

Construction Code Communicator



State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

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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 Expor Assessments, the company that now administers the NCPCCI exams, asked that all test candidates be encouraged to fill out the evaluations. Expor Assessments is planning to track the candidates' responses and create measurable data. This will give Board members and Expor 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 Expor 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 needed 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 Expor 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



Center for Government Services
33 Livingston Avenue, Suite 200
New Brunswick, NJ 08901-1979

FIRST-CLASS MAIL

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 non-structural 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

1		2		3	4	5		6			
7	8		9		10			11	12		13
14						15					
16								17			
	18										
19											20
21								22			
				23		24					
	25	26							27	28	
29								30			31
32						33					
34					35	36			37		
					38						

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* initia-

tive 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 di-

rected 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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RUTGERS

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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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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 |  Elevator Safety |
|  Building |  Mechanical and Energy |
|  Fire Protection |  Plumbing |
|  Electrical | |

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 In-

spector 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



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
<i>difference between 1998 and 1999</i>				
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



State of New Jersey
Christine Todd Whitman, Governor

Department of Community Affairs
Jane M. Kenny, Commissioner

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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 im-

posed. 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

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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 sub-code 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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New Brunswick, NJ 08901-1979

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