determine whether the sprinkler system contains sprinkler heads with O-ring seals. Since it may be hard to visually identify the type of sprinkler heads used, it is helpful to review any sprinkler installations and/or maintenance records to obtain the make, model, and manufacturer date of the sprinkler heads.

A "Proof of Claim" form and a "Waiver, Release of Claims, and Replacement Agreement" form must be completed to receive free replacement sprinkler heads and installation. In addition to the "Proof of Claim" form, two paragraphs describing each sprinkler must be submitted so that Central can help identify the sprinkler heads and confirm that they are part of the voluntary program. The "Waiver and Release" form will not be accepted without the sprinkler system owner's signature.

The actual replacement of the sprinkler heads will not cost the sprinkler head owner anything. In addition, permits are not required when replacing the sprinklers. N.J.A.C. 5:23-9.3(a)4i clearly states that the replacement of sprinklers falls under the category of ordinary fire protection maintenance and, therefore, does not require a permit. Once all the paperwork is completed and sent to Central Sprinkler, the new sprinkler heads should be on their way.

For more information on how to identify faulty sprinklers or how to participate in the program, call the Notice Packet Request Line at 1-800-871-3492. Information may also be obtained by visiting the program's website at www.sprinklerreplacement.com.

For additional assistance, call Central Sprinkler's Customer Service Hotline at 1-800-505-8553.

Source: Rob Austin
Code Assistance Unit

Are Sprinkler Problems Interfering with Occupancy?

Every building needs a Certificate of Occupancy (CO), but what if a certain sprinkler recall is hindering individuals from receiving their CO on time? With the recent Central Sprinkler recall, you might find yourself in this situation. In order to avoid setbacks, the Department of Community Affairs recommends that construction officials issue a Temporary Certificate of Occupancy (TCO). The TCO should allow a reasonable amount of time for compliance with the voluntary sprinkler replacement program that Central is offering.

The time by which Central Sprinkler resolves any sprinkler problem is based on where the problem falls on their priority listing. In other words, situations that Central considers to be the most important will be taken care of first. If a sprinkler system is leaking and/or corroding, it will be at the top of the priority list. The age of the system is the second most important factor and the final determinant is the type of occupancy the system protects. If the building is new, the system is new as well and should not be leaking or corroding, leaving the type of occupancy as the deciding factor. If the building is of residential use, or is a place where someone sleeps, it will be among the first to receive a sprinkler replacement.

If you have any questions, please do not hesitate to contact me at (609) 984-7609.

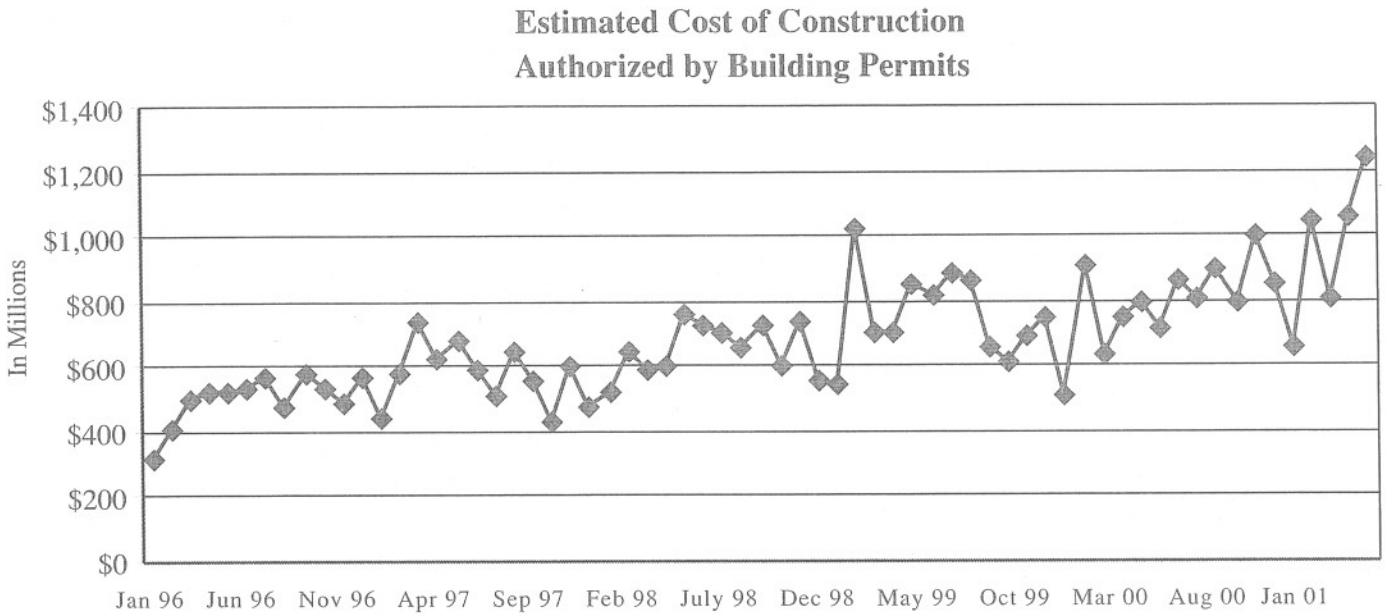
Source: Rob Austin
Code Assistance Unit

June 2001 Highlights

The following is from the June 2001 issue of the New Jersey Construction Reporter. The Department of Community Affairs began publishing the Construction Reporter in 1995. The publication has construction statistics from building permits issued throughout the State.

At the start of the 1990s, New Jersey's construction economy was in a depressed state. The number of new houses authorized by building permits dropped well below 20,000, to levels not seen since the 1940s. The industry began a steady recovery in the mid-1990s. Each year since 1995, estimated construction costs authorized by building permits grew by about one billion dollars. Authorized houses also grew steadily. Construction activity in May 2001 reached $1.1 billion. This was an all-time high for a single month since the Department of Community Affairs began collecting and publishing construction data more than five years ago.

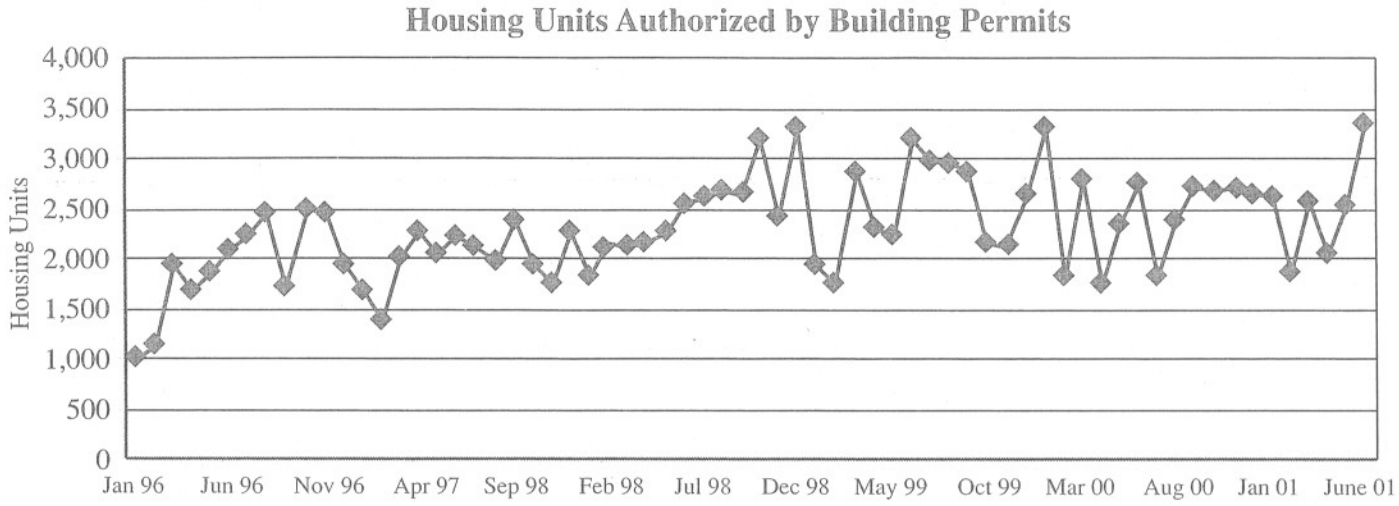
June's activity surpassed last month's total by $178.1 million. The estimated cost of construction authorized by building permits in June was $1.238 billion; 501 municipalities reported. Residential construction amounted to $572.6 million (46.3 percent). Office, retail, and other nonresidential structures totaled $665.1 million (53.7 percent). New housing also was up. New Jersey municipalities issued building permits for 3,339 new housing units in June.



Boom Time on the Gold Coast

One municipality stands out. Jersey City in Hudson County has seen a housing and office boom unlike that in any other locality. In 1999, New Jersey's second largest city led all municipalities with the most new housing (1,783 units), the most new office space (1.4 million square feet), and the most total construction activity (estimated at $354.4 million). Just for the month of June, the City reported a level of activity that surpassed records set for the entire year in 1999. The estimated cost of construction authorized by building permits in June was $412.1 million. Three permits accounted for most of this activity. Work began on a new, 1.5-million-square-foot office building for a large financial investment firm. The estimated cost of construction for the 43-story structure was $254.6 million. This is the largest building permit reported to the Department of Community Affairs since the agency began publishing construction data in 1995. Two large, multifamily housing complexes also broke ground in June. One of the developments is a high-rise structure (37 stories) with 648 market-rate units and an estimated construction cost of $69.2 million. The other has 296 market-rate dwellings and an estimated cost of $68.2 million.

Other localities had big projects in June, but none on the level with Jersey City. The estimated cost of all construction authorized by building permits in Tabernacle Township, Burlington County totaled $25.2 million of construction. Most of this was for a new, 187,000-square-foot high school ($23.8 million). East Brunswick Township in Middlesex County had $16.5 million in construction for residential and commercial (hotel and office) development. There also were several large public works projects that included a sewage treatment plant for a regional sewer authority in Monmouth County, and facility construction by the University of Medicine and Dentistry of New Jersey and Rowan University.



Mid-Year Review

Major construction indicators are up compared to this time last year. This is due in large measure to the development in Jersey City. Between January and June 2001, the estimated cost of all construction authorized by building permits was $6.2 billion, about $1.4 billion more than the first half of the year 2000, an increase of 28.3 percent. Jersey City issued building permits for $718.9 million of construction, accounting for 11.8 percent of all activity.

Major Construction Indicators, New Jersey: January - June

Period	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
January – June '97	$3,926,007,970	12,824	3,527.402	2,622,495
January – June '98	$4,121,149,094	15,139	4,780,300	4,128,120
January – June '99	$4,994,367,961	16,809	5,254,870	3,596,066
January – June '00	$4,798,965,724	16,849	5,972,159	2,233,888
January – June '01	$6,157,204,386	16,834	9,771,589	3,244,421
Difference Between 2000 and 2001				
2000-2001	$1,358,238,662	-15	3,799,430	1,010,533
Percent Change	28.3%	-0.1%	63.6%	45.2%

Source: NJ Department of Community Affairs, 8/8/01

A little more than ten percent of all the new houses authorized by permits were in Jersey City. Between January and June, New Jersey localities issued building permits for 16,834 new dwellings, which was about the same as last year; 1,739 of these new units were in Jersey City.

New office construction increased by 3.8 million square feet, or 63.6 percent, compared to the first half of the year 2000. About 30 percent of all the new office space was in Jersey City. Retail construction in the first half of 2001 is up by about one million square feet compared to January through June 2000. Mount Olive Township in Morris County led all municipalities with the most new retail space (450,220 square feet).

New House Prices

The median sales price of the 5,079 new houses that began enrollment in a new home warranty program in the second quarter of 2001 was $248,750. This was 2.4 percent more than the median sales price last quarter. Somerset County had the most expensive new houses. Half of the 198 new houses that began enrollment in a new home warranty program in the second quarter of 2001 cost more than $414,374.

(continued on page 8)

(continued from page 7)

Period	Number of New Houses	Median Sales Price	Percent Change
1996	20,903	$183,300	-----
1997	21,640	$190,000	3.7%
1998	23,884	$209,980	10.5%
1999	24,479	$224,496	6.9%
2000	25,058	$231,728	3.2%
First Quarter 2001	4,262	242,900	3.0%
Second Quarter 2001	5,039	248,750	2.4%

Source: NJ Department of Community Affairs, 8/8/01

For more information about the *Construction Reporter* or to receive a complimentary copy, contact me by telephone at (609) 984-7609. You may also reach me by e-mail at jlago@dca.state.nj.us.

Source: John Lago
Office of Planning and Program Development

REPRINT: Ten Things Every Construction Official Should Know About New Home Warranties

The following originally appeared in the fall edition of the 1996 Construction Code Communicator, Volume 8, Number 1.

1. When a builder's registration expires, the builder is not put on the suspended or revoked list. Consequently, you must check a builder's registration card in addition to the revoked and suspended lists to be sure that the builder is in a position to pull permits and apply for Certificates of Occupancy.

2. Once every five years, a property owner may build a house for his or her own use or occupancy. This does not mean that a builder can sell a house every five years without a warranty. Only the property owner can sign the Certification in Lieu of Oath.

3. The builder who transfers title is the builder who should provide the warranty. The implication is that the builder who is transferring title is the builder who should pull the permits.

4. Builders who use modular homes must provide a new home warranty. The factory warranty does not qualify as a new home warranty. Owners of lots (with intent to occupy) who contract with the factory directly do not receive a new home warranty (see #5).

5. An owner who will occupy a unit, and who is responsible under a separate agreement for any of the basic systems of the structure, is acting as his own general contractor and may not receive a warranty.

6. Warranty forms are not valid unless they have been stamped with a warranty number and date, or have been otherwise endorsed as indicated on the form. Each of the approved warranty plans has a distinct form or forms indicating a valid enrollment. If the form says "not valid unless signed," be sure there is a signature. The State New Home Warranty Program's Certificate of Participation must be stamped with a number and date in the lower right-hand corner.

7. Warranties are not applicable to renovations, which include the construction of an otherwise new home on an existing foundation or part of an existing foundation.

8. A builder may not build under someone else's registration.

9. If there will not be a warranty, your file should include one of the following 1) the certification in Lieu of Oath of an owner building for his or her own use or occupancy, 2) an affidavit by the owner of the lot that the home was constructed for lease purposes only, 3) a letter from the New Home Warranty Program granting an exception, 4) a notation on the permit(s) that the new home incorporates portions of an existing foundation or other structural element, or 5) an indication that the home was built in accordance with the U.S. Department of Housing and Urban Development (HUD) requirements rather than those of the Uniform Construction Code (UCC).

10. If you have questions, please contact the New Home Warranty Program at (609) 984-7905.

Source: Peter Desch
Bureau Chief, Bureau of Homeowner Protection

Workplace Hazards

In an effort to be proactive in preventing workplace injury, illness, and death, the Occupational Safety and Health Administration (OSHA) is focusing on the leading causes of construction worker injury and death in New Jersey. The following is a list of some of the conditions that might contribute to construction worker injury and death:

1. Scaffolds or other structures greater than 6 feet high without fall protection such as guardrails, nets, or other personal fall arrest systems with harness and lifelines;
2. Trenches or excavations for sanitary sewer work and commercial construction deeper than 5 feet without some means of protection from cave-ins; and
3. Working within 10 feet of high voltage power lines when operating cranes operators or trimming trees.

In addition, in an effort to combat occupationally related lung disease in New Jersey, OSHA is embarking on a strategic initiative aimed at reducing worker exposure to crystalline silica, which normally occurs during roadwork. OSHA recognizes that, as code officials, you do not have jurisdiction over the construction of roads. However, we are requesting that if you or any of your staff observe some of the following activities, you inform us so that we can reduce the occurrences of this problem. Crystalline silica overexposure might occur when the following tasks are performed:

- Chipping, hammering, drilling of rock
- Abrasive blasting using silica sand as the abrasive
- Abrasive blasting of concrete
- Sawing, cutting, hammering, drilling, grinding, or chipping of concrete masonry
- Demolition of concrete and masonry structures
- Dry sweeping or use of pressurized air to blow concrete dust

When crystalline silica is inhaled, lung tissues react by developing fibroid nodules and scarring around the trapped silica particles causing a condition called silicosis. This condition, which is similar to emphysema in its symptoms, causes severe breathing difficulties. This disease is progressive and often fatal. Respirable crystalline silica is also a known human lung carcinogen.

Over the years, OSHA has had problems catching up with employers performing these tasks. Although code officials are not responsible for enforcing OSHA rules and regulations, we believe that you are likely to know of projects in your towns and you may observe improper work practices. If you see an improper work condition that OSHA should know about, please contact us at the telephone numbers provided below. OSHA is also interested in being notified of any other known causes of workplace fatalities, catastrophes, or serious injuries.

Some examples of helpful information include: name of employer, exact location, task being performed, and approximate number of exposed individuals.

Should you observe any of these workplace hazards, or if you have any others to report, please contact the Avenel OSHA office at (732) 750-3270. For nights, weekends, or toll free calls during the day, please call 1 (800) 321-6742. Your interest in occupational safety and health is appreciated.

Source: Robert D. Kulick, Area Director
Occupational Safety and Health Administration

Elevated Fees

The other day, a respected colleague called to ask if the price of kitchen cabinets is included in permit fees. My response was, "Have you forgotten about Bulletin No. 94-3?" My colleague replied that he had not forgotten about the bulletin, but that he had included the cost because "every other town had made him include the cost." The purpose of this article is to alert readers to STOP including that cost in the permit fees.

Bulletin No. 94-3 is still active. It clearly states that as part of the renovation of an existing kitchen, the installation of kitchen cabinets, plumbing fixtures, and kitchen appliances does not require permits. Therefore, their costs should not be included in the permit documentation.

Source: John Terry
Code Assistance Unit

Recall of Andersen Windows

For your information, Andersen Corporation, in cooperation with the US Consumer Product Safety Commission (CSPC), is recalling tilt latches in about 400, 000 windows sold between May 2001 and August 2001. This recall involves only the tilt latches on the lower sash of the Andersen 200 Series Til-Wash Double-Hung window.

As code officials you are not responsible for enforcement, however, as a service to the builders and residents/homeowners in your community, you may wish to alert them of this recall.

Concerned residents may obtain information by contacting the Andersen Window Care Solution Center toll-free at 1 (888) 888-7020 between the hours of 7 a.m.-7 p.m. Central Time (CT) Monday through Friday or 8 a.m.-4 p.m. CT Saturdays, or by logging on to Andersen's website at www.andersenwindows.com.

Source: Megan K. Sullivan
Code Development

"Rules to Live By" or "Don't Make these Mistakes"

Each year, the Department of Community Affairs receives information on over 300,000 building permits that are important sources of information on development and settlement patterns in New Jersey. They tell us what is being built and where it is being built. They provide indicators on the vitality of a key component of New Jersey's economy, the construction industry, and are one of the few sources of information available from every municipality every month.

If you are the construction official or technical assistant responsible for entering this important data, thank you. The job you are doing is important and useful to many people. You are part of the largest, most comprehensive inventory of construction data in the state.

Every large database has data-entry errors. What follows is a list of mistakes made by more than a few localities and rules of thumb to avoid them. You may want keep this list by the computer used to enter construction data.

1. Don't confuse square feet with cubic feet. The permit applicant must provide information on the square feet and cubic feet of the new structure or addition. Too many times, these two are confused. This mistake significantly distorts the statistics we get and the building fees you collect. ***Rule of thumb:*** *Square feet (floor area) can never be more than cubic feet (volume).*

2. Don't confuse buildings with dwellings. Sometimes a construction official or technical assistant tells us a new house was created when they really mean a new structure was built. For example, a town will issue a new construction permit for a nonresidential building, say a store, and will indicate that there is one new dwelling. This is true only if a house (for-sale unit) or apartment (for-rent unit) is part of the store. Too many confuse buildings with dwellings. We already know that a new building is going up. What we want to know is if the structure has any houses or apartments. ***Rule of thumb:*** *Most nonresidential uses do not have dwellings. There are some rare exceptions. See item # 3.*

3. An assisted living facility is a nonresidential use group (I-2) with dwellings. As our population ages, assisted living is becoming a more common and important housing option. Compared to skilled nursing homes, assisted living facilities provide quarters that allow for more independent living. These units may have small kitchens or microwaves. They look more like apartments than nursing homes and should be counted as dwellings. Oftentimes, an assisted living complex has a wing for nursing home or hospital beds. We only want to know the number of assisted living units. So, a complex with 30 beds for skilled nursing care and 70 assisted living apartments has a total of 70 "for-rent" units. Don't count the nursing home beds as units. ***Rules of thumb:*** *If the unit is designed for independent living, if each unit has a small kitchen or microwave, and looks like an apartment, count it as a dwelling.*

4. Don't issue permit updates that double count. Permit updates usually occur for large projects built over several months, even years. If the construction official knows the complete cost and size of a project at the outset, then by all means let us know with the initial permit. Sometimes this information is not known up front. A permit will be issued for footings and foundations, and the official only has the cost estimate for that phase of the development. Enter what you know. If the computer software requires square or cubic feet and you do not have the information at this time, enter a "one" and follow up with a permit update when the details become available. But, do not double count. For example, a permit for a large project, like an elementary school is issued. The permit indicates the structure will be 100,000 square feet, 1.7 million cubic feet, and have an estimated cost of $8.5 million. A permit update for additional work follows that repeats this information. It looks as if the applicant doubled the size and cost of the school. ***Rule of thumb:*** *Updates should include only the information that was not included in the initial permit. Enter as much information as possible with the initial permit and follow up with updates, adding new data that does not repeat earlier submissions.*

5. Count the zeros. One of the few times a $100000 house looks like a $1000000 house is when the computer software used to track permits does not have punctuation. We realize the screen displays on many computers are hard to read. The next generation of software the Department distributes will have better displays. All numbers will be fully formatted. There will be drop-down boxes to reduce data-entry errors. Until then, check your work, especially the figures for estimated construction costs. ***Rule of thumb:*** *Use whole numbers (no decimals) and count the zeros.*

6. Pay attention to demolition permits that result in the loss of a house or apartment. Several construction officials and technical assistants confuse the demolition of a building with the demolition of a dwelling. When we look at demolition permits, we especially want to know if any houses or apartments were lost and, if so, how many. Many officials issue permits for demolition of nonresidential structures — say a store, office, or warehouse — and then misinterpret the data-entry fields "for-sale unit loss" and "for-rent unit loss" as referring to buildings. They do not. They refer to dwellings. We already know a building was razed simply by the issuance of the permit. What we want to know is whether the demolished building had dwellings. Sometimes this problem occurs because of

incorrect Census item numbers. As an example, a permit will be issued for the removal of an oil tank in a house and the construction official or control person will enter Census item "645," which is for the demolition of a single-family house. The computer software sees this item number and logically queries for the number of dwellings lost, and won't let the user move to the next screen until a number is entered. Removal of an oil tank is not the same as the demolition of a house. Think of the tank as a nonresidential or accessory structure. Use item number "649" or "999." ***Rule of thumb:*** *Pay particular attention to demolitions that result in the loss of a dwelling. If you issue a permit to demolish a nonresidential structure and indicate that a house or apartment was lost, expect a follow-up call from us to verify that there was indeed a house or an apartment lost.*

7. Let us know when you need to revise or correct a building permit that was already transmitted. With over 300,000 records in the Statewide construction database, mistakes will occur. If you discover an error with a particular permit before it is transmitted, correct it. There is no need to call. Keep in mind, however, that once a permit is sent to the Department, a firewall exists that prevents any corrections by you to the Statewide database. Any revisions to previously transmitted data must be made by us. ***Rule of thumb:*** *When necessary, call us with the permit number and the correction, and we will revise the central, Statewide construction database.*

8. Submit monthly building permit and certificate reports. We expect to hear from all localities every month. There are many reasons why a town does not report. One reason common among smaller communities is that there is no activity. We still need to hear from you so we can distinguish a "no-activity" town from a "delinquent" town. Technical problems may be another reason for no reports. Over 400 municipalities transmit construction data over telephone lines. Snafus happen. If you cannot submit the monthly reports, let us know. We may be able to arrange a stopgap measure. ***Rule of thumb:*** *Submit every month, even if to report no activity. If your town appears on our delinquency list, expect a call or letter.*

9. Call with questions and comments. If you have questions about how a permit should be entered, don't hesitate to call. Also, please call if you need a report from the Statewide construction data. Many construction officials use building permits in pretty sophisticated ways. They combine this information with tax assessment data and planning and zoning decisions. Some have started to use commercially available software to map construction activity. If you have a software or data application to share or suggestions to improve how building permits are tracked and recorded, let us know with either a letter, phone call, or e-mail.

If you have any questions, please do not hesitate to call. I may be reached at (609) 984-7609.

Source: John Lago
Office of Planning and Program Development

Sizing of Gas Piping

As a result of the adoption of the 2000 International Fuel Gas Code (IFGC), the Department of Community Affairs is updating the gas pipe sizing tables referenced in Bulletin 94-1.

In accordance with the 2000 IFGC, the tables that should be used for gas pipe-sizing when the utility supplier provides gas with a specific gravity of 0.6, a system pressure 0.5 PSIG or less, and a pressure drop of 0.3 inches of water column are Tables 402.3(1) and 402.3(5). When natural gas is delivered under conditions other than those described above, the appropriate gas pipe-sizing table should be used.

Tables 402.3(1) and 402.3(5) should be used for iron pipes and schedule 40 standard pipes. The 2000 IFGC also has sizing tables for semi-rigid tubing, corrugated stainless steel tubing (CSST), and Liquefied Petroleum Gas (LP Gas). The appropriate sizing table must be used for the piping material being installed.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Counter Documents

The Department of Community Affairs is forming a working group to review existing counter documents and to make recommendations on how to share useful ones statewide. Counter documents are those information sheets available at the counters of local construction code enforcement offices that help explain code requirements and administrative procedures to permit applicants.

The Department has been collecting sample documents covering a variety of subjects such as career development in the field of building code administration; permit information for decks, porches, and roofs; and facts on fire sprinklers.

Any code official with counter documents that could be included in this review should send them to Mary Ellen Handelman, Division of Codes and Standards, Department of Community Affairs, Post Office Box 802, Trenton, New Jersey 08625.

If you have questions about this project, I may be reached at (609) 984-7609.

Source: Kristy Paolillo
Code Development

Construction Code Communicator

NEW JERSEY UNIFORM CONSTRUCTION CODE

State of New Jersey
James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

Volume 13 Number 4 **Winter 2001**

Availability of 2000 IMC, IFGC, and NSPC CD-ROMs

In the Fall 2001 edition of the *Construction Code Communicator*, the article entitled "Latest Code Adoptions" generated many telephone requests to the Department of Community Affairs for copies of the 2000 editions of the International Mechanical Code (IMC), the International Fuel Gas Code (IFGC), and the National Standard Plumbing Code (NSPC) on CD-ROM.

The article apparently created the impression that these CD-ROMs were available through the Department; however, we do not supply them. The 2000 IMC and IFGC are available for purchase from Building Officials and Code Administrators (BOCA) International, Inc. at 1-800-214-4321. The 2000 NSPC may be obtained from New Jersey Plumbing, Heating, and Cooling Contractors (NJ-PHCC) at (609) 499-8070.

I apologize for the confusion. Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Permit Requirements

The Office of Regulatory Affairs has discovered an increasing number of construction code officials who are allowing work to commence without first issuing the appropriate permits. Some officials are issuing footing and foundation letters, while others are simply allowing work to proceed as long as payment has been received and all subcode officials have signed off on their respective portions of the permit.

Both scenarios are absolutely inappropriate. Except for minor work and emergency repairs, permission to work, which is what a permit is, can only occur when you have issued Form F180, which is the legal document signifying that the applicant has successfully completed all aspects of the application process.

Please remember that it is unlawful on your part to allow work to commence without first issuing a partial or full permit for any work that requires a permit. This is a fundamental rule contained within the Uniform Construction Code.

Source: Louis J. Mraw
Supervisor
Office of Regulatory Affairs

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Accessibility and Sales Offices

The Department of Community Affairs has received several requests for clarification on the accessibility requirements for sales offices at developments of single-family homes.

Accessible route: The office is required to be accessible to all customers; therefore, there must be an accessible route into the office. When the office is in an on-site trailer, this is usually accomplished by a ramp. When the office is in the garage of the on-site model home, the entrance to the office is at grade and is accessible. The model home itself is not required to have an accessible route into and through the dwelling, and the toilet facilities in this single-family home are (of course) exempt from the Barrier-Free Subcode.

Accessible toilet room: When toilet facilities are available to customers, an accessible toilet room must be provided. When the sales office is in the garage of the model home, this may be accomplished by providing an accessible port-a-john on an accessible route (stable, firm, and slip-resistant) adjacent to the office. When toilet facilities are not available to customers, but are available only for employees, an accessible toilet must be provided (in compliance with the Americans with Disabilities Act, Title I) as an accommodation to an employee.

If you have further questions on this issue, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily Templeton
Code Development Unit

Reminder: Building Safety Week 2002

The 21st Annual Building Safety Conference will be held Wednesday, May 1 through Friday, May 3, 2002 at Bally's Park Place in Atlantic City. Look for your registration brochure toward the end of February.

We are encouraging all code enforcement personnel and other interested parties to participate in this worthwhile event. Please mark these dates on your calendars.

If you have any questions, contact the Education Unit in the Bureau of Code Services at (609) 984-7820.

Source: Megan K. Sullivan
Code Development Unit

Bulkheads, Piers, and the UCC

There have been a number of inquiries on whether a permit is needed for a bulkhead or pier. No technical standards are adopted under the Uniform Construction Code (UCC) for bulkheads and piers; therefore, UCC permits are not required. Neither the Building Officials and Code Administrators (BOCA) National Building Code/1996 nor the One- and Two-Family Dwelling Code/1995 provides criteria for these designs.

There are exceptions to this rule:

1. If the bulkhead or pier is used to support a building or structure, then a permit is required, as the bulkhead or pier becomes part of the building foundation.
2. If the bulkhead is used as a retaining wall that is part of the means of egress, a permit is required. See Bulletin No. 88-6.

The responsibility for the review and inspection of the design and construction of bulkheads and piers is with the town engineer. UCC forms should not be used for this purpose.

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

Source: Marcel Iglesias
Code Assistance Unit

IBC/IRC Update

For everyone out there who is a bit curious about the adoption of the International Building Code (IBC) and the International Residential Code (IRC), here's the deal!

The 2000 IBC and IRC have been completely and thoroughly reviewed by the International Code Council (ICC) Advisory Committee, which was formed by the Department of Community Affairs to review these codes in depth. The ICC Advisory Committee divided into working groups to address such critical issues as residential affordability, fire safety issues, changes in use group definitions, structural design issues, and special inspections.

The ICC Advisory Committee's recommended changes were referred to the Code Advisory Board (CAB) at a joint meeting on December 14, 2001. The recommendations and draft rule were then sent to the

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Building, Fire Protection, Elevator Safety, and Plumbing Subcode Committees of the CAB. Their review is expected to take several months.

With their input, a proposal for adoption should be made in the *New Jersey Register* in late spring or early summer. The IBC and IRC should be officially adopted with technical amendments by the end of 2002.

Because there is a significant number of changes, the Department is planning to contract for a New Jersey publication of the IBC and the IRC with all the amendments included. So before you go out and buy all of these code books, wait to see when a NJ publication will occur!

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

Source: Rob Austin
Code Assistance Unit

New Jersey Register Adoptions

Bulletin No. 01-3: This bulletin is a companion to the rule on training fees in which the Department of Community Affairs exempts projects involving affordable housing from Departmental fees, including the training fee. This bulletin provides the Department's definition of "affordable housing."

Date: October 1, 2001
Adoption: 33 *N.J.R.* 3430(a)
Summary: *N.J.A.C.* 5:23-2.23, 4.18, and 4.20: These adopted amendments require the issuance of a Temporary Certificate of Occupancy for a building or portion of a building when the work covered by a permit is substantially completed and the building or portion of the building may be occupied without endangering health or safety.

Date: October 15, 2001
Adoption: 33 *N.J.R.* 3673(b)
Summary: *N.J.A.C.* 5:23-3.14: These adopted amendments change the existing requirements for ornamental guardrails by deleting the reference to a "ladder effect."

Date: October 15, 2001
Adoption: 33 *N.J.R.* 3674(a)
Summary: *N.J.A.C.* 5:23-3.14 and 3.21: These adopted amendments provide the definition of "habitable attic" from the 1990 edition of the Building Officials and Code Administrators (BOCA) National Building Code. In addition, the adopted amendments delete any remaining citations for Chapter 11 of the Building Subcode in their entirety.

Source: Megan K. Sullivan
Code Development Unit

How Do I Reach Experior?

I have recently received several complaints from code officials who are attempting to register for exams that are offered through Experior Assessments, Inc. When I have called Experior to see whether the problem is replicated, I have had no problems. It has occurred to me that perhaps there is an obsolete telephone number being circulated.

Approximately six months ago, in an effort to improve customer service, Experior consolidated all test development and administration of the National Certification Program for Construction Code Inspectors (NCPCCI) in its central office in St. Paul, Minnesota. The phone number to reach Experior is 1-800-864-5309.

In order to address any future difficulties you may encounter when contacting Experior, please ask for the name of the person to which you are speaking. This will allow us to track the problem more efficiently. I hope this will help all of you receive faster, higher quality service from Experior.

Source: Emily Templeton
Code Development

Installation of Arc Fault Circuit Interrupters

This article serves as a reminder that Section 210-12(b) of the National Electrical Code (NEC) 1999 was amended at *N.J.A.C.* 5:23-3.16 to delete the words "become effective January 1, 2002" at the end of the section and to substitute the words "be considered optional." Therefore, the installation of arc fault circuit interrupters (AFCI) in dwelling unit bedroom branch circuits that supply 125-volt, single-phase, 15- and 20-ampere receptacle outlets cannot be required by the electrical subcode official, and the decision to have these devices installed remains the "option" of the owner/designer.

However, if AFCIs are installed, they must be in accordance with their listing and labeling requirements. A recent Underwriters Laboratories listing indicates that manufacturers have had their products listed.

The Department of Community Affairs invites you to advise us how often this option is being selected to enable us to review the optional feature appropriately. Comments may be sent to me by e-mail at amehta@dca.state.nj.us; by fax at (609) 984-7717; or by mail at the New Jersey Department of Community Affairs, Division of Codes and Standards, Post Office Box 802, Trenton, NJ 08625.

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

Source: Ashok Mehta
Code Assistance Unit

Census Item Numbers

As construction officials and technical assistants, you are responsible to report each month to the New Jersey Department of Community Affairs on the construction activity in your locality. Many of you also may be aware of a similar obligation you have to submit this information to the U.S. Bureau of the Census. For most of you, these requirements occur behind the scenes and are met by the computer software used to record and keep track of building permits and certificates. Some of you may not know that, in recent years, the U.S. Census Bureau changed its reporting requirements.

In the1980s, the Census Bureau wanted to know a lot more about construction than it does now. Back then, the Census Bureau was interested in building permits for new houses. They also wanted to know about residential alterations and additions. Nonresidential construction (new buildings, along with rehab work) was also recorded, as well as the number of dwellings demolished. Construction officials and technical assistants had to refer to a long and complicated list of "census item numbers" when they filled out the Census Bureau's C-404 form.

Good news, bad news. Bad news first: The Census item numbers classified construction activity in a way that was clumsy and nonintuitive to many construction officials and technical assistants. There were two problems. First, the Census Bureau used numbers, not words; and second, there were too many numbers. Most construction officials and technical assistants got the hang of the commonly used numbers. Almost everyone knew a 101 was a new, single-family house. A few learned this too well and used it incorrectly whenever they issued a new construction permit for an office, store, or a new building of any type. The Census Bureau no longer uses item number 102. Old-timers might remember this referred to a new, single-family house that was attached to at least one other, a row house or town house. A 103 is a duplex, and a 104 is a residential building that had three or four dwellings. A 105 is a building with five or more dwellings. The old C-404 forms used to have separate item numbers for nonresidential structures and asked about demolitions, as well as alterations and additions to both residential and nonresidential buildings.

The good news is that you can forget about most Census item numbers. As far as the Census Bureau is concerned, they only want to know about new houses or apartments. The Census Bureau no longer tracks demolitions and is no longer interested in most nonresidential buildings. The exception is assisted-living facilities (I-2 use group). Both the Census Bureau and the Department recognize these buildings as places where people live. The number of dwelling units in the assisted-living facilities should be counted and recorded on the building permit. Keep in mind that, if the assisted-living facility also has a wing for nursing home or hospital beds, only the assisted-living units should be counted as dwellings and that the nursing home/hospital beds are NOT counted as dwellings. In most instances, the appropriate Census item number for assisted-living facilities will be 105.

Don't misunderstand. Although the Census Bureau no longer cares about demolitions and most nonresidential construction, we at the Department still do. You should continue to record this information. It's just that construction officials and technical assistants can erase from their memory banks most of the old Census item numbers. The only item numbers you have to remember and keep close by your computer if you use construction reporting software are: 101, 103, 104, and 105. Everything else is a 999 or an "off item," as far as the Census Bureau is concerned.

Better news still. In the next version of reporting software that the Department is working on, construction officials and technical assistants won't even have to remember any item numbers. In programmer's jargon, the item numbers will become an "automatically populated field." If you issue a building permit for a residential building, say a single-family house, specify the use group as either R-3 or R-4, indicate that the permit type is new construction, and say that one house will be built, then a "101" will automatically be inserted by the software as the appropriate item number. This will tell the Census Bureau what it needs to know and make your life easier.

In the meantime, keep in mind that the only numbers you really need to know are shown on the table at the top of the next page. If you have questions about the C-404 form, you can call the Census Bureau directly at its toll-free number: 1-800-845-8244. You may also call me with questions at (609) 984-7609, or e-mail jlago@dca.state.nj.us.

IF Use Group	AND Permit Type Is	AND Number of Dwellings Is	THEN Census Item Number Is
R-3	New	1	101
R-4	New	1	101
R-3	New	2 (duplex)	103
R-4	New	2 (duplex)	103
R-2	New	3 or 4	104
R-2	New	5 or more units	105
I-2 (assisted living)	New	5 or more units	105*
All Other Use Groups	New, Addition, Alteration, or Demolition	Does Not Matter	999 (off item to the Census Bureau)

*Note: If the assisted-living facility has both nursing home beds and apartments, count only the apartments as dwelling units.

Source: John Lago
Office of Planning and Program Development

Review of Load Management Device and Area Lighting Facility Installation Programs

As an electrical subcode official, you may be aware of the agreements made several years ago between the Department of Community Affairs and several electric utility companies to conduct limited inspections of load management devices and area lighting facility installation programs on private properties. The specific procedures for permit and inspection of these programs are set forth in *N.J.A.C.* 5:23-2.18A (Load Management) and 2.18B (Area Lighting).

The Department has not received many complaints or suspected violation reports from electrical subcode officials about the site lighting installation program by the utilities, but we would like to have some feedback from electrical subcode officials on the load management device and site lighting installation programs. The Department plans to undertake a review of these programs and it is possible that they may undergo changes. As a result, the Department invites you to let me know of any way in which these programs could be made more effective and efficient in furtherance of public health and safety.

Please send your comments to me by mail at the Division of Codes and Standards, New Jersey Department of Community Affairs, Post Office Box 802, Trenton, New Jersey 08625; by fax at (609) 984-7717; or by e-mail at

Source: Ashok Mehta
Code Assistance Unit

Local Enforcing Agency Staffing Problems

I recently responded to a letter from Mr. Thomas Millar, Construction Official for West Windsor Township and immediate Past President of the Building Officials Association of New Jersey (BOANJ), concerning problems construction officials experience in meeting the Uniform Construction Code (UCC)-required time frames for permit issuance and inspections due to staffing problems. Because this issue affects many offices, I thought my response would be helpful to all code enforcement offices.

Thank you for your recent letter concerning the problems some of the members of the Central Chapter of the BOANJ are experiencing complying with the 20-day time frame to issue a permit, as well as the three-business-day inspection time frame contained in Subchapter 2 of the Uniform Construction Code. You state in this letter that officials are questioning whether they can suspend the issuance of new permits until any backlogs are addressed, or until the municipality hires additional staff.

It is my opinion that the language contained within the Uniform Construction Code does not support a moratorium on permit issuance. I realize that this statement puts the licensed official in a "Catch 22" position whereby he or she does not have adequate time to comply with the time frames mentioned above or perform competent plan reviews and inspections. However, it is also my opinion that, when an official is failing to comply with the above-mentioned time frame and it has been established through the Office of Regulatory Affairs that a substantial staffing deficiency exists, the failure to comply is a violation that

(continued on page 7)

Highlights of the Adoption of the 2000 IMC and IFGC 

This article is to serve as a reminder that the 2000 International Mechanical Code (IMC) and the International Fuel Gas Code (IFGC) took effect on December 16, 2001. As with all adoptions of model codes, there is a six-month grace period during which the existing codes may still be used. That grace period is now over. Any submissions must be in conformance with the 2000 IMC, and/or applications and permits for IFGC codes.

The following are some of the new items that the new IMC and IFGC require:

IMC/2000

1. Section 403.3, "Ventilation Rate," Table 403.3, "Required Outdoor Ventilation Air," must be used for outside air requirements. The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) 62 standard is no longer a referenced standard as it was in the Uniform Construction Code (UCC) amendments to the 1993 Building Officials and Code Administrators (BOCA) National Mechanical Code.
2. Section 502, "Required Systems," lists many types of buildings and areas of buildings that require exhaust systems that were not covered in the previous mechanical code.
3. Section 510.2, "Hazardous Exhaust Systems," describes three conditions which, if provided, require a hazardous exhaust system.
4. Section 513, "Smoke Control Systems," is an entirely new section that includes complete detailed requirements of the types of systems required. The 1993 BOCA National Mechanical Code referred to the building code.
5. Section 801.19, "Multistory Prohibited," prohibits the use of common venting systems for appliances that are located on more than one floor level, except when all of the appliances are located in rooms or spaces that are accessed only from the outdoors. In this case, the appliance enclosures shall not communicate with the occupied areas of the building. This requirement is also located in the IFGC under Section 503.10.1.
6. Section 1007.1, "Boiler Low-Water Cutoff," requires that ALL steam and hot-water boilers be protected with a low-water cutoff control. This control is now a mandatory item on all boilers, both residential and commercial.
7. In addition, the requirements for new equipment and systems are included with the adoption of the latest IMC/2000.

IFGC/2000

1. Sizing tables for corrugated stainless-steel tubing (CSST) gas piping systems are included in this code. Be aware that the sizes for the pipes are in Equivalent Hydraulic Diameter (EHD). One EHD is equal to approximately 1/32 of an inch. Each manufacturer has its own installation manual containing sizing recommendations. It is recommended that the manufacturer's sizing be used to ensure proper pipe size.
2. Section 404.8, "Protection Against Corrosion," states "zinc coatings (galvanizing) shall not be deemed adequate protection for gas piping underground." In addition, Section 404.8.2, "Protective Coatings and Wrappings," states "pipe protective coatings and wrappings shall be approved for the application, and shall be factory applied."
3. Section 404.9, "Minimum Burial Depth," states "underground piping systems shall be installed at a minimum depth of 12 inches below grade" except for individual outlets, which remain 8 inches below grade. This is a change from the 1993 BOCA Mechanical Code, which required 18 inches minimum.
4. Section 411.1.2, "Appliance Fuel Connectors," states "connectors shall have an overall length not to exceed 3 feet, except for range and domestic clothes dryer connectors, which shall not exceed 6 feet in length."

These are just a few changes contained in the new 2000 IMC and IFGC. You should review each subcode for other new code requirements. In addition, please remember that, as always, there are also UCC changes that were made to each of these adopted subcodes.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

(continued from page 5)

can only be attributed to the municipality's failure to adhere to N.J.A.C. 5:23-4.4(d), which states:

> *(d) The municipality shall ensure that the enforcing agency has adequate staff to review plans, applications, specifications, and to schedule and perform inspections in a timely manner.*

With that in mind, I can assure you that the Office of Regulatory Affairs will not take action against an official who cannot meet the mandatory time frames contained within the Uniform Construction Code due to the failure of a municipality to provide adequate staffing as evidenced by a Regulatory Affairs' staffing analysis.

It is important for every official to understand that your primary responsibility is to ensure all buildings are constructed and occupied safely. Accordingly, when understaffing forces a construction official to make priority choices, prompt, full, and thorough inspection of projects already permitted should take precedence over plan reviews and additional permits. Municipalities are required to provide adequate numbers of qualified staff to meet the demand of the public. Please do not sacrifice quality for quantity.

Source: Louis J. Mraw
Supervisor
Office of Regulatory Affairs

New Construction on Existing Foundations

It has been brought to the Department of Community Affairs' attention that the article entitled "When is a Demolition Permit Required?" which appeared in the Fall 2001 edition of the *Construction Code Communicator*, might cause some confusion in the field. Specifically, the article stated that, when a building or structure is going to be demolished and the foundation left in place, "any portion of the new structure built on the existing foundation is treated as new construction."

Does this mean that the building is new construction for the purposes of a new home warranty? The answer is no.

There are two laws that apply in this circumstance. First, the parameters for determining when a permit is required for demolition are set through the Uniform Construction Code (UCC) Act. Under the UCC Act, anything new built on an existing foundation is considered new construction for the purposes of code requirements.

Second, the parameters for issuing a new home warranty are set in the New Home Warranty Act. Under this Act, a building constructed on an existing foundation is specifically **not** considered to be a new home eligible for a new home warranty.

If you have any UCC-related questions, please contact the Code Assistance Unit at (609) 984-7609. If you have any questions regarding new home warranties, please contact the Bureau of Homeowner Protection at (609) 984-7905.

Source: Megan K. Sullivan
Code Development Unit

Public Access to Plans

Recently, William Connolly, Director of the Division of Codes and Standards, sent the following memorandum to all New Jersey construction officials. The memorandum is reprinted here to provide this information to all readers of the *Construction Code Communicator*.

MEMORANDUM

TO: Construction Officials

FROM: William M. Connolly
Director
Division of Codes and Standards

SUBJECT: Public Access to Plans

As a construction official, you are the custodian of many public records, including the plans and specifications for buildings. In light of recent events, it is necessary to evaluate the policies in place for providing members of the public with access to the plans for a given building. Access to plans should be provided only if the request comes from the building owner, or from someone who has established a clear and legitimate need for information contained in the plans. If you have any questions or concerns in applying this standard, please contact the Office of Regulatory Affairs at (609) 984-7672.

Improper Truss Installations and Storage Underscore Reasons for Training

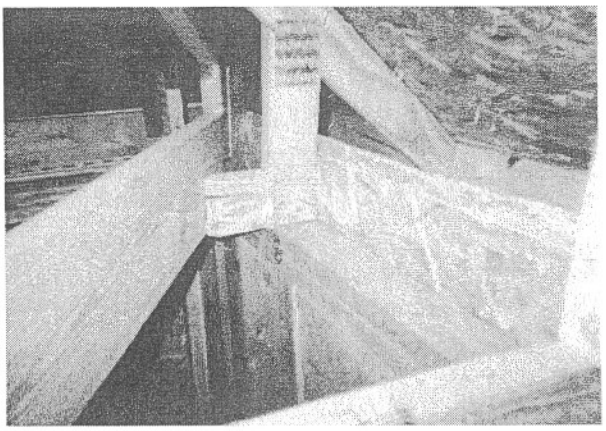
The Department of Community Affairs is taking steps to require training on how to perform proper framing inspections. This initiative is the result of the Department becoming aware of significant problems with improper installation and storage of trusses.

Examples of problems include broken web members, which may be caused by the improper storage or overload of certain members by stacking piles of shingles on roofs; poor framing techniques; and un-engineered repairs by contractors that are made without consulting the design professional to ensure proper bracing.

Many problems result from careless workmanship, as can be seen in the pictures below. (The locations where these pictures were taken will remain undisclosed to protect the "not so innocent.")

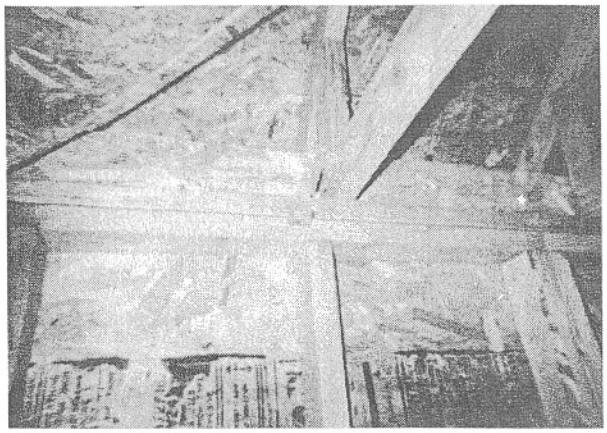


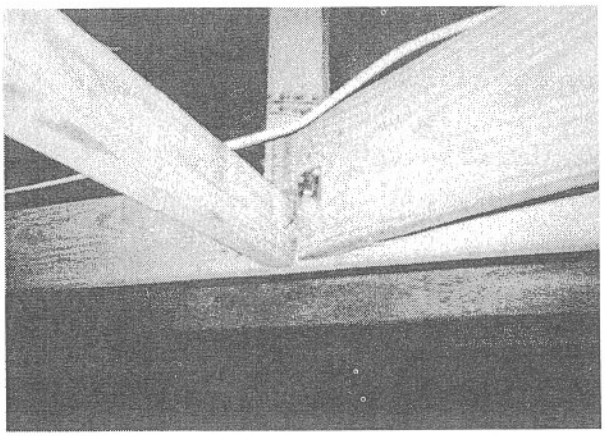
In truss construction, the unusually long span and/or configuration of trusses requires that extreme care be used in the movement and storage of truss members. The manufacturer's instructions, which should be followed, make this clear.





Shown above are examples of poor framing techniques. The plywood is not aligned appropriately and the wood is split. The truss should have been measured prior to nailing and the damaged wood should have been replaced.





In these trusses, the nails are not connected to the sheathing. The plywood, which should act as a brace, is carelessly assembled. This poor framing weakens and damages the truss.

If you have any questions or concerns, please contact Jeffrey Applegate, Rob Austin, Marcel Iglesias, or John Terry of the Code Assistance Unit at (609) 984-7609.

Source: Kristy Paolillo
Code Development Unit

Uniform Construction Code Administrative Records System (UCCARS) -- *PermitsNJ* Update

Since the publication of the Summer 2001 issue of the *Construction Code Communicator*, substantial progress has been made in the development of the new construction activity reporting system. The Department of Community Affairs (DCA) and Office of Information Technology (OIT) staff have been working hard to support the project.

The following is an update of the project's status.

- First and foremost, UCCARS-NG is no more. DCA has chosen a new name for the system: *PermitsNJ*.
- A Java Design architect is working in consultation with OIT to finalize the overall system design. The architect is designing a system inventory used to classify the system's functions and as a basis for programming these functions.
- A system glossary is being drafted to help OIT identify frequently used terms as they apply to the new system.
- A table of proposed fields for the municipal permits sections of *PermitsNJ* is close to completion.

As you already know from previous *Construction Code Communicator* articles, local construction offices will access the *PermitsNJ* database via a web browser. By using a web browser, users will navigate to the *My NJ* web channel to gain automatic access to *PermitsNJ*.

From the *My NJ - PermitsNJ* channel, users can access a relational database structure, which increases functionality for construction offices by improving search features of the system, in addition to the following:

- Error checks and "hint text" in data entry provides for quicker and more accurate data collection.
- Compatibility with commercial office software applications provides the ability to create mail merges and other typical office document processing.
- Local enforcing agencies can stand alone using the Internet to gain automatic access to *PermitsNJ*.

Look forward to the next edition of the *Construction Code Communicator* to keep abreast of changes made, future ideas, and progress achieved regarding the *PermitsNJ* project.

Source: Lynn Ferrara
Team UCCARS

Technical Assistants – 4th Graduating Class

On the beautiful fall afternoon of October 24, 2001, 54 proud Technical Assistants celebrated their certification. The graduation program and reception were held at the Trenton War Memorial in historic downtown Trenton. Certificates and words of congratulation were offered by Department of Community Affairs' Deputy Commissioner Anthony Cancro, in conjunction with the Director of the Division of Codes and Standards, William Connolly, and the Chief of the Bureau of Code Services, Richard Osworth, along with many well-wishers including construction officials, family, and friends.

Technical Assistants are key players in the Office of the Construction Official and this voluntary educational program allows them to enhance their professional status by establishing a credential. Throughout the State, 159 employees have graduated from this program and there are many more who will finish this semester.

The program is being converted from the core course curriculum to a 40- to 50-hour college course, which will be offered in the evening. This will allow more people from the general public who are interested in code enforcement to enroll. It is anticipated that the course will be available at participating community colleges in the fall of 2002. You may call the Education Unit, Bureau of Code Services for further information at (609) 984-7820.

Photographs were taken at this event and placed on the Technical Assistant website. You may view them at www.members.home.net/vsalone/NJATA.htm.

The Department offers its hearty congratulations. We are sure the graduates of the 4th class are experiencing great joy and a true sense of pride!

Source: Susan McLaughlin
Supervisor, Education Unit
Bureau of Code Services

The Natural Nuisance

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 and Senior Services (DHSS) 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 DHSS.

Code Officials: If homeowners have questions about mold or general indoor air quality problems, you may direct them to the DHSS Technical Support and Research Project at (609) 588-3120. Also, information may be obtained from the DHSS website at www.doh.state.nj.us/health/eoh/tsrp.

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

Source: Megan K. Sullivan
Code Development Unit

What Projects Require DCA Plan Review?

The Bureau of Construction Project Review (BCPR) is responsible for performing code reviews on any project that cannot, for one reason or another, be performed by the local municipality. The Bureau is the sole reviewing agency for health-care facilities, casinos, power plants, solid waste disposal plants, public mausoleums, vaults, crypts, and incineration plants. In addition, the BCPR is the primary reviewing agency for State-owned buildings. It also performs a major portion of code reviews on public schools, although it does not have exclusive jurisdiction.

In the Uniform Construction Code, *N.J.A.C.* 5:23-4.3A is the specific regulation governing projects that are not reserved to the State by law. The following summaries of Class 1, 2, and 3 municipalities should help clear up some of the confusion that has existed over the years on unreserved projects.

Class 1 municipalities may perform code reviews on essentially any unreserved project in their jurisdiction, as stated at *N.J.A.C.* 5:23-4.3A(d)3.

Class 2 municipalities may perform code reviews on any unreserved Class 2 or Class 3 project, as defined at *N.J.A.C.* 5:23-4.3A(d)1 and 2, within their jurisdiction. Reconstruction, change of use, the installation or alteration of fire protection systems, or additions to Class 1 structures shall be submitted to the Bureau for review. Further, if an addition to a Class 2 or Class 3 structure would cause the building's classification to change to Class 1, it must also be submitted to the Bureau. At its discretion, the Bureau may keep the project for code review, or return it to the local municipality.

Class 3 municipalities may perform code reviews on any unreserved Class 3 building, as defined at *N.J.A.C.* 5:23-4.3A(d)1. Reconstruction, change of use, the installation or alteration of fire protection systems, or additions to Class 1 or Class 2 structures shall be submitted to the Bureau for review. Further, if an addition to a Class 3 structure would cause the building's classification to change to Class 1 or Class 2, it must also be submitted to the Bureau. At its discretion, the Bureau may keep the project for code review, or return it to the local municipality.

The following table shows some of these requirements:

Town's Classification	Building's Classification	Jurisdiction
3	2 with addition	DCA
3	3 with addition to Class 2	DCA
2	2 with addition to Class 1	DCA

Should you have any questions about jurisdiction, please call the Bureau at (609) 633-7448 for further information.

Source: David Uhaze
Chief, Bureau of Construction Project Review

What PRINTING Do You Have?

Well, the time has come for new code adoptions, and two of New Jersey's newest are the 2000 edition of the International Fuel Gas Code (IFGC) and the 1995 edition of the Council of American Building Officials Model Energy Code (CABO MEC).

With every new code adoption, there are some obstacles. In the case of these two codes, the obstacles were created by the printer. When these codes were first published (first printing), the Department of Community Affairs reviewed, amended, and adopted them. Subsequent printings (second, third, fourth, etc.), however, were *not* identical to the first. To make matters worse, an errata sheet was not provided with subsequent printings, so the code user has not been able to easily identify changes from one printing to the next.

A few examples might help. Section 306.2 in the IFGC changed the passageway width from 35 to 36 inches between printings. Also, in Section 503.10.2.5, a reference to Table 506.10.2.5 was changed to Table 503.10.2.5. In the CABO MEC, Section 301.2 was deleted without substitution between printings. Also, in Section 602.2.5, the second paragraph was deleted without substitution. Consequently, if you have a question on either of these codes, be ready to be asked, "What printing do you have, please?"

There is a solution that should help resolve this situation. The International Code Council (ICC) website at www.intlcode.org contains a listing of all errata discovered in the printing of each code edition. This should help clear up some of the confusion; but please note that, based on the printing date, you may have a book that differs from others with the same edition!

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

Source: Rob Austin
Code Assistance Unit

N. J. Dept. of Community Affairs
Div. of Codes and Standards
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Construction Code Communicator

State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

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Spring 2000

No Personnel on Elevators During Testing

While performing routine *inspections*, it is acceptable to ride in or on top of the elevator. When any type of *testing* is being performed, however, no personnel may be stationed in or on top of the elevator.

N.J.A.C. 5:23-12.2(e) establishes that inspections and testing procedures for equipment are to be performed in accordance with ASME A17.2. The inspector's manual for electric elevators, in the appropriate section under "Caution," directs inspectors not to allow anyone to ride the elevator car during the five-year elevator test.

The Department of Community Affairs (DCA) recommends that all elevator inspectors follow this safety provision for all elevator testing and that no one be allowed on, in, or under any elevator during an elevator test.

Questions on this issue may be directed to me at (609) 984-7833.

Source: Arthur Earle
Elevator Safety Unit
Bureau of Code Services

Decks Versus Balconies

There has been an influx of calls to the Code Assistance Unit regarding the appropriate live load for decks that are attached to a one- or- two-family dwelling. When determining the live load for an exterior appendage on these types of buildings, first determine if the appendage is a deck or a balcony.

According to both the 1996 Building Officials and Code Administrators (BOCA) National Building Code and the 1995 Council of American Building Officials (CABO) One- and Two-Family Dwelling Code, a "balcony" is an exterior floor projecting from and supported by a structure without additional independent supports. A "deck" is defined by each code as an exterior floor supported on at least two opposing sides by an adjacent structure, posts, piers, or other independent supports. Therefore, if the floor system is cantilevered off the adjacent dwelling, it is a balcony; if it is supported by some other means, it is a deck.

Once the appendage is defined, applying the live load tables of either code is fairly simple. For decks serving a one- or two-family dwelling, the live load is 40 pounds per square foot (Table 1606 in BOCA; Table 301.4 in CABO). For balconies serving a one- or two-family dwelling, the code requirements in CABO differ from the code requirements in BOCA. In CABO, the live load for balconies is 60 pounds per square foot in all cases. In BOCA, the table specifies 60 pounds per square foot for balconies that do not exceed 100 square feet. For balconies greater than 100 square feet, the live load is 100 pounds per square foot.

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

Source: John N. Terry
Code Assistance Unit

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Fire Separation Assemblies/Fire Partitions

The Bureau of Regulatory Affairs has become aware of problems associated with the lack of continuity of fire separation assemblies/fire partitions and unprotected openings in those assemblies. These problems are usually found in attics and involve multifamily dwellings (Use Group R-2) or multiple single-family dwellings (Use Group R-3). The most significant problems seem to stem from code officials not properly applying Table 602 of the building subcode, which gives the rating requirements for fire separation assemblies.

The enclosure of an exit stair is required by Table 602 to be designed as a fire separation assembly. Section 709 of the building subcode, which requires fire separation assemblies, provides that a fire separation assembly is to be continuous from the top of a rated floor/ceiling assembly to the underside of the floor. The wall is to be continuous through all concealed spaces, including above a suspended ceiling, to the roof deck above. It appears that, in many cases, the assembly is not continuous to the underside of the roof deck.

Also, dwelling unit separation is required to be a fire partition. A fire partition (Section 711.0 of the building subcode) is permitted to stop at a rated floor/ceiling assembly. A field review of both construction plans and installations shows that the plans showing rated floor/ceiling assemblies have not been provided in the field. In fact, nonrated, instead of rated, floor/ceiling assemblies have been constructed. This most often occurs at the ceiling of the topmost dwelling units. When the assembly is not rated, the fire partition must be continuous from the floor of the unit to the underside of the roof deck.

Openings in the rated assemblies are also a problem. While it is difficult to determine when an opening was made, some openings are not simply sized for wiring; some are man-sized. The official must inspect the assemblies to ensure that any openings are properly protected. It has been my experience that openings are sometimes left in hard-to-reach places, for example, at the eaves or at the top of the wall where an assembly meets the roof sheathing. Assemblies are required to be taped and spackled in accordance with the listed assemblies.

The lack of these assemblies permits fire to spread unchecked. Inspectors are reminded to be more diligent during the inspection process.

Should you have any questions, I may be reached at (609) 984-7672.

Source: Gerald Grayce
Bureau of Regulatory Affairs

A Form is a Form is a Form: Not!

The Code Assistance Unit has received calls from permit applicants stating that some municipalities do not accept the standard Uniform Construction Code (UCC) construction permit application form. These municipalities apparently require that permit applications be on forms provided by the municipality.

At N.J.A.C. 5:23-2.15(a), the UCC requires that permit applications be submitted on the standard construction permit application form prescribed by the Commissioner of the Department of Community Affairs at N.J.A.C. 5:23-2.15(b)2. Municipalities are required to accept the UCC's standard forms, even though the forms may not include the name of the enforcing agency or other appropriate identifying information.

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

Source: Thomas Pitcherello
Code Assistance Unit

Signing and Sealing Forms

At N.J.A.C. 5:23-2.15(b)2ii (Construction permits — application), the Uniform Construction Code (UCC) requires that the seal and signature of a licensed plumbing contractor must be affixed to the corresponding subcode application form.

According to the New Jersey Board of Examiners of the Master Plumbing Licensing Law [NJAC 13:32-1.5(b)2] entitled "Bona fide representative, responsibilities and limitations," a bona fide representative is allowed to:

> "Secure or instruct an authorized employee to secure all necessary permits as may be required by State and local law for the performance of plumbing work to be performed by the entity for which the license acts as a qualified bona fide representative. In making an application for permit issuance, the authorized employee shall have in his possession a letter authorizing him to make application. A letter of authorization may authorize a permit application for a specific period of time, not to exceed 60 days, and shall have affixed to it the seal of the bona fide representative."

It is the opinion of the Department of Community Affairs that the letter of authorization satisfies the signing and sealing requirement of N.J.A.C. 5:23-2.15(b)2ii. When this letter has been signed and sealed by the bona fide representative, it may be attached to the proper subcode form.

This applies only to master plumbers; it does not apply to licensed electrical contractors, who are governed by a separate licensing law.

Source: Thomas Pitcherello
Code Assistance Unit

The *Construction Code Communicator* is published quarterly by the New Jersey Department of Community Affairs and the Center for Government Services at Rutgers, The State University. Editor: Emily Templeton. Address changes and subscription requests may be directed to the **DCA Publications Unit, P.O. Box 802, Trenton, NJ 08625-0802**. Comments and suggestions should be sent to the **Code Development Unit, P.O. Box 802, Trenton, NJ 08625-0802.**

NFPA 13 Adopted Edition vs. Current Edition

The Bureau of Regulatory Affairs has been informed that some fire subcode officials are not using the adopted version of National Fire Protection Association (NFPA) 13. The problem seems to stem from the use of the NFPA subscription service. Through the subscription service, code officials obtain the most recently published NFPA standards.

The most recently published standard, however, may not be the one adopted as part of the Uniform Construction Code (UCC). To be specific, the UCC has adopted the 1996 edition of the BOCA National Building Code as the building subcode. BOCA adopts a variety of other documents, including some NFPA standards, by reference. The BOCA National Building Code/1996 references the 1994 edition of NFPA 13. Therefore, NFPA 13-1994 is part of the UCC and only the 1994 edition of NFPA 13 can be enforced.

It is equally important to point out that, in some cases, a technical standard is adopted by reference for a specific application by the national model code. Code officials must be aware of the extent to which a standard is referenced and, in the case of limited application, must not apply the entire standard.

Should you have any questions, I may be reached at (609) 984-7672.

Source: Gerald Grayce
Bureau of Regulatory Affairs

Whatever Happened to the Licensing of Fire and Burglar Alarm Businesses?

Governor Whitman signed a law (P. L. 1997, c. 305) that amended N.J.S.A. 45:5A, the Electrical Contractors Licensing Act. The act created a Fire Alarm, Burglar Alarm, and Locksmith Advisory Committee to recommend rules and regulations regarding alarm and locksmith licensure to the Board of Examiners of Electrical Contractors. The effective date of the amendment was supposed to be July 7, 1998 (180 days after enactment).

The Executive Director of the Board of Electrical Contractors has recently informed the Department of Community Affairs (DCA) that there have been delays in the promulgation of the rules and regulations. The Advisory Committee is now in place. The Advisory Committee anticipates that the **proposed** rules and regulations will be submitted for the Board's review and approval later this year. The proposal will then go through the Division of Consumer Affairs and will be published in the *New Jersey Register* for public comment before it can be adopted.

Until the rules and regulations are adopted, the current Electrical Contractor's Licensing Act continues to exempt fire and burglar alarm businesses, in accordance with N.J.S.A. 45:5A-18(o).

If you have further questions on this matter, please contact the Board of Electrical Contractors at (973) 504-6410 or the Code Assistance Unit at (609) 984-7609.

Source: Ashok Mehta
Code Assistance Unit

The Puzzle of Missing Bonding Conductor Size

Effective February 7, 2000, the 1999 National Electrical Code (NEC) was adopted as the electrical subcode of the Uniform Construction Code (UCC). While reviewing the requirements of the 1999 NEC, it was observed that, in Section 250-104(b), the code does not specify the size of the bonding conductor required to bond an aboveground gas piping system.

Section 250-104(b) of NEC 99 applies to all aboveground metal gas piping systems, whether or not the gas piping is connected to electrical equipment. The safest approach for sizing the bonding conductor is to follow the size requirements applicable to bonding conductors for a grounding electrode system. It is the Department of Community Affairs' position that the bonding conductor must not be sized smaller than that required by Table 250-66 of NEC 99.

If there are questions on this matter, feel free to contact me at (609) 984-7609.

Source: Ashok Mehta
Code Assistance Unit

Means of Support — Lighting Fixtures

There appears to be some confusion about comparing the securing and supporting requirements of the electrical subcode for lighting fixtures in a suspended ceiling to the requirements for such wiring methods as cable assemblies, raceways, boxes, cabinets, and fittings above a suspended ceiling.

Support requirements for lighting fixtures in a suspended ceiling are covered in Section 410-16(c). Section 300-11 deals with securing and supporting raceways, boxes, and fittings for the wiring located within the cavity of a roof-ceiling assembly. A careful review of Sections 410-16(c) and 300-11 reveals that the requirements for support of lighting fixtures are different from the requirements for cable assemblies, raceways, boxes, and fittings.

Section 410-16(c) allows lighting fixtures to be supported by framing members of the suspended ceiling as long as the framing members are securely fastened to the building structure at appropriate intervals. Section 300-11, on the other hand, prohibits the securing and supporting of wiring within the cavity by the ceiling grid and the ceiling-support wires unless the assembly is tested or is otherwise listed.

Lighting fixtures must be securely fastened to the framing members by a mechanical means (such as bolts, screws, and rivets), as required by Section 410-16(c). If clips are used, they must be listed and identified for use within a particular framing member and type of fixture to be secured. Additionally, the grid must be designed to withstand the load of the lighting fixtures to be installed.

Source: Ashok Mehta
Code Assistance Unit

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An Evaluation of the Construction Code Inspector Tests

At the end of each test module in the National Certification Program for Construction Code Inspectors (NCPCCI), there is an evaluation form that asks the test taker to rate the testing center and the exam. Many test takers do not fill out this form.

At the NCPCCI Board meeting in January, the representatives of Experior Assessments, the company that now administers the NCPCCI exams, asked that all test candidates be encouraged to fill out the evaluations. Experior Assessments is planning to track the candidates' responses and create measurable data. This will give Board members and Experior Assessments an opportunity to determine what improvements are needed.

In addition, test candidates who want to challenge the validity of a question on an exam are asked to do so on the day of the test at the Sylvan Center. The accuracy of the information provided is the freshest and most complete at the time the exam is taken. Quick reporting makes it possible for Experior Assessments to make a prompt evaluation.

Source: Emily Templeton
Code Development

Data, Please

The *Construction Reporter* is a monthly report of construction data gathered from municipalities across the state. It is important for municipalities to submit their data—and to do it on time. We are working on improving data transmittal and we recognize that some of the current gaps in receipt of data are due to transmittal glitches. However, there are some towns that need to be nudged and reminded every month.

The annual report for 1999 is being compiled now. Once again, there are municipalities that must be needled to submit their numbers. We are asking for more cooperation in submitting this data regularly and on time. It is important to remember that this is a requirement; it is not an option.

The data that you send and that we analyze are extremely valuable. The *Construction Reporter* has become a reliable source of information for both the construction industry and public officials. Members of the New Jersey State Legislature consult these data, as do other public officials across the State. This publication represents the work you do. So, think of the data submittal as spreading the news about your municipality and the work of your construction code office. Provide the data and, in each issue of the *Construction Reporter*, you will see how construction in your town compares with construction throughout New Jersey.

If you are having difficulties with data transmission, you may contact Team UCCARS at (609) 292-7898.

Source: Team UCCARS
Division of Codes and Standards

Flammable and Combustible Liquid Storage Issues

It has come to our attention that there have been several installations of above ground storage tanks throughout the State that are neither portable nor stationary. The tank installations in question consist of flammable or combustible liquid storage tanks (other than propane), ranging from 500 gallons to 10,000 gallons, that are installed on the back of flat bed trailers. These tanks are then piped to fuel dispensers either on the trailer or adjacent to the trailer and connected to the building's electrical service. Code officials in these jurisdictions have stated that these tanks need not comply with the requirements of the Uniform Construction Code (UCC) and should be regulated by the fire official and must comply with the Uniform Fire Code (UFC). However, there are several instances where these tanks **are** regulated by the UCC.

Tanks that are permanently connected to building services fall under the UCC. Stand-alone tanks that are self-sufficient or temporarily connected (ie. plug-in type) are regulated by the UFC. For those tanks that are regulated by the UCC, the following procedure applies:

Temporary tanks may be issued a Temporary Certificate of Approval (TCA) for not longer than 180 days.

- Temporary tanks must be sited on the lot in accordance with the requirements of the building subcode and all applicable referenced standards. These distances are based on the commodity stored in the tank. Temporary tanks that are not within the jurisdiction of the UCC are within the jurisdiction of the fire official.
- Accessory equipment such as, but not limited to, electrical wiring, plumbing and mechanical equipment is subject to the permit requirements of the UCC. For example, an electrical permit is required for an electrical connection to a building for tanks, even if the installation is temporary.
- Similarly, a plumbing permit is required when piping is used to connect a remote dispenser to the tank. If the tank is to be used for more than 180 days, its installation must comply with **all** UCC requirements for storage tanks, including the applicable provisions of referenced technical standards.

Should the fire official in your jurisdiction identify any of these tanks, s/he should inform the Construction Office and the procedure given above should be followed.

Should you have any questions, please contact the Code Assistance Unit at 609/984-7609.

Source: John N. Terry
Code Assistance Unit

New Jersey Register Adoptions

Date: October 18, 1999

Adoption: *31 N.J.R.* 3082(a)
Adopted New Rules: *N.J.A.C.* 5:23-11
Adopted Amendments: *N.J.A.C.* 5:23-1.1, 2.38, and 3.11

Summary: The "Handbook for Public Playground Safety," 1997 Edition, published by the Consumer Product Safety Commission, is hereby adopted by the Department of Community Affairs as the Playground Safety Subcode. By statute, the Department is responsible for the enforcement of these rules, which impose no new permit requirements for playground equipment or surfacing. Permits will continue to be required only for work for which a permit is already required under the Uniform Construction Code. The Department will have the sole responsibility with regard to matters not subject to a locally issued permit.

Date: December 6, 1999

Adoption: 31 *N.J.R.* 4001(c)
Adopted Amendments: *N.J.A.C.* 5:23- 1.4, 2.7, 2.14, 2.32, 3.2, 3.3, 4.3A, 6.2, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19, 6.20, 6.21, 6.22, 6.23, 6.25, 6.25A, 6.26, 6.27, 6.28, 6.31, 6.32, 6.33, 9.3

Summary: This adoption contains revisions to the Rehabilitation Subcode. For a comprehensive listing of the amendments, please refer to Volume 11, Number 3 of the *Construction Code Communicator* (Fall 1999), pages 7 and 8. Also contained in this adoption is the change of the term *ordinary repair* to *ordinary maintenance* throughout the Uniform Construction Code.

Date: December 20, 1999

Adoption: 31 *N.J.R.* 4259(a)
Adopted Amendment: *N.J.A.C.* 5:23-3.9

Summary: An incorrect reference in this section was corrected.

Date: February 7, 2000

Adoption: 32 *N.J.R.* 445(a)
Adopted Amendment: *N.J.A.C.* 5:23-3.16

Summary: The 1999 edition of the National Electrical Code (NEC) is adopted as the Electrical Subcode.

Date: February 7, 2000

Adoption: 32 *N.J.R.* 443(a)
Adopted New Rule: *N.J.A.C.* 5:23-2.18C
Adopted Amendments: *N.J.A.C.* 5:23-2.20; 2.23; 2.25; 3.5; 4.18; and 4.20

Summary: Rules governing the testing and electrical inspection of swimming pools, spas, and hot tubs are adopted. In a separate adoption of a new rule, the conditions are given for the issuance of electrical certificates or inspections of swimming pools. Also adopted is a fee schedule for electrical work and for fire alarm/detection systems.

Source: John N. Terry
Code Assistance Unit

What Printed Material May be Brought Into a Test?

One of the issues that came up at the National Certification Program for Construction Code Inspectors (NCPCCI) Board meeting was whether "any copyrighted material" could be brought into the test center. When the NCPCCI exams were administered as paper-and-pencil exams by the Educational Testing Service (ETS), any copyrighted materials were allowed to be used during the exam. This broad policy was possible because ETS contracted with — and trained — the test proctors. Therefore, the people who were overseeing the exams knew how to judge whether specific material was allowed in the exam and the judgments made from site to site were consistent.

When the exams were changed to computer-based tests, the Chauncey Group (a for-profit subsidiary of ETS) entered into a contract with the Sylvan Centers for testing sites. The Sylvan staff were not trained by Chauncey in testing protocols, so the Board restricted the materials that could be brought into testing centers to those materials listed as referenced sources in the Candidate Information Bulletin.

In January 2000, in response to complaints raised by several test candidates, the Board discussed this issue again. With the agreement of the staff of Experior Assessments (the current test administrator), the Board voted to expand the list of referenced sources to allow commentaries, handbooks, or illustrated codes that include the entire code text to be used during the exams. These books will be listed in the Candidate Information Bulletin effective July 1, 2000.

This action expands the code materials that are allowed in the test center. However, in the interest of consistency and uniformity, it does not return to the days when "any copyrighted materials" could be used. Computer-based testing has brought many conveniences, including instant test results, but the numbers of testing centers and the volume of staff in those centers means that testing can be uniform only if the sources allowed are finite and are listed in the Candidate Information Bulletin.

The Candidate Information Bulletin is scheduled to be reprinted for distribution beginning July 1, 2000. At that time, commentaries, handbooks, and illustrated code texts will be allowed by personnel in all Sylvan's testing centers.

Source: Emily Templeton
Code Development

Time to Spare?

In connection with proposed legislation to require the retrofit of all existing college dormitories with sprinkler systems, the Department anticipates a large number of suppression system installations in the coming months.

Therefore, the Department is compiling a list of individuals who are available for specific assignments to perform plan review of suppression systems and/or to inspect suppression system installations and witness the testing of the systems. Some of this work may be performed in the evening or on weekends. Those interested in performing plan review must have Fire Protection Subcode and Fire HHS licenses. For inspection, those interested must have a Fire HHS license. The Department may be retaining this list to contact individuals for specific assignments on an as needed basis.

If you would like to be included on this list, please send a letter of interest to my attention at the Department of Community Affairs, Division of Codes and Standards, PO Box 802, Trenton, NJ 08625.

Please indicate which licenses you possess, DCA license numbers, whether you are interested in plan review or inspection or both, when you are available, and give a telephone number and time when you may be reached. (Please note that this request is distinct from the list that the Department has compiled of inspectors interested in working on an hourly basis in various towns.)

If you have further questions, please contact me at (609) 292-7898.

Source: Esther Hilzer
Division of Codes and Standards

Electrical Contracting Without a License is Now a Crime

On January 12, 1999, Governor Christine Todd Whitman signed into law P.L. 1998, c.151. This act makes it a crime of the fourth degree for a person without a business permit from the Board of Examiners of Electrical Contractors to engage in the business of electrical contracting if that person (1) creates or reinforces a false impression that he or she is duly licensed or possesses a business permit, or (2) derives a benefit of more than incidental value from doing the work, or (3) in fact causes injury to another person. Crimes of the fourth degree are punishable by a fine of up to $7,500 or by imprisonment for not more than 18 months.

While code officials are not responsible for enforcement of criminal statutes, they should be aware of their obligation, not only to refuse to issue an electrical permit when a person who presents himself or herself as a contractor does not have a valid business permit, but also to report the incident to local law enforcement authorities.

Source: Michael Ticktin, Esq.
Division of Codes and Standards

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Construction Code Communicator

State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

Volume 12 Number 2 *Summer 2000*

Building Safety Conference of New Jersey 2000

Several hundred code enforcement officials converged at Bally's Park Place in Atlantic City, the land of salt air and ocean breezes, on May 17-19, 2000 for the 19th annual Building Safety Conference. Those in attendance agreed that the conference was a huge success. A spirit of conviviality ran through the crowd. There were no long registration lines, the food was outstanding, and the educational opportunities were presented with cutting edge technology.

This year, there were 24 training seminars and 38 Cracker-barrel topics from which to select. Everyone made selections and all were pleased — and still asked for more. The conference maintained a rapid pace; there was always too much to do with not enough time.

The awards luncheon was a highlight of the conference. Commissioner Jane M. Kenny spoke about the importance of the services provided by code officials. William M. Connolly, Director of the Division of Codes and Standards, reminded the audience that the Rehabilitation Subcode had won the prestigious Innovations in American Government award sponsored by the Ford Foundation, the Kennedy School of Government, and the Council for Excellence in Government. He emphasized that the excellence of the construction code enforcement people made the Uniform Construction Code work and made the Rehabilitation Subcode possible.

At the luncheon, recognition was given to the Inspectors and the Technical Assistant of the Year. The award recipients were selected by their respective associations for outstanding accomplishment and achievement in their fields. They were:

Anthony Falasco, City of Vineland, Deerfield Township, Upper Deerfield Township, Lawrence Township – Plumbing Inspector.

William M. Gleason, Parsippany-Troy Hills Township, Building Inspector.

Thomas F. Balland, Lawrence Township, Aberdeen Township, Electrical Inspector.

Edward S. Bagniewski, Jr., East Newark Borough, Harrison Town, Fire Protection Inspector.

Deborah A. Timko, New Providence Borough, Technical Assistant.

Other activities included a golf outing, an Awards reception, Association meetings and a spouse's program. The hotel provided very good service, staffing, and room accommodations. Mr. Wallace Englehart, Eatontown, was the lucky person selected to attend the Building Safety Conference free of charge next year.

We hope your expectations of the conference were met and that it was an enjoyable and educational experience. We look forward to seeing you next year.

Source: Susan McLaughlin
Supervisor, Education Unit
Bureau of Code Services

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☞ ALERT!

In this issue of the *Construction Code Communicator*, you will notice that the titles of some articles are preceded by "ALERT." These articles are particularly important. They constitute a warning regarding inspections that have become lax. These articles do not constitute only observation and advice; they serve as a "heads up" to all inspectors to increase diligence.

Source: Director's Office
Division of Codes and Standards



☞ ALERT: Foundation Walls

The Uniform Construction Code mandates that certain inspections be performed before construction can continue. N.J.A.C. 5:23-2.18(b) establishes four inspections for one-and two-family dwellings for which construction must cease:

1. The bottom of footing trenches before placement of footing, except that in case of pile foundations, inspection shall be made in accordance with the requirements of the building subcode;

2. Foundation and all walls up to grade level prior to back filling;

3. All structural framing and connections prior to covering with finish or infill material; plumbing underground services, rough piping, water service, sewer, septic services and storm drains; electrical rough wiring, panels and service installations; insulation installations;

4. Installation of all finished materials, sealing of exterior joints; plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical installations."

An area of concern is where failure occurs in the foundation walls. Let's look at the requirements. During plan review we must determine that the foundation walls are designed to resist frost action, hydrostatic pressure and the structural loads as per Section 1812.0 of the BOCA National Building Code/1996. Furthermore, the walls need to comply with Tables 1812.3.2(1) and 1812.3.2(2) with regard to wall height, depth of unbalanced fill and soil classification. The wall thickness specified in these tables is based on the height of unbalanced backfill that the foundation wall is required to support. The specific thickness in the tables is for the entire wall, from the top of the footing to the bottom of the plate. If the designer reduces the thickness of the wall, the wall is required to be designed for the reduced thickness for its entirety.

During an inspection, we must make sure that the wall thickness and height are those specified in the approved construction documents. The wall shall be properly braced (Section 2111.1.5). It shall be waterproofed from the bottom of the wall to not less than 12 inches above the maximum elevation of the ground water table (Section 1813.4.2). The waterproofing shall consist of two-ply hot-mopped felts, not less than 6-mil polyvinyl chloride, 40-mil polymer-modified asphalt, 6-mil polyethylene or other approved methods or materials capable of bridging nonstructural cracks. The remainder of the wall shall be dampproofed (Section 1813.3.2.2). Prior to the application of waterproofing and dampproofing materials on concrete or masonry walls, the walls shall be prepared in accordance with Section 1813.3.2.1. Foundation drains (Section 1813.5.2) shall be installed around the foundation perimeter prior to backfilling. Backfill material (Section 1813.6) shall be free of large rocks, organic materials and construction debris. The backfill shall be placed in lifts and compacted in a manner which does not damage the foundation, the waterproofing or the dampproofing material.

Should you have any questions, I may be reached at (609) 984-7609.

Source: Marcel Iglesias
Code Assistance Unit

Citing the Code

Having recently rejoined the Code Assistance Unit, 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.

Because, as code officials, we understand the codes, we may tell the applicant in "short hand," what is needed to comply with the code. The applicant, however, 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 a code cite.

At NJAC 5:23-4.5(a)3ii and in the "Procedures Manual" (at procedure 8.1.3, action 2.2b), the directions for the subcode official and construction official are as follows:

"8.1.3 Subcode Official/Construction Official

2. Completes Notice;

2b. Quotes the section of the regulations violated."

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

Providing complete and accurate code information can lower our blood pressure and our stress; and can make all our lives — code user and code enforcer — a little bit better.

Source: Jeffrey Applegate
Code Specialist

The *Construction Code Communicator* is published quarterly by the New Jersey Department of Community Affairs and the Center for Government Services at Rutgers, The State University. Editor: Emily Templeton. Address changes and subscription requests may be directed to the **DCA Publications Unit, P.O. Box 802, Trenton, NJ 08625-0802**. Comments and suggestions should be sent to the **Code Development Unit, P.O. Box 802, Trenton, NJ 08625-0802.**

Celebrating the Rehab Subcode

On June 9, 2000, following the regularly scheduled Code Advisory Board meeting, the Department of Community Affairs (DCA) held a celebratory luncheon for all who had volunteered their time to create the Rehabilitation Subcode.

William M. Connolly, Director of the Division of Codes and Standards, spoke briefly on the impact of the award-winning Rehab Code, as it is known throughout the country. He applauded the efforts of the people who had contributed their time and expertise to make the Rehab Code an innovative and effective regulation. Referring to an article in the *Providence Journal*, Mr. Connolly stated that a Rhode Island code official had commented that a code for existing buildings had not been tackled by anyone before because "if you do it, you have to think of *everything*." Mr. Connolly thanked all the volunteers for "thinking of everything" and making sure that the code warranted the awards it has won.

Anthony Cancro, Deputy Commissioner of DCA, brought Commissioner Jane Kenny's thanks to the volunteers for creating the Rehabilitation Subcode. He also spoke about his admiration for the task that had been accomplished, citing his familiarity with the need for a code that could address the problems of affordable housing and the refurbishing of the existing building stock.

Certificates of Appreciation were given by Deputy Commissioner Cancro and Director Connolly to all the volunteers who served on the Rehabilitation Subcode Advisory Committee and to those who serve on the Code Advisory Board.

It was a celebration full of pleasure and pride for a job well done.

Source: Emily Templeton
Code Development



William M. Connolly, William J. Lynn, Anthony Cancro (Deputy Commissioner).

Check for Builder Registration

The staff of the New Home Warranty Program has noticed an increase in the number of warranty applications being submitted by builders who were not registered at the time the building permit was issued. Pursuant to the regulations which govern new homebuilders, such incidents should not occur because a builder must possess a valid registration from the Department of Community Affairs (DCA) in order to be granted a permit for the construction of a new home.

Assuming the house is being built for sale, or a general contractor acting as the agent for an owner is building the house, a permit should never be issued unless the builder can show proof of being registered. Moreover, since actions by the DCA to revoke or suspend a builder registration do not result in the destruction of the builder's registration card, the validity of a registration can only be determined after referencing the Revoked and Suspended Builders list. This list is updated quarterly and mailed to each construction code enforcement agency in New Jersey.

Because many people who build new homes for sale do not intend to continue in the business of new home building, the threat of loss of their builder registration does not compel performance. Therefore, the New Home Warranty Program often exercises its option to inspect new homes before enrollment in the warranty plan. These inspections are intended to eliminate warranted defects prior to the sale of the home and are conducted on a case-by-case basis. However, warranty enrollment inspections are of little value if the home is already occupied. This is because the agency has very little leverage over a builder who has sold his or her only or last house. For this reason, it is essential that certificates of occupancy, or even temporary certificates of occupancy, not be issued in the absence of a valid warranty enrollment.

In the event you encounter any problems or have any questions regarding the warranty, you are encouraged to contact the Bureau of Homeowner Protection at (609) 633-6455.

Source: Maryann Merkh
Bureau of Homeowner Protection

Internet E-Mail as an Alternative

Because of the challenges presented to our old UCCARS/CrossTalk/UCCOMM trio by the new multitasking environments, we have developed a method for utilizing the Internet e-mail function as a means of transmitting UCCARS data! If you have an Internet connection with e-mail capability, you can take advantage of this more reliable form of transmitting your UCCARS data.

The files required for switching to this monthly submission method are available on diskette. They may be obtained by telephoning us at (609) 292-7899 and asking for the e-mail diskette for UCCARS. As an alternative, you may download the necessary files and instructions from the Internet at http://surf.to/uccars.

Source: Team UCCARS
Division of Codes and Standards

New Jersey Register Adoptions

Date: February 7, 2000
Adoption: *32 N.J.R.* 443(a)
Adopted New Rules: N.J.A.C. 5:23-2.18C
Adopted Amendments: N.J.A.C. 5:23-2.20, 2.23, 2.25, 3.5, 4.18, 4.20
Summary: Establishes administrative provisions for enforcing the periodic electrical inspections of swimming pools, spas, and hot tubs. Revises the DCA fee schedule for fire alarm systems in any one- and two-family dwelling units, for pools, and for other electrical work.

Date: February 7, 2000
Adoption: 32 *N.J.R.* 445(a)
Adopted Amendments: N.J.A.C. 5:23-3.16
Summary: Adopts the 1999 National Electrical Code

Date: February 7, 2000
Transmittal: Number 41
Summary: Bulletin No. 00-1: Lists referenced standards that are applicable to the enforcement of the Electrical Sub code.
Bulletin No. 00-2: Lists applicable standards for bal lasted roofs.

Date: February 22, 2000
Adoption: 32 *N.J.R.* 688(a)
Administrative Corrections and Changes: N.J.A.C. 5:23-6.8, 6.21, 6.25, 6.26, and 6.31
Summary: Corrects several typographical errors from the most recent adoption of the Rehabilitation Subcode.

Date: April 17, 2000
Adoption: 32 *N.J.R.* 1376(a)
Adopted Amendments: N.J.A.C. 2.14, 2.17A, 2.18, 2.23, 3.4, 3.5, 3.11, 3.11A, 3.17, 3.21, 4.2, 4.5, 4.9, 4.10, 4.11, 4.20, and Bulletin No. 00-3.
Adopted New Rule: N.J.A.C. 5:23-9.9
Summary: The following amendments have been made:
N.J.A.C. 5:23-2.14: The amendment to this section delineates when a construction permit is required for small utility structures, such as sheds and fences. Permits are not required for sheds and similar structures that are 100 square feet or less in area and 10 feet or less in height. Additionally, permits are not required for fences six feet or less in height, unless the fence serves as a pool barrier.

N.J.A.C. 5:23-2.17A: This amendment adds to the list of items that are to be considered *Minor Work* for elevators.

N.J.A.C. 5:23-2.18: This amendment relocates the requirements regarding periodic inspections previously contained in N.J.A.C. 5:23-3.5 (*Posting structures*) to N.J.A.C. 5:23-2.18 (*Inspections*). Additionally, verification of compliance with the posting requirements is added to the list of final inspection items.

N.J.A.C. 5:23-2.23: This amendment clarifies that backflow preventers that are used to isolate high-hazard sources of contamination, as defined by the plumbing subcode, are the only backflow devices required to be tested every 12 months.

N.J.A.C. 5:23-3.4: This amendment corrects the assignment of enforcement responsibility for masonry chimney requirements to the building subcode official. Additionally, field inspection for Section 3305.0 of the building subcode entitled "Fire Hazards" has been reassigned to the fire inspector.

N.J.A.C. 5:23-3.5: These amendments standardize requirements for a hydraulic system data plate to be posted and require structures with truss construction to be identified with an emblem. National Fire Protection Association (NFPA) standards require hydraulically designed fire sprinkler systems to be identified by affixing a permanently marked sign at the alarm valve. This amendment standardizes the information contained on this data plate.

N.J.A.C. 5:23-3.11: Pursuant to Governor Whitman's Reorganization Plan No. 002-1998, enforcement of safety standards for carnival and amusement rides, ski lifts, high-pressure boilers, refrigeration systems, pressure vessels, and liquefied petroleum gas installations were assigned to the Department of Community Affairs. This amendment reflects this assignment.

N.J.A.C. 5:23-3.11A and Bulletin 00-3: Pursuant to Governor Whitman's Reorganization Plan No. 004-1996, the construction plan review functions of the Department of Education (DOE) were assigned to the Department of Community Affairs (DCA). This amendment reflects this assignment and corrects the list of projects that must be submitted for DCA plan review. Bulletin No. 00-3 contains a checklist for local code enforcement officials to use for the plan review and inspection of public education facilities. The bulletin includes both DOE and DCA requirements for public schools. Several changes to N.J.A.C. 5:23-3.11A reflect technical revisions and corrections are also included in this amendment.

N.J.A.C. 5:23-3.17: This amendment adds a cross-reference to the fire protection subcode for the hydraulic system data plate requirements contained in N.J.A.C. 5:23-3.5.

N.J.A.C. 5:23-3.21: This amendment to the adoption of the 1996 CABO One- and Two- Family Dwelling Code matches its text with the referenced section of the 1992 edition of the CABO code on foundations. It also brings consistency between the building subcode and the one- and two- family dwelling subcode regarding the number of roof coverings that are permitted to be installed.

N.J.A.C. 5:23-4.2: This amendment reflects the change in enforcement responsibilities brought about by Reorganization Plan No. 004-1996. (See summary of N.J.A.C. 5:23-3.11 and 3.11A.)

N.J.A.C. 5:23-4.5: This amendment adds the hydraulic system date plate to the required standard forms.

N.J.A.C. 5:23-4.9, 4.10, and 4.11: Pursuant to Governor Whitman's Reorganization Plan No. 002-1998, certain responsibilities of the Department of Labor and the Division of Building and Construction in the Department of the Treasury were transferred to the Department of Community Affairs. The amendments reflect this assignment.

N.J.A.C. 5:23- 4.20: This amendment corrects the reference establishing fees for demolition by adding Use Group R-4 to the current reference to Use Group R-3.

N.J.A.C. 5:23-9.9: This amendment delineates when a foundation system is required for small utility structures. The amendment provides that foundations are not required for sheds 100 square feet or less in area and 10 feet or less in height. Minimal foundation requirements are specified for sheds between 100 and 200 square feet.

Date: April 17, 2000
Adoption: 32 *N.J.R.* 1380(a)
Administrative Correction: N.J.A.C. 5:23-6.32
Summary: Replaces the phrase "in changes of use" with "imposed by additions" at N.J.A.C. 5:23-6.32 of the Rehabilitation Subcode.

Source: John N. Terry
Code Assistance Unit

When All Else Fails, We'll Take the Paper Reports

IF you are a UCCARS user AND you are experiencing transmission problems that we have not been able to readily solve, AND you do not have Internet access, rather than fail to submit the required monthly activity reports, please send us your paper reports. In this way, you will not stand out as delinquent in meeting your reporting obligation.

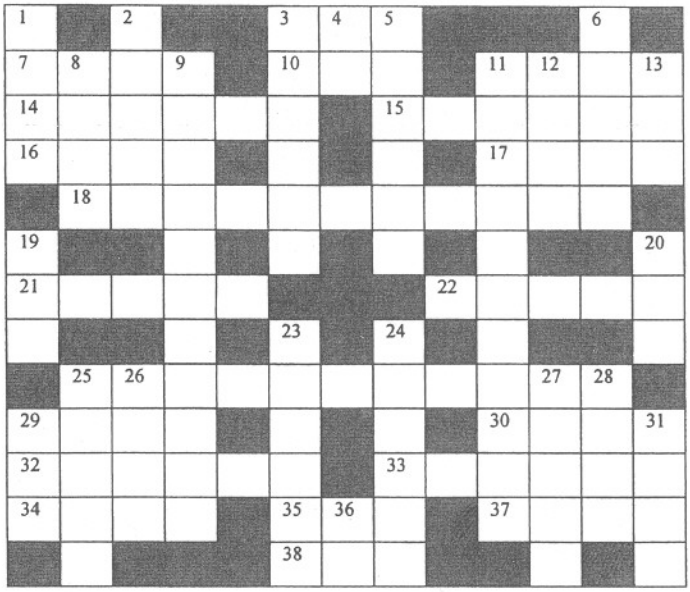
Please note that when we say "Send us the paper reports," we mean the **Permit Activity Report** and the **Certificate Activity Report**, not the Permit Fee Log. The Permit Activity Report and the Certificate Activity Report are the third and fourth picks off the UCCARS System I Print Reports menu; they are the second pick off both the *Print Permit Reports* and *Print Certificate Reports* submenus in System II.

Your reports may be faxed to us at (609) 633-6729, or mailed to Team UCCARS, NJDCA, Division of Codes and Standards, P.O. Box 802, Trenton, NJ 08625-0802.

Again, DO send the **Permit Activity Report** and the **Certificate Activity Report**. DO NOT send the Permit Fee Log; that report is of no use to us.

Source: Team UCCARS
Division of Codes and Standards

Crossword Puzzle



ACROSS

3. British Airforce
7. Left open
10. "H" uses that require sprinklers
11. Beat soundly
14. Explanatory caption
15. Reluctant
16. Adolescent
17. Accessory structure
18. Distributed rules
21. Structural member
22. Threshold hazard
25. Occupied again
29. Plane Prefix
30. Cast _____
32. Window treatments
33. "M" uses
34. Without
35. Night before
37. Tread part
38. Distress call

DOWN

1. Sodium Chlorine
2. Beer type
3. Random byproduct
4. Mental periodicly
5. Toilet attachment
6. Bonded together
8. Inspector's vehicle?
9. Rehab work type
11. Rehab goal
12. He will _____ _____ won't (2 words)
13. A Kennedy
19. Joist type
20. Change of _____
23. Passages for pipes
24. Misuses
25. Race Type
26. Ireland Poeticly
27. Mistake
28. She deers
29. Plastic pipe material
31. Points on a compass
32. Whiskey

(Answers on page 9)

19th Annual Building Safety Conference



Richard Adams (Presenter, Vice-president, New Jersey State Plumbing Inspectors Association), Anthony Falasco (Plumbing Inspector of the Year), William M. Connolly.



Tom Millar (Presenter, President, BOANJ), William M. Gleason (Building Inspector of the Year), William M. Connolly.



Linda Aiello (Presenter, New Jersey Association of Technical Assistants), Deborah A. Timko (Technical Assistant of the Year), William M. Connolly.

2000 Awards — "The Best of the Best"



Victor Timpanaro (Presenter, Municipal Electrical Inspectors Association), Thomas Balland (Electrical Inspector of the Year), William M. Connolly.



John Lightbody (Presenter, New Jersey State Fire Prevention and Protection Association), Edward S. Bagniewski, Jr. (Fire Protection Inspector of the Year), William M. Connolly.

Enforcing the Rehab Subcode

It is getting very frustrating to those of us in Code Assistance to hear that some inspectors circumvent the Rehabilitation Subcode and its enforcement. I hope this will resolve the misunderstandings about the applicability and enforcement of Subchapter 6.

First, regarding applicability, if the building in question is an existing building and it is located in the State of New Jersey, the Rehab Subcode is applicable. It is that simple. If the building exists in New Jersey, as code officials, we need to review and inspect the construction project on that building using the Rehab Subcode.

Second, regarding enforcement, everyone needs to understand that the Rehab Subcode, like any other code that is adopted and enforced in the State, is a minimum standard code. An enforcing agent can enforce only the minimum requirements contained in *any* code or subcode adopted by the Uniform Construction Code (UCC), and the Rehab Subcode is no exception. There may be times when a design professional chooses to exceed the minimum requirements of the code. As you all know, it is *not* our obligation as code enforcement professionals to inform designers that they have exceeded the minimum. But, it *is* our obligation to *require* that the construction project be designed and constructed to meet the minimum requirements. We *cannot require* that a project exceed the minimum standards established by any subcode of the UCC. This includes the Rehab Subcode.

There is ample opportunity for commenting on the provisions of the Rehab Subcode. There are Rehab Subcode code change hearings that are announced in the *Construction Code Communicator* and a form for submitting Rehab Subcode code change proposals is also provided. If any official believes that provisions of the Rehab Subcode should be changed, the code change public hearing, held annually in March, is the proper forum for that discussion. Code users and construction projects should not be held hostage to differing opinions about code requirements. Code officials are licensed and employed to enforce the UCC uniformly throughout the State of New Jersey — and that includes the Rehab Subcode.

I hope this clears up the issue. If you have any questions, please contact me at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Congratulations, Technical Assistants!

Neither the clouds nor the cool temperatures dampened the spirits of the first graduating class of Technical Assistants. There were 58 proud recipients who gathered at the Trenton War Memorial on April 25th for the presentation of the certificates. Department of Community Affairs' Commissioner Jane M. Kenny, together with William M. Connolly, Director of the Division of Codes and Standards, presided over the ceremony.

Commissioner Kenny and Director Connolly each emphasized the importance of the Technical Assistant in ensuring the effective working of the Uniform Construction Code (UCC) team. The Technical Assistants had completed 10 core courses, with two administrative courses and one technical elective course. The last of the core courses included the completion of a 10-15 page paper summarizing this learning experience and discussing its application to the code enforcement office.

Jurisdictions in other states have inquired about this program, which establishes a credential for support personnel in the office of the construction official. This voluntary program has drawn a large number of participants. The current enrollment is 350.

If you would like to see photographs of the celebration event, please log on to the web site at www.members.home.net/vsalone/NJATA/.

If you are interested in the Technical Assistant certificate program, please contact the Education Unit in the Bureau of Code Services at (609) 984-7820.

Source: Susan McLaughlin
Education Unit
Bureau of Code Services

Accessible Units for Sale or for Rent

There used to be a distinction in the Barrier Free Subcode between multifamily dwelling units that were constructed to be sold and those that were constructed to be rented.

This distinction was impacted by the Federal Fair Housing Amendments Act (1988), which established a threshold for "covered multifamily dwellings." The threshold was "four dwelling units in a single structure" and discrimination was prohibited "in the sale or rental" (42 USC 3604) as well as in "the design and construction of covered multifamily dwellings" (42 USC 3604, section 804(f)(3)(C)). The Federal Fair Housing Amendments Act Guidelines (at Section 2, Definitions), which were published in 1991, make it clear that "dwelling units within a single structure separated by firewalls do not constitute separate buildings."

The Barrier Free Subcode was amended in 1990 to reflect the threshold of four units in a single structure established by the Federal Fair Housing Amendments Act/1988. Occasionally it is brought to the Department's attention that a multifamily dwelling project is being constructed with no accessible dwelling units. The response to Departmental questioning is often, "Well, these are condos." Sometimes the response is, "These have party walls, so they are exempt."

The fact is that (like the Federal Fair Housing Amendments Act/1988) the Barrier Free Subcode requires that multifamily dwellings of Use Group R-2, R-3, or R-4 include accessible dwelling units when there are *four or more dwelling units in a single structure* (NJAC 5:23-7.5(a)). It does not matter if the dwelling units are to be sold or rented.

There are some exemptions in the Barrier Free Subcode for residential construction. Single family detached homes (Use Group R-3) are exempt and, like single family detached homes, townhouses are exempt. The Barrier Free Subcode defines a townhouse as "a single dwelling unit with two or more stories of living space, exclusive of basement or attic; the dwelling unit shall have an independent entrance at or near grade; most or all of the sleeping areas shall be on one story with most of the remaining habitable space, such as kitchen, living, and dining areas on another story." (NJAC 5:23-7.3(b)1i)

In the interest of clarity, the Barrier Free Subcode then states that "For the purposes of determining the number of dwelling units in a single structure, firewalls shall not constitute separate buildings." (NJAC 5:23-7.3(b)2i) As far as construction is concerned, firewalls and party walls are the same. The difference between them is ownership of the dwelling unit. Because the Barrier Free Subcode requires that a single structure with four or more dwelling units provide accessible dwelling units — and because it does not matter whether the dwelling units are for sale or for rent — for the purposes of construction, the firewalls and party walls are a distinction without a difference.

It is probably easiest to think of a single structure the way a layperson, with no knowledge of building codes and definitions, would regard it. If there is a building with at least four dwelling units in it, some of those units must be accessible. Again, the Barrier Free Subcode gives clear direction. If there is an elevator in the building, all of the dwelling units must be accessible. If there is no elevator in the building, the ground floor dwelling units must be accessible.

One more thing, accessible dwelling units and adaptable dwelling units are the same. They are dwelling units that comply with CABO/ANSI A117.1, Section 4.33. They have an accessible entrance, accessible interior route, accessible clear floor space, maneuvering space at the doorways, one full accessible bath on an accessible route, and they have adaptable features in the kitchen and bathroom.

In sum, a single structure with four or more dwelling units is required to have accessible dwelling units whether those units are for sale or for rent. If there is an elevator in the building, all (100%) of the dwelling units must be accessible; if there is no elevator, all of the ground floor dwelling units must be accessible.

If you have any questions on whether a multifamily project should include accessible dwelling units, please call the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Certified Contractors for Unregulated Heating Oil Tanks

On January 6, 2000, Governor Whitman signed into law P.L. 1999, Chapter 322, which requires anyone performing services, including installation, removal, abandonment and testing, on "unregulated heating oil tanks" to be certified by the Department of Environmental Protection (DEP). This law was to take effect 180 days after enactment, which would be July 4, 2000.

"Unregulated heating oil tank" means any one or combination of tanks, including appurtenant pipes, lines, fixtures, and other related equipment, used to contain an accumulation of heating oil for on-site consumption in a residential building; or it means those tanks with a capacity of 2000 gallons or less used to store heating oil for on-site consumption in a nonresidential building, the volume of which (including the volume of the appurtenant pipes, lines, fixtures and other related equipment) is 10 percent or more below ground.

In order to become certified, an individual must pass a DEP exam. Because the DEP is in the process of developing regulations to implement this statutory change, it will not have the certification program up and running by the July 4, 2000 deadline. In fact, DEP has indicated that it hopes to be ready to implement this requirement by January 1, 2001.

Because the DEP certification program will not be ready by the July 4, 2000 date, at this time, the UCC code official should NOT require that a contractor be certified to perform this type of work on unregulated heating oil tanks. This will not affect services performed on regulated tanks. Enforcement of these regulated tanks is still in effect.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

UCCARS...The Next Generation

The Division of Codes and Standards recently accepted a proposal for the planned replacement of its Uniform Construction Code Administrative Records System (UCCARS) software. The project will be completed in two phases. Phase I of "UCCARS...The Next Generation" will focus on the design of the new application. Key areas to be addressed during the design phase include defining the system's architecture and database structure. Detailed components, such as the screen interface and standard parameters for reporting functions, will also be addressed during the design phase. Phase II of "UCCARS...The Next Generation" will focus on the implementation, testing, troubleshooting, and training of users of the new UCCARS application.

Using a commercial web browser, municipalities will be able to access a functional relational database application that will meet their administrative requirements for construction code enforcement. Employing web technology into the re-design of UCCARS creates the potential for local government offices to participate in *New Jersey's Government Business Network* initiative called *GovConnect*. *GovConnect* creates a secure web infrastructure that will enable local government agencies to conduct business with the State via the Inter/intranet through a single point of entry, or portal. Some anticipated features of *GovConnect* include an online directory of services and of government agencies as well as e-mail and messaging services. Anticipated features of "UCCARS...the Next Generation" include:

- Online access to UCC-related material including publications and UCC subscription information.
- Web-based system platform to provide an avenue for the public for submitting building permit applications and fees via the Internet.
- Relational database structure to increase functionality for construction code enforcement offices by improving the search features of UCCARS data.
- Checks to prompt for errors and "hint text" to provide quicker, more accurate data collection.
- Geographical information systems interface to expand the functionality of UCCARS data by providing mapping capabilities.
- Multi-access points linking the database to other municipal offices (such as tax offices) to increase efficiency.
- Compatibility with commercial office software applications to provide the ability to use mail merges and other timesaving office document processing.

"UCCARS...the Next Generation" will require a PC (personal computer) with a web browser (Internet Explorer or Netscape 4.0). It will also require a modem connection with a minimum of 56K. Phase I of the project includes soliciting comments and recommendations from systems users. A user survey intended to assess the current UCCARS I and II versions and to collect information on the hardware presently in use in local construction code offices, will be made available.

We welcome your comments on, and recommendations for, improving UCCARS. Please direct them to UCCARS@dca.state.nj.us.

Source: Team UCCARS
Division of Codes and Standards

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Pre-existing Code Violations: How Are They Addressed, When, and Why?

These questions continue to be a thorn in every working code official's side. First, we will concentrate on the code official's responsibility when, while performing an inspection, pre-existing construction work that was done by the previous homeowner without a permit is discovered. What do you do?

Do you slam the (innocent) new homeowner with violations and penalties? Or do you provide an explanation, such as: "The previous owner obviously performed work without the proper permits. This work is in need of at least a visual inspection to ensure that no dangerous conditions exist."

Some examples of dangerous conditions are: several severely over-spanned floor joists, an unsupported girder that is showing obvious signs of distress, and electrical wiring using extension cords. If conditions like these are uncovered, the current homeowners should be compelled to obtain a permit for their own safety.

Minor issues, such as back pitched pipes, kitchens that are not on dedicated circuit breakers, joist hangers which may not be completely nailed, and minor over-spanned floor joists which conform to the Rehabilitation Subcode need not be addressed.

How do you handle a complaint from a homeowner regarding a new home that recently received a Certificate of Occupancy? First, obtain a complaint in writing because this becomes your invitation to reenter the premises. Next, investigate the allegations consistent with N.J.A.C. 5:23-2.29(d), entitled "Entry." Pursuant to this section, if there are reasonable grounds to believe that code violations exist (the written complaint constitutes "reasonable grounds"), you have the authority to reinspect and, *if warranted*, to compel the builder to correct a violation.

Now then, what does "if warranted" mean? What should be addressed? It may be easier to explain what should not be addressed. For example, what if the stairs are an eighth of an inch out of tolerance, the grading is not quite pitched in accordance with the code, or there is a damp wall? These issues are more appropriately handled by the homeowner's warranty. You should inform the homeowner of the option of filing a claim. All workmanship issues, which may or may not be code violations, should be referred to the homeowner's warranty company. Code violations (such as truss bracing, over-spanned floor joists, missing concrete-filled pipe columns, or unsupported bearing partitions) should be addressed through a Notice of Violation to the builder, with a copy provided to the homeowner. If a builder fails to correct a cited violation, a complaint should be filed with the Bureau of Homeowner Protection (Post Office Box 805, Department of Community Affairs). Failure to correct a documented code violation may subject the builder to penalties under the New Home Warranty Act.

There is an inexhaustible number of examples, each with different sets of circumstances; however, one theme is clearly apparent. Each code official must exercise "prosecutorial discretion" when faced with existing code violations. This is part of the job of code enforcement and we are all aware that code officials exercise judgment with regard to new construction every day. That same judgment (whether and when to "prosecute") must be applied when encountering existing code violations. The hazard must be evaluated and a decision made as to whether the hazard is sufficiently serious to require remediation.

An analogy may help here. Like code enforcement officials, police officers exercise prosecutorial discretion daily. For example, when a law enforcement officer pulls someone over for speeding, a decision is made about whether to issue an additional ticket for an infraction that might not have been apparent when the decision to ticket the first offense was made. At the same time, on a daily basis, law enforcement officers also decide whether to pull over people who are speeding when it does not appear that the speeding is hazardous.

Source: Lou Mraw
Supervisor
Bureau of Regulatory Affairs



☞ ALERT: Truss Bracing

The Bureau of Regulatory Affairs has come across a significant number of deficiently braced roof trusses. It is apparent from our investigations that inspectors are relying on the framing contractors and are not independently verifying proper installation. The only way to ensure that trusses are braced properly is by inspecting and utilizing truss certifications in conjunction with the approved plans. Truss certifications usually contain the location of all lateral bracing, while the approved plans should provide location and size of diagonal bracing. Please be aware that there is a variety of methods to brace trusses; therefore, it is extremely important to inspect for conformance to the truss certification, which may be different from what you are accustomed to seeing.

We recently came across trusses which the designer, in an attempt to design an economically manufactured truss, relied considerably on truss bracing for structural stability and, therefore, required extensive bracing of approximately nine two-by-fours per truss.

My point is: Do not trust your experience when it comes to truss bracing. Make sure you adhere to the design criteria set forth by the truss manufacturer. Additionally, make sure that either the designer of the truss or the designer of the structure has designed bracing that ties in the adjacent dissimilar trusses.

Finally, we have also noticed that some officials have not been making sure that gable end trusses are tied into the main framing. In fact, on occasion, we have been able to physically move the entire gable end wall after occupancy due to a lack of bracing. We know it is time-consuming and difficult, but without proper bracing, trusses may not withstand design wind loads.

Source: Louis J. Mraw
Supervisor
Bureau of Regulatory Affairs

Are the Voltage Drop Limitations Specified in the FPN of the NEC Enforceable?

Fine Print Notes (FPN), as outlined in Section 90-5(c) of the 1999 National Electrical Code (NEC), contain explanatory material that is not considered text of the rules unless specified in the Uniform Construction Code (UCC) regulations.

The voltage drop limitations specified in the FPN under Section 210-19(a) are recommended values for achieving a reasonable degree of efficiency of operation. They are not a requirement and are not intended to be enforced. Limiting the voltage drop to a specific value is a design consideration that depends on several factors. Some of these factors are the size and material of the conductor, the number of phases, the power factor and the loading of the circuit, and the type of raceway enclosure (whether magnetic or nonmagnetic). The NEC does not establish a mandatory rule on voltage drop for either the branch circuit or the feeder. The NEC does not state that a voltage drop greater than 5 percent is unacceptable or unsafe.

Any voltage drop measurement greater than the recommended value in the FPN, points out suspected deficiencies and may warrant a review by the designer. By itself, in the opinion of the NEC's code making panel, it does not constitute a violation of the NEC. Unless specifically referenced in the UCC, (NJAC 5:23-3.16(a)2i and Bulletin 00-1) the FPN is informational only and is not enforceable as code.

Please direct any questions to me at (609) 984-7609.

Source: Ashok K. Mehta
Code Assistance Unit

UCCARS Monthly Activity Data Transmission Problems

As your office begins to upgrade and replace some of its old computer equipment, you may find (if you have not already) that you will be unable to consistently transmit your monthly activity data file successfully, i.e., the "Send Data to DCA" from the UCCARS main menu.

This is generally because the communications software with which UCCARS interfaces is a DOS-based program and, therefore, does not perform well in a multitasking environment, such as Windows '95 and above. Although we have made extensive changes to a utility program called UCCOMM that we provide to UCCARS users, the multitasking environment continues to challenge us. Our latest version of UCCOMM (ver. 3.03, dated 04/24/2000) addresses all of the UCCARS/CrossTalk problems that have been encountered to date related to functioning in the multitask environment. If you are a UCCARS user, and your office transmits its monthly construction activity data to our bulletin board via CrossTalk communications software and a modem, please check to see if you are using the latest UCCOMM utility file. If you are not, give us a call at (609) 292-7899 and ask for UCCOMM version 3.03.

Source: Team UCCARS
Division of Codes and Standards

Accessible Fire Houses — An About-Face

THE FOLLOWING ARTICLE CONSTITUTES A CHANGE IN THE ADVICE GIVEN BY THE CODE ASSISTANCE UNIT.

Ever since the Americans with Disabilities Act was passed in 1990, questions about the accessibility of firehouses have recurred in Code Assistance. For the past ten years, when asked whether a firehouse had to have an elevator, the answer that we have given is, Yes. This response was based on an interpretation of the Americans with Disabilities Act that was given by representatives of the United States Department of Justice (DOJ) in the two years following the passage of the ADA. Over the years, we have tried repeatedly to obtain a copy of this DOJ policy, but have not been successful. Nonetheless, unwilling to expose New Jersey architects and building owners to Federal civil rights law suits, we have consistently stated (and taught in the Barrier Free Subcode class) that firehouses are considered "Title II entities" (i.e. State or local governments) under the ADA and, therefore, the elevator exemption available for Title III entities (public accommodations and commercial facilities) cannot be applied to newly constructed firehouses. This position has met with a great deal of resistance and the questions have continued.

In response to questions concerning the accessibility of firehouses and the need to install an elevator to a second floor, we continued in our efforts to obtain a copy of the DOJ policy. We have finally been successful in getting a copy of a DOJ response to the question of whether firehouses are Title II (and must provide an elevator) or Title III (and must provide an elevator only if the building is more than two stories).

Instead of a policy statement or an interpretation, the DOJ written source is a letter to then-Congressman (from Pennsylvania) Rick Santorum. In this letter, the DOJ stated that each firehouse must make a determination of its Title II or Title III status. The major criterion is whether the fire service gets its funding from public funding or whether it is privately owned and run. The proportion of public/private funding is important.

In New Jersey, there are fire companies that lie clearly in the public camp. These include fire districts, which have the authority to tax, and municipal fire companies. With other kinds of fire services, however, it is not so clear. A fire company that supports itself through bake sales and donations is likely to be a private entity, unless its equipment is provided by a municipality. In that case, the contribution by the municipality must be regarded as a portion of the budget. If it is a substantial portion, the company may be considered a Title II entity, a function of local government.

In summation, each fire company must make a determination about whether it is a public (governmental) entity or a private entity that provides a public service. Whether an elevator is must be provided in the construction of a new firehouse follows from that determination. Code officials may ask whether that determination has been made and must accept the result.

If you have questions on this or on another accessibility issue, please contact the Code Assistance Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development



☞ ALERT: Not Just Paperwork

The drawings for a condominium development in southern New Jersey were completed by a New Jersey architectural firm for a development of five buildings with 15, two-story units, on 297 piles. The buildings were within one block of the beach. A warranty was issued by the New Home Warranty program.

Within a year of the warranty's issuance, the Condominium Association notified the builder of record of many structural cracks throughout the five buildings. A claim, together with a professional engineer's report, was submitted to the New Home Warranty Program. Within six months, the defects were determined to be covered by the warranty. An engineer's report attributed the cracks in the structure to varying degrees of settlement of individual piles.

During resolution of the claim, geotechnical engineers reported that firm bearing was determined to exist in medium-dense sand which occurred at a level 30 feet below grade. Piles should have been driven five feet into this bearing layer. With a five-foot pile stick up this makes the required length of piles 40 feet long.

The architects of record specified piles to be driven to firm bearing. The builder's project foreman for the pile placement is on record as stating that test pilings prior to construction showed the need for 35-foot piles. The builder purchased 30-foot piles and directed the foreman to penetrate the soil 25 feet, with five feet sticking up above grade. This was five feet short of the length indicated by the engineers' test; it was 10 feet short of design requirements. The foreman further stated that, in many cases, he did not obtain the resistance required for a 20-ton capacity pile. The builder of record did not contract for engineering certification of the pile installation, but instead performed this function himself. There is no record that the code official requested certification from the licensed design professional of proper bearing for the installed piles.

All five buildings and 297 piles were sinking.

The warranty authorized payments totaling $630,791.20 to correct the builder's defects and subsequently the claim was closed.

The Building Officials and Code Administrators National Building Code (BOCA) 1996, Section 1817.4, allows the code official to require at least one controlled test pile when "the design load for any pile foundation is in doubt." Applying this regulation to construction today, the code official can require certification of the design loads from the design professional.

The lesson here is simple: certifications are not just paperwork. Just imagine the great savings — in time, human resources, and money — had the proper foundation certificate been required.

Source: Bartholomew A. Sowul, A.I.A.
New Home Warranty

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Department of Community Affairs
Jane M. Kenny, Commissioner

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Symbols for Uniform Construction Code Subcodes

When looking through several of the indexes of the *Construction Code Communicator* for a specific article, it has become apparent that it is not always possible to figure out which article "goes with" a specific subcode.

Therefore, starting in this *Communicator*, the articles that address issues of specific subcodes of the Uniform Construction Code identify those subcodes with symbols beside the title. The symbols are:

- Barrier Free
- Building
- Fire Protection
- Electrical
- Elevator Safety
- Mechanical and Energy
- Plumbing

The value of this will become clearer at some point in the future when you are looking through the Index for an article that had a clever title that now escapes you.

Source: Emily Templeton
Code Development

What's My Load?

Recently, a respected colleague asked me to confirm the maximum span for a roof rafter in a single-family dwelling that was being designed and constructed using the Council of American Building Officials (CABO) One- and Two-Family Dwelling Code. The first step was to determine the correct table in the code — it is Table 502.3.1.C. The next step was to determine the properties of the lumber (Fiber strength in bending or Fb and the Modulus of Elasticity or E). The problem was — which type of loading is appropriate for determining the Fb? There are three choices: Seven Day Loading, Normal Duration, or Snow Loading. The Seven Day Load is not applicable for the roof rafter because it is a construction load. The Normal Duration is not appropriate for a roof rafter because it is used for the design of floor or ceiling joists that are consistently loaded.

The appropriate choice for a roof rafter is the Snow Load. It should be noted that the Fb for the Snow Load is somewhat larger than the Normal Duration; but remember, the snow load in New Jersey is not a 12-month load like that of a floor.

Remember, when using a "cookbook" like the CABO One- and Two-Family Dwelling Code, you must make sure to use the correct ingredients, or you might end up with a "bad load."

Source: John N. Terry
Code Assistance Unit

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Emergency Lighting and Exit Signs: Who and When

The monitoring of local code enforcement agencies throughout the State has indicated that there is some confusion about who is responsible for enforcing the requirements of emergency lighting and signs. The Uniform Construction Code (UCC) separates the enforcement responsibility into plan review and field inspections (NJAC 5:23-3.4). Following the summary, I will list some of the common electrical violations of emergency lighting that I have encountered.

I. Plan Review

The Building Subcode Official and Fire Subcode Official have joint plan review responsibility for Section 1023 (exit signs) and Section 1024 (means of egress lighting) of the Building Officials and Code Administrators (BOCA) National Building Code/1996. These sections specify where exit signs and egress lighting are required.

The Electrical Subcode Official, however, is responsible for enforcing the National Electrical Code (NEC). In the NEC, Article 700 specifies the correct circuitry and wiring methods (NEC chapters 1-4) for this type of equipment. The correct circuitry gives lighting for the occupants, even when there is a non-catastrophe, like a breaker tripping. The Electrical Subcode Official must ensure that the equipment and wiring complies with the Electrical Subcode.

I have been told that it is not unusual for the Fire Protection Subcode Official or the Building Subcode Official to ask that the lighting be on a separate breaker. But, it is not their responsibility to determine circuitry.

II. Field Inspection

The Fire Subcode Official has no field inspection responsibility for emergency lighting. The Fire Subcode inspection cannot be failed for a violation of the Electrical Subcode or the Building Subcode.

The Building Subcode Official and the Electrical Subcode Official each has designated inspection responsibilities. The Building Subcode Official has enforcement responsibility for all of Chapter 10 of the BOCA National Building Code. Often, building inspectors tell me that the fire inspector does the inspection on the emergency lighting and signs. But, the UCC provides that it is the responsibility of the building inspector, not the fire protection inspector. The Electrical Subcode Official has enforcement responsibility for all of the NEC, including Article 700. It is not the responsibility of the Electrical Inspector to determine if more exit signs and egress lights are needed. If the Electrical Inspector notices a violation of another subcode, the Building Subcode Official should be informed. The Electrical Inspector cannot fail an installation for a violation of the Building Subcode.

III. Common Violations

NEC 700-12(e)

- NEC 700-12(e) requires that unit equipment be on the same branch circuit that is serving the normal lighting in the area. Accordingly, the exit discharge lighting supplied by the unit equipment must be on the circuit for that area. This is often not done.

NEC 700-12(e), Exception

- NEC 700-12(e), Exception, allows unit equipment to be on a separate branch when there are three or more normal lighting circuits in an area, provided that the separate branch circuit feeding unit equipment in an area originates from the same panel board as the normal lighting circuits. This is often not done.
- NEC 700-12(e), Exception, requires that there be a lock-on feature on the breaker. This is often not done.

If you have questions on these issues, please contact Ken Verbos at (609) 984-7672 or Ashok Mehta at (609) 984-7609.

Sources: Kenneth W. Verbos, Monitoring Unit, Bureau of Regulatory Affairs; Ashok Mehta, Code Assistance Unit

Regulation of Construction Activities in Railroad Yards

A recent court decision, *Village of Ridgefield Park v. New York Susquehanna & Western*, deals with whether there is any jurisdiction for local code enforcement agencies to perform plan review and inspection of railroad facilities. The answer is that local code enforcement agencies do have some jurisdiction and railroad buildings must comply with local codes (e.g., in New Jersey, the Uniform Construction Code). However, because railroads are federally regulated, the State or municipal enforcing agency cannot impose **administrative** delays.

More specifically, upon request, the railroad must provide construction documents and must also provide access for inspections. But, the code official may not require plan approval before construction begins. If found, a violation must be handled with a notice and a penalty, but not with a stop work order. There are no permits, fees, or certificates of occupancy issued. Although the federal government encourages contractors to pay fees voluntarily, they cannot be required to do so. The Department of Community Affairs will issue a bulletin to clarify this matter.

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

Source: Marcel Iglesias, Code Assistance Unit

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To Bond or Not to Bond

The National Fuel Gas Code Committee, the lead committee responsible for interpreting requirements for bonding of gas piping, has recently issued a Formal Interpretation Z223-99-2 of Section 3.14(a), Bonding of Gas Piping. The text of Section 250-104(b) added in the National Electrical Code (NEC) 1999 (NFPA 70) is extracted from the language of Section 3.14(a) of NFPA 54 (National Fuel Gas Code). The ANSI ASC Z223 and NFPA 54 National Fuel Gas Code Committee jointly issued the following formal interpretation:

"It is the intent of Z223.1/NFPA 54, Section 3.14(a) and NFPA 70, 250-104(b) to consider this bonding requirement to be satisfied where a grounded gas appliance is attached to the metal gas piping system."

The NEC contains a provision that permits the equipment grounding conductor of the circuit that may energize the "other" interior metal piping to serve as the bonding means. This interpretation recognizes that provision as applicable to metal gas piping systems. In simple words, this interpretation says that if the electrical circuit serving a gas appliance contains an equipment grounding conductor, no further bonding of the metal gas piping is required. It is important to note that the bonding of a metal gas piping system, where no isolating fitting exists between the underground and aboveground portions of the metal gas piping, may create a potentially hazardous condition. Section 250-52(a) of NEC 1999 does not allow the underground metal gas piping system to be used as a grounding electrode.

If you have any questions on this issue, feel free to contact me at 609-984-7609.

Source: Ashok Mehta
Code Assistance Unit

Accessible Controls and Operating Systems

Several questioners have asked the Code Assistance staff of the Department of Community Affairs (DCA) what is covered by the "accessible controls and operating systems" requirement of the Barrier Free Subcode. The specific question is whether circuit breakers in electrical panels serving an individual dwelling unit that is subject to the Barrier Free Subcode are subject to the "accessible controls and operating systems" requirements of the Barrier Free Subcode, as contained in CABO/ANSI A117.1, Section 4.25. The answer is yes.

A resident who does not use a wheelchair has access to these control devices and so should a resident who uses a wheelchair. Therefore, the reach ranges specified in CABO/ANSI A117.1, Sections 4.2.5 and 4.2.6, and the clear floor space provisions in Section 4.2.4, are applicable to the circuit breakers.

The reach ranges provided in CABO/ANSI A117.1-1992, Sections 4.2.5 and 4.2.6 are as follows. For a parallel approach, the circuit breakers of the electrical panel must be no higher than 54 inches; for a forward approach, the circuit breakers of the electrical panel must be no higher than 48 inches. The clear floor space for a wheelchair is 30 inches by 48 inches. In a forward approach, the 48-inch dimension is perpendicular to the electrical panel; for a parallel approach, the 48-inch dimension is parallel to the electrical panel.

NOTE: This applies to a circuit breaker of an electrical panel in an individual dwelling unit that is subject to the Barrier Free Subcode. It does not apply to circuit breakers of electrical panels that serve an entire multifamily residential structure, nor does it apply to the circuit breakers of an electrical panel that serves an individual residence or dwelling unit that is not subject to the Barrier Free Subcode.

Sources: Emily Templeton
Code Development
Ken Verbos
Bureau of Regulatory Affairs

Registering for NCPCCI Exams

At its July meeting, the Board of Governors of the National Certification Program for Construction Code Inspectors (NCPCCI) discussed registrations for inspector exams. Over the past year, I have received several complaints about the difficulty of getting an exam scheduled, particularly in June and December.

In January 2000, the construction code inspector testing program (CCIP) changed from giving tests only at specified times, called windows, to allowing any eligible candidate to test any time. The major problem with registering is that June and December are the busiest times of the year for the testing centers, which administer a variety of computer-based tests, including exams for people who are applying to college or graduate school. Coincidentally, June and December are the months that the Uniform Construction Code classes end. However, with open testing, a candidate for the construction code tests may register for one or more exams months — even a year — in advance.

Therefore, if you are taking a class and know that you will want to test when the class ends, register for your exam when you register for the class. Registering ahead will almost certainly ensure you a seat.

In addition, the people who answer the telephone for these exams also respond to registration requests for other exams. Please identify the exam(s) for which you are registering as the "CCIP exams."

Source: Emily Templeton
Code Development

Copies of the UCC for Working Code Officials

As working code officials, if you receive a renewal notice for the subscription service to the Uniform Construction Code (UCC) *and* there are no questions at the bottom of the form asking where you work, **call me before you send payment.**

As a working code official, you are entitled to ONE complimentary subscription to the UCC. If you work in more than one town and you want to have a subscription service for each town, you must pay for the extra subscriptions.

If you have any questions, you may call me at (609) 984-0040.

Source: Cecilia Heredia
Publications Unit

Reprinted Articles

Beginning with this *Construction Code Communicator*, Fall 2000, we are initiating a section of each issue that will be dedicated to reprinting articles from issues of the *Communicator* that are more than five years old.

These articles have often become sources that are quoted by code officials and relied upon in day-to-day work. The purpose in reprinting them (aside from providing a clean copy!) is to make them available to code officials who earned their licenses after the articles appeared. This will make them available to everyone. (There may be some grammatical changes and contact information, such as addresses and telephone numbers, that will be updated in the reprint, but the substance will remain the same.)

If any reader of the *Communicator* has an "old favorite" that warrants republication, please do not hesitate to contact me by telephone at (609) 984-7609, by fax at (609) 984-7717, or by e-mail at etempleton@dca.state.nj.us.

Source: Emily W. Templeton
Code Development

REPRINT: Existing Elevator Devices and Retrofits

(Revised and Updated —
Originally Printed in Volume 6, Number 2, Summer 1994)

This article states the Elevator Safety Unit's position regarding the issue of elevator inspections and retrofit. As adopted, the Elevator Safety Subcode is not a retrofit code. The Elevator Safety Subcode, Subchapter 12 of the Uniform Construction Code (UCC), provides that all applicable routine and periodic tests and inspections of existing elevator devices must be in conformance with the most recent edition of ASME A17.1, as referenced in the Building Subcode.

As per the ANSI/ASME A17.1 standard, Part 10, Section 1000, Rule 1000.2, titled "Applicability of Inspection and Test Requirements," the purpose of inspections and tests is to determine whether the equipment conforms with the code provisions that were applicable at the time of installation or alteration. Before the elevator inspection begins, the applicable code edition must be determined. The inspection is performed to the applicable code or standard. Therefore, if an item was required by the code in effect at the time of installation or alteration, but has been removed or is no longer operational, the subcode official must issue a notice of violation ordering correction. This is an issue of code compliance, not an issue of retrofit. A retrofit provision requires that an existing device comply with the current edition of the code.

I would like to clarify another misconception. Some officials seem to believe that issuing a violation notice is akin to a retrofit requirement. That is not the case. A common example is requiring the installation of a means to automatically disconnect the main line power supply to affected elevator(s) prior to the application of water from a fire suppression system installed in an elevator machine room, machinery spaces, and hoistways.

Both the UCC and the Uniform Fire Code (UFC) contain requirements for sprinkler systems in elevator machine rooms, machinery spaces, and hoistways. The systems must be installed in conformance with the UCC and must comply with the referenced standards in effect at the time the permit was issued. ANSI/ASME A17.1 is a referenced standard in the UCC. Therefore, the type and installation of fire suppression systems must comply with the edition of the ANSI/ASME A17.1 that was in effect when the construction permit was issued. If the ANSI/ASME A17.1 standard that was referenced when the construction permit was issued required a means to automatically disconnect the main line power supply, the disconnect should be there. If the disconnect is not there, a violation must be cited by the elevator inspector.

A specific example may help explain this more clearly. A construction permit to install a sprinkler system was taken out in March 1987. The standard referenced by the Building Subcode was ANSI/ASME A17.1-1984, which required an automatic disconnect of power to the affected elevator(s) prior to the application of water. When performing an inspection today, if the automatic disconnect is not present, a violation must be issued. This is a matter of code compliance; it is not a retrofit requirement.

The Department of Community Affairs (DCA) recognizes that if the electricity is automatically disconnected, people may be trapped in elevator devices. Bulletin 94-2 states that the elevator should be able to return to a floor and open its doors before the electrical power is automatically cut off. The automatic disconnect system that is installed must comply with the ANSI/ASME A17.1 standard—it must be independent of the elevator controls and must be activated only when the elevator device is in motion.

Some readers may find a brief history of the requirement for the automatic disconnect of the main line power supply interesting. The requirement was first introduced in the ANSI/ASME A17.1 standard in 1984; it was adopted as part of the UCC on April 1, 1985. This requirement had been put into performance language and accepted by the ANSI A17 consensus committee. It was one of three options recommended to that committee by the National Fire Sprinkler Association (NFSA) — then known as the National Automatic Sprinkler and Fire Control Association, Inc. — after the NFSA had reviewed the potentially hazardous effects of water on the elevator's brakes, motor, generator, transformer, and safety circuits.

If you have questions, please contact me at (609) 984-7833.

Source: Paulina Caploon
Elevator Safety Unit
Bureau of Code Services

LP Gas Installation Inspections

Inspectors with a plumbing technical license should be aware that there is a proposal to change the responsibility for code enforcement for certain liquefied petroleum gas (LPG) installations.

The Office of Safety Compliance in the Department of Community Affairs (DCA) (formerly in the Department of Labor) is the primary enforcing agency for most LPG installations. The one exception is LPG installations in one- and two-family residential structures (Use Group R-3 or R-4), which are enforced by the local enforcing agency (per N.J.A.C. 5:23-3.11A).

For new LPG installations for which plans are not required to be submitted to the Office of Safety Compliance, a Notice of Filing must be filed with the Office of Safety Compliance. Again, there is an exception: a Notice of Filing is not required for an LPG system that has a capacity of 250 gallons or less (individual or aggregate capacity).

At this time, the inspection responsibilities for LPG installations are divided. The Fire Protection Subcode Official is responsible for the plan review and inspection of one- and two-family residential (Use Group R-3 or R-4) LPG container(s) installations. The Plumbing Subcode Official is responsible for plan review and inspections of the vapor piping system installation. The Office of Safety Compliance is charged with the inspection of LPG installations, other than those associated with buildings of Use Group R-3 and R-4.

The DCA is proposing a rule to streamline the inspection responsibilities. The Uniform Construction Code municipal inspector who possesses a plumbing technical license will be responsible for the plan review and inspection of all LPG installations involving containers of 2000 gallons (volume as measured with water) or less, vapor delivery systems only, and all associated vapor piping. This will eliminate the need for two field inspections, one by the Plumbing Subcode Official and one by the Fire Protection Subcode Official. The Office of Safety Compliance will continue to be responsible for the inspection of all LPG installations of container(s) of 2001 gallons or more. The Office of Safety Compliance will also continue to inspect liquid withdraw systems.

A training program for plumbing inspectors is being established. The training program will consist of a three-hour seminar. The seminar will address what is required to inspect LPG installations for compliance with National Fire Prevention Association (NFPA) 58, the Liquefied Petroleum Gas Code. The seminar will be offered through the Education Unit in the Bureau of Code Services. Two three-hour classes will be given each day, but only one three-hour class is required. The seminars started on August 31, 2000 and will continue through December 14, 2000. There are 11 days of seminars scheduled. On each seminar day, there are two three-hour classes offered.

All code officials should have received a letter containing the information on these special seminars. The LPG seminars are also included in the booklet listing all the fall seminars. The change is proposed to take effect approximately January 1, 2001. The DCA strongly encourages all inspectors possessing a plumbing technical license to take advantage of this seminar.

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

Source: Thomas C. Pitcherello
Code Assistance Unit



Sprinklers in Assisted-Living Facilities

The Health Care Plan Review Unit has recently received several submissions of fire suppression plans for assisted-living facilities that use Section 5-3.2 of National Fire Prevention Association (NFPA) 13, Residential Sprinklers, as the basis for design.

Designers and contractors are apparently misled by the definition of a "dwelling unit" given in NFPA 13, Section 1-4.2. This definition states that "For the purposes of this standard, dwelling unit includes hotel rooms, dormitory rooms, apartments, condominiums, sleeping rooms in nursing homes, and other similar living units." From this definition, designers and contractors have concluded that the resident rooms in assisted-living facilities may be treated as dwelling units and, therefore, that a residential sprinkler system may be installed.

NFPA 13 is a referenced standard of the Building and Code Officials Association (BOCA) National Building Code. But, as a referenced standard, the provisions of NFPA apply only in the context of the specific reference in the BOCA National Building Code and its adoption in the Uniform Construction Code (UCC). In the BOCA National Building Code/1996, dwelling units are clearly defined (Section 310.2). According to the BOCA definition, dwelling units are contained only in buildings of Use Group R.

All assisted-living facilities are Use Group I-2 and, except for accessibility features, the residents' rooms are not to be designed as dwelling units of Use Group R. Bulletin 98-3 spells this out clearly. Because the residents' rooms in an assisted-living facility are not dwelling units (as defined by the BOCA National Building Code), a residential sprinkler design is not permitted. This is not just semantics; the residential sprinkler system does not provide the coverage intended by the code for an institutional use.

The Department of Community Affairs has begun allowing local code enforcement agencies to review and approve sprinkler shop drawings and hydraulic calculations for assisted-living facilities. This article, therefore, serves as an alert for those agencies to ensure compliance with this critical area of code enforcement.

Source: Dave Uhaze, Supervisor
Health Care Plan Review Unit



Sheathing Installation as Bracing

There have been a number of inquiries about the proper installation of wall sheathing to provide structural bracing. The Building Officials and Code Administrators (BOCA) National Building Code/1996, Section 2305.8 provides requirements for wind bracing. One method of wind bracing is to use the wall sheathing as bracing.

For wall sheathing to be effective as bracing, the sheathing must be at least 48 inches wide, must cover three 16-inch stud spaces or two 24-inch stud spaces, and must be fastened to the wall studs in accordance with Table 2305.2. The sheathing must be fastened to the wall studs, sole plate, and top plate. All vertical joints of panel sheathing shall occur over studs; all horizontal joints shall occur over blocking that is at least equal to the studs in size. All framing in connection with sheathing used for bracing is not permitted to be less than 2 inches nominal thickness.

There has been confusion about whether the sheathing is required to extend to the sill plate. In reviewing the section above, the sheathing is required to extend to the sole plate (the bottom horizontal member of a frame wall); it is not required to extend to the sill plate. Another area of concern has been the end joint of the sheathing. The end joint of the second course of sheathing is required to be offset from the one below.

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

Source: Marcelino Iglesias
Code Specialist
Code Assistance Unit

Overhead Service Locations

"But I've done it that way for 20 years." How often have inspectors heard that from a contractor? Just like contractors, inspectors often believe that the way they learned to do something is the right way of doing it. But, just because you learned something once does not mean you do not have to check the code. The failure to check the code is one major reason that there is inconsistent enforcement of some code sections. One of the code sections inconsistently enforced is in the 1999 National Electrical Code (NEC) — Article 230-54, addressing overhead service locations.

Service-drops may be connected with a raceway that includes a raintight service head [NEC Article 230-54(a)], a service cable with a raintight service head [NEC Article 230-54(b)], or a service cable with a gooseneck. [A gooseneck has a bend in a downward direction in SE cable taped with self-sealing, weather-resistant thermoplastic. See NEC Article 230-54(b), Exception.]

A typical service installation has the SE cable run up to 10 feet, with a service hook above the cable. In the *American Electricians' Handbook*, which has been used by electrical contractors and electricians since 1913 as the most basic "how-to" book, it was pointed out that this "typical service installation" is not code compliant. Article 230-54(c) of the NEC requires service heads or goosenecks to be located **above the point of attachment.** There is an exception to Article 230-54(c). This exception provides that where it is impractical to be above the point of attachment, **a service head**, not a gooseneck, may be used and may be up to 24 inches from the point of attachment. Also, the termination of the SE cable sheath on a gooseneck must be above the point of attachment and not just above the bend in the cable. This code section has been in the NEC since before the adoption of the Uniform Construction Code. We should NOT allow goosenecks below point of attachment and, unless it is impractical, we should not allow service heads below the point of attachment.

NEC Article 225-18 requires the open conductors (e.g., the lowest point of a drip loop), not the service heads or goosenecks, to be a specified distance from the ground. Therefore, electrical contractors must take the drip loop into consideration. The contractor may need to make the point of attachment higher to keep the lowest point of drip loop the specified distance from the ground.

Source: Kenneth W. Verbos
Monitoring Unit
Bureau of Regulatory Affairs

Code Officials Can Help Protect Wetlands

The Department of Environmental Protection (DEP) has benefited over the years from the assistance of a number of local code enforcement officials who have identified potential violations of environmental regulations and reported them to DEP. With the pending adoption of revised freshwater wetlands protection rules, the DEP is seeking to develop and enhance communication and cooperation with municipalities.

While conducting routine duties, local code officials may observe potential violations of the regulations governing wetlands associated with construction activities. Indicators of the presence of wetlands may include the presence of ponds or streams; areas of standing water; high water table; dark- or gray-colored soil; and wetland-tolerant vegetation such as cattails, skunk cabbage, red maple, and white cedar. Regulated activities in wetlands that require prior authorization from the DEP include filling, excavation, draining, and destruction of plant life.

Projects authorized by permits from DEP should have a sign posted on the site containing information on the type(s) of permit(s) issued. In addition, wetland boundary lines should be noted on plans and are typically marked in the field with stakes or surveyor's tape.

DEP encourages all local code officials to report any activities they observe that they believe may be occurring in freshwater wetland areas without DEP authorization, or appear to be in excess of what was authorized.

Reports and inquiries for Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Monmouth, Ocean, and Salem Counties may be made to (732) 255-0787.

For Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Morris, Passaic, Somerset, Sussex, Union, and Warren Counties, reports and inquiries may be directed to (609) 292-1240.

Source: Peter Lynch
Acting Administrator
Coastal and Land Use Compliance
Department of Environmental Protection

1999 HIGHLIGHTS

New Jersey's construction industry boomed in 1999. The boom's effects included New Jersey's cities and suburbs, as well as the residential, commercial, and public works sectors of the State's construction economy. The estimated cost of work authorized by building permits was $10.6 billion. Residential construction amounted to $5.4 billion, or about 51 percent of all authorized activity. Office, retail, and other nonresidential structures totaled $5.2 billion (49 percent). Compared to last year, authorized construction increased by nearly $1.2 billion, 12 .6 percent. In real terms, assuming an annual inflation rate of 2.2 percent, 1999 activity was 10.2 percent more than the $9.4 billion authorized last year.

The number of new houses and office space also exceeded last year's levels. Authorized housing was up by 5.2 percent in 1999 and the amount of new office space increased by 4.2 percent compared to 1998. New retail space, however, was down by 21.4 percent.

Construction by Region

Nearly 40 percent of the estimated construction costs were in northern New Jersey. Central New Jersey accounted for 37.7 percent of all work. Southern New Jersey comprised 17.5 percent. In terms of new housing, three cities in the northern part of the State led all localities in 1999. Still, 41.4 percent of the new housing built in 1999 was in the central part of the State. Central New Jersey had 15,549 authorized units. Northern New Jersey counties had 12,610 authorized units (33.6 percent) and southern New Jersey had 9,363 new dwellings (24.9 percent). More than 46 percent of all new office space was built in the northern counties; 44 percent of all new retail space was in central New Jersey.

Boom Towns

Jersey City in Hudson County and the City of Newark in Essex County had the most construction in 1999. The estimated cost of all work authorized by permits in Jersey City was $354.4 million, top among localities. New market-rate housing and office development boomed along Jersey City's waterfront, the so-called "gold coast." The City led all municipalities with the most new housing in 1999 (1,783 units) and the most new office space (1,435,673 square feet); it also ranked fifth in terms of new retail space (218,351 square feet). Newark had $214.4 million in construction in 1999. Not included in this amount is $167.8 million for the Essex County Jail, which will be located in the City. Newark's construction office also issued building permits for 977 new houses in 1999, ranking third behind Jersey City and the City of Hoboken in Hudson County. Hoboken had 1,070 authorized housing units in 1999.

Other top municipalities were Woodbridge Township in Middlesex County ($176.6 million), Hopewell Township in Mercer County ($165.8 million), Hoboken ($164.2 million), and the City of Linden in Union County ($141.9 million). Among the big projects in Woodbridge were a large, new office building for an

Major Construction Indicators, New Jersey: 1996-1999

Year	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (sq. ft.)	Authorized Retail Space (sq. ft.)
1996	$7,028,424,990	27,577	6,229,515	4,880,139
1997	$8,346,533,144	30,017	10,409,171	5,688,955
1998	$9,396,755,517	35,676	12,703,824	7,921,892
1999	$10,584,167,530	37,536	13,237,891	6,229,471
difference between 1998 and 1999				
1998-99	$1,187,412,013	1,860	534,067	(1,692,421)
Percent Change	12.6%	5.2%	4.2%	-21.4%

Source: N.J. Department of Community Affairs, 8/8/00

New Jersey Construction Indicators by Region: 1999

Region	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (sq. ft.)	Authorized Retail Space (sq. ft.)
North	$4,193,675,802	12,610	6,116,403	2,105,684
Central	3,992,591,559	15,549	4,763,769	2,740,383
South	1,849,911,714	9,363	1,594,340	1,380,404
State Buildings	547,988,455	14	763,379	0
NEW JERSEY	$10,584,167,530	37,536	13,237,891	6,226,471
Percent Distribution by Region				
North	39.6%	33.6%	46.2%	33.8%
Central	37.7%	41.4%	36.0%	44.0%
South	17.5%	24.9%	12.0%	22.2%
State Buildings	5.2%	0.04%	5.8%	0.0%
NEW JERSEY	100.0%	100.0%	100.0%	100.0%

Source: N.J. Department of Community Affairs, 8/8/00

Construction Indicators, Top New Jersey Municipalities: 1999

Rank	Municipality & County	Estimated Cost of Construction (dollars)	Authorized Housing Units	Authorized Office Space (sq. ft.)	Authorized Retail Space (sq. ft.)
1	Jersey City Hudson	$354,372,917	1,783	1,435,673	218,351
2	Newark Essex	214,384,186	977	107,776	16,306
3	Woodbridge Middlesex	176,549,808	61	57,124	114,066
4	Hopewell Twp. Mercer	165,841,353	119	1,139,828	0
5	Hoboken Hudson	164,218,254	1,070	13,683	0
6	Linden Union	141,932,138	98	29,174	2,620
7	Edison Middlesex	126,363,087	198	113,852	190,611
8	Jackson Ocean	120,087,528	660	15,286	19,929
9	Bridgewater Somerset	115,177,758	241	208,408	590,272
10	Evesham Burlington	99,952,018	577	91,601	119,161
	Top Municipalities	1,678,879,047	5,784	3,212,405	1,271,316
	New Jersey	$10,584,167,530	37,536	13,237,891	6,226,471

Source: N.J. Department of Community Affairs, 8/8/00

insurance company, two new warehouses, and two large parking garages. Much of the development in Hopewell was from an office campus for a financial investment firm. New housing accounted for most of the activity in Hoboken. The big projects in Linden were an office and warehouse complex for a large pharmaceutical firm and a factory for an automobile manufacturer.

Rehabilitation Subcode

Last year was the second year since New Jersey enacted a separate code for the renovation of existing buildings. The Rehabilitation Subcode removes regulatory barriers that raised the cost of work on existing structures. At the same time, however, the Subcode maintains health and safety standards. Since its enactment in January 1998, New Jersey's Rehabilitation Subcode has received wide acclaim and praise. In October 1999, it was named one of ten winners of the Innovations in American Government Award sponsored by the Ford Foundation, the John F. Kennedy School of Government at Harvard University, and the Council for Excellence in Government. Other states and localities are in the process of adopting a similar subcode following the New Jersey model.

In 1998, the first year since the New Jersey Rehabilitation Subcode was enacted, rehab work increased significantly, especially in the State's cities. In 1997, work on existing buildings in New Jersey's 16 largest cities totaled $363.3 million. In 1998, the amount increased by 40.6 percent to $510.8 million. How has the Subcode done in its second year? Renovation work continues to be a strong part of New Jersey's construction economy, accounting for about 43 cents of every dollar of construction authorized by building permits. In 1999, renovation work in New Jersey's 16 largest cities reached $590.4 million, 62.5 percent more than the amount in 1997. While many forces are behind this surge, the Department of Community Affairs believes that the Rehabilitation Subcode had a vital role, making it easier and less expensive to rehabilitate and preserve existing buildings.

Source: John Lago
Division of Codes and Standards

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Construction Code Communicator

NEW JERSEY UNIFORM CONSTRUCTION CODE

State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

Volume 12 Number 4

Winter 2000

ALERT To Cut or Not to Cut?

It has come to the attention of the Department of Community Affairs that there is no uniformity in the interpretation and application of the section of the Barrier Free Subcode that deals with adaptable kitchen counters in adaptable dwelling units. The issue is whether the kitchen counters have to be pre-cut in a 30-inch length to facilitate the later adaptation of that work space. The answer is that **the kitchen counters do not have to be pre-cut**.

History

A short history of this issue may help. On September 5, 1989, the Department of Community Affairs proposed, and on August 6, 1990 adopted, several changes to the Barrier Free Subcode. One of the changes was the elimination of the need to pre-cut a section of the kitchen counter for possible future adjustment by a resident with a disability. The requirement for pre-cut sections was opposed by residents because of the resulting crack between the pre-cut counter section and the remainder of the kitchen counter. Anecdotal evidence had been presented to the Department in sufficient quantity to indicate that the cut created not only an aesthetic problem, but a sanitary issue, as well, because crumbs fell into the crack and were impossible to retrieve. A reasonable solution was found in the language that allowed the counter to be "replaceable as a unit." Since 1990, this language has been accepted as providing code compliance. The counter can be replaceable as a whole or it can be loosened and cut at the 30-inch dimension.

Current Practice

The applicable section reads, "The counter shall be adjustable or replaceable as a unit at varying heights between 28 inches and 36 inches, measured between the floor and the top of the counter surface, or shall be mounted at a fixed height of 34 inches maximum, measured from the floor to the top of the counter surface." (CABO/ANSI A117.1-1992, Section 4.33.4.4.1)

This section describes three options for the installation of a kitchen counter in an adaptable dwelling unit.

1. The counter can be adjustable and mounted at heights between 28 inches and 36 inches; or

2. The counter can be replaceable as a unit and mounted at heights between 28 inches and 36 inches; or

3. The counter can be mounted at a fixed height of 34 inches.

Option 1, an adjustable counter, if chosen, requires that the counter be pre-cut to be able to effect the adjustment. Option 2 and Option 3, however, do not require a pre-cut section. Option 2 requires that the section be "replaceable as a unit," while Option 3 requires that the counter be installed at a "fixed height of 34 inches."

The impact of this section is to provide flexibility in kitchen design and construction. Because people with disabilities are diverse in their preferences for kitchen arrangements, the flexibility in adaptable design is practical. Both Option 1 and Option 2 result in kitchen counters that are easily changed. Option 3

(Continued on page 2)

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provides a kitchen counter that is at the standard height for an accessible work surface of 34 inches. **Because each of these options is code compliant, it is up to the design professional or building owner, not the code official, to select the option used.**

This provision of the Barrier Free Subcode (and all others) should be uniformly enforced throughout New Jersey. If you have questions on this Barrier Free issue, please contact me at (609) 984-7609.

Source: Emily W. Templeton
Code Development Unit

Common Problems Found in Wood Frame Construction

After 17 years as a carpenter, and ten years with the Department, it never ceases to amaze me that the most common problems found in wood frame construction 20 years ago are still some of the most common problems (read mistakes) found today. Of course, the increase in use of wood 'I' joists and engineered lumber have added a few common problems all their own.

The following is a brief breakdown of typical errors found and what to look for:

1. **GRADE AND SPECIES OF DIMENSIONAL LUMBER:** Be alert for substitutions, as grade and species substitution can greatly affect load-bearing capacity.
2. **ENGINEERED LUMBER, INCLUDING WOOD 'I' JOISTS:** Be alert for substitutions. Remember an LVL (Microlam) is not a PSL (Paralam) is not an LSL (Timberstrand). As with dimensional lumber, substitutions can greatly affect load-bearing properties and capability. Wood 'I' joists also vary in load-bearing ratings, which makes it critical that the system specified is the system installed.
3. **ENGINEERED LUMBER INSTALLATION:** Make sure that engineered lumber systems are installed in accordance with design and manufacturer specifications. Remember that systems work properly only when all the components are present. These include, but are not limited to, metal hangers, straps, bridging, bearing plates, connections, and squash blocks.
4. **BEARING LOCATIONS:** The open, airy designs being used today typically rely on the transfer of loads to specifically designed bearing locations. Proper location and sizing of columns, posts, and solid blocking are critical to the structural performance of these types of buildings.
5. **WOOD TRUSS SYSTEMS:** Roof and floor trusses are designed to perform as a system. Again, layout and proper installation in accordance with the designer's specifications is important/necessary if the system is to carry the loads imposed. Bracing is required in most wood truss applications. It is important to obtain a layout and bracing schedule specific to each elevation or model to be constructed. This is especially true in residential construction for which prototype plans are submitted. Bracing schedules should include gable end truss bracing requirements and a method of connection between dissimilar trusses. Having a bracing and layout schedule specific to the building you are inspecting in hand will enable you to inspect wood truss systems and be sure that what you are approving is in fact a proper installation.
6. **SHEATHING:** Sheathing inspections can be required when sheathing is used as a component of a wood frame structural system. Read the bracing requirements for roof trusses and you will find that many designers rely on properly sized and properly fastened wood sheathing to provide lateral bracing. Further, wood sheathing is widely used as wind bracing, which is also a structural requirement.

You can eliminate all of the above-noted problems found in wood frame construction with diligent plan review and inspections. The types of materials and systems used in wood frame construction dictate that you have the appropriate design documents in hand while performing framing inspections. Failure to follow this simple procedure can result in improper structural performance of wood frame construction.

Source: Rick Brodeur
Bureau of Regulatory Affairs

Liquefied Petroleum Gas Board

The New Jersey Liquefied Petroleum Gas Education and Safety Board (LP Gas Board) has been formed as a result of legislation signed into law on May 14, 1999. Its charge is to ensure the safe use of liquefied petroleum gas through an enforcement program that includes inspections, training, and education.

The LP Gas Board is composed of representatives of the propane industry and environmental and consumer groups, and is staffed by the Department of Community Affairs. The Board meets quarterly on the third Tuesday of the month. At the last meeting, on October 5, 2000, the Board elected William Curcio as Chair and William Rieger as Vice-Chair. Other topics discussed at the meeting included a proposal for operations audits, and information on LP Gas training and educational initiatives in other states.

The next meeting is scheduled for December 19, 2000 at the New Jersey Department of Community Affairs, 101 South Broad Street, Trenton, NJ. Members of the public are encouraged to attend.

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

Source: Lauren Sturm
Code Development Unit

The *Construction Code Communicator* is published quarterly by the New Jersey Department of Community Affairs and the Center for Government Services at Rutgers, The State University. Editor: Emily Templeton. Address changes and subscription requests may be directed to the **DCA Publications Unit, P.O. Box 802, Trenton, NJ 08625-0802**. Comments and suggestions should be sent to the **Code Development Unit, P.O. Box 802, Trenton, NJ 08625-0802.**

UCCARS, the Next Generation – An Update

The new construction activity reporting software known as UCCARS-NG will feature a relational database maintained at the State level and shared by local construction offices via a web browser. Firewalls and data encryption will prevent unauthorized users from accessing the UCCARS-NG database. An advisory committee of UCCARS users was assembled to provide comments and recommendations for UCCARS-NG. Committee members include: Gene Blair, Jr., Construction Official, Westampton Township; Anthony G. Lombardo, Construction Official, South Brunswick Township; Alan Feid; Douglas "Casey" Hoff, Hoff's Electrical Service; Dawn Neil, Technical Assistant, Bernards Township; Sheree Raudenbush, Technical Assistant, Ocean City; Geoff Morsell, Vice-President of Construction, Sharbel Building Associates, and several staff members from the Division of Codes and Standards.

We are at the crucial phase of assessing the needs of the user, which is key in building a construction activity reporting system that demonstrates high performance and efficiency in both construction office automation and permit processing. Several new features will be built into the construction activity software based on the concerns and suggestions of the advisory committee. UCCARS-NG will feature checks for prior approvals as described in N.J.A.C. 5:23-1.4, which include zoning, soil erosion, sediment control, highway curb cuts, water and sewer treatment works approvals, coastal areas facilities review, and underground storage tank systems. Prior approval checks deemed necessary by the Department of Environmental Protection and the local construction official shall also be integrated into the proposed database. In order to assist local construction offices with settling outstanding permits and violations, UCCARS-NG will maintain a history of construction permit activity for a building by block and lot. Inspection scheduling modules will be able to be customized in order to meet the specific demands of the construction office.

We are gathering feedback from the advisory committee and local construction offices on the performance requirements for UCCARS-NG. We welcome and encourage your comments and suggestions for the new product.

Please direct your comments concerning UCCARS-NG by e-mail to UCCARS@dca.state.nj.us or by mail at Team UCCARS-NG, New Jersey Department of Community Affairs, Division of Codes and Standards, 101 South Broad Street, PO Box 802, Trenton, NJ 08625.

Source: Team UCCARS
Division of Codes and Standards

What Does Regulatory Affairs Want Now?

An employee of the Bureau of Regulatory Affairs contacts you indicating that he or she has received a phone call or a letter from a contractor who claims that you are interpreting a section of the Uniform Construction Code (UCC) in a way that is inconsistent with the Department's interpretation. After a brief discussion, it is affirmed that your interpretation does, in fact, differ. You say, "What authority do you have to intervene or overrule my decisions? That is what the Board of Appeals is for."

In fact, there is some merit to your argument. The Construction Board of Appeals is in place for code disputes and is used on a regular basis. The Department has several methods of providing code interpretations. First, there are Formal Technical Opinions (FTO). These are binding on all licensed officials and must be enforced. There are issues, however, which do not rise to the level of an FTO that are addressed in other forms of literature.

Second, there are bulletins, which are not binding. However, the Department expects all code officials to adhere to the principles of the guidelines provided. Bulletins are reviewed and approved by the Uniform Construction Code Advisory Board and its subcode committees, which are comprised predominantly of code officials.

Third, there are the *Construction Code Communicator* articles. Like bulletins, these are not legally binding. However, these articles should not be ignored and are not just another opinion of a DCA staff member. The *Construction Code Communicator* articles are thoroughly researched and reviewed before publication. They reflect the Department's opinion.

Getting back to the annoying telephone call from the Regulatory Affairs employee – the Bureau receives hundreds of telephone calls a week concerning complaints from dissatisfied customers. The vast majority of these complaints are disposed of by a Regulatory Affairs employee without the need for a telephone call to the code official. In fact, the majority of telephone calls end up with the Bureau supporting the local code official's decision, thereby eliminating the need for unnecessary litigation.

When it becomes necessary to contact a local official, it is usually because the Bureau has information that may alter the decision of the official involved. Most of our conversations end with the Bureau giving a suggestion to the code official. However, there are rare occasions when it becomes necessary to impose upon a local official's directive. When a situation escalates to this level, only the Supervisor of the Bureau of Regulatory Affairs has the authority to issue letters and orders. It is not the intent of the Bureau to undermine the authority of the local official. But, at the same time, if we have information about the misapplication of the Code, we would be remiss if we did not provide notification to the local official because the Department is ultimately responsible under law to ensure that the Code is properly and fairly enforced on every job.

In the final analysis, without one authority (the Department of Community Affairs) organizing and disseminating information, the foundation of the Uniform Construction Code, its uniformity, will cease to exist. The cooperative effort between the local code official and the Department continues to be the backbone of the UCC's success.

Source: Louis J. Mraw
Bureau of Regulatory Affairs

New Jersey Department of Community Affairs/Division of Codes and Standards
Rehabilitation Subcode (NJAC 5:23-6)
Code Change Proposal

DUE: Code changes must be submitted by **January 26, 2001**
Proposals must be presented with language proposed for deletion in brackets [ ].
Proposals must be presented with language proposed for addition underlined ___.

Mail code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625

FAX code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
(609) 633-6729 or
(609) 984-7717

Direct questions to the Code Development or Code Assistance Units at (609) 984-7609.

Section (Citation) proposed for change: _____

Sections (companion changes) that may also need to be changed: _____

_____

NAME: _____

ORGANIZATION: _____

ADDRESS: _____

_____

TELEPHONE: _____ FAX: _____ E-mail: _____

Proposed Code Change:

_____

_____

_____

_____

Supporting Statement (Reason for Code Change):

_____

_____

_____

_____

Department of Community Affairs
Division of Codes and Standards
Rehabilitation Subcode
Code Change Proposal 2001

Experior Exams on Hold in January 2001

This article serves to inform anyone who is planning to take any of the licensing exams offered by Experior Assessments, Inc. (at Sylvan/Prometric Testing Centers) that there will be no exams offered between January 1-15, 2001.

Over the past year, the exam update process involved replacing the Building Officials and Code Administrators (BOCA)-based exams with exams based on the International Code Council (ICC) codes. To ensure that all of the updated exams are loaded and available on all computers used in the testing centers, there will be no exams offered for the first two weeks of January 2001. Testing will resume on January 16.

Source: Emily W. Templeton
Code Development Unit

Landscape Irrigation Permits

Recently, the Department has received many calls regarding a letter from the Irrigation Association of New Jersey. The letter requested assistance from code officials in the enforcement of the licensing and certification requirements for irrigation contractors. In New Jersey, contractors must first obtain certification when installing landscape irrigation systems under the New Jersey Landscape Irrigation Contractors Certification Act.

Under the regulations of the Uniform Construction Code, licensed code officials are required to enforce the provisions of the Plumbing and Electrical Subcodes. A plumbing permit is required for the installation of the backflow preventer and the connection to the potable water supply for the irrigation system. Any associated electrical work performed by the landscape irrigation contractor requires a permit under the Electrical Subcode. However, electrical work, which has the potential of not more than 30 volts, is not required to be performed by a licensed electrical contractor as stated in the Licensing Act. Finally, code officials are not responsible for the enforcement of the Landscape Irrigation Contractors Certification Act.

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

Source: Thomas C. Pitcherello and Ashok Mehta
Code Assistance Unit

New Jersey Register Adoptions

Date: October 16, 2000

Adoption: 32 NJR 3783(a)
Adopted Amendments: N.J.A.C. 5:23-3.12 and 4.5

Summary: N.J.A.C. 5:23-3.12: This adopted amendment is a result of P.L. 1996, c.53, N.J.S.A. 52:27D-122.1, which amended the State Uniform Construction Code Act and eliminated the automatic adoption by the Department of new editions of national model codes as they become available. Under the revised statute, the Department is required to review the changes made by new editions of the model code, and adopt only those changes that are consistent with the intent and purpose of the Uniform Construction Code Act.

N.J.A.C. 5:23-4.5: This adopted amendment changes the term *immediate family* to *close relative*. The Department holds that this change will eliminate confusion due to the definition of "immediate family" in another statute, and will enable code officials to avoid a professional conflict of interest.

Date: October 16, 2000

Adoption: 32 NJR 3784(a)
Adopted Amendment: N.J.A.C. 5:23-9.6

Summary: This adopted amendment changes the factor used to calculate the occupancy load for a gaming floor in a casino. A new factor of 11 replaces the existing factor of 7.5 square feet per occupant.

Source: Megan K. Sullivan
Code Development Unit

REPRINT: Barrier Free Parking: Enforcement

(Revised and Reprinted from Volume 4, Number 4, Winter 1992)

Note: Earlier articles on the same subject were published in the *Construction Code Communicator*, Volume 2, Number 1, Spring 1990 and Volume 3, Number 1, Spring 1991.

In November 1989, the Handicapped Parking Act was signed into law. It provides that the fine for violating the restrictions on a barrier free parking space be $100 for a first offense and $100 plus 90-days of community service for a subsequent offense. The fine applies to all "appropriately marked" barrier free parking spaces, whether they are on public or private property. Appropriately marked handicapped parking spaces are those with two signs: one with the international symbol of accessibility and the other with the penalty for violating the restriction clearly stated. The Department of Transportation (DOT) designed a penalty sign and the Barrier Free Subcode was amended in 1990 to reflect the new requirement.

Then, the Department began to hear that there were problems with enforcement, that tickets issued for violation of the restrictions on the parking space were being overturned in some municipal courts. Upon investigation, we learned that the citation on the parking ticket referenced the DOT statute only. DOT requires that all barrier free parking spaces designated under a municipal ordinance be registered with the DOT. When a barrier free parking space was found not to be registered with the DOT, it was presumed to be an invalid parking space and the parking tickets issued for violating the restrictions on the space were being judged invalid.

At that point, the Department of Community Affairs sought an opinion from the Attorney General on whether the restrictions placed on parking spaces constructed in compliance with the Uniform Construction Code were enforceable. The Attorney General responded by issuing a directive to all county prosecutors to inform all involved with municipal parking enforcement that the restrictions on the parking spaces constructed in compliance with the Uniform Construction Code are as enforceable as those constructed in compliance with a DOT-compliant municipal ordinance. This should resolve the issue.

By now, all barrier free parking spaces that were constructed before June 1, 1990 that had a sign with an international symbol should have been modified to include a sign stating the penalties for violating that restriction. The construction official was responsible to ensure the modification of the signs on all Uniform Construction Code spaces (those that serve an accessible building entrance); the municipal engineer was responsible to ensure the compliance of municipal spaces (those on municipal streets or in municipal parking lots). In addition, all barrier free parking spaces constructed after June 1, 1990 should have both the international symbol and the penalty sign. The penalty for violating the restrictions on any handicapped parking space, whether constructed under the Uniform Construction Code or the DOT provisions, should be upheld in municipal court.

Source: Emily W. Templeton
Code Development Unit

Spas or Hot Tubs Installed Outdoors and the NEC

Some confusion has arisen concerning the rules of the Electrical Subcode (NEC 1999) applicable to residential outdoor spa and hot tub installations. Fundamentally, the same code requirements for swimming pools apply to outdoor spas, with some minor differences. Part D of Article 680 of the NEC 1999 makes an important distinction between outdoor and indoor locations for spas and hot tubs. Spas or hot tubs installed outdoors pose greater hazards because they are exposed to grounded surfaces and are susceptible to corrosion.

The applicable code section for outdoor installations of spas and hot tubs is Section 680-40 of the NEC 1999. This section requires compliance with Parts A and B of Article 680. However, two modifications of the requirements in Parts A and B exist when installing flexible connections and bonding. Herein lies some of the confusion.

The first exception is contained in part (a) of Section 680-40. This section modifies Section 680-25(d) by allowing the use of a metallic or nonmetallic liquid-tight flexible conduit, a maximum length of 6 feet for flexible connections, or a cord with a maximum length of 15 feet for the purpose of cord and plug connections, but only for listed packaged units employing a factory-installed remote panelboard. The circuit must be ground-fault protected and the receptacle cannot be located closer than 5 feet from the inside wall of the spa or hot tub, as specified in Section 680-6 (a). The second exception is found in part (b) of Section 680-40, which allows bonding by means of a metal-to-metal mounting of equipment to a common frame or base. The bonding of metal bands or hoops used to secure wooden staves is not required.

Don't forget that Section 680-42 requires the outlets that supply a self-contained spa or hot tub, a packaged spa or hot tub equipment assembly, or a field assembled spa or hot tub with a heater load of 50 amperes or less, to be protected by a ground-fault circuit interrupter. In addition, Section 680-6 (a) (2) and (3) require a general purpose 15- or 20-ampere, GFCI-protected outlet to be installed not less than 10 feet, but not exceeding 20 feet, from the inside walls of the pool or spa. Also, an emergency shutoff or control switch as required in Section 680-38, applies to all installations except single-family dwellings. In all cases, the unit must be listed as suitable for outdoor use, as required by Section 110-3.

Source: Pete Doblosky
Northern Regional Office
Bureau of Local Code Enforcement

REPRINT: Spring Showers

(Reprinted from *Construction Code Communicator,* Volume 7, Number 5, Summer 1995)

Well, it's summer and I hope all those spring shower calls I've been getting will finally begin to dry up. It seems the latest trend in plumbing inspection is to verify shower temperature with a thermometer. That in itself isn't bad.

The Code clearly calls for thermostatic and pressure-balancing shower valves to be equipped with limit stops that ensure the maximum temperature of shower water is 120°F. If you don't feel comfortable judging temperature by feel, you can justify packing a thermometer with your flashlight and inspection pad.

If you're going to join the trend, or if you're one of those who started the trend, you need to decide what to do when the thermometer reads less than 120°F. In other words, how low can the shower water temperature be and still pass inspection? Some people have claimed that the temperature has to be exactly 120°F. Section 10.15.1 requires that hot water be supplied to all fixtures in residences that are used for bathing and we know that hot water is defined as 120°F to 140°F. So, it would seem that you can't comply with both 10.15.1 and 10.16.6 unless the water is 120°F. No less, no more.

Requiring water to be exactly 120°F isn't practical and, if you read the Code carefully, it isn't required. Section 10.15.1 requires that hot water be *supplied* to the fixture. Technically, the water is supplied to the shower valve, but the valve, by setting the stop at 120°F, will not let you get hot water out of it. Therefore, there is no minimum temperature at the shower discharge, as long as the hot water to the shower valve is 120°F or more. This can be verified by checking the temperature of the water at an adjacent lavatory.

It does not seem reasonable to have the water discharge at a temperature that is not conducive to showering. If the shower discharges at 80°F maximum, the owner will surely make some adjustment to get hotter water. In this case, you've just wasted your time checking. The most reasonable range I've heard of for acceptable shower temperature is from 105°F to 120°F.

Source: Michael Baier
Code Assistance Unit (Alumnus)

Can You Identify Cases of Soot Accumulation?

Home builders and insurance companies have been receiving calls for several years regarding the accumulation of a black material in carpeting and on walls, plastic outlets, switches, and kitchen appliances, just to name a few. In some cases, the black material has been shown to come from candles or oil lamps burned by the homeowner and has been identified as soot. But, in other cases, the material has not been identified.

Under sponsorship of the Air-conditioning and Refrigeration Technology Institute (ARTI), ENERGEN Consulting of Germantown, Maryland is conducting a project aimed toward identifying the true causes of the accumulation of this discoloring agent. Participant homeowners will be interviewed by telephone and approximately 10 homes will be visited for the purpose of conducting a site inspection.

If you have experienced soot accumulation or discoloration in your home, or if you know this is a problem in your area, the Black Soot Deposition Research Project would like to hear from you. The information collected will be used for research purposes only and will be kept absolutely confidential.

To contribute contacts, or for more information, you may contact me by telephone at (202) 244-2488, by fax at (202) 244-2314, or by e-mail at dwcautley@mindspring.com.

Source: Dan Cautley
Cautley Engineering

Reinspection Fees

During my review of the municipal fee ordinances, I noticed that some municipalities have been charging a fee for reinspections and/or additional inspections. Reinspections occur when the work performed is not approved during the initial inspection. Additional inspections, on the other hand, are necessary when the work was not finished, or the scope of the project expanded, at the time the inspection was requested. The local enforcing agency's rationale behind charging a special fee is that it is trying to offset the incurred cost for conducting reinspections or additional inspections. Is this permissible under the Uniform Construction Code (UCC)?

N.J.A.C. 5:23-4.18(h) provides that no special fee shall be established for any class or type of work which is undertaken as a part of work authorized by a construction permit, except for elevator and sign permits. The Department holds that reinspection fees are an unauthorized penalty on the permit holder. More importantly, the UCC itself does not empower the local enforcing agency to impose a separate fee for reinspections or additional inspections. The construction permit fee, as set forth in the regulations, covers all inspections, reinspections, and additional inspections until the permit is properly closed by the issuance of a certificate of occupancy and/or a certificate of approval. This means that, based on the rules governing permits, a local enforcing agency cannot charge a separate fee for reinspections and/or additional inspections while the construction permit remains open unless the additional fee is attributed to the increased scope of work.

If you have any questions, please contact the Bureau of Regulatory Affairs at (609) 984-7768.

Source: Urmil Deora
Bureau of Regulatory Affairs

Examination of Plans

Over the years, the Bureau of Regulatory Affairs' Monitoring Team has received calls from homeowners and contractors complaining that, even though they built according to their plans or sketches that were submitted to the local enforcing agency, the finished work failed inspection. Upon investigation, the Monitoring Team has found that, in most of these cases, plans or sketches were submitted, but were not reviewed. The reason given for the plans not being reviewed was that the construction official had waived the requirement for plans. The Uniform Construction Code, at N.J.A.C. 5:23-2.15(e)1.ix, provides that "the construction official, upon the advice of the appropriate subcode official, may waive the requirement for plans when the work is of a minor nature."

A problem arises when plans are submitted, no plan review is conducted, and the applicant obtains a permit. The permit applicant may logically conclude that, if the work complies with the submitted plans, it will pass inspection. When it does not, confusion and frustration result. It is inappropriate to accept plans or sketches for a project and not review them. At N.J.A.C. 5:23-2.15(e)2, the Uniform Construction Code provides that all submitted plans, whether required or not, must be reviewed.

Questions about this issue may be directed to the Bureau of Regulatory Affairs at (609) 984-7672.

Source: Ken Verbos
Bureau of Regulatory Affairs

Lights! Cameras! Permits?

Over the past several years, there has been an influx of movie-making activity throughout the State. With this flurry of activity, many questions have arisen regarding the issuance of construction permits for structures that are associated with this industry. This article is intended to provide construction officials with some guidance for determining when construction permits are required.

The first scenario is an existing building that is **permanently** converted into a soundstage. This may or may not be a change in the building's use group. However, it is a change in the character of the building's use. The Rehabilitation Subcode, at N.J.A.C. 5:23-6.31(b)3.vi, requires soundstages to comply with Section 411.0 of the Building Subcode. Therefore, permits are required for all necessary construction activity. But, note that the Uniform Construction Code treats the construction of scenery used in a soundstage the same as furniture — it is not regulated by the Code.

The second scenario is an existing building that is **temporarily** converted into a soundstage. The Uniform Fire Code, at N.J.A.C. 5:70-2.7(a) 3.ix, provides requirements for the occasional use of a space. In this case, a Type I permit is issued and is enforced by a fire official.

The third scenario is the construction of a temporary soundstage. From time to time, film companies have come into a jurisdiction and built a structure with the intent of using it as a soundstage. In this case, it is appropriate to require all applicable construction permits for this structure. Common sense and good judgment should prevail when reviewing and inspecting a facility that will be used for ONLY several months.

The fourth scenario is the construction of scenery outside of a building. This type of construction is beyond the scope of the Uniform Construction Code. Similar to scenery built inside a soundstage, the Uniform Construction Code chooses not to regulate the construction of scenery outside of a building. Sometimes this scenery consists of three-story facades, or stick-built buildings with limited interiors that are filmed from the outside and not occupied. As mentioned earlier, this type of scenery is not regulated.

Most likely, a scenario will arise that does not fall under any of these examples. As construction officials, please apply good judgment when determining the need for permits. A good question to ask yourself when making your decision is, "What is the hazard?" Should you need some help, or if you have any questions, give us a call at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Fire-Resistance Requirements for Balconies and Similar Appendages

Recently, a building material supplier contacted me to complain about a municipality that was requiring balconies constructed on single-family homes to be made of fire-retardant-treated/pressure-treated lumber. As he put it, "nobody else in the area is requiring this material." He was confused when I informed him that the municipality was right.

Section 1406.4 of the 1996 BOCA National Building Code requires balconies and similar appendages supported by Type 3, 4, or 5 construction to afford a fire-resistance rating in compliance with Table 602 for floor construction. The exceptions are balconies or decks that are constructed of fire-retardant-treated lumber. But remember, in New Jersey, in addition to the fire-retardant-treated lumber, pressure-treated lumber is required for exposed wood. **For buildings of 5B construction, this is not an issue**. However, according to Table 602, buildings of 5A construction are required to be provided with a 1-hour, fire-resistance rating for floors. Therefore, this provision of the code applies.

So, when reviewing the construction documents for those big three-story, single-family dwellings, be sure to look at the material being used for the decks. Should you have any questions regarding this, please contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Abandonment of Underground Residential Heating Oil Tanks and Other Heating Oil Tanks Under 2001 Gallons

A recent letter from the Department of Environmental Protection (DEP), Division of Solid and Hazardous Waste has alerted the Department of Community Affairs to confusion in the field attributed to Bulletin 95-1B regarding the abandonment of underground heating oil tanks under 2001 gallons.

The DEP has determined that any liquid and/or sludge generated from the cleaning of an Underground Storage Tank (UST) is considered a solid waste, and must be removed before abandoning the UST. In addition, the DEP has determined that any material used in cleaning the UST must be removed and recycled, or disposed of properly. Bulletin 95-1B, Example C, Step 2 states that an "oil-absorbent material such as 'Quick-Dry'" must be poured into the tank being abandoned. The DEP is now specifying that the oil-absorbent material used to clean the tank must be removed before undertaking Step 3, filling the tank with an inert material.

The Department of Community Affairs is currently revising Bulletin 95-1B to include this additional step.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

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