

Construction Code Communicator



State of New Jersey
James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

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Happy Anniversary, Uniform Construction Code by Commissioner Susan Bass Levin

When New Jersey adopted a statewide building code 25 years ago, it represented an important step forward in protecting public safety and enhancing economic development. It also represented a unique partnership between State and local government.

New Jersey's Uniform Construction Code may have been established by the State, but its enforcement, and its ultimate success, rested with local code officials.

We now know it couldn't have been in better hands.

New Jersey today is recognized as having among the best construction code officials in the nation. Thanks to the training and professionalism of these men and women, New Jersey's system of code enforcement is regarded as a national model.

This was confirmed several years ago when the insurance industry undertook a nationwide evaluation of local building codes and code enforcement.

The Insurance Services Organization developed a rating system to compare local building departments from state to state on a scale of one to ten. Nationwide, 57 percent of local building departments in America scored five or better. In New Jersey, 100 percent of our building departments scored five or better. That's an amazing statistic and every local code official should take pride in it.

As Mayor of Cherry Hill for 14 years, I gained a firsthand appreciation for the men and women of local code enforcement by observing Township Director of Code Enforcement Anthony Saccamanno, a true professional. Tony taught me a great deal about the technical expertise of code officials and the many demands of the job.

As we wish our Uniform Construction Code a Happy 25th Anniversary, let us renew our commitment to the strong State and local partnership that made our system so successful. Let us also salute the local code officials in all our towns and cities who have dedicated themselves to protecting the health, safety, and welfare of our communities.

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Accessible Dwelling Units Revisited

Once again, the rumor seems to be traveling around that the Uniform Construction Code requires a percentage of dwelling units to be fully accessible. Sometimes the rumor is two percent; sometimes it is four percent. This is not true. These percentages were eliminated in 1990 because they did not work. Let me take this opportunity to straighten out the requirements for accessible dwelling units.

Which dwelling units are required to be accessible?

1. In a building with four or more dwelling units, if the building has an elevator, all (100 percent) of the dwelling units must be adaptable. [N.J.A.C. 5:23-7.5(b)]
2. In a building with four or more dwelling units, if there is no elevator, all (100 percent) of the ground-floor dwelling units must be adaptable. [N.J.A.C. 5:23-7.5(b)]
3. Ground-floor dwelling units: In a building with dwelling units, the first floor containing dwelling units must be accessible and must contain adaptable dwelling units, regardless of whether that floor is at grade. [N.J.A.C. 5:23-7.5(b)1]
4. Townhouses, which are an exemption to the rules, are exempt from the Barrier-Free Subcode. Townhouses are dwelling units with two or more stories of living space, with all or most of the sleeping areas on one story and all or most of the living areas on another story, and with an independent entrance at or near grade. [N.J.A.C. 5:23-7.3(b)1]

What is the difference between accessible and adaptable?

An adaptable dwelling unit is an accessible dwelling unit with adaptable features. An adaptable dwelling unit must have (1) an accessible entrance, (2) an accessible interior route, (3) one full adaptable bath on an accessible route, (4) maneuvering space at all doors, and (5) adaptable features in the kitchen and bathroom.

What features in the kitchen may be adaptable?

1. Adaptable counter: There must be a 30-inch length of counter that can be adjusted to an accessible height. The base cabinets in this section must be removable and the floor must be finished all the way to the wall. The 30-inch section itself does not have to be pre-cut; it can be "replaceable as a unit." This means that it must be able to be cut in place and either lowered or replaced.

2. Kitchen cabinets: Kitchen cabinets that are installed at the accessible height do not allow for even a toaster underneath. The kitchen cabinets may be installed at the standard height as long as they are attached in such a manner that they can be lowered without damaging the wall.

What features in the bathroom may be adaptable?

1. Grab bars do not have to be installed, but the wall must be reinforced to permit their later installation.
2. The threshold in a transfer shower may be adaptable as long as the adaptation can be made easily without undertaking a construction project.
3. The mirror may be installed at a standard height as long as it is attached in such a way that it can be lowered without damaging the wall.
4. A vanity may be installed underneath the lavatory as long as it can be removed without requiring the removal or replacement of the lavatory.

Maneuvering Space at Doors

There have been some projects that have been brought to the Department of Community Affairs' attention in which no maneuvering space is provided at doors. Maneuvering space is critical to the usability of the dwelling unit. The requirements are:

1. For a front approach to the pull side of a swinging door, 18 inches of clear space must be provided on the latch side. (CABO/ANSI A117.1-92, Section 4.13.6.1)
2. For a front approach to the push side of a swinging door that is equipped with both a closer and a latch, 12 inches must be provided on the latch side of the door. (CABO/ANSI A117.1-92, Section 4.13.6.2)

A wider door is not necessarily better. It is important for the wheelchair user to be able to *maneuver* the wheelchair. The maneuvering space is required in both dwelling units and commercial buildings. This is one of those items that should be checked in plan review and checked again at the framing inspection. It is nearly impossible to fix once the building is built.

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

Source: Emily W. Templeton
Code Development

Affidavits of Consent

Construction and subcode officials should be aware of the requirements of *N.J.A.C. 5:23-2.15*, Construction Permits – Application, regarding deviations from released plans.

N.J.A.C. 5:23-2.15(e)3.v requires a new affidavit of consent if there has been a substantial deviation from the original construction application. Consequently, questions have arisen regarding who should submit the affidavit and what constitutes a “substantial” deviation.

The individual in charge of the construction work should submit the affidavit of consent. Depending upon how the certification section in the construction permit application was completed, the responsible party would be either the owner, or his or her agent.

“Substantial” deviations usually involve situations where there have been structural changes on the project. Concerning electrical and plumbing changes, substantial deviations may often be addressed through a permit update, rather than a new affidavit of consent.

If you have any questions regarding these matters, do not hesitate to contact the Office of Regulatory Affairs at (609) 984-7672.

Source: Robert Hilzer
Office of Regulatory Affairs

Time Frame to File Appeals

In 1996, the regulations governing construction boards of appeal were amended. As a result, the time frames for Uniform Construction Code (UCC) appeals were made consistent with the statutory requirement for Uniform Fire Code appeals. However, there has been confusion regarding the allotted time frame for applicants to file their requests.

Pursuant to *N.J.S.A. 52:27D-206* of the Fire Safety Act, the application for hearing with the board shall be filed “by the 15th day after receipt by the person of the ruling, action order, or notice complained of.”

UCC officials and board members are reminded that the time frame to file an appeal for a violation notice is 15 calendar days, *not* 15 business days. This is reaffirmed in the standard notice of violation form that allows the applicant to file his appeal.

The construction board of appeal must strictly enforce the 15-calendar-day time frame. If a board does not follow this time frame, the enforcing agency can

successfully appeal the board’s decision to the Superior Court. UCC officials who believe any request to be untimely should move for the dismissal of the appeal by the board. The enforcing agency, either on its own or through its attorney, can move for dismissal prior to the hearing.

If you have any questions regarding the content of this article, you are invited to contact me at (609) 984-7672.

Source: Robert Hilzer
Office of Regulatory Affairs

Building Area -- How Is It Measured?



The other day, I received a telephone call from a well-respected colleague who asked a question that, at the time, seemed very basic. I found the question quite humorous, until I realized that this issue was being misinterpreted throughout the State. The question was, “How is the area of a building measured?”

According to Section 502 of the 1996 Building Officials and Code Administrators (BOCA) National Building Code, the term “area, building” is defined as the “area included within surrounding exterior walls (exterior walls and fire walls) exclusive of vent shafts and courts.” Therefore, the area of a building is that which is measured from the inside of the exterior walls. This is further exemplified in a BOCA interpretation on this issue. According to No. 34/305/81R, the measurement of a building’s area does not incorporate the thickness of exterior walls.

I hope this eliminates any confusion on how the area of a building is measured and for determining compliance with Table 502. Should you have any questions regarding this issue, feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Utility Sheds and Other Similar Structures



It’s spring! Sheds will soon be blooming, which always brings up the question, “What is a garden-type utility shed or similar structure?” Sheds come in many shapes and sizes. Utility sheds are designed to enclose materials such as garden tools, lawn mowers, pool supplies, or personal belongings. The term “similar structure” has a broader meaning. It can include a gazebo; a trellis; an independent, free-standing platform; or a deck not attached to a building.

(continued from page 3)

Some garden utility sheds or similar structures are pre-constructed; brought to the site on a truck; and set in place by a light crane on the truck, forklift, or tractor. Some consist of components with wood frames onto which the siding and the roof are added. Some are composed of metal panels with structural members screwed together at the site and mounted on a base. Others are constructed the old-fashioned way — from materials purchased from lumberyards.

There are three thresholds for permit and foundation requirements:

- The first is when a garden-type utility shed or similar structure is 100 square feet or less in area, 10 feet or less in height, and is accessory to a building of a residential use group (R-2, R-3, R-4). In this case, no permit is required by the Uniform Construction Code (UCC). The installation of the shed, including anchorage, is the owner's responsibility. The code official does not inspect the installation of a garden-type utility shed or similar structure of this size.
- The second threshold is when this type structure is greater than 100 square feet, but does not exceed 200 square feet; is 10 feet or less in height; and is accessory to buildings of a residential use group (R-2, R-3, R-4). When a structure falls within this category, a permit is required. The structure must have a minimum four-inch-deep bed of stone to provide some protection from frost heaving, or it must have another frost-protected design. The construction must be dimensionally stable. At *N.J.A.C. 5:23-9.9, Foundations Systems for Garden-Type Utility Sheds and Similar Structures*, the UCC states that a structure is considered dimensionally stable if the walls are tied together with a floor system. Finally, the shed or garden structure must be either heavy enough to stay in place in strong winds, or it must be anchored.
- The third threshold exists by exception. If a garden-type utility shed or similar structure exceeds any of the criteria established at *N.J.A.C. 5:23-9.9, Foundations Systems for Garden-Type Utility Sheds and Similar Structures*, or *N.J.A.C. 5:23-2.14(b)8, Construction Permits -- When Required*, the construction is treated as it would be for any other building. For example, if the shed is greater than 200 square feet; or if the height of the shed is greater than 10 feet; or if the shed is accessory to any use group other than R-2, R-3, or R-4, the structure may not be constructed using the special provisions in Sections 9.9 or 2.14 of the UCC. This would indicate that, if a shed were constructed on the

property of a business building (Use Group B) and if it were identical to a garden shed (100 square feet and 9 feet, 11 inches high) at someone's home, it would require the installation of a foundation system that extends to below the frost line.

The Code Assistance Unit has become aware of some informational brochures provided by several municipalities that contain inaccurate information. This article should be provided in their place. If there are questions about this issue, please contact the Code Assistance Unit at (609) 984-7609.

Source: Jeffrey Applegate
Code Assistance Unit

Duct Tape - Duct Tape - Duct Tape

For years, old, reliable duct tape has been used for just about everything, including its use as a sealant for ducts. However, with two new code adoptions, duct tape's acceptable code-related uses may be altered.

The Department of Community Affairs has recently adopted the Council of American Building Officials Model Energy Code (CABO MEC)/1995 for residential buildings and the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) 90.1-1999 for commercial buildings. The grace period for the new adopted energy subcodes expires on July 16, 2002, at which time they are fully enforceable. According to these standards, duct tape *is not* an approved sealant on any supply or return ducts.

CABO MEC/1995, Section 503.8.2, Duct Sealing, states, "all low-pressure supply and return ducts shall be sealed using mastic with fibrous backing tape. For fibrous ducts, pressure-sensitive tape may be used, if installed in accordance with Standard RS-45. Other sealants may be approved by the subcode official. Duct tape is not permitted as a sealant on any ducts."

ASHRAE 90.1-1999, Section 6.2.4.3, Duct Sealing, states "ductwork and plenums shall be sealed in accordance with Table 6.2.4.3A, Minimum Duct Seal Level, and Table 6.2.4.3B, Duct Seal Levels, as required to meet the requirements of Section 6.2.4.4, Duct Leakage Tests, and with standard industry practice." Please refer to these tables to determine the level of sealing required. (Please note, as stated in Table 6.2.4.3B for seal levels A and B, pressure-sensitive tape shall not be used as the primary sealant.)

There are many other products, other than duct tape, that are manufactured for this purpose. Some of these products include liquid sealants, mastic-type sealants,

gaskets, pressure-sensitive tapes, and heat-applied materials.

Please be advised that the sealing of ductwork is an Energy Subcode requirement.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Grace Periods

When new codes are adopted, there is often confusion regarding the date of enforcement. Many people ask whether new codes must be enforced immediately after their operative date, or if there is a time frame when the previously enforced code may be used. I have provided two examples below that should clarify any confusion.

Example 1: Tom brings a complete permit application for a project that complies with the Building Officials and Code Administrators (BOCA) National Mechanical Code/1993 to a construction office. All prior approvals are included. However, the State has recently adopted the International Mechanical Code/2000 and the International Fuel Gas Code/2000, which were adopted to replace the BOCA National Mechanical Code/1993. Should the construction office approve Tom's documents, even though they don't comply with the newly adopted codes?

The answer is "Yes." The Uniform Construction Code (UCC) contains provisions at *N.J.A.C. 5:23-1.6(b)* that allow for new projects submitted within the grace period to be reviewed. A grace period is that period of time by which previously enforced codes may be used. Therefore, Tom's construction documents may be reviewed for compliance with the BOCA National Mechanical Code/1993.

Example 2: Rob comes to the construction office with documents for plumbing review approval. These documents comply with the National Standard Plumbing Code (NSPC)/1996; however, the State adopted the NSPC/2000 five months ago. Can the construction office issue a permit for documents that comply with the NSPC/1996, even five months since the adoption of the NSPC/2000?

Again the answer is "Yes." *N.J.A.C. 5:23-1.6(a)* provides that the applicant may submit a completed permit application, including all prior approvals, to be reviewed under the code in force immediately preceding the subcode adoption. The grace period is in effect for the six months after the new subcode has been adopted. Therefore, Rob would be allowed to commence construction work on the plumbing portion of the project.

If you are still confused, or more confused than you were before reading this article, please feel free to call me at (609) 984-7609 and we can discuss your particular situation.

Source: Marcelino Iglesias
Code Assistance Unit

Unrated Corridor Wall Requirements



Lately, there has been an influx of telephone inquiries regarding Tables 1011.4 and 602 of the Building Officials and Code Administrators (BOCA) National Building Code/1996, which do not require corridor walls to be fire-resistance rated. The callers have asked, "When the required fire-resistance rating of a corridor wall is zero hours, is the wall considered a 'fire partition?' If so, must it be constructed in accordance with Section 711.0 of BOCA/1996?"

The intent of fire-resistance-rated fire partitions is to prevent the spread of fire from adjacent rooms and spaces into the corridor that is serving as an occupant's means of egress. When fire partitions are required to be fire-resistance rated, they must also meet the requirements of Section 711.0 of BOCA/1996 for opening protectives, continuity, penetrations, and joints. By requiring the fire-resistance-rated wall to comply with these provisions, the necessary separation and protection is achieved.

However, if the walls are not required to be rated, there is no need to comply with any of these sections. As long as the material used to construct the wall is consistent with the construction type of the building, the walls could, in effect, be "cyclone fencing."

If you have any questions regarding this matter, please feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

Kudos to the Staff Who Wrote the Uniform Construction Code!

This 25th anniversary celebration of the Uniform Construction Code (UCC) should not pass without applauding the effort of the Department of Community Affairs staff who wrote and rewrote the rules we now call “The Code.”

CHUCK DECKER: Chuck Decker had the singular ability to see the logical result of each piece of the UCC as it was being developed — and of the whole as those pieces were combined. More than once, Chuck advocated a rewrite because “we don’t want to be where that could take us.” The fact that the UCC is technically clear and enforceable is due in large part to Chuck Decker’s contributions.

LISA FARRELL: Lisa Farrell set up the first training program for code officials. Seminars were offered in every discipline all across New Jersey. Her efforts established the standard toward which the educational program continues to strive today.

SOL METZGER: The UCC itself and the members of the UCC team benefited from Sol Metzger’s legal savvy. Clarity and precision were twin goals that Sol set — and made sure we reached. The UCC itself is enforceable from a legal standpoint because of Sol Metzger’s contributions.

JIM SINCLAIR: Jim Sinclair was the UCC “idea man.” As we struggled to determine how to make this State-local partnership work, Jim had a myriad of suggestions, each one valuable and each one worth considering. We would not have the system we have now were it not for Jim’s understanding of how things work — and his innovative approach to how to make them work better.

PAUL STAUDT: From a purely practical standpoint, the UCC works because the field activities were well set up. Paul Staudt organized the plan review unit and the local code enforcement team. He set the standard for sensible, efficient code enforcement; his work was rock solid.

CYNTHIA WILK: Cindy Wilk spearheaded the licensing program. Working in concert with the training initiative, Cindy ensured the development of a series of licenses in each technical discipline that was both reasonable and effective. This part of the UCC has required little “tinkering” over the years and the framework of licenses for the UCC has been used as a basis for other licensing initiatives.

One of the hallmarks of code enforcement in New Jersey is teamwork. There is the large State-local team in which we all work together for safe buildings. There is the reliance by the Department on local officials when a large rule-making project is undertaken. Two projects spring to

mind. The Rehab Code is an award-winning document because of the work of the code officials and the other interested parties who participated in its development. The review of the International Code Council’s International Building Code and International Residential Code that was just completed is the most thorough and careful review of these codes that has been conducted by any jurisdiction in this country. This review and analysis was possible only because code officials, architects, and representatives of professional associations and trade organizations were willing to volunteer their time and expertise.

The teamwork that has informed the UCC process from the very beginning carries over to our work today. The open, comprehensive, collegial process in which the UCC was created — and through which it is changed — makes my job challenging and satisfying. The people with whom I worked in the past — and with whom I work today — make it rewarding.

Source: William M. Connolly
Director
Division of Codes and Standards

25th Anniversary of the Adoption of the UCC

There would be no Uniform Construction Code in New Jersey without Bill Connolly and Chuck Decker. Bill Connolly, Chuck Decker, and later, Cindy Wilk, did dozens of “dog-and-pony” shows in countless municipalities trying to convince the local mayors, unions, and associations of the logic of one statewide code.

For years, Chuck’s name was the noun for every expletive adjective in the English language. He was the point man on this endeavor; and you know what happens to point men!

He and our entire team did a magnificent job. I am proud to have been a member of that team.

Source: Joan Van Camp

NOTE: Joan Van Camp was Chuck Decker’s secretary from when he began with DCA, in 1974, until his untimely death in 1993.

Code Advisory Board Members – 2002

The Uniform Construction Code Advisory Board was formed in 1976 to advise the Department of Community Affairs Commissioner on the Uniform Construction Code. There are fifteen members – nine named seats and six public members, one of whom represents disabilities, and two of whom represent consumers. The current Board members and the seats each holds are:

ROBERT LEMON (Chair): Mr. Robert Lemon has served on the Board since 1987. Currently in a public seat, he represented building inspectors and served as the Chair of the Building Subcode Committee from 1986 - 1995. He is the Construction Official and Building Subcode Official for Egg Harbor City and Mullica Township in Atlantic County.

ALBERT TUREK, P.E. (Vice-Chair): Mr. Albert Turek has served on the Board in the seat for licensed professional engineer, mechanical since 1988. Initially appointed as the Chair of the Energy Subcode Committee, he became Chair of the Mechanical/Energy Subcodes Committee when those disciplines were merged in 1993.

LINDA AIELLO: Ms. Linda Aiello has served on the Board since 1998. She holds a public seat and she represents the interests of technical assistants who run the local enforcing agency offices around the State.

JUNG CHO, V.M.D., DR.P.H.: Dr. Jung Cho has been a member of the Board since 1980. He is the County Health Officer/Public Health Coordinator for Camden County and holds the seat designated for a public health official.

JOHN D. DEL COLLE: Mr. John Del Colle has been a member of the Board since 1991. He is the Chair of the Barrier-Free Subcode Committee and was involved in the development of the first Barrier-Free Subcode in 1977. He holds the public seat designated for the representative of people with disabilities.

STEPHEN E. FRAME: Mr. Stephen Frame has been a member of the Board since 1995. He represents building inspectors and is the Chair of the Building Subcode Committee. He is the Building Subcode Official for Atlantic City.

GEORGE HRIN: Mr. George Hrin has served on the Board since 1999. He serves as a public member representing elevator inspectors and is the Chair of the Elevator Safety Subcode Committee.

WILLIAM J. LYNN: Mr. William Lynn has served on the Board since 1992. He serves as the Chair of the Fire Protection Subcode Committee and represents licensed fire prevention inspectors.

ROBERT A. McCULLOUGH: Mr. Robert McCullough has served on the Board since 1990. He serves as the Chair of the Electrical Subcode Committee and represents licensed electrical inspectors.

MICHAEL J. MILLS, FAIA: Mr. Michael Mills has served on the Board since 1988. In his initial appointment, he was a public member, but was transferred to the seat representing architects in 1992.

GREGORY MOTEN, AIA: Mr. Gregory Moten joined the Board in 2002 as a public member. He served on the International Code Council Advisory Committee, which was charged with reviewing the International Building Code and the International Residential Code for possible adoption in New Jersey.

BETH A. POCHTAR, P.E.: Ms. Beth Pochtar has been a member of the Board since 1995. She holds the seat of licensed professional engineer, structural.

LEONARD SENDELSKY: The only remaining charter member of the Board, Mr. Leonard Sendelsky represents the building industry.

JAMES SINCLAIR, P.E., DPA: Dr. James Sinclair has served on the Board since 1993. He holds a public seat that is designated for consumers.

ALEXANDER TUCCARONE: Mr. Alexander Tucciarone has served on the Board since 1995. He serves as the Chair of the Plumbing Subcode Committee and represents licensed plumbing inspectors.

Code Advisory Board members may be contacted through the Department at:

Division of Codes and Standards
Department of Community Affairs
Post Office Box 802
Trenton, New Jersey 08625
Telephone: (609) 984-7609
Fax: (609) 984-7717

Those who would like to speak to a staff member to deliver a message to a member of the Board should direct their requests to Megan Sullivan or me. We can each be reached at the address and telephone numbers provided above.

Source: Emily W. Templeton
Code Development

NEW JERSEY UNIFORM CONSTRUCTION CODE ADVISORY BOARD

Seats Held and Terms of Service

Seat Held	Name	Dates of Service
Chair	Joel Wiesenfeld, P.E., Ph.D.	1975 - 1995
	Robert Lemon	1995 - Present
Vice-Chair	Richard S. Magee, P.E.	1975 - 1988
	Robert Lemon	1988 - 1995
	Albert Turek, P.E.	1995 - Present
Registered Architect	Eleanore Pettersen, AIA (Charter Member)	1975 - 1979
	William Brown, AIA (transferred from Public Member seat in 1980)	1980 - 1992
	Michael Mills, FAIA (transferred from Public Member seat in 1992)	1992 - Present
Licensed Professional Engineer (Structural)	Joel Wiesenfeld, P.E., Ph.D. (Charter Member)	1975 - 1995
	Beth Pochtar, P.E., W.B.E.	1995 - Present
Licensed Professional Engineer (Mechanical) (serves as Chair of the Mechanical/Energy Subcodes Committee)	Richard S. Magee, P.E. (Charter Member) Albert Turek, P.E.	1975 - 1988 1988 - Present 1988 - 1993 (Chair of the Energy Subcode Committee) 1993 - Present (Chair of the Mechanical/Energy Subcodes Committee)
Municipal Building Official (serves as Chair of the Building Subcode Committee)	Wilbur Lind (Charter Member)	1975 - 1980
	Clarence Boorman	1980 - 1986
	Robert Lemon (transferred from Public Member seat in 1986; transferred to Public Member seat in 1995)	1986 - 1995
	Stephen E. Frame	1995 - Present
Member of the Building Industry	Leonard R. Sendelsky (Charter Member)	1975 - Present
Public Health Official	Walter R. Lezynski (Charter Member)	1975 - 1980
	Jung H. Cho, D.V.M.	1980 - Present

Seat Held	Name	Dates of Service
Licensed Plumbing Inspector (serves as Chair of the Plumbing Subcode Committee)	Raymond A. Hopkins (Charter Member)	1975 - 1982
	John P. Muldowney	1982 - 1987
	Donald Metcalf	1987 - 1991
	Fred Miller	1992 - 1995
	Alexander Tucciarone	1995 - Present
Licensed Fire Prevention Inspector (serves as Chair of the Fire Protection Subcode Committee)	H. Raymond Vliet (Charter Member)	1975 - 1984
	Michael R. Townley	1984 - 1992
	William J. Lynn	1992 - Present
Licensed Electrical Inspector (serves as Chair of the Electrical Subcode Committee)	Clinton Casterline (Charter Member)	1975 - 1980
	Thomas Santamaria	1980 - 1989
	Robert A. McCullough	1990 - Present
Public Member Representing Consumers (in 1980, this seat was designated as Consumer Representing the Handicapped) (serves as Chair of the Barrier-Free Subcode Committee)	Norman Kempson (Charter Member)	1975 - 1980
	Ina White	1980 - 1991
	John D. Del Colle	1991 - Present
Public Member Representing Consumers (serves as Chair of the Elevator Safety Subcode Committee, which was created in 1990)	George Feddish (Charter Member)	1975 - 1977
	Donald H. Woodward	1980 - 1985
	Gustav Caspar	1985 - 1990
	Russell Bauer	1990 - 1994
	Kenneth Faerber	1994 - 1997
	Jon Evans	1997 - 1999
	George Hrin	1999 - Present
Public Member Representing Consumers (serves as Chair of the Mechanical Subcode Committee) (the Mechanical Subcode Committee merged with the Energy Subcode Committee in 1993)	Peter Heintz (Charter Member)	1975 - 1978
	Louise Friedman	1980 - 1983
	Robert C. Hoffman, P.E.	1983 - 1993
	Jim Sinclair, D.P.A., P.E.	1993 - Present

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Seat Held	Name	Dates of Service
Public Member	Catherine A. Costa (Charter Member)	1975 - 1977
	Marvin Schold	1981 - 1982
	Salvatore J. Mauro	1982 - 1990
	Vera Bacwyn-Holowinsky, RA	1998 - 2001
	Gregory Moten, AIA	2001 - Present
Public Member	William Brown, AIA (transferred to Registered Architect seat in 1980)	1978 - 1980
	Joseph Helfrich	1980 - 1983
	Ezra Bixby	1983 - 1985
	Robert Lemon (transferred to Municipal Building Official seat in 1986)	1985 - 1986
	Carl Blumenthal	1990 - 1991
	Fred Hillier	1991 - 1994
	Samuel Wheeler	1994 - 1997
	Linda Aiello	1998 - Present
Public Member	Theodore L. Primas, Sr.	1978 - 1988
	Michael Mills, AIA (transferred to Registered Architect seat in 1992)	1988 - 1992
	Daniel Millen, AIA	1992 - 1995
	Robert Lemon (transferred from Municipal Building Official seat in 1995)	1995 - Present

The Code Advisory Board — A Perspective

Looking back on the development of the Uniform Construction Code, I can see how important the Code Advisory Board was to the initial acceptance and continued success of the Uniform Construction Code as a working — and evolving — regulatory system. The Code Advisory Board, which represents the collective experience and technical insight of professionals from all segments of the construction process, has guided New Jersey construction code development from its inception to its current status as a nationally recognized regulatory program.

On January 1, 1977, New Jersey implemented an up-to-date, statewide construction code. The New Jersey

Uniform Construction Code superseded all state and municipally adopted construction ordinances and regulations. The adoption of this rule, which was grounded in national model codes, was the culmination of twenty-five years of effort by government officials, contractors, design professionals, and builders to eliminate conflicting and outmoded building regulations and to replace them with a single, uniform set of standards for construction in New Jersey.

The Uniform Construction Code Act (P.L. 1975, c. 217) was signed into law by Governor Brendan Byrne on October 7, 1975. In less than 15 months, the staff of the New Jersey Department of Community Affairs designed a new regulatory system from the ground up, selected the

national model codes that provide the technical content of the Uniform Construction Code, and saw the resulting rule proposal through the regulatory process. The code development process and its final product were ultimately accepted by all of the key organizations in building design and construction in both the public and private sectors. In addition, because of the hard work, leadership, and peer outreach of local code officials such as Wilber Lind from Hackensack, the professional associations representing the trades and inspector groups endorsed the final product. I am proud to have been part of the development team. This was a spectacularly good piece of work and is a credit to all of the staff of the Department of Community Affairs who worked on this project under the direction of Division Director William Connolly.

Interestingly, the creation of a Code Advisory Board was not in the original version of the legislation that was proposed during Governor Cahill's administration. The Code Advisory Board was added in the bill that was considered in the Byrne administration. Not a regulatory board, the Code Advisory Board is a friendly technical and policy consultant to the Department of Community Affairs, which is responsible for the implementation and administration of the Uniform Construction Code Act. This citizen advisory board and its technical subcode committees were formed to advise and recommend procedures for administration of the Uniform Construction Code and to assist in the selection of subcodes. The Code Advisory Board is comprised of 15 members who represent: the building industry; architects; engineers (structural and mechanical); consumers; public health officials; people with disabilities; building, electrical, elevator, fire prevention, and plumbing inspectors; and the people of New Jersey.

As the Uniform Construction Code was developed, the regulatory design team worked in an area of great administrative, technical, and political uncertainty. Each political and technical constituency had its own agenda and raised issues that required resolution. Constructing a workable management system was a highly charged process whose outcome impacted every municipality, inspector, and builder in this "home rule" state. The Uniform Construction Code, in its final form, required a redefinition and restructuring of roles and responsibilities at many levels. From the beginning, the code development staff looked to the Code Advisory Board as a forum for discussing — and diffusing — the demands of the special interest groups that had not fully understood the intent of the legislation.

Prior to the first meeting of the Code Advisory Board in February 1976, the staff prepared procedural rules for the operation of the Board. The rules were drafted to provide a place for the Board as a vital cog in the code development and implementation process. These rules have held up for

over 25 years. The Code Advisory Board, chaired by Dr. Joel Wiesenfeld, and its individual members, including Leonard Sendelsky who has represented builders on the Code Advisory Board since its first meeting, quickly became the mediating mechanism for solving complex turf issues and for drawing bright lines between conflicting subcode requirements. The Code Advisory Board itself — and any one of the groups represented on the Board — could have fatally disrupted the implementation of this project. In the end, everyone had to be on "the same page" for the Uniform Construction Code to be adopted. To their credit, and to the benefit of the citizens of the State, Board members were able to look at the big picture and worked together to resolve the most difficult issues.

The Code Advisory Board has established itself as the primary defender of the Uniform Construction Code process and has been a vital support mechanism for the Department's oversight and management of the Code. The Board conducts its deliberations in a highly professional manner. The Code Advisory Board recommends changes only after a thorough technical review by an active subcode committee process and vigorous Board discussion. Many times documents are returned to Department staff for rework and then, in an iterative process, are returned to the subcode committees for additional review. This process has built the most professional code enforcement system in the nation and it continues to provide the public with the most effective life-safety protection in building construction.

Source: James Sinclair, PE, DPA
Member Representing Consumers
Code Advisory Board

Delivering the Dream

Today, after 25 years, New Jersey's Uniform Construction Code (UCC) is generally taken for granted. There is broad-based support for its framework of private sector initiative that is supervised by municipally employed, State-licensed professionals who rely upon a statewide code. It has resulted in a public/private partnership that is committed to producing safe, healthful, accessible housing that middle-income families can afford.

Given the common sense principles that are the foundation of the UCC, its success might not seem surprising, but it was by no means inevitable. The success of the UCC is testimony to the foresight, flexibility, and good faith of several individuals who shared the common goal of providing all of New Jersey's citizens with an adequate supply of affordable places to live and work.

Without meaning to slight the many individuals who have made the UCC a success, there are a few who deserve

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special attention. First and foremost were Assemblyman Ozzie Pelecchia, the prime sponsor of the legislation, and Senator Martin Greuber, who moved the legislation through the Senate; they gave a political voice to a practical policy.

No matter how well written, however, a law is only as effective as its implementation. Among all of those who transformed the UCC Act into an effective program, none contributed as much as Bill Connolly of the Department of Community Affairs (DCA). Among the private sector's most influential representatives is Andy Cattano, who grew up with the UCC.

For 25 years, I have had the honor of serving on the Code Advisory Board, which is responsible for maintaining the balance of affordable protection. In that time, I have served with many distinguished housing advocates. The most notable was Dr. Joel Wiesenfeld, the Board's long-time chairman whose professionalism and patience knew no bounds.

As I look back over the past three decades – from the days when the UCC was merely a legislative draft to today's compendium of technical standards – I can identify a few key themes that have shaped our thinking and, I think, transformed the UCC into today's working success. Just a few words on each.

The UCC starts from the premise that, because the places where we live and work – the buildings that are the focus of the codes – serve multiple functions, the codes that regulate them must address multiple objectives. Accordingly, the UCC is informed by the principle that we cannot let any single "perfect" serve as the enemy of the general "good." Instead, we must balance as many "goods" as is reasonably possible.

The UCC recognizes, for example, that while we might be able to concoct a code for a perfectly "safe" building, the resulting structure would be so unappealing, so uncomfortable, and so unaffordable that few would be able to occupy it. Consequently, while the "perfect" code's safety potential might be considerable, its actual benefits would be few.

Instead of reaching for the "perfect," the UCC approach has been attentive to balancing benefits and costs in ways that would keep housing affordable to middle and modest income households. We have devised standards that give New Jerseyans the nation's safest housing, without unduly inflating the costs of their shelter.

Key to the informed balancing of the UCC's multiple objectives has been the tradition of the consensus-oriented deliberations that have characterized the code development

process from the outset. It is a tradition that is richly evident in the vigorous debates of the Code Advisory Board, where representatives from all perspectives – regulators, consumers, builders, and advocates for those with special needs – resolve differences out of a commitment to the common goal of housing New Jersey's workers and their families in structures that are safe, healthful, and affordable.

Finding solutions that balance the Uniform Construction Code Act's multiple objectives sometimes requires a rethinking of its basic approach. With the oldest housing stock in the nation, New Jersey faced a dilemma in which the cost of meeting contemporary health and safety standards tended to discourage making improvements to older buildings. Clearly, when code compliance costs make renovations economically untenable (thereby forcing the continued use of outmoded structures), the net effect is a reduction in public health and safety. In the code's sphere, we resolved the dilemma by developing the nation's first building rehabilitation code – a code that encourages us to replace something "bad" with an affordable "good," an outcome far superior to retaining a "bad" because the "perfect" is unaffordable.

The UCC takes advantage of the comparative strengths of different sectors and institutions to optimize the balance between protection and affordability. It is clear that health and safety concerns vary more by building type than by where buildings are located. Accordingly, we achieve considerable economies through a uniform statewide code governing the types and uses of buildings. Enforcement, on the other hand, must be done where the building is located. Given enforcement's local nature, the UCC assigns those responsibilities to licensed code enforcement professionals who are employed by municipalities.

Under the lens of public oversight, the private sector has considerable flexibility to build housing and workplaces that meet the widely varied needs of different segments of the State's diverse population. While other State and local regulations severely impede where and how we address the State's housing crisis, the UCC is a model of cooperative flexibility in search of solutions.

Over the past 25 years, the UCC has been about one thing: providing people with safe, healthful, affordable places to live and work. The premise of the UCC is that housing is more than just one of life's basic necessities, it is essential to our dignity as human beings. The Uniform Construction Code Act and those who have made it a success proceed from a simple principle: without housing, an individual's survival is in jeopardy, and without decent housing, an individual's dignity is diminished.

It has been an honor and a pleasure to have participated in this undertaking to give our fellow citizens adequate places to work and affordable places to live. In other words, to give them the American Dream.

Source: Leonard Sendelsky
Charter Member, UCC Advisory Board
Member of the Building Industry

UCC -- 25 Years of Change

What a glorious 25 years it has been since the enactment of the Uniform Construction Code. At the same time the UCC was put into place, the State also passed legislation expanding the provisions for accessibility. This new legislation was extremely important since it defined public buildings as those used by the general public and not just those facilities built with federal, state, or local funds. This resulted in a better statewide code and, more importantly, created provisions for accessibility that have made New Jersey a leader in providing independence for an untold number of people with disabilities.

I remember quite vividly the many obstacles facing me some thirty years ago when I first reentered the world in a wheelchair. I realized that life would be much more difficult using a wheelchair, but I was amazed by the number of places I could not even enter. In those days, it was routine to be denied access due to stairs, the lack of an elevator, or even something as small as a curb. This was before the state building code laws and well before the Americans with Disabilities Act. One's rights were limited, and, to be honest, even new buildings were obstacles. It is amazing how far we have all come from those difficult days. The choices of going to a store or even a restaurant were extremely limited. I could almost bet I would not be able to get into a building. Even if I did get into the building, the chance of using the restroom was almost nonexistent. These were very difficult days to be a wheelchair user and the frustration level was extremely high. But like everyone else who is different, you learn to adapt to the existing environment, as tough as it sometimes could be. What a glorious difference 25 years makes!

I am very proud to have played a small part in the changes that have occurred over the years. I remember my first barrier free meeting in 1976. At that time, the Department of the Treasury was responsible for the Code, and, to be honest, no one was really sure what direction we should be taking to implement the law. It took a lot of dedication and arguments to move forward, but we did, and the Code has been amended numerous times since then to reflect changes and needs. This is what makes the Code so effective; it is not a static document, but one that is

constantly monitored and improved. To do so takes an enormous amount of work by a lot of people. I know that at times change comes slowly. It is also true that patience, a trait I have learned to develop from the early days, and hard work produce results.

The impact of the Code has been felt throughout the State. Although I still have to check out a building, it is now very rare for me to find one that is totally inaccessible. Malls, transportation facilities, and office buildings are all accessible. This has meant freedom of choice, integration, and opportunity for all of our citizens. When you see young boys and girls attending grammar schools, young adults in high school and college, and men and women seeking employment, regardless of disability, you know we have made a difference in their lives.

At this point in time, in my opinion (but since I am the Chairman of the Barrier Free Subcode, you could argue that I am somewhat biased), New Jersey has the best access provisions in the country. This has happened not by accident, but by a conscientious effort on behalf of the State and the disability community to work together. This ongoing commitment to change allows us to continuously review and update the Code to keep us up to date on new technology as well as responsive to the needs of people. We have definitely come a long way, but we still need to go further. It is imperative to keep the Code updated to reflect the needs of all our citizens and, in doing so, provide a safe and secure environment. I look forward to the next 25 years of change and am committed to do all I can to see New Jersey continue the leadership role it has achieved.

Source: John Del Colle
UCC Advisory Board
Public Member Representing the Handicapped

State of New Jersey Training Fee: A New Name . . . and a New Rate

Effective August 5, 2002, the State of New Jersey training fee will have a new name *and* a new rate. Rule amendments proposed in the May 6th issue of the *New Jersey Register* change what has always been referred to as the "training fee" from "State of New Jersey Training Fee" to "New Jersey State Permit Fee."

In addition, the fee's rates have changed *from* \$0.0016 *to* \$0.0019 per cubic foot volume of new buildings and additions, and *from* \$0.80 *to* \$0.96 per \$1,000 of value of construction for all other construction.

The Department of Community Affairs anticipates adoption of these amendments on August 5 of this year. The new rates will require changes to: 1) your Uniform

Showing Compliance with the Energy Code for Residential Structures

A proposal will soon appear in the *New Jersey Register* that will make it necessary to show compliance with the Energy Code as part of the permit application process. There will be three ways to show residential structures comply with the 1995 Council of American Building Officials (CABO) Model Energy Code (MEC).

The first way to show compliance would be with calculations. This has been the traditional way that compliance with energy codes has been shown. Unless the building is very unusual, this is probably the least attractive method and we don't expect many people to use it. It involves calculating the "U" value (thermal conductance) of the various building components (such as walls, floors, and roofs) and showing that the values are less than the code-specified maximum value for the components. Tradeoffs, between components that exceed the code and those that are less than the code requires, are allowed provided that the overall building is as efficient as it would have been if each component met code. Guidance on how to perform the calculations can be found in the Appendix of the 1993 version of the Building Officials and Code Administrators National Energy Conservation Code.

The second way to comply is through the use of prescriptive packages. On the following pages are six tables that correspond to the three degree-day heating zones in the State. Each table lists several different combinations of wall insulation, floor insulation, and percentage and efficiency of glazing. Applicants are permitted to use any one of these "packages" to show compliance with the code.

In order to use a package, the applicant must provide insulation "R- values" equal to or greater than listed on the table, and must have percentages of glazing and window U values equal to or less than listed on the table. The applicant need only submit the package that was chosen and show details that correspond to that package on the plans.

The third way of showing compliance is with MEC*check* software. The software is available from the website at www.energycodes.gov; **it can be downloaded for free**. Be sure to download the New Jersey version of the software. The software simply requires that you input the areas of the various components, the R value of insulation, and the U value of windows to be provided. The software automatically gives tradeoffs. It allows you to use components where the insulation level exceeds code to make up for those components that do not meet code. The software must be manipulated a little if you want to take advantage of the basement insulation tradeoff that is allowed in New Jersey's Energy Subcode.

Under the Energy Subcode, applicants are allowed to trade off high-efficiency heating equipment for basement wall insulation. The software can be tricked into allowing the tradeoff. If you are using the tradeoff, do not enter an area for the basement or the high-efficiency equipment in the mechanical section. Then use the software as you normally would. When submitting the printout for the program, just indicate that the tradeoff is being used and that high-efficiency equipment will be provided.

If you have questions, please call (609) 984-7609.

Source: Michael Baier
Office of Program Development

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Construction Code Administrative Records System (UCCARS) or UCCARS-equivalent software setup and 2) the posted fee schedules in municipal construction code enforcement offices.

With regard to changing your computer software setup, a letter of instruction to construction officials is being written and will be mailed sometime early in July. The letter will provide detailed, step-by-step instructions to UCCARS users to ensure the proper recording and accounting for New Jersey State permit fees during the transition quarter. In addition to that instruction, an upgrade diskette will be provided later in July.

If your town uses a software other than UCCARS for permit tracking, the letter simply advises you to contact your software vendor to ensure that: 1) fees are calculated based upon the new rates for permits and permit updates issued on or after August 5, 2002; 2) the State Permit (formerly known as Training) Fee report for the third quarter of 2002 is produced in two parts, the first summarizing activity from July 1, 2002 through August 4, 2002, and the second summarizing activity from August 5, 2002 through September 30, 2002; and 3) the name of the fee is changed from "State Training Fee" to "State Permit Fee" on all pertinent system-generated outputs.

With regard to changing your posted fee schedule, please ensure that the new rates are properly reflected on it and on any counter forms your office provides relevant to fees. If you have questions, please contact Richard Byrne at (609) 292-7898.

Source: Team UCCARS
Director's Office

Prescriptive Packages -4500 Degree-Day Region
Single Family Detached

Package	Maximum		Minimum					Heating/Cooling Equipment Efficiency?		
	Heating Rate (kBtu/hour)	Cooling Rate (kBtu/hour)	Cooling P. Value ¹	Wtl P. Value ²	Floor P. Value ³	Basement Total B. Value ⁴	Slab Perimeter Area ⁵			Cover/Covered Wtl P. Value ⁶
1	12%	0.80	10	11	10	0	4	10	High Heating	ACE Equipment Values
2	10%	0.60	10	11	10	0	4	10	High Heating	
3	10%	0.60	10	11	10	0	4	10	High Heating	
4	10%	0.80	10	11	11	0	4	10	High Heating	
5	10%	0.80	10	12	10	0	4	10	High Heating	
6	10%	0.40	10	12	10	0	4	10	High Heating	
7	10%	0.40	10	11	10	0	4	10	High Heating	
8	10%	0.80	10	11	11	0	4	10	High Heating	
9	17%	0.60	10	10	10	0	4	10	High Heating	
10	17%	0.60	10	10	10	0	4	10	High Heating	
11	17%	0.80	10	10	10	0	4	10	High Heating	
12	12%	0.80	10	10	10	0	4	10	Normal	Research Package Values Not Applicable
13	17%	0.40	10	10	10	0	2	10	Normal	
14	17%	0.80	10	10	10	0	4	10	Normal	
15	10%	0.40	10	10	10	0	2	10	Normal	
16	10%	0.80	10	10	10	0	2	10	Normal	
17	10%	0.40	10	10	10	0	0	10	Normal	
18	20%	0.40	10	10	10	0	0	10	Normal	
19	12%	0.70	10	10	10	0	0	7	High Heating	
20	10%	0.80	10	11	11	0	0	0	High Heating	
21	10%	0.80	20	10	10	0	0	10	High Heating	
22	10%	0.80	10	10	10	0	0	10	High Heating	
23	12%	0.80	10	10	10	0	0	10	High Heating	
24	17%	0.80	10	14	10	0	4	10	High Cooling	
25	10%	0.40	10	10	10	0	0	10	High Cooling	
26	20%	0.40	10	10	10	0	0	10	High Cooling	
27	12%	0.70	30	10	11	0	0	7	High Heat/Cool	Research Package Values Not Applicable
28	10%	0.70	30	10	10	0	0	7	High Heat/Cool	
29	10%	0.80	20	10	11	0	0	7	High Heat/Cool	
30	10%	0.80	10	11	10	0	0	10	High Heat/Cool	
31	10%	0.80	10	10	10	0	0	10	High Heat/Cool	

Prescriptive Packages -4500 Degree-Day Region
Multi-Family

Package	Maximum		Minimum					Heating/Cooling Equipment Efficiency?		
	Heating Rate (kBtu/hour)	Cooling Rate (kBtu/hour)	Cooling P. Value ¹	Wtl P. Value ²	Floor P. Value ³	Basement Total B. Value ⁴	Slab Perimeter Area ⁵			Cover/Covered Wtl P. Value ⁶
1	12%	0.25	10	11	10	0	4	0	High Heating	ACE Equipment Values
2	10%	0.25	10	11	10	0	4	0	High Heating	
3	10%	0.40	10	11	10	0	4	0	High Heating	
4	10%	0.20	10	11	11	0	4	0	High Heating	
5	10%	0.40	10	10	10	0	4	0	High Heating	
6	10%	0.20	10	11	11	0	4	0	High Heating	
7	20%	0.40	10	10	10	0	4	0	High Heating	
8	20%	0.20	10	11	10	0	4	0	High Heating	
9	10%	0.20	10	10	11	0	0	0	Normal	
10	10%	0.40	10	10	10	0	0	0	Normal	
11	20%	0.40	10	10	10	0	0	0	Normal	
12	20%	0.40	10	10	11	0	0	0	Normal	
13	20%	0.40	10	10	10	0	0	7	Normal	
14	20%	0.40	10	10	11	0	0	0	Normal	
15	20%	0.40	10	10	10	0	0	7	Normal	
16	10%	0.40	10	10	11	0	0	0	High Heating	Research Package Values Not Applicable
17	10%	0.20	20	10	11	0	0	0	High Heating	
18	10%	0.40	10	10	11	0	0	0	High Heating	
19	20%	0.40	10	10	11	0	0	0	High Heating	
20	20%	0.40	10	10	11	0	0	7	High Heating	
21	10%	0.70	10	10	11	0	0	0	High Cooling	
22	20%	0.40	10	10	10	0	0	0	High Cooling	
23	20%	0.40	10	10	10	0	0	0	High Cooling	
24	20%	0.40	10	10	10	0	0	10	High Cooling	
25	10%	0.40	10	10	10	0	0	0	High Heat/Cool	
26	20%	0.70	10	10	11	0	0	0	High Heat/Cool	
27	20%	0.70	10	10	10	0	0	0	High Heat/Cool	
28	10%	0.40	10	10	10	0	0	0	High Heat/Cool	
29	20%	0.40	10	10	10	0	0	0	High Heat/Cool	
30	20%	0.40	10	10	11	0	0	0	High Heat/Cool	

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Prescriptive Packages 6000 Degree-Day Region
Single Family Dwelling

Package	Maximum		Minimum					Heating/Cooling Equipment Difference ¹	
	Shading Area Percent ²	Ceiling R-Value ³	Ceiling R-Value ⁴	Wall R-Value ⁵	Floor R-Value ⁶	Basement Floor R-Value ⁷	Slab Perimeter R-Value ⁸		
1	17%	0.50	10	11	10	0	4	0	ICC Exemption Threshold
2	17%	0.50	10	11	10	0	4	0	
3	17%	0.45	10	11	10	0	4	0	
4	17%	0.40	10	11	10	0	4	0	
5	17%	0.35	10	11	10	0	4	0	
6	17%	0.30	10	11	10	0	4	0	
7	17%	0.25	10	11	10	0	4	0	
8	17%	0.20	10	11	10	0	4	0	
9	17%	0.15	10	11	10	0	4	0	
10	17%	0.10	10	11	10	0	4	0	
11	17%	0.05	10	11	10	0	4	0	
12	17%	0.00	10	11	10	0	4	0	
13	17%	0.00	10	11	10	0	4	0	
14	17%	0.00	10	11	10	0	4	0	
15	17%	0.00	10	11	10	0	4	0	
16	17%	0.00	10	11	10	0	4	0	
17	17%	0.00	10	11	10	0	4	0	
18	17%	0.00	10	11	10	0	4	0	
19	17%	0.00	10	11	10	0	4	0	
20	17%	0.00	10	11	10	0	4	0	
21	17%	0.00	10	11	10	0	4	0	
22	17%	0.00	10	11	10	0	4	0	
23	17%	0.00	10	11	10	0	4	0	
24	17%	0.00	10	11	10	0	4	0	
25	17%	0.00	10	11	10	0	4	0	
26	17%	0.00	10	11	10	0	4	0	
27	17%	0.00	10	11	10	0	4	0	
28	17%	0.00	10	11	10	0	4	0	
29	17%	0.00	10	11	10	0	4	0	
30	17%	0.00	10	11	10	0	4	0	
31	17%	0.00	10	11	10	0	4	0	
32	17%	0.00	10	11	10	0	4	0	
33	17%	0.00	10	11	10	0	4	0	
34	17%	0.00	10	11	10	0	4	0	
35	17%	0.00	10	11	10	0	4	0	
36	17%	0.00	10	11	10	0	4	0	
37	17%	0.00	10	11	10	0	4	0	
38	17%	0.00	10	11	10	0	4	0	
39	17%	0.00	10	11	10	0	4	0	
40	17%	0.00	10	11	10	0	4	0	
41	17%	0.00	10	11	10	0	4	0	
42	17%	0.00	10	11	10	0	4	0	
43	17%	0.00	10	11	10	0	4	0	
44	17%	0.00	10	11	10	0	4	0	
45	17%	0.00	10	11	10	0	4	0	
46	17%	0.00	10	11	10	0	4	0	
47	17%	0.00	10	11	10	0	4	0	
48	17%	0.00	10	11	10	0	4	0	
49	17%	0.00	10	11	10	0	4	0	
50	17%	0.00	10	11	10	0	4	0	
51	17%	0.00	10	11	10	0	4	0	
52	17%	0.00	10	11	10	0	4	0	
53	17%	0.00	10	11	10	0	4	0	
54	17%	0.00	10	11	10	0	4	0	
55	17%	0.00	10	11	10	0	4	0	
56	17%	0.00	10	11	10	0	4	0	
57	17%	0.00	10	11	10	0	4	0	
58	17%	0.00	10	11	10	0	4	0	
59	17%	0.00	10	11	10	0	4	0	
60	17%	0.00	10	11	10	0	4	0	
61	17%	0.00	10	11	10	0	4	0	
62	17%	0.00	10	11	10	0	4	0	
63	17%	0.00	10	11	10	0	4	0	
64	17%	0.00	10	11	10	0	4	0	
65	17%	0.00	10	11	10	0	4	0	
66	17%	0.00	10	11	10	0	4	0	
67	17%	0.00	10	11	10	0	4	0	
68	17%	0.00	10	11	10	0	4	0	
69	17%	0.00	10	11	10	0	4	0	
70	17%	0.00	10	11	10	0	4	0	
71	17%	0.00	10	11	10	0	4	0	
72	17%	0.00	10	11	10	0	4	0	
73	17%	0.00	10	11	10	0	4	0	
74	17%	0.00	10	11	10	0	4	0	
75	17%	0.00	10	11	10	0	4	0	
76	17%	0.00	10	11	10	0	4	0	
77	17%	0.00	10	11	10	0	4	0	
78	17%	0.00	10	11	10	0	4	0	
79	17%	0.00	10	11	10	0	4	0	
80	17%	0.00	10	11	10	0	4	0	
81	17%	0.00	10	11	10	0	4	0	
82	17%	0.00	10	11	10	0	4	0	
83	17%	0.00	10	11	10	0	4	0	
84	17%	0.00	10	11	10	0	4	0	
85	17%	0.00	10	11	10	0	4	0	
86	17%	0.00	10	11	10	0	4	0	
87	17%	0.00	10	11	10	0	4	0	
88	17%	0.00	10	11	10	0	4	0	
89	17%	0.00	10	11	10	0	4	0	
90	17%	0.00	10	11	10	0	4	0	
91	17%	0.00	10	11	10	0	4	0	
92	17%	0.00	10	11	10	0	4	0	
93	17%	0.00	10	11	10	0	4	0	
94	17%	0.00	10	11	10	0	4	0	
95	17%	0.00	10	11	10	0	4	0	
96	17%	0.00	10	11	10	0	4	0	
97	17%	0.00	10	11	10	0	4	0	
98	17%	0.00	10	11	10	0	4	0	
99	17%	0.00	10	11	10	0	4	0	
100	17%	0.00	10	11	10	0	4	0	

¹ Indicates that the package cannot be used with that foundation type.

Prescriptive Packages 5000 Degree-Day Region
Multiple Family

Package	Maximum		Minimum					Heating/Cooling Equipment Difference ¹	
	Shading Area Percent ²	Roofing R-Value ³	Ceiling R-Value ⁴	Wall R-Value ⁵	Floor R-Value ⁶	Basement Floor R-Value ⁷	Slab Perimeter R-Value ⁸		
1	12%	0.00	10	11	10	0	4	0	ICC Exemption Threshold
2	12%	0.05	10	11	10	0	4	0	
3	12%	0.10	10	11	10	0	4	0	
4	12%	0.15	10	11	10	0	4	0	
5	12%	0.20	10	11	10	0	4	0	
6	12%	0.25	10	11	10	0	4	0	
7	12%	0.30	10	11	10	0	4	0	
8	12%	0.35	10	11	10	0	4	0	
9	12%	0.40	10	11	10	0	4	0	
10	12%	0.45	10	11	10	0	4	0	
11	12%	0.50	10	11	10	0	4	0	
12	12%	0.55	10	11	10	0	4	0	
13	12%	0.60	10	11	10	0	4	0	
14	12%	0.65	10	11	10	0	4	0	
15	12%	0.70	10	11	10	0	4	0	
16	12%	0.75	10	11	10	0	4	0	
17	12%	0.80	10	11	10	0	4	0	
18	12%	0.85	10	11	10	0	4	0	
19	12%	0.90	10	11	10	0	4	0	
20	12%	0.95	10	11	10	0	4	0	
21	12%	1.00	10	11	10	0	4	0	
22	12%	0.00	10	11	10	0	4	0	
23	12%	0.05	10	11	10	0	4	0	
24	12%	0.10	10	11	10	0	4	0	
25	12%	0.15	10	11	10	0	4	0	
26	12%	0.20	10	11	10	0	4	0	
27	12%	0.25	10	11	10	0	4	0	
28	12%	0.30	10	11	10	0	4	0	
29	12%	0.35	10	11	10	0	4	0	
30	12%	0.40	10	11	10	0	4	0	
31	12%	0.45	10	11	10	0	4	0	
32	12%	0.50	10	11	10	0	4	0	
33	12%	0.55	10	11	10	0	4	0	
34	12%	0.60	10	11	10	0	4	0	
35	12%	0.65	10	11	10	0	4	0	
36	12%	0.70	10	11	10	0	4	0	
37	12%	0.75	10	11	10	0	4	0	
38	12%	0.80	10	11	10	0	4	0	
39	12%	0.85	10	11	10	0	4	0	
40	12%	0.90	10	11	10	0	4	0	
41	12%	0.95	10	11	10	0	4	0	
42	12%	1.00	10	11	10	0	4	0	
43	12%	0.00	10	11	10	0	4	0	
44	12%	0.05	10	11	10	0	4	0	
45	12%	0.10	10	11	10	0	4	0	
46	12%	0.15	10	11	10	0	4	0	
47	12%	0.20	10	11	10	0	4	0	
48	12%	0.25	10	11	10	0	4	0	
49	12%	0.30	10	11	10	0	4	0	
50	12%	0.35	10	11	10	0	4	0	
51	12%	0.40	10	11	10	0	4	0	
52	12%	0.45	10	11	10	0	4	0	
53	12%	0.50	10	11	10	0	4	0	
54	12%	0.55	10	11	10	0	4	0	
55	12%	0.60	10	11	10	0	4	0	
56	12%	0.65	10	11	10	0	4	0	
57	12%	0.70	10	11	10	0	4	0	
58	12%	0.75	10	11	10	0	4	0	
59	12%	0.80	10	11	10	0	4	0	
60	12%	0.85	10	11	10	0	4	0	
61	12%	0.90	10	11	10	0	4	0	
62	12%	0.95	10	11	10	0	4	0	
63	12%	1.00	10	11	10	0	4	0	
64	12%	0.00	10	11	10	0	4	0	
65	12%	0.05	10	11	10	0	4	0	
66	12%	0.10	10	11	10	0	4	0	
67	12%	0.15	10	11	10	0	4	0	
68	12%	0.20	10	11	10	0	4	0	
69	12%	0.25	10	11	10	0	4	0	
70	12%	0.30	10	11	10	0	4	0	
71	12%	0.35	10	11	10	0	4	0	
72	12%	0.40	10	11	10	0	4	0	
73	12%	0.45	10	11	10	0	4	0	
74	12%	0.50	10	11	10				

(continued from page 17)

FOOTNOTES:

1. Glazing area is the ratio of the area of the glazing assemblies (including sliding glass doors, skylights, and basement windows, but excluding opaque doors) to the gross wall area, expressed as a percentage. Up to 1% of the total glazing area may be excluded from the U-value requirement. For example, 3 ft.² of decorative glass may be excluded from a building design with 300 ft.² of glazing area.
2. Glazing U-values must be tested and documented by the manufacturer in accordance with the National Fenestration Rating Council (NFRC) test procedure. Center-of-glass U-values cannot be used.
3. The ceiling R-values do not assume a raised or oversized truss construction. If the insulation achieves the full insulation thickness over the exterior walls, R-30 insulation may be substituted for R-38. Ceiling R-values represent the sum of cavity insulation plus insulating sheathing (if used). For ventilated ceilings, insulating sheathing must be placed between the conditioned space and the ventilated portion of the roof.
4. Wall R-values represent the sum of the wall cavity insulation plus insulating sheathing (if used). Do not include exterior siding, structural sheathing, and interior drywall. For example, an R-19 requirement could be met *EITHER* by R-19 cavity insulation *OR* R-13 cavity insulation plus R-6 insulating sheathing. Wall requirements apply to wood-frame or mass (concrete, masonry, log) wall constructions, but do not apply to metal-frame construction.
5. The floor requirements apply to floors over unconditioned spaces (such as unconditioned crawl spaces, basements, or garages). Floors over outside air must meet the ceiling requirements.
6. Walls of conditioned basements below uninsulated floors must be insulated from the top of the basement wall to a depth of 10 ft. below ground level or to the level of the basement floor, whichever is less. The entire opaque portion of any individual basement wall with an average depth less than 50% below grade must meet the same R-value requirement as above-grade walls. Windows and sliding glass doors of conditioned basements must be included with the other glazing. Basement doors must meet the door U-value requirement described in Note b.
7. The R-value requirements are for unheated slabs. Add an additional R-2 for heated slabs. For packages with a slab insulation requirement, the insulation must extend a total linear distance of at least 24 in. The insulation must extend 1) down from the top of the slab; 2) down from the top of the slab to the bottom of the slab and then horizontally underneath the slab; or 3) down from the top of the slab to the bottom of the slab and then horizontally away from the slab, with pavement or at least 10 in. of soil covering the horizontal insulation.
8. The crawl space wall R-value requirements are for walls of unventilated crawl spaces. The crawl space wall insulation must extend from the top of the wall (including the sill plate) to at least 12 in. below the outside finished grade. If the distance from the outside finished grade to the top of the footing is less than 12 in., the insulation must extend a total vertical plus horizontal distance of 24 in. from the outside finished grade.
9. *High Heating* means a furnace AFUE of 90% or more, or a heat pump HSPF of 7.8 or more. *High Cooling* means a SEER of 12 or more. *High Heat/Cool* means both heating and cooling equipment must meet these minimum efficiencies. If you plan to install more than one piece of heating equipment or more than one piece of cooling equipment, the equipment with the lowest efficiency must meet or exceed the efficiency required by the selected package.

NOTES:

- a) Glazing areas and U-values are maximum acceptable levels. Insulation R-values are minimum acceptable levels. R-value requirements are for insulation only and do not include structural components.
- b) Opaque doors in the building envelope must have a U-value no greater than 0.35. Door U-values must be tested and documented by the manufacturer in accordance with the NFRC test procedure. If a door contains glass and an aggregate U-value rating for that door is not available, include the glass area of the door with your windows and use the opaque door U-value to determine compliance of the door. One door may be excluded from this requirement (i.e., may have a U-value greater than 0.35).
- c) If a ceiling, wall, floor, basement wall, slab edge, or crawl space wall component includes two or more areas with different insulation levels, the component complies if the area-weighted average R-value is greater than or equal to the R-value requirement for that component. Glazing or door components comply if the area-weighted average U-value of all windows or doors is less than or equal to the U-value requirement (0.35 for doors).

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New Jersey Register Adoptions

Date: January 7, 2002

Adoption: 33 *N.J.R.* 267(a)

Summary: *N.J.A.C.* 5:23-2.4, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, and 6.31: The adopted amendments at *N.J.A.C.* 5:23-2.4 ensure unequivocally that the provisions of any other code, standard, rule, or ordinance that is more stringent than the provisions of the Rehabilitation Subcode shall not apply.

At *N.J.A.C.* 5:23-6.4(d)6, 6.5(d)7, 6.6(d)7, and 6.7(d)6, the adopted amendments require that, other than in dwelling units of Use Group R-2, R-3, or R-4, mirrors shall not be hung in or adjacent to any means of egress. In addition, the adopted amendments require that, other than in dwelling units of Use Group R-2, R-3, or R-4, draperies or similar hangings shall not obscure an exit.

At *N.J.A.C.* 5:23-6.4(e)7, 6.5(e)8, and 6.6(e)14, the adopted amendments require the installation of fireblocking when the work being performed exposes the framing of any wall, floor, ceiling, or roof that would otherwise require fireblocking in accordance with the Building Subcode.

At *N.J.A.C.* 5:23-6.5(e)9, 6.6(e)15, and 6.7(e)11, the adopted amendments require the installation of carbon monoxide detectors in locations specified in the Mechanical Subcode.

At *N.J.A.C.* 5:23-6.8(b)5.iv, the adopted amendment provides requirements for exit signs that would make the Rehabilitation Subcode consistent with the Building Subcode.

At *N.J.A.C.* 5:23-6.9(a)10.i, the adopted amendment clarifies when newly installed elevators are exempt from the seismic requirements of Section XXIV of the American Society of Mechanical Engineers (ASME) A17.1, which is referenced in the Building Subcode.

At *N.J.A.C.* 5:23-6.9(a)23, the adopted amendment provides that newly created stairs that are not a required means of egress comply with the Building Subcode.

At *N.J.A.C.* 5:23-6.9(a)24, the adopted amendment requires that newly created passageways, aisle accessways, and aisles in buildings of Use Group M comply with the minimum width requirements of the Building Subcode.

At *N.J.A.C. 5:23-6.31(b)3.iv*, the adopted amendment addresses the change of an existing building to an open parking structure, which is currently not covered in the Rehabilitation Subcode.

At *N.J.A.C. 5:23-6.31(b)3.vii*, the adopted amendment includes Use Group I-3 in the list of special uses and occupancies that need to comply with the Building Subcode. Any change in the condition or character of the use of a building or structure of Use Group I-3 requires compliance with the referenced section of the Building Subcode.

At *N.J.A.C. 5:23-6.31(c)1.i* and *(c)2.iii*, the adopted amendment specifies that occupant load must be calculated as five square feet of occupiable floor space per occupant for any change of use to Use Group A-2.

Date: January 22, 2002

Adoption: 34 *N.J.R.* 521(a)

Summary: *N.J.A.C. 5:23-3.20*, 6.25A, 6.26A, and 6.31: These adopted amendments provide an exemption to the provision that requires single-station carbon monoxide alarms at guestrooms or dwelling units. Single-station carbon monoxide alarms shall not be required, given that the building is equipped with a monitored carbon monoxide alarm system. In addition, these adopted amendments clarify what constitutes "open parking areas" as defined in the Building Subcode.

Date: January 22, 2002

Adoption: 34 *N.J.R.* 523(a)

Summary: *N.J.A.C. 5:23-5.21*: This adopted amendment provides for a mandatory continuing education seminar on framing for all holders of a building RCS, ICS, or HHS license. This provision applies to those licenses renewed on or after January 1, 2002.

Date: February 4, 2002

Adoption: 34 *N.J.R.* 732(a)

Summary: *N.J.A.C. 5:23-4.19* and 4.20: These adopted amendments eliminate the training fee for construction or rehabilitation work that is done as a result of a natural disaster when the local enforcing agency has waived its fees. Fees shall be eliminated altogether when the Department of Community Affairs is the local enforcing agency.

Date: February 4, 2002

Adoption: 34 *N.J.R.* 732(b)

Summary: *N.J.A.C. 5:23-12.12*: This adopted amendment adds four retrofit items to the Elevator Safety Subcode. *N.J.A.C. 5:23-12.12(b)* requires that, in each building with more than one elevator, each elevator be numbered. *N.J.A.C. 5:23-12.12(c)* requires each existing elevator to be retrofitted with skirt obstruction and step level devices. Finally, *N.J.A.C. 5:23-12.12(d)* prohibits floating platforms, which allow the operation of an elevator device when the door or gate is open.

Source: Megan K. Sullivan
Code Development Unit

***PermitsNJ* . . . What Will It Require?**

Many of you have recently asked, "What kind of computer equipment and communications service must our offices purchase in order to use *PermitsNJ*?" In turn, we have asked our application development team. Here's what they said . . .

PermitsNJ will be a web-based application accessed through a web browser on the desktop. Because all files and screens will be stored at the system level and processing will *not* be done on the desktop, a number of PCs of various sizes and configurations will do.

The more important aspect to consider when using a web-based application is transmission speed. The speed

at which you will transmit and receive information is influenced by three components: 1) your connection mode, 2) your Internet Service Provider (ISP), and 3) your modem.

With regard to your connection mode, the best choice is a Digital Subscriber Line (DSL), which may be ordered through your telephone company. Second to a DSL is a cable connection. This is *much* faster than an ordinary dial-up phone line, which of course would be your last choice.

In terms of selecting an ISP, Giga Information Group®, a leading global information technology advisory firm, suggests asking the following questions before committing to one of the many companies that offer this service:

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1. What is the ISP's busy-free dial rate? (This is the ratio of subscribers to the number of the ISP's server ports; the lower the ratio of subscribers to server ports, the better.)
2. Does the ISP have tiered services and is there a business class available? (Yes is the answer you'll want to hear.)
3. Does the ISP prioritize traffic for customers? (Again, Yes is the correct answer.)
4. Does the ISP have asynchronous dial bonding inverse multiplexing? (This is a device on the ISP's end that doubles the speed of the line. Again, the correct answer is Yes.)

Concerning your modem, we have found that a better modem than that provided with most new PCs may be very helpful in increasing the speed of the transmission of information. A good choice on today's market is the US Robotics 56K external modem, which retails for around \$86.

Thus, if you are considering or are in the process of purchasing the components necessary for participation in *PermitsNJ* this fall, please consider the foregoing, as well as the following guidelines:

PC

Current industry standard, which at present is:

- Pentium 4
- 128 MB RAM
- 20 GB hard drive
- MS Windows 98 or higher operating system.

Internet Browser

Microsoft's Internet Explorer 4.0 or higher. MS Internet Explorer comes packaged with MS Windows.

Modem

Minimum 56K. The size and quality of the modem affects the speed of the transmission. A modem of better quality than the one typically bundled with a PC would be a wise investment.

Monitor

17" is now standard, but larger (19", 21") or smaller (15") will work, too.

Telephone Line or Cable Connection

Again, a DSL is the best alternative. If DSL is not an option, however, remember that cable is about 10 to 20 times faster for transmission than a phone line with a 56K modem.

ISP

If a cable connection is used, the cable company becomes your ISP; otherwise, select wisely based upon the answers to those questions outlined above.

Printer(s)

Laser printers are now fairly standard and fairly common; you may even already have one, as many municipalities do. Any relatively new printer, however, should work. Whether a given model is adequate depends more upon your office's level of activity, i.e., how much printing you expect to do.

So, there you have it. Again, if you are in the process of purchasing computer equipment and are planning to use it with *PermitsNJ*, consider this advice.

On a related note, if your office is presently equipped with a late-model PC, it may also be adequate for use with *PermitsNJ*. We are presently testing application performance with various combinations of memory, speed, and operating systems. The results will enable us to identify minimum system requirements. We expect to report those results in the next issue of the *Construction Code Communicator*.

In the meantime, if you have further questions concerning equipment and/or communications requirements, as always, please telephone us at (609) 292-7898. We may also be reached via e-mail at: dyedwab@dca.state.nj.us or bosworth@dca.state.nj.us.

Source: Dana Yedwab and Berit Seiple Osworth
Division of Codes and Standards

Building Inspectors, Footings, and Grounding Revisited

The Department of Community Affairs is still receiving questions on how to create a grounding electrode system made of concrete-encased rebars in the footings of a new structure in accordance with Section 250-50 of the Electrical Subcode.

If you are still having difficulties understanding this, please dig out your old *Construction Code Communicator* articles. Volume 13, Number 1 (Spring 2001) contains the article "Building Inspectors, Footings, and Grounding." Still not helping? Then grab your Uniform Construction Code and find Bulletin No. 02-2, "Availability of Concrete-Encased Electrodes." This should clear up most of your questions.

Still got questions? See if this helps! (Keep in mind, these situations are only where a conductive rebar of one-half inch or more in diameter is used in the foundation design of the building.)

(1) *Partial Permit*: If a partial permit is issued for a foundation only or where no electrical portion of the permit has been issued, the Electrical Subcode

Technical Section needs to be filled out prior to the inspection. This technical section is to be filled out under "Technical Site Data" in the blank space at the bottom. Also, the building subcode official/inspector is to initial for the inspection under the "Job Summary" section in the space for "Other."

(2) *Placement of Conductor:* The building subcode official/inspector should recommend that the free end of the grounding electrode conductor is left inside of the foundation to prevent physical damage to the wire during backfilling. Also, the rebar chosen for clamping should preferably be placed on the outer edge of the foundation or footings to ensure that the rebar is in direct contact with the moist soil.

(3) *Additions:* *N.J.A.C. 5:23-6.32* requires additions to comply with new construction standards. However, the rebar requirement under Section 250-50(c) of the Electrical Subcode is enforceable only where a concurrent permit exists for the installation, upgrading, or relocation of any service equipment.

If you have questions on this matter, feel free to contact the Code Assistance Unit at (609) 984-7609.

Source: Rob Austin
Code Assistance Unit

Technical Assistant College Course Fall 2002

With over 300 graduates, the Technical Assistant (TA) Certification Program has been very popular throughout New Jersey. When the program began in 1997 with continuing education seminars, the curriculum consisted of nine core courses, three electives, and a ten- to fifteen-page Capstone paper.

Since then, the core courses have been rewritten and we are about to introduce a new curriculum, consisting of 45 credit hours, that will be offered at our participating community colleges throughout the State. This new course will be available to anyone who is interested in learning about working in a construction code office as a TA to the construction official.

The TA is a key player in the Code Enforcement Office. The TA works hand in hand with the construction official to ensure all of the administrative duties of the Uniform Construction Code are met. This multifaceted position is demanding and very rewarding.

Certified TAs who have completed a "train-the-trainer" program are eligible to teach the college course.

This course will be offered under the Construction Code Enforcement Program, which allows students who successfully complete it to apply for up to 50 percent tuition reimbursement. A schedule of course offerings will be available by August 1, 2002.

We are enthusiastic about the conversion of the program. It will allow more individuals to consider the TA position and enable completion of the required courses in a shorter period of time.

If you have any questions or would like to enroll, please call the Education Unit at (609) 984-7820, or visit our website at www.state.nj.us/dca/codes.

Source: Susan H. McLaughlin, Supervisor
Education Unit
Bureau of Code Services

Temporary Certificates of Occupancy

The Department of Community Affairs has recently adopted amendments to *N.J.A.C. 5:23-2.23(g)* that clarify the rules governing Temporary Certificates of Occupancy (TCOs). Accordingly, a bulletin has been issued for additional clarification purposes. The regulations now provide that, if requested by the owner, TCOs must be issued when buildings are safe for occupancy.

TCOs allow building occupancy when incomplete construction work does not affect the health or safety of the occupants. For example, let's say in a single-family home (Use Group R-3 or R-4) the landscaping, sidewalks, powder room, and carpeting are incomplete, but the carpeting and the powder room fixtures are on back order. In addition, the landscaping and sidewalks cannot be completed until spring. Since none of these instances are detrimental to the occupant's health, the issuance of a TCO is appropriate.

Incomplete construction work should be finished within a reasonable time frame. In the example above, since the work on the landscaping and sidewalks cannot be started until spring, a time constraint of 120 days would be appropriate. This would allow enough time for all landscaping and sidewalk labor to be completed efficiently. If, for instance, the backordered items for the powder room do not arrive at a sufficient time within the 120-day period (because, as you know, one can never tell how long a back order may take), it would be appropriate to renew the TCO for an additional 120 days.

There are several circumstances other than health and safety issues that preclude the issuance of a TCO. First, a TCO may not be issued if the applicant has outstanding Uniform Construction Code (UCC) fees or

(continued from page 23)

penalties associated with the project, unless those fees or penalties are being appealed. Secondly, a TCO may not be issued if the project does not have a warranty or other required registrations. For example, if a home is required to have a New Home Warranty, a TCO may not be issued until the warranty is in place. Similarly, for elevator-serviced buildings, the elevator must be installed, inspected, and operational (although the registration need not have been completed) before a TCO may be issued.

The Department has provided code officials with the option to charge a fee no greater than \$30 for the extra work an office may incur by issuing a TCO. However, if the Certificate of Occupancy fee is paid in full when the first TCO is issued, the office cannot collect a TCO fee for that issuance. If a TCO is renewed, then a fee may be collected.

All code officials make judgment calls every day on the job and the decision whether or not to issue a TCO is just another one in their daily routine. Before a TCO is issued or denied, some questions need to be considered, which include:

- Will the occupants be safe in the structure?
- Can the structure be used as it is intended?
- Have all UCC fees, penalties, and judgments been paid?
- Is the building registered or warranted as required by the UCC?

To further exemplify a judgment call, let's consider a place of assembly. A place of assembly, such as a church, theater, or restaurant, has been constructed and is ready for occupancy. The project is completed in January; however, the sidewalks and landscaping remain unfinished, and cold temperatures prevent this work from being completed until spring. In such a situation, a TCO should not be issued UNLESS a code-compliant accessible route (which may be temporary) is provided.

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

Source: Jeffrey Applegate
Code Assistance Unit

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James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

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Multi-Tenant Buildings

Recently, the Code Assistance Unit received a letter that raised a number of questions concerning the issuance of construction permits and Certificates of Occupancy (CO) for a multi-tenant building. The letter indicated that the building in question was a multiple-tenant building, similar to a “strip shopping center,” with individual tenant spaces or “vanilla boxes” that would be finished at a later date. The building would be supplied with services such as water, gas, electric, and suppression complying with the various subcodes for each tenant space.

The following four questions were raised and answered in the order presented:

1. “Should the building provided in the example above be constructed under the issuance of a single permit for the entire structure; or may a ‘footing, foundation, and shell’ permit be issued for the main structure, with subsequent individual permits for each tenant fit-up or ‘vanilla-box’ space?”

Either approach is acceptable. When applying for permits for a multiple-tenant building, there are two options for permit issuance. 1) The owner may apply for a single permit and submit a permit update for each tenant fit-up that is completed. 2) The owner could apply for a permit for the common elements of the building (shell) and require the tenants to apply for individual permits for each of the tenant spaces.

2. “If the building is constructed under a single permit, can permits be issued to start work in tenant spaces before the ‘footing, foundation, and shell’ of the structure are complete?”

As stated in the response to #1 above, if the building owner has chosen to use the single-permit option, construction on tenant spaces may be performed, provided a permit update is submitted for each space. Under a single permit, separate permits are not to be issued for construction of tenant spaces. However, if the building owner has chosen to use the multiple-permit option, individual permits may be issued to start work on the tenant spaces in the building as long as the shell is ready to receive construction in the specified areas.

3. “How should a Certificate of Approval (CA) or CO be issued for the base building and the tenant spaces?”

This depends on the permit option selected. For the single-permit option, a CO is issued when the project is complete and all tenant spaces are occupiable. A Temporary Certificate of Occupancy is issued for each tenant space as it becomes occupiable throughout construction.

For the multiple-permits option, a CA would be issued for the base building to indicate the intended work (“footing, foundation, shell, and services”) is finished and to indicate all construction under that permit is

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complete. In doing so, the permit for the base building permit is closed. Then, when the construction for each of the tenant fit-ups is complete, a CO is issued for the individual tenant space.

4. "Can the square footage of the original 'vanilla-box' spaces be altered while construction is in progress?"

Yes. Since the building has not yet received a CO, tenant fit-ups may be issued permit updates, which could address any modifications to the original design. This may include the moving of tenant demising walls, or the addition of new area or volume to the original building.

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

Source: Jeffrey Applegate
Code Assistance Unit

Cutting, Notching, and Boring of Engineered Lumber

Rob, the inspector, is performing a framing inspection. He notices that the plumbing, electrical, and mechanical contractors have cut, notched, and bored some of the framing members. All of the cutting, notching, and boring comply with the Building Officials and Code Administrators National Building Code/1996, Section 2305.0. As he proceeds with the inspection, he also notices that the project has both conventional and engineered lumber.

All appears to be well. Just as he is about to pass the inspection, Rob suddenly remembers something he had heard at one of the continuing education seminars: "Cutting, notching, and boring of engineered lumber must be in accordance with the manufacturer's specifications."

When Rob completes the inspection, he notifies the owner that the project has failed due to the absence of specifications from the engineered lumber manufacturer on the cutting, notching, and boring of the engineered structural members used in the project. He tells the owner that, if he provides the inspector with this information, he will reinspect the structure.

Right away, the owner conveys this message to the architect and asks him to please address the inspector's concerns.

The architect must obtain the cutting, notching, and boring specifications from the engineered lumber manufacturer. Once these specifications are obtained, the inspector may reinspect the structure. If a violation is found after reinspection, the architect must either provide a method to correct the violation (if any), or tell the contractor to remove and replace all damaged members.

If you don't want to run into this, remember that cutting, notching, and boring of engineered lumber must be in accordance with the manufacturer's specifications.

Some other things to keep in mind:

- Different engineered lumber may have different criteria for cutting, notching, and boring.
- Different manufacturers may have different specifications.
- The architect must provide the manufacturer's information on all engineered lumber when the project is submitted for review.
- If this issue is addressed in plan review, then the inspector is required only to verify that it was built according to the released plans.

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

Source: Marcel Iglesias
Code Assistance Unit

Boiler Low-Water Cutoffs

With the adoption of the 2000 International Mechanical Code comes a requirement for a low-water cutoff on all steam and hot-water boilers. Section 1007.1, General, now states, "All steam and hot-water boilers shall be provided with a low-water cutoff control." This requirement includes boilers that are installed for residential use.

Coil-type/watertube boilers require forced circulation to prevent the coil or tube from overheating. Since low-water cutoff controls do not sense flow, they cannot protect a forced circulation coil-type/watertube boiler from overheating when loss of circulation occurs. Consequently, a flow-sensing device, which detects flow and verifies that the boiler and system are full of water, is required.

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Since a swimming pool heater is classified as a forced-circulation-type boiler, a flow-sensing device is required. A relief valve must be installed as well. The manufacturer's instructions should be checked for any additional requirements.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Elevator Car Size Regulations Adopted

Recently, regulations were adopted that provide a minimum size requirement for elevator cars in newly constructed multiple dwellings. *N.J.A.C. 5:23-3.14*, the Building Subcode, has been amended to provide that elevator cars must be large enough to accommodate a 24-inch by 76-inch ambulance stretcher.

The regulations also provide that these elevators be identified with the international symbol for emergency medical services, or the "Star of Life." The size requirement for this sticker is no less than three inches.

These requirements pertain to elevators with access to residential floors in newly constructed multiple dwellings. They do not require the installation of an elevator in buildings where an elevator would not otherwise be required.

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

Source: Kristy Paolillo
Code Development Unit

Mike Needs Energy Training

Jeff, the homeowner, decides to build his new home. He goes to the local construction code enforcing agency to apply for a construction permit so that he can begin his mission as soon as possible.

Jeff's project consists of a two-story, Use Group R-3 building of Type 5B construction. The plans indicate 2'-by-4' stud walls. Rob, the building subcode official, completes the plan review on the architectural plans and releases them for construction.

About three months later, with the help of MECcheck and numerous drawings, Jeff is able to submit the energy calculations. Rob reviews the documents and determines that the R19 insulation to be installed will result in energy code compliance. Upon approval, Rob releases the construction documents.

Approximately eight months after the date on which the first set of plans were submitted, Jeff calls for a framing inspection. Rob assigns the inspection to Mike, the building inspector, who goes out to do the inspection using the released plans. He finds that the wall studs are all 2' by 4' and comply with the released documents. Mike passes the inspection.

Now, Jeff is really excited and he is ready to install the R19 insulation in the walls of his future home. Looking at the walls skeptically, he notices that the R19 has a thickness of about six inches, while the wall cavity is only about four inches in depth.

Well, he wasn't counting on that, but Jeff proceeds nonetheless – nothing is going to get in the way of completing his new house. He decides to compress the insulation into the wall cavity. Voila!

Jeff looks at his creation triumphantly. But suddenly (uh-oh), he wonders whether the compressed R19 insulation still qualifies as R19. He is afraid that it is likely this structure now does not comply with the energy code.

What is the moral of the story?

The architectural plans must correlate with the insulation plan. When there is conflict, the reviewing agency must notify the parties involved and have them revise the documents accordingly.

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

Source: Marcel Iglesias
Code Assistance Unit

Building Safety Conference of New Jersey 2002

The Building Safety Conference of 2002 is now history. The awards have been presented and the seminars are over - what remains are the memories. This year, there were over 600 participants and I'm sure each one has some special thoughts of our days at the conference.

One of the activities included an awards luncheon, at which Rodney Blane, representing the International Code Council, provided the audience with an overview of the new "I Codes."

Also at the luncheon, Inspector of the Year awards were presented to the following individuals:

Dominic D. Demico, Plumbing Inspector, Township of East Brunswick, Middlesex County
Anthony J. Cermele, Building Inspector, Township of Lawrence, Mercer County
James J. McGlynn, Electrical Inspector, City of Margate, Atlantic County
David A. Maas, Fire Protection Inspector, Township of Springfield, Union County

In addition, the Technical Assistant of the Year award was presented to:

Dawn Neil, Technical Assistant, Township of Bernards, Somerset County

A wide variety of "cracker-barrel" subjects and seminar topics provided everyone with a good selection of themes that broadened their educational qualifications. Some of the activities included a golf outing (which had the largest number of participants to date), an awards reception, various association meetings, and a spouse program. Plus, David J. Pangaldi, a licensed plumbing inspector, was selected to receive a complimentary registration to the 2003 Building Safety Conference.

I hope that each of you can join us next year at Bally's Park Place, April 30 – May 2, 2003. Mark your calendars now!

Source: Susan H. McLaughlin
Education Unit
Bureau of Code Services



Dominic D. Demico, Jr. (right), Plumbing Inspector, East Brunswick Township, presented by Richard Adams, President, New Jersey Plumbing Inspectors Association



Anthony J. Cermele (right), Building Inspector, Lawrence Township, presented by John Scialla, President, Building Officials Association of New Jersey



James J. McGlynn (left), Electrical Inspector, Margate City, presented by Robert K. Rogers, Jr., President, Municipal Electrical Inspectors Association

(continued from page 5)



David A. Maas (left), Fire Protection Inspector, Springfield Township, presented by John Lightbody, President, New Jersey Fire Prevention and Protection Association



Dawn M. Neil (right), Technical Assistant, Bernards Township, presented by Kali Tsimboukis, Vice-President, Northwest Jersey Technical Assistants Association

'Tis the Season for Haunted Houses

Last October, William Connolly, Director of the Division of Codes and Standards, sent the following notice to New Jersey construction officials outlining the requirements for the temporary use of existing buildings as haunted houses. The notice is reprinted here as a reminder of such requirements for the upcoming season.

Attention: Construction Officials **Temporary Use of Existing Buildings as Haunted Houses**

At this time of year, many existing buildings are used as haunted houses. The use of barns and other existing buildings as haunted houses on a temporary basis requires permits and inspections, as follows:

The local fire official may issue a permit under the Uniform Fire Code (UFC) at N.J.A.C. 5:70-2.7. If the local fire official does not assume jurisdiction, then these haunted houses should be treated as a temporary use under the Uniform Construction Code (UCC). The building owner must apply for a permit and obtain a Certificate of Occupancy (CO) for the temporary use. No haunted house or similar temporary amusement should be operated without either a valid permit issued under the UFC or a valid CO for the temporary use issued under the UCC.

Prior to issuing a CO, the construction official should ensure that the building, as modified for the haunted house, complies with the special amusements provisions of the UCC, or that approved alternatives are in place. Particular attention should be paid to the presence of combustibles and the flame-spread rating of materials used. Relief should not be granted on these items.

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

Source: John N. Terry
Code Assistance Unit

History Lesson: Adoption of New Jersey's Model Codes

Updating the Uniform Construction Code has kept the Department of Community Affairs on its toes for many years and now some of New Jersey's most familiar model code books will be swapped for new ones.

Regulations proposing the use of the 2000 International Building Code (IBC), the 2000 International Residential Code (IRC), and the 2002 National Electrical Code will be published soon. These editions will be in place in the near future and the preceding codes will no longer be enforced. (Reminder: A previously enforced code has a six-month grace period after the adoption of a new code. During this grace period, the old code may continue to be used and enforced.)

Please reference the chart labeled "New Jersey Model Code Adoptions" for the history of all of New Jersey's model code adoptions.

PS – Due to the significant number of changes to the IBC and IRC, the Department is planning to contract with Building Officials and Code Administrators International to have New Jersey editions printed of both the codes.

Source: Rob Austin
Code Assistance Unit

Home Inspector Regulations Adopted

On June 3, 2002, regulations were adopted at N.J.A.C. 13:40-15 promulgating the requirements for State licensing of home inspectors. This applies to any person licensed as a home inspector who inspects the condition of an existing residential building for a fee. The purpose of this article is to assist enforcing agencies in providing information to the residents of their towns so that they may direct individuals to the appropriate department.

Information on these new requirements may be obtained from the Department of Law and Public Safety, Division of Consumer Affairs, State Board of Professional Engineers and Land Surveyors.

Please be advised that home inspectors must be licensed by May 29, 2003.

If you have any inquiries regarding these regulations, please contact the Division of Consumer Affairs for additional information at (973) 504-6460 or 1 (800) 242-5846.

Source: John N. Terry
Code Assistance Unit

New Jersey Register Adoptions

Date: July 1, 2002
Adoption: 34 *N.J.R.* 2312(a)
Summary: *N.J.A.C.* 5:23-3.14: This adopted amendment requires that elevators installed in newly constructed multiple dwellings be designed to accommodate an ambulance stretcher that is 24 inches by 76 inches.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2781(c)
Summary: *N.J.A.C.* 5:23-4.19, 4.20, 8.4, 8.9-8.11: These adopted amendments increase fees for hotel and multiple dwelling inspections; for carnival/amusement ride permits; for lead evaluation and abatement certifications; and for plan review, licensing, and asbestos regulation performed by the Department of Community Affairs.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2783(a)
Summary: *N.J.A.C.* 5:23-2.6 and 6.31: These adopted amendments provide that a group overnight stay does not trigger a change in the use group of a building if the facility holds six or fewer within a calendar year. Whenever these overnight stays take place, however, the building owner is required to comply with the applicable provisions of the Uniform Fire Code (*N.J.A.C.* 5:70). If the facility holds seven or more overnight stays, the building is then considered to have undergone a change in use to Use Group R-1 and a new Certificate of Occupancy is required.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2784(a)
Summary: *N.J.A.C.* 5:23-5.20: This adopted amendment raises the educational and examination requirements for licensure of building inspectors at the RCS, ICS, and HHS levels; and plumbing inspectors at the ICS and HHS levels.

Date: August 5, 2002
Adoption: 34 *N.J.R.* 2787(a)
Summary: *N.J.A.C.* 5:23-7.5: This adopted amendment establishes a threshold of 10,000 square feet or greater for requiring elevator service in multifamily residential buildings.

Source: Megan K. Sullivan
 Code Development

OPD Valve Requirement

Effective in April 2002, Liquefied Petroleum Gas (LPG) cylinders must be equipped with an Overflow Prevention Device (OPD) -fitted valve. This valve prevents propane cylinders from overfilling, thereby enhancing safety.

OPD valves are required for all cylinders manufactured after October 1, 1998. By law, effective in April 2002, older cylinders and cylinders without OPD valves cannot be refilled. While construction officials do not enforce this requirement, it might be helpful to have this information to answer questions.

Please note, it is crucial that all old cylinders are properly disposed of and recycled. If disposed of haphazardly, used cylinders pose a serious threat to public safety and to the environment. Many companies will accept old cylinders for a minor fee and some will do so at no cost. For a list of places to recycle used LPG cylinders, residents should contact the county recycling coordinator.

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

Source: Kristy Paolillo
 Code Development

Irrigation Sprinkler System Fees

It has been brought to the Code Assistance Unit's attention that some municipalities are charging a fee per head for irrigation sprinkler systems. The Uniform Construction Code (UCC) fee schedule does not provide for a charge for irrigation sprinkler systems, with the exceptions of the water connection and backflow preventer components. In such instances, a Plumbing Technical Section would be required.

UCC sprinkler fees based upon the number of sprinkler heads pertain to fire sprinkler systems, not irrigation sprinkler systems. Any municipality that is charging this fee should please discontinue the practice, unless the municipal fee ordinance specifically provides otherwise.

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

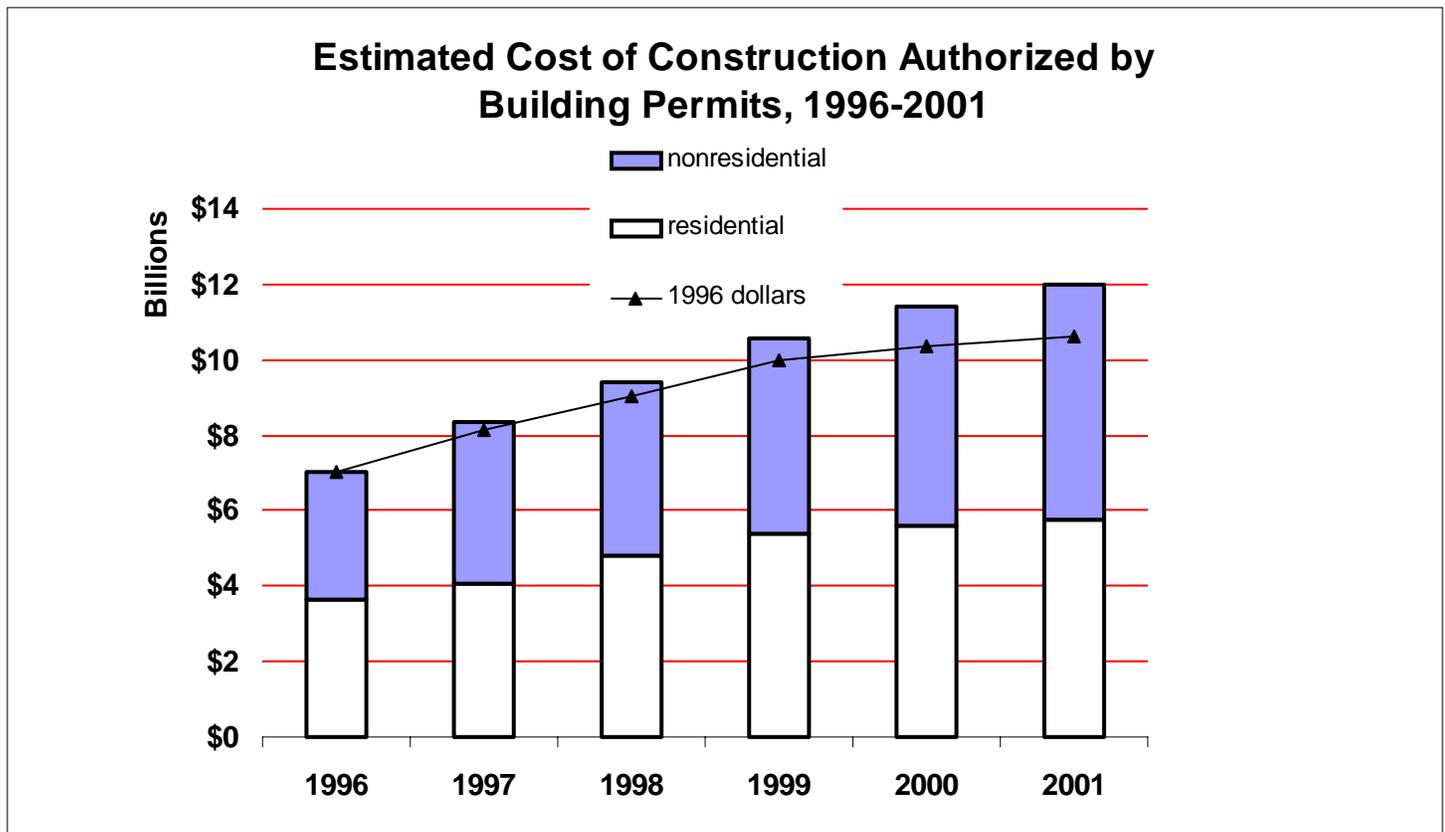
Source: Thomas C. Pitcherello
 Code Assistance Unit

Highlights of the 2001 *New Jersey Construction Reporter*

The following contains highlights of the 2001 *New Jersey Construction Reporter*. The publication contains information on building activity in the State. Construction officials who are interested in obtaining a complimentary copy should contact John Lago at jlago@dca.state.nj.us, or call (609) 292-7898.

2001 HIGHLIGHTS

Despite a national recession that started in March, New Jersey's construction industry performed strongly in 2001. The estimated cost of work authorized by building permits reached \$12 billion, \$619.8 million more than last year. This was an increase of 5.4 percent. In real terms, assuming the value of a dollar declined by 2.8 percent, authorized work grew by 2.5 percent.



Building permits were issued for 35,680 new houses, 2,385 units fewer than last year, for a decline of 6.3 percent. New office and retail space were up significantly. Office space increased by nearly 3.6 million square feet, 23.2 percent compared to last year. New retail space grew by 1.2-million square feet, an increase of 19.5 percent.

Activity by Region

Northern and central New Jersey had nearly 80 percent of the work authorized by permits. The amount in the northern part of the State was \$5.1 billion. In central New Jersey, it was \$4.3 billion. Nearly \$2.6 billion was authorized for new office buildings or renovations to existing offices. Central and northern New Jersey issued permits for 8.8-million and 8.4-million square feet of new office space, respectively. Jersey City in Hudson County accounted for over 4.1-million square feet, nearly 22 percent of all the new office space in the State.

(continued from page 9)

New Jersey Construction Indicators: 1996-2001				
	Estimated Construction Costs	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
1996	\$7,028,424,990	27,577	6,229,515	4,880,139
1997	\$8,346,533,144	30,017	10,409,171	5,688,955
1998	\$9,396,755,517	35,676	12,703,824	7,921,892
1999	\$10,584,167,530	37,536	13,237,891	6,229,471
2000	\$11,387,683,514	38,065	15,531,039	6,063,412
2001	\$12,007,456,630	35,680	19,134,533	7,244,833
2000-2001	\$619,773,116	(2,385)	3,603,494	1,181,421
Percent Change	5.4%	-6.3%	23.2%	19.5%
Source: N.J. Department of Community Affairs, 5/13/02				

Central New Jersey had 38 percent of all the new houses built in the State. Three central New Jersey counties (Ocean, Middlesex, and Monmouth) had about 26.5 percent of all new houses.

Major Construction Indicators by Region: 2001				
Region	Estimated Cost of Construction	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
North	\$5,125,936,607	12,557	8,384,715	2,916,595
Central	4,339,933,807	13,549	8,840,389	3,121,272
South	2,141,943,546	9,561	1,286,408	1,206,546
State Buildings	399,642,670	13	623,021	420
New Jersey	\$12,007,456,630	35,680	19,134,533	7,244,833
<i>Percent Distribution by Region</i>				
North	42.7%	35.2%	43.8%	40.3%
Central	36.1%	38.0%	46.2%	43.1%
South	17.8%	26.8%	6.7%	16.7%
State Buildings	3.3%	0.037%	3.3%	0.01%
New Jersey	100.0%	100.0%	100.0%	100.0%
Source: N.J. Department of Community Affairs, 5/13/02				
Northern New Jersey: Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties				
Central New Jersey: Hunterdon, Mercer, Middlesex, Monmouth, Ocean, and Somerset Counties				
Southern New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, and Salem Counties				

Urban Development

Among municipalities, New Jersey's two largest cities stood out. Jersey City had the most work: \$867 million. The City had the most new houses (2,009 units) and the most new office space in 2001 (4.1 million square feet). The City of Newark in Essex County issued permits for an estimated \$213.6 million of construction, second among localities. Newark had 606,320 square feet of new office space in 2001 (fifth among all municipalities). Like Jersey City, Newark is in the midst of a housing boom and had 1,066 new houses in 2001, second among municipalities. But unlike Jersey City, where most of the new houses are market-rate units in high-rise structures, Newark had an increase in low-rise, single-family houses, duplexes, and three-family units for low- or moderate-income households. Together, Jersey City and Newark accounted for just over 8.6 percent of all the new houses in New Jersey in 2001.

Construction Indicators Top New Jersey Municipalities: 2001					
Municipality	County	Estimated Cost of Construction (Dollars)	Authorized Housing Units	Authorized Office Space (square feet)	Authorized Retail Space (square feet)
Jersey City	Hudson	\$867,048,392	2,009	4,111,027	245,585
Newark City	Essex	213,559,984	1,066	606,329	7,906
Hopewell Township	Mercer	137,656,814	52	409,311	0
Rahway City	Union	135,594,569	38	261,471	6,111
Bridgewater Township	Somerset	128,127,081	82	844,664	153,379
Hoboken City	Hudson	126,770,013	207	191,304	0
Elizabeth City	Union	124,829,161	432	5,737	3,576
Atlantic City	Atlantic	115,140,513	33	2,331	0
Dover Township	Ocean	114,092,636	481	99,956	261,691
South Brunswick Township	Middlesex	110,566,696	139	196,053	6,209
Top Municipalities		2,073,385,859	4,539	6,728,183	684,457
New Jersey		\$12,007,456,630	35,680	19,134,533	7,244,833

Source: N.J. Department of Community Affairs, 5/13/02

Other cities with a high level of activity were the Cities of Rahway and Elizabeth in Union County, the City of Hoboken in Hudson County, and Atlantic City in Atlantic County. Most of the work in Rahway was for office development for Merck & Company, Inc., a pharmaceuticals firm. The other big projects were for public school additions and the construction of a new library. Elizabeth had 432 authorized units (15th among localities) and also issued permits for two new hotels. Hoboken had 207 authorized dwellings in 2001 and 191,304 square feet of new office space. In Atlantic City, casino development and new parking structures accounted for most of the work. The Atlantic City construction office also issued permits for two new elementary schools, each with an estimated construction cost of \$13 million.

Spotlight on Jersey City and Newark

One of the reasons construction activity was so strong in 2001 was because of development in Jersey City and Newark. Jersey City is in the midst of a housing and office boom. This trend began in the late 1990s and grew sharply this year. Newark also benefited from increased demand for housing and office development. The City has seen major renovations of existing buildings advanced in part by the State's adoption of the Rehabilitation Subcode, which reduces regulatory impediments to the reuse of existing structures.

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The biggest project in Jersey City was the Goldman Sachs office tower. The 1.5-million-square-foot building sits on the Hudson River waterfront, across from New York City's financial district. The picture to the right shows the tower which, when complete, will be the tallest in the State. The estimated construction cost reported on the initial permit was \$242 million. This is the largest amount on a single permit in the more than six years that the Department of Community Affairs has published building permit data.



*Goldman Sachs Tower and parking deck on Hudson Street, Jersey City
—photo by John Lago, New Jersey Department of Community Affairs*



*Liberty Towers East and West, 33 Hudson Street, Jersey City -- the Goldman Sachs office building is on the left; the two buildings to the right are the apartment complex.
—photo by John Lago, New Jersey Department of Community Affairs*

Next to Goldman Sachs is Liberty Towers, an apartment complex that broke ground in 2001. Two buildings make up the complex. They will have 648 market-rate units, parking facilities, and a gymnasium.

Along with the Goldman Sachs tower, two other new office buildings under construction were Harborside Financial Center Plaza Five and Newport Office Center VII. Plaza Five, a 34-story office building, is on Morgan Street. North of Plaza Five, on Washington Boulevard, is Newport Office Center VII, a 32-story office. All told, both buildings will have nearly 2-million square feet of office space. All of these office developments were well underway prior to the destruction of the World Trade Center on September 11.



*Harborside Financial Center, Plaza Five, 20 Morgan Street, Jersey City
—photo by John Lago, New Jersey Department of Community Affairs*



*Newport Office Center VII, 480 Washington Boulevard, Jersey City
—photo by John Lago, New Jersey Department of Community Affairs*

Newark also reported a high level of activity this year. Several large office and housing developments were built or started. In May 2001, the City's construction office issued a permit authorizing \$51.8 million of work on a 516,000-square-foot building that will have a mix of retail and office uses. The main use of the structure will be to house a branch office of the Federal Bureau of Investigation.

Newark issued building permits for 1,066 new houses. The City demolished old public housing apartments in high-rise buildings, and replaced them with affordable townhouses, duplexes, and apartments. The picture below shows townhouses in a 206-unit development under construction by the New Community Corporation, a nonprofit housing and community development agency. These affordable units were funded by a grant from the United States Department of Housing and Urban Development, and are located in the City's south ward.



*Community Hills Townhouses, 206-unit development in Newark's south ward --
in the background is an old public housing development that the City will demolish.
—photo by Chester Chinsky, New Jersey Department of Labor*

(continued from page 13)



*Community Hills Townhouses, Newark south ward
—photo by Chester Chinsky, New Jersey Department of Labor*



*Three-family homes under construction in Newark's iron-bound district
—photo by Chester Chinsky, New Jersey Department of Labor*



*Buy-and-rent housing in Newark's north ward -- home buyers are able to live in one of the units and rent the other.
—photo by Chester Chinsky, New Jersey Department of Labor*

New House Prices

A total of 23,372 new houses were completed and began enrollment in a new home warranty program in 2001. The median sale price of these houses was \$253,670. This was nearly 10 percent more than last year. Bergen and Somerset Counties had the most expensive new homes. Half of the 1,055 new houses in Bergen County that began enrollment in a new home warranty program in 2001 cost more than \$452,900. In Somerset County, the median sale price was \$435,960.

New House Prices			
Period	Number of New Houses	Median Sale Prices	Percent Change in Sale Prices
1996	20,903	\$183,300	
1997	21,640	\$190,000	3.7%
1998	23,884	\$209,980	10.5%
1999	24,479	\$224,496	6.9%
2000	25,058	\$231,728	3.2%
2001	23,372	\$253,670	9.5%
1st Quarter 2001	5,305	\$243,696	
2nd Quarter 2001	6,136	\$251,530	3.2%
3rd Quarter 2001	6,225	\$259,000	3.0%
4th Quarter 2001	5,606	\$260,925	0.7%

Source: N.J. Department of Community Affairs, 5/13/02

Source: John Lago
Office of Planning and Program Development

Pull-Down Stairs

During a recent Uniform Construction Code Advisory Board meeting, the following question was asked: "When an attic is finished as living space, can a pull-down stair be used to provide the means of egress?"

Finishing an attic is considered an alteration under the Rehabilitation Subcode, provided that it does not increase the height or number of stories. *N.J.A.C. 5:23-6.3*, entitled "Definitions," states that any term not defined herein which is defined in any of the other subcodes of the Uniform Construction Code (UCC) shall have the meaning as defined in that subcode. Habitable attic is not defined in the Rehabilitation Subcode, but is defined at *N.J.A.C. 5:23-3.14(b)2.vi*, Building Subcode, or *N.J.A.C. 5:23-3.21(b)*, One- and Two-Family Dwelling Subcode, and must therefore comply with *N.J.A.C. 5:23-3.14(b)vi* or *N.J.A.C. 5:23-3.21(b)*.

With that in mind, a "habitable attic," according to the UCC, is "an attic which has a stairway as a means of access and egress, and in which the ceiling area at a height of seven feet above the attic floor is not more than one-third of the area of the next floor below."

A pull-down stair, however, is considered a ladder. It is not a stairway and a stairway is required by definition. Therefore, a stairway would need to be installed to provide a means of access and egress. In addition, the stairway is considered a new building element as per *N.J.A.C. 5:23-6.9(a)8*, New Building Elements. Therefore, it must comply with Section 1014.0 of the Building Officials and Code Administrators National Building Code/1996.

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

Source: Marcel Iglesias
Code Assistance Unit

Showers and Hot Water

About seven years ago, an article appeared in the *Construction Code Communicator* that addressed the recurring question, "What is the code requirement for hot-water outlet temperatures for showers?"

The 2000 National Standard Plumbing Code (NSPC) definition of hot water is, as many of us know, 120 to 140 degrees Fahrenheit. With that definition in mind, please note NSPC Section 10.15.1 provides that "hot water shall be supplied to all plumbing fixtures . . ." This means that the hot-water temperature supplied to the fixtures must meet the requirement set forth in the NSPC definition of "hot water."

This includes showers. At Section 10.15.6, the required "outlet" temperature to a shower is a maximum of 120 degrees Fahrenheit, the key word being "maximum."

Therefore, since NSPC Section 10.15.6 provides a maximum outlet temperature for showers, not a minimum, a shower with a hot-water outlet temperature of less than 120 degrees Fahrenheit would not fail an inspection.

On the other hand, if the outlet hot-water temperature exceeds 120 degrees Fahrenheit, the shower cannot pass inspection.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

When Does a Storage Building Need to Have an Elevator?

In recent months, questions about large, self-storage buildings have become a hot item in the Code Assistance Unit. We have received quite a few calls on whether installation of an elevator is required in a self-storage building of 10,000 square feet or more that is more than one story.

The answer is "yes." *N.J.A.C. 5:23-7.4(a)1* of the Barrier-Free Subcode provides that "large buildings, defined as those with a total gross enclosed floor area of 10,000 square feet or more, shall have elevator(s) to provide accessible, vertical access between floors." However, *N.J.A.C. 5:23-7.3(a)3* exempts floors and mezzanines of less than 3,000 square feet from being required to be served by an elevator.

So, in short, self-storage building + total enclosed floor area of 10,000 square feet or more + more than one story = ELEVATOR! On the other hand, self-storage building + total enclosed floor area of 10,000 square feet or more + mezzanine of less than 3,000 square feet = NO ELEVATOR!

Source: Rob Austin
Code Assistance Unit

Technical Assistant Graduation

We had a “hot” time on June 26th during the fifth Technical Assistant graduation. The ceremony was held in the picturesque Masonic Temple on Barrack Street, which was built around the 1920s. No, there was no air conditioning, so we relived those old times when large fans were used to blow hot air around, producing a sound similar to that of airplanes taking off for flight.

Everyone endured the heat for the ceremony, in which the successful completions of numerous certification courses were celebrated. William Connolly, Director of the Division of Codes and Standards at the Department of Community Affairs, spoke about the many “firsts” in code enforcement of which we in New Jersey can be proud. Charles Richman, Assistant Commissioner of the Department, also gave his congratulations to the graduates.

The class consisted of 101 Technical Assistants, 48 of whom attended with guests. This brought the total number of certified Technical Assistants in New Jersey to 260.

Certificates and pins were presented at the ceremony. Afterwards, cool, light refreshments were served.

This was the last Department-sponsored graduation for Technical Assistants. The Technical Assistant Certification Program will continue as a 45-hour, evening college course. Courses will be offered starting this fall at community colleges.

If you would like further information on dates and college locations, please call the Education Unit at (609) 984-7820.

We offer our best wishes to all the Technical Assistants!

Source: Susan McLaughlin
Supervisor, Education Unit
Bureau of Code Services



NOTES

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State of New Jersey
James E. McGreevey, Governor

Department of Community Affairs
Susan Bass Levin, Commissioner

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HAPPY NEW YEAR

Corrections to the CABO One- and Two-Family Dwelling Code

The Code Assistance Unit of the Department of Community Affairs recently received a telephone call that created quite a stir. The caller indicated that he had constructed a home with a spiral stair that has a riser height of 9½ inches, in accordance with Section 314.5 of the 1995 edition of the Council of American Building Officials One- and Two-Family Dwelling Code (CABO/1995). However, upon inspection, the code official cited the builder for having a spiral stair with a riser height of greater than 7¾ inches, in accordance with Section 314.5 of CABO/1995.

By now, you have noticed that both the builder and the code official referenced the same section of the same edition of the code. However, the builder is quoting language from the *first printing* of CABO/1995 and the code official is citing from the *second printing* of the code.

The Department has determined that, when the second printing was published, an error was made and the wrong dimension was given. Therefore, the first printing is accurate and the correct dimension for the riser height of a spiral stair is 9½ inches. This has been confirmed through

an errata sheet provided by Building Officials and Code Administrators (BOCA) for the second printing.

If you own the *second printing*, please make this correction to your copy of the code. Those who have a copy of the first or third printing do not need to do anything, because these printings were correct upon publication.

One more correction, which needs to be made in both the first and second printing, should be noted. This is also on the errata sheet. On page 26, in Note 5 of Figure 403.1a, "Concrete and Masonry Foundation Details," the code states, "Bolts shall extend a minimum of 15 inches into masonry or 7 inches into concrete." This statement should read, "Bolts shall extend a minimum of 7 inches into masonry or concrete." If you own either the *first printing* or *second printing*, please make this correction to your copy of the code.

If you have questions about code requirements, please contact the Code Assistance Unit at (609) 984-7609. If you have questions about the errata sheet, or about which edition or which printing you have, please contact BOCA at (708) 799-2300.

Sources: Jeffrey Applegate and Marcel Iglesias
Code Assistance Unit

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Pressure-Assisted Water Closets

The purpose of this article is to remind Uniform Construction Code officials that, as of December 16, 2002, the requirement at *N.J.A.C. 5:23-3.15(b)8.ii*, Plumbing Subcode, for the installation of pressure-assisted water closets in commercial buildings of Use Groups A, E, B, and M that require more than two water closets to be connected to the building sewer is no longer mandatory. This provision was deleted, as adopted in the *New Jersey Register* on December 16th. The type of water closets to be used for a project is at the discretion of the design professional.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

Egress Door Hardware

The Code Assistance Unit of the Department of Community Affairs has become aware that some clarification concerning the use of egress door hardware is necessary in respect to panic hardware, and manually operated flush bolts and surface bolts.

One of the most frequently asked questions about egress door hardware is: "If the egress door is a double-leaf door (e.g., two 3' 0" doors in the same frame), may there be an inactive leaf? We would like to have a 6' 0" opening, but only a 3' 0" door is required for egress."

The answer is "NO." This would entail the use of manually operated flush bolts on the egress doors, which is prohibited by Section 1017.4.1.1, "Flush and Surface Bolts," of the 1996 edition of the Building Subcode, the Building Officials and Code Administrators National Building Code/1996. People who are exiting during an emergency should not be required to determine which door of a pair is the active egress door.

The appearance of an inactive leaf can be accomplished through the use of automatic flush bolts. These are designed to unlatch when the active door leaf is opened and latch automatically when the active door leaf is closed. Of course, the installation of panic hardware on

one door with an automatic flush bolt or both doors is also code compliant.

Panic hardware is used to allow quick and easy operation of egress doors in a time of panic during emergencies from places that normally have a large occupancy, such as assembly halls. If no one is able to operate the latching mechanism, the force of the crowd will eventually cause the panic hardware to be activated. The automatic flush bolt allows the inactive leaf to open when the panic hardware on the active leaf is operated.

Please note, in order to prevent confusion during an emergency, no hardware of any type (e.g., a door knob) is permitted on the door that is equipped with the automatic flush bolt.

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

Source: Jeffrey Applegate
Code Assistance Unit

Energy – Enforce Only What Is Referenced

N.J.A.C. 5:23-3.18, Energy Subcode, adopts the 1995 edition of the Council of American Building Officials (CABO) Model Energy Code with technical amendments. Chapter 7 of CABO references the American Society of Heating, Refrigeration, and Air-Conditioning Engineers 90.1, the 1999 edition (ASHRAE 90.1-1999) as the standard for "Building Design For All Buildings Other Than Residential Buildings." In other words, ASHRAE 90.1-1999 is a referenced standard and is to be used for the design of all buildings except residential buildings of three or fewer stories in height.

It is important to remember that only those portions of the referenced standard that address building design are applicable. This applies to the building itself, including the building envelope, percent glazing, R-values, and U-values. This does not include the performance of the equipment installed. Equipment is required to be listed and labeled with a percentage AFUE (furnaces and boilers), HSPF (air source heat pumps), and/or SEER (air-conditioning) efficiency; however, it does not require "system commissioning" (ASHRAE 90.1-1999, Section 6.2.5.4). An inspector must make sure the equipment is listed and

labeled as required by the Energy Subcode, but does not need to ensure that the owner/operator is aware of the operating and maintenance requirements for the equipment. Requirements for Use Groups B and E are different. *N.J.A.C. 5:23-2.23(h)7*, "Certificate Requirements," does require a "Test and Balance" report for mechanically ventilated Class I and II buildings of Use Groups B and E, but other portions of the commissioning process are outside of the scope of the Uniform Construction Code.

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

Source: Rob Austin
Code Assistance Unit

Opening Communication on NJDEP's Septic Rules

The Department of Community Affairs (DCA) and the New Jersey Department of Environmental Protection (DEP) initiated a dialogue to increase communication between the two agencies to better enforce regulations that pertain to similar technical issues.

Items that were discussed included a review of inconsistencies between the Uniform Construction Code (*N.J.A.C. 5:23*) and the Standards for Individual Subsurface Sewage Disposal Systems (*N.J.A.C. 7:9A*). Mechanisms to increase communication between the Departments and local building and health officials were also explored. Specifically, the following issues were discussed:

- When accepting a building permit application, the code official should verify whether the facility utilizes a public sewer, or if it is connected to a septic system. If a project is on a property that is connected to a septic system, it is important the local or county health office that reviews septic plans is involved. This is fundamental to ensure that all applicable requirements are met including the required capacity of the septic system, the maintenance of any required setbacks, and the protection of the septic system from construction activities (such as heavy equipment rolling over and crushing components, excavating near another utility line, etc.). This is of greater concern in areas where local building officials must coordinate with county-level health departments. The above require prior approval per *N.J.A.C. 5:23-1.4*, "Definitions."
- There is a difference in the separation distance required between a building sewer to a septic system and potable water service lines from a public water service main. Currently, DEP septic and water supply rules at *N.J.A.C. 7:9A* require a five-foot separation. However,

the Plumbing Subcode at *N.J.A.C. 5:23-3.15* only requires a one-foot separation. Plumbing subcode officials have jurisdiction in this matter; therefore, a one-foot separation should be enforced.

- If a project entails reconfiguring existing space to incorporate an additional bedroom(s) or constructing an addition that includes bedrooms, then the septic system typically requires an evaluation. Further, additions to the structure outside the existing footprint may require relocation of the system to maintain the required setbacks. The local health office responsible for septic system review must be contacted when any of the noted activities are proposed.

By opening the dialogue between State agencies and continuing communication lines to all building and health officials, we hope to make everyone's job a little easier by promoting the exchange of information. If you have any questions, please contact the Code Assistance Unit at (609) 984-7609, or the DEP's Bureau of Non-Point Pollution Control at (609) 292-0407.

Sources: Thomas C. Pitcherello
Code Assistance Unit

and

Mark Miller
DEP, Bureau of Non-Point Pollution Control

Duct Tape — What a Sticky Mess!

This is a follow-up to the duct tape article that appeared in the Spring/Summer 2002 edition of the *Construction Code Communicator*. The Code Assistance Unit of the Department of Community Affairs has received many telephone calls pertaining to this article. The most frequently asked question is, "What is the proper type of pressure-sensitive (duct) tape sealant that would be permitted to be used on ductwork for residential installations that would comply with the 1995 Council of American Building Officials Model Energy Code (CABO MEC)?"

As stated in Section 503.8.2, "Duct Sealing," of the 1995 CABO MEC (residential), "Duct tape is not permitted as a sealant on any ducts." In other words, the everyday, run-of-the-mill, "You-can-buy-me-at-any-hardware-section-of-many-home-improvement-or-discount-centers" gray duct tape is not permitted as a sealant on any ductwork.

However, there has been some confusion with the use of the term "duct tape," because some products that actually do meet the duct sealant requirements of

(continued from page 3)

Underwriters Laboratories (UL) 181, "Standard for Factory-Made Air Ducts and Air Connectors," are labeled "duct tape," even though CABO MEC/1995 prohibits the use of duct tape as a sealant on ductwork.

There are two specific UL 181 standards for different types of ductwork: UL 181B-FX, "Standard for Closure Systems for Use with Flexible Air Ducts and Air Connectors," which is the appropriate testing standard for flex ducts; and UL 181A-P, "Closure Systems for Use with Rigid Air Ducts and Air Connectors," which is the appropriate testing standard for rigid fiberglass air ducts. UL 181A-P can also be used for flex ducts. In addition, although UL 181A-P is not specifically tested for metal ductwork, it is the appropriately labeled tape to use for metal ducts. (Please keep in mind that the UL label must be visible at all times – it should be printed directly on the face of the sealant.)

Therefore, if a duct tape has a visible label that "certifies" it meets either of the UL 181 requirements, then it is acceptable to use as a duct sealant.

Please note, this article pertains to pressure-sensitive tapes only. There are many other types of sealant products that are permitted as well. Should you have any questions, you may contact me at (609) 984-7609.

Source: Thomas C. Pitcherello
Code Assistance Unit

Escalators as Building Stairs

On November 4, 2002, the Department of Community Affairs proposed an amendment that would enhance the level of public safety for individuals using escalators. This proposal, at *N.J.A.C. 5:23-12.12*, Special Safety Equipment, requires a sign at the top and bottom landings of each escalator to prohibit standing escalators from being used as building stairs.

The Department is aware that, prior to 1987 (when the Building Officials and Code Administrators National Building Code was revised to prohibit it), an escalator was allowed to be part of a second means of egress, provided it was enclosed. The Department believes that there are not many (possibly not any) enclosed escalators that were constructed prior to 1987 as part of a second means of egress. Those that do exist, however, must be regarded as hazardous because the escalator device was not designed to support the loads that result from a fully loaded escalator being used as stairs. In those cases where there is an enclosed escalator that is part of a second means of egress, the fire official must identify/require another second means of egress.

If you have questions on this issue, please contact John Terry, Jeffrey Applegate, Marcel Iglesias, or Rob Austin of the Code Assistance Unit. They may be reached at (609) 984-7609.

Source: Emily Templeton
Code Development Unit

Gas Piping Protection – Above and Below Ground

Since the adoption of the 2000 edition of the International Fuel Gas Code (IFGC/2000), there have been questions on the proper means of protection for ferrous metal gas piping that is installed outdoors above ground.

Section 404.8, "Protection Against Corrosion," states in the third sentence: "Ferrous metal exposed in exterior locations shall be protected from corrosion in a manner satisfactory to the code official." This provision is intended to allow the use of a rust-prohibitive primer and paint to protect gas piping from corrosion. Zinc coatings (galvanizing) are allowed to be used to protect gas piping above ground, provided the exposed threads are properly painted to protect against corrosion. However, zinc coating is not an adequate means of protection for gas piping underground.

Factory-applied protective coatings and wrappings, per Section 404.8.2, must be approved for application, and shall be used for gas piping installed underground. Approved factory-applied protective coatings and wrappings may be used for above-ground gas piping as well.

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

Source: Thomas C. Pitcherello
Code Assistance Unit

New Jersey Model Code Adoptions

On page 9 is a chart that provides the history of all of New Jersey's model code adoptions. This was intended to accompany the article printed in the Fall 2002 edition of the *Construction Code Communicator* entitled "History Lesson: Adoption of New Jersey's Model Codes." The chart was inadvertently omitted; however, it has been printed in this issue for your convenience.

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

Source: Rob Austin
Code Assistance Unit

(continued on page 9)

Fire Escapes -- Signing and Sealing of Construction Documents

There have been a number of inquiries as to when a licensed design professional is required to sign and seal construction documents for a fire escape. Guidelines for this requirement are provided in Formal Technical Opinion (FTO) 3, "Fire Escapes."

According to FTO-3, the two methods that may be used to comply with the Building Officials and Code Administrators (BOCA) National Building Code/1996 requirements are: a specification methodology and a design methodology.

1. Specification Methodology

Construction documents submitted to show compliance with the specification methodology are not required to be signed and sealed by a design professional licensed in the State of New Jersey. The specification methodology provided in FTO-3 standardizes the requirement to indicate compliance with BOCA/1996.

For example, FTO-3, "Method One (Specification Methodology), Part B, Landing Platform Components," states, "Floor surface support members shall be a minimum of 2½-inch x 2½-inch x ¼-inch steel plate angles, 50 inches in length maximum, and not spaced over 24 inches on center." The specification methodology identifies the components of the fire escape that are needed to comply with BOCA/1996. Therefore, when using the specification method in FTO-3, the construction documents are not required to be signed and sealed.

2. Design Methodology

Construction documents submitted under the design methodology must be signed and sealed by a licensed design professional. This method requires a design professional to apply the code requirements specified in FTO-3 to design the fire escape.

For example, FTO-3, "Method Two (Design Methodology), Part A, Construction," states, "The fire escape shall be designed to support a live load of 100 pounds per square foot." Because the design methodology provides the criteria necessary to design a fire escape that would comply with the applicable requirements, documents are required to be signed and sealed when utilizing the design methodology.

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

Source: Marcel Iglesias
Code Assistance Unit

ICC/ANSI A117.1-98 – What's New?

On November 4, 2002, the Department of Community Affairs adopted amendments to the Barrier Free Subcode at *N.J.A.C. 5:23-7*, which included a change of the edition of the Accessible and Usable Buildings and Facilities Standard that is referenced in the regulations. Specifically, the reference to the Council of American Building Officials/American National Standards Institute (CABO/ANSI) A117.1-1992 has been replaced with a reference to the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-1998. The purpose of this article is to highlight the major differences between these two standards.

1. The first major difference between the two editions of the Accessible and Usable Buildings and Facilities Standard is the format. CABO/ANSI A117.1-1992 contains text in the front of the publication and the illustrations are located in the back. In ICC/ANSI A117.1-1998, each illustration is contained next to the text that it depicts. However, the role of the illustrations has not changed. Remember, the illustrations do not contain additional requirements that are not contained within the text. Should there be a difference between the text and the illustration, the text applies.
2. Another formatting difference is the chapter styles of the standards. Take one look at the ICC/ANSI A117.1-1998 table of contents, and you will see the numbering is much easier to use and to cite than that provided in CABO/ANSI A117.1-1992.
3. Chapter 3 of ICC/ANSI A117.1-1998, "Building Blocks," is a new concept to the Barrier Free Subcode. This chapter contains the dimensions that are repeated and unchanged throughout the remainder of the standard. For example, the clear floor space for a wheelchair is 30 inches by 48 inches. This dimension remains the same throughout the standard, regardless of the subject matter; the clear floor space is the same for accessible routes, building elements, and plumbing fixtures. Therefore, each section that contains a requirement for clear floor space refers to the "Building Blocks" chapter. This is intended to be only one example of the many fundamental dimensions contained in Chapter 3.
4. From a technical standpoint, in ICC/ANSI A117.1-1998, the side-reach range is consistent with the front-reach range, both being 48 inches, whereas these ranges differed in CABO/ANSI A117.1-1992. (The side-reach range was 54 inches and the front-reach range was 48 inches.)

(continued from page 5)

5. It is important to note that the requirements for maneuvering clearance at doors are the same in both standards. However, a table has been provided in ICC/ANSI A117.1-1998 for easy understanding. Please refer to Table 404.2.4.1, Maneuvering Clearances for Manual Swinging Doors.
6. ICC/ANSI A117.1-1998 provides that doors are not permitted to swing into the clear floor space or clearance for toilet and bathing facility fixtures. Although this provision is not different from the requirement of CABO/ANSI A117.1-1992, the exception differs. In the 1992 edition, toilet rooms designed for individual use (known as “knock-and-locks”), or toilet rooms with a 30-inch by 48-inch space provided outside of the swinging door, were permitted to have the door swing in. In the 1998 edition, both of these conditions must be present. That is, the room must be a knock-and-lock, and a 30-inch by 48-inch space must be provided outside of the swinging door.
7. The requirements for clearances around water closets differ dramatically between the two standards. CABO/ANSI A117.1-1992 requires 48 inches of clearance in front of the water closet. Instead of the 48-inch dimension, ICC/ANSI A117.1-1998 requires a minimum of 56 inches of clearance perpendicular to the rear wall. This dimension is consistent with toilet compartment spacing required for wall-hung fixtures. Impact: The room is smaller by approximately one foot.
8. One of the biggest differences between the 1992 and 1998 editions of the standard is a difference of only two inches. However, the two inches in question involve the 16-inch to 18-inch range that is now allowed for the required distance between the centerline of the water closet and the adjacent wall. The two-inch range provides some flexibility for this very important dimension.
9. Section 604.3.1, “Clearance,” of ICC/ANSI A117.1-1998 makes it very clear that no fixtures are permitted to impinge upon the water closet clearance. This issue has been the Number One source of Code Assistance calls since July 1, 1995, the day the Department adopted CABO/ANSI A117.1-1992.
10. Section 604.6, “Flush Controls,” of ICC/ANSI A117.1-1998 provides that flush controls may be located on either side of the water closet. This issue accounts for the Number Two source of Code Assistance calls over the last seven years.
11. ICC/ANSI A117.1-1998 provides dimensions for alternate roll-in shower stalls in Section 608.2.3, “Alternate Roll-In-Type Shower Compartment.”
12. ICC/ANSI A117.1-1998 sets forth requirements for “Special Rooms and Spaces” in Chapter 8. These spaces include assembly areas, dressing and fitting rooms, and most importantly, kitchens. This pertains to kitchens that are not contained within dwelling units. CABO/ANSI A117.1-1992 did not have requirements for kitchens, other than those located in dwelling units. Therefore, the Department had advised that required clear floor space and reach ranges must be provided for all fixtures and appliances contained within kitchens provided in buildings and spaces other than dwelling units. With the adoption of ICC/ANSI A117.1-1998, this has changed; the standard now clearly requires knee space at sinks and work spaces in kitchens that are provided with a conventional range or cook top (see Section 606.2, exception number one).
13. The requirements for adaptable dwelling units are contained in Chapter 10. It is important to know that the Department deleted the requirements for “Type B” dwelling units upon adoption. This means that there is only one type of adaptable dwelling unit in the State of New Jersey – a Type A dwelling unit.
14. The requirements for Type A dwelling units provided in ICC/ANSI A117.1-1998 are similar to the dwelling unit requirements set forth in CABO/ANSI A117.1-1992. The biggest difference is the requirements for residential bathrooms, which are provided in Section 1002.11.5.2, “Clearance,” of ICC/ANSI A117.1-1998. As with nonresidential toilet rooms, the clearance around the water closet has been reduced. The 48-inch dimension in front of the water closet is not required in the 1998 edition of the standard. However, in Section 1002.11.5.2, there is a requirement for a five-foot turning radius within the residential bathroom. The end result is a bathroom that is almost the same size as required by CABO/ANSI A117.1-1992, with more flexibility for the design professionals as to where to provide the clear floor space.

This list is not intended to be all-inclusive; rather, it provides a list of the “big-ticket” differences between the two editions of the A117.1 Accessible and Usable Buildings and Facilities Standard. Should you have any questions regarding the requirements contained in ICC/ANSI A117.1-1998, please feel free to call the Code Assistance Unit at (609) 984-7609.

Source: John N. Terry
Code Assistance Unit

ISO is Reevaluating: What You Should Remember

The Department of Community Affairs has recently learned that the Insurance Services Office (ISO) is reevaluating code enforcement offices in New Jersey. During the initial evaluation, local code enforcement offices scored very well. We have discovered that, during the reevaluation, municipalities are not faring nearly as well. There are two main reasons for the lower scores during the reevaluation.

First, the State has not yet adopted the building and residential codes published by the International Code Council. This is a temporary situation. On December 16, 2002, the proposal to adopt the International Building Code (IBC)/2000, International Residential Code (IRC)/2000, and National Electrical Code (NEC)/2002 was published in the *New Jersey Register*. Following a 60-day public comment period, these codes will be published as an adoption in the *New Jersey Register* early in the spring of 2003. The Department plans to meet with representatives of the ISO to determine whether the reevaluations could be scheduled to follow, rather than precede, the adoption of the IBC/2000 and IRC/2000.

Second, in the evaluations that we have seen, local code officials are responding to some of the questions in terms of the Uniform Construction Code and not in the broad-based terms of the Building Code Effectiveness Grading System (BCEGS) questionnaire. For example, there is a question about "training." The BCEGS specifies 96 hours of training in a year. The questionnaire does not explain that, in the BCEGS system, "training" includes discussions about codes and code enforcement. According to this definition, any meeting (on the telephone or in person) where code requirements are discussed or explained, any code discussions within the office among code enforcement personnel, and any meetings of professional associations for code enforcement personnel all count as training. By this broad definition, it is hard to imagine that there is a code enforcement office in the State of New Jersey that does not exceed 96 hours each year!

Following the meeting with the ISO, we plan to publish in the *Construction Code Communicator* a guide to answering the BCEGS questionnaire. This guidance will be similar to that provided in the *Communicator* in 1996 and 1997, when the first evaluations were performed.

In the meantime, if you have any questions about the ISO, please contact Lou Mraw at (609) 984-7672 or me at (609) 984-7609.

Source: Emily W. Templeton
Code Development

Barrier Free Subcode: Large Building/Small Building

On August 5, 2002, a revision to the Barrier Free Subcode, Subchapter 7 of the Uniform Construction Code, was published in the *New Jersey Register*. The result of a decision by the Appellate Division of the Superior Court of New Jersey, this rule applies to multifamily residences the same large building/small building requirements that have applied to commercial buildings since 1986.

For multifamily residential buildings, the large building/small building distinction applies to buildings with four or more dwelling units. The rule provides that, in small buildings (which are less than 10,000 square feet total gross enclosed floor area), an accessible route and accessible building features are required for ground-floor dwelling units. In large buildings (which are 10,000 square feet or more total gross enclosed floor area), an accessible route (an elevator) and accessible building features are required throughout the building.

The rule further provides that, when deciding whether a building is a large building or a small building, firewalls that are penetrated for human passage do not designate separate buildings. This distinction is important when determining whether an elevator is needed to provide an accessible route.

Also, the rule provides that, for either a large building or a small building, when counting the number of dwelling units in a structure, firewalls do not designate a separate building. This distinction is important when determining whether the multifamily residential structure is subject to the Barrier Free Subcode.

The Barrier Free Subcode continues to require that [unless exempted by *N.J.A.C. 5:23-7.3(b)*, "Exemptions"], in an elevator-serviced building, all (100 percent) of the dwelling units must be accessible. In a building without an elevator, ground-floor dwelling units must be accessible. The Barrier Free Subcode also now specifies that an accessible dwelling unit is one with an accessible entrance, an accessible interior route, one full accessible bathroom on an accessible route, required clear floor spaces and reach ranges, and maneuvering spaces at doorways. Adaptable features are permitted in the kitchen and in the accessible bathroom that is on the accessible route.

NOTE: Although an elevator is not required in a small building, if one is provided, all dwelling units must be accessible. Multifamily residential structures with fewer than four dwelling units in a single structure are exempt.

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A chart summarizing the requirements for large buildings and small buildings as they apply to the accessibility of multifamily residential structures might help.

Category of Residential Building	Size of Building	Number of Dwelling Units	Accessible Route	Required Accessible Dwelling Units
Large Building	10,000 square feet or more*	4 or more dwelling units**	elevator required	100%
Small Building	less than 10,000 square feet*	4 or more dwelling units**	no elevator required	ground floor

*When determining square footage of a building, firewalls not penetrated for human passage designate separate buildings.
 **When counting the number of dwelling units in a single structure, firewalls do not designate separate buildings.

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

Source: Emily W. Templeton
Code Development

New Jersey Register Adoptions

Date: August 19, 2002
Adoption: 34 *N.J.R.* 2965(a)
Summary: This adopted amendment corrects several cross-references. At *N.J.A.C.* 5:23-2.14(b)4, "Construction Permits – When Required," the cross-references to the provisions of *N.J.A.C.* 5:23-3.14(b)22 have been updated to *N.J.A.C.* 5:23-3.14(b)23, which provides amendments to the Building Subcode pertaining to "Special Construction."

Date: October 7, 2002
Adoption: 34 *N.J.R.* 3497(b)
Summary: This adopted amendment at *N.J.A.C.* 5:23-9.1, "Interpretations: Plumbing Subcode," allows attached, single-family dwelling units in groups of three or more to be served by common water lines and building sewers, provided the common water service is located on a property that is subject to an (association) easement or is located on common property. Also, a homeowner's association or some other entity must be responsible for maintenance.

Date: November 4, 2002
Adoption: 34 *N.J.R.* 3771(b)
Summary: This adopted amendment corrects a typographical error in the codification of a provision in the Building Subcode regarding elevator car size and accommodation of a 24-inch by 76-inch ambulance stretcher.

Date: November 4, 2002
Adoption: 34 *N.J.R.* 3772(a)
Summary: These adopted amendments revise the Barrier Free Subcode, Subchapter 7 of the Uniform Construction Code, by adopting the International Code Council/American National Standards Institute (ICC/ANSI) A117.1-1998 as the technical standard for accessible design and construction. In addition, the adopted amendments recodify and clarify the accessibility requirements for large buildings, small buildings, and multifamily residences.

Source: Megan K. Sullivan
Code Development Unit

(continued from page 4)

New Jersey Model Code Adoptions
(Revised 11/4/02)

Building Subcode	Electrical Subcode	Energy Subcode	Fire Subcode	Mechanical Subcode	Fuel Gas Subcode	Plumbing Subcode	1 & 2 Family	Barrier Free (Sub 7)	Rehab (Sub 8)	Effective Date
BOCA IBC	NEC	BOCA CABO ASHRAE MEC Std. 90.1	BOCA/ IBC/ NFPA	BOCA IMC	IFGC	NSPC	CABO IRC	CABO ICC ANSI A117.1		years when six month grace period began
1975	1975		1975			1975				01-01-77
1976/S			1976/S							12-01-77
1978	1978		1978/S			1978				10-01-78
1981	1981		1981			1980				05-07-81
1983/AS			1983/AS			1981/82/S				02-22-83
1984	1984		1984	1984		1983				08-06-84
1985/S			1985/S	1985/S			1983			04-01-85
						1984/85/S				07-01-85
1986/AS			1986/AS	1986/AS						02-03-86
1987	1987		1987	1987						09-22-86
						1987				04-01-87
1988/S			1988/S	1988/S			1988			08-21-87
										06-20-88
							1987/88/A			08-15-88
										09-08-88
1989/AS			1989/AS	1989/AS						02-06-89
						1988/S				11-01-89
1990	1990		1990	1990			1989			05-21-90
1991/S			1991/S	1991/S		1990				07-01-90
										03-04-91
1993	1993		1993	1993		1991/S	1993/91/A			05-20-91
						1993	1992			05-01-93
								1992		07-01-95
1996	1996		1996	1993		1996			1998	01-05-98
	1999									07-06-98
									Revised	02-07-00
										12-18-00
				2000	2000					06-18-01
						2000				09-17-01
									Revised	01-07-02
		1995	1999							01-16-02
								1998		11-04-02

S = Supplement AS = Accumulative Supplement A = Amendments

Licensing Update

On August 5, 2002, the Department of Community Affairs adopted new regulations at *N.J.A.C. 5:23-5.20*, "Standards for Educational Programs," concerning the subjects to be covered in the Building Inspector RCS, ICS, and HHS courses, and the Plumbing Inspector ICS and HHS courses. These changes are the result of a comprehensive review of the prior standards by broad-based committees comprised of active code officials, instructors, and the respective inspector associations. The result of the committees' work is a much more standardized and specific course of study in areas that are vitally important to students pursuing a career in construction code enforcement. Additional items of importance that have presented themselves since the initial standards were promulgated have also been developed and incorporated into the course standards.

The Department is currently evaluating the fire protection inspector courses. Changes in course requirements are anticipated to be proposed in the spring or summer of 2003. After the fire protection course review is completed, we will move on to a review of the standards for the electrical inspector licensing courses.

The most notable change in the courses for building and plumbing inspectors is the number of course hours required. The Building Inspector RCS course will require a minimum of 90 hours of instruction, as opposed to the former 60-hour requirement. The Building Inspector ICS course will now require a minimum of 75 hours of instruction, whereas the former standard required 90 hours of instruction. Also, the Plumbing Inspector ICS course now requires a minimum of 120 hours of instruction, as opposed to the former 90-hour requirement. Finally, the Building Inspector HHS and Plumbing Inspector HHS courses remain unchanged at a minimum of 60 hours of instruction each. These changes will be in effect for the Spring 2003 semester. Anyone who completes any of the affected courses prior to the Spring 2003 semester will continue to receive credit for the course, subject to the five-year limitation on the validity of construction code courses.

As a result of the changes in course standards, changes to which examinations are required for licensure were also necessary. These changes were based upon the duties of inspectors at the various levels of licensure. The Building Inspector RCS level will require examinations in "building, one- and two-family dwellings," as well as "mechanical, one- and two-family dwellings." The Building Inspector ICS level will require examinations in "building, general" and "mechanical, general." The Plumbing Inspector ICS license will now require examination in "plumbing, general" and "mechanical, general."

The changes in required examinations will take effect February 5, 2003. Those who have completed the examinations required under the old regulations must submit an application for the affected license before this date. Those who apply for licensure on or after February 5th will be required to complete the examinations as noted above.

If you have any questions regarding the above changes, please contact me at (609) 984-7834, or by e-mail at codeslicensing@dca.state.nj.us.

Source: John A. Delesandro
Supervisor of Licensing

Prohibited Paint Removal Methods

The Department of Community Affairs has a chapter of regulations (*N.J.A.C. 5:17*, Lead Hazard Evaluation and Abatement Code) which deals specifically with lead paint testing and abatement by licensed abatement and evaluation contractors. A permit for lead abatement is obtained from the local construction official. All inspections of lead abatement work are performed by State inspectors. In order to close out the permit for the abatement work, a clearance certificate must be obtained from the local construction official.

Sometimes, however, the Department receives questions about work practices in buildings where there is no "lead abatement" under *N.J.A.C. 5:17*. There are questions about whether there is too much paint debris or dust generated and whether anything can be done. Under the Rehabilitation Subcode of the Uniform Construction Code (UCC), *N.J.A.C. 5:23-6*, there are certain paint removal methods which are prohibited in buildings in certain use groups.

In all Use Group R buildings built prior to 1978, in all Use Group E buildings, and in Use Group I-2 buildings used for childcare, there can be no uncontained water blasting or power washing, open flame burning, use of high-temperature (more than 1100°F) heat guns, or dry scraping or sanding more than two square feet per room. (Proposed amendments to the Rehabilitation Subcode would prohibit dry scraping or sanding more than two square feet per room, interior; and ten square feet or more per building, exterior.) Please see *N.J.A.C. 5:23-6.4(d)5* for prohibitions in repairs, *N.J.A.C. 5:23-6.5(d)6* for renovations, *N.J.A.C. 5:23-6.6(d)6* for alterations, and *N.J.A.C. 5:23-6.7(d)5* for reconstruction.

If officials observe violations of these code sections, violators should be cited under the UCC. If there is a problem that involves a State-licensed lead abatement contractor,

please inform the Asbestos/Lead Unit at (609) 984-7815 of any action you take.

Source: Chrystene Wyluda
Asbestos/Lead Unit

Park Model Trailers Support and Stabilizing System

The Department of Community Affairs has recently been informed that several manufacturers of park model trailers and owners/residents of campgrounds are claiming park model trailers are not required to have any type of support or stabilizing (anchoring) system. This is not accurate.

Uniform Construction Code (UCC) Bulletin No. 93-6, "Label Requirements for Park Models," states that, wherever park model trailers are located, they are subject to the requirements of the UCC. It does not matter whether they are used for vacation purposes or as permanent residences. Therefore, properly designed foundation stabilization systems must be provided for each park model trailer.

A construction permit is required to initiate the work to be completed and all applicable inspections must be conducted to ensure the anchoring system is compliant with the code. A Certificate of Occupancy must be issued before the park model trailer can be occupied.

When applying for the construction permit, the applicant is required to submit designs and specifications for the foundation and stabilization systems, based upon the applicable requirements of Section 1609, Wind Loads; Section 1804.1, "Loadbearing Value of Soils, Soils Report;" and Section 1806.1, "Depth of Footings, Frost Protection" of the Building Officials and Code Administrators National Building Code/1996. The designs and specifications must be signed and sealed by a professional engineer or an architect licensed in New Jersey, and must also clearly indicate the type, make, model, etc. of the anchoring equipment so that the construction code official can verify conformance in the field.

I hope this will clear up any confusion. If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva
Bureau of Code Services

Manufactured Homes: Permanent Foundations

Uniform Construction Code Bulletin No. 88-2, "Manufactured Housing," identifies four specific conditions for a manufactured home (formerly called "mobile homes") to be located on a private property. One condition is the requirement for a permanent foundation for the manufactured home. The Department of Community Affairs has received several inquiries regarding the definition and guidelines for these permanent foundations. The following information should be useful in the enforcement of this provision:

- The use of straps and anchors (whether concrete or soil anchors) does not constitute a permanent foundation.
- Permanent foundations are required to be constructed of durable materials, i.e., concrete, mortared masonry, or treated wood, and must be site-built. Permanent foundations are required to have attachment points to anchor and stabilize the manufactured home in order to transfer all loads to underlying soil or rock.

Please note, *N.J.A.C. 5:23-2.15(e)1.vi*, "Construction Permits – Application," provides that the foundation and stabilizing system must be designed by a New Jersey licensed professional engineer or registered architect. The structural design of the foundation system is required to be developed in accordance with the manufacturer's instructions for permanent foundation and must take into consideration the following:

- Vertical Stability:
 1. Rated anchorage capacity must prevent uplift and overturning due to wind forces. Screw-in anchors are not acceptable.
 2. Footing size must prevent overloading the soil-bearing capacity and must avoid soil settlement. Footing shall consist of reinforced concrete and shall be considered permanent.
 3. Base of footing is required to be below maximum frost-penetration depth.
 4. The crawl space, when provided, shall be enclosed with a continuous wall. The wall may be bearing or non-bearing.
- Lateral Stability:
Rated anchorage capacity must prevent sliding due to wind forces.
- Design:
The design of a permanent foundation must be based on the applicable requirements of Section 1609, "Wind Loads," in the 1996 edition of the Building Officials and Code Administrators National Building Code.

(continued from page 11)

For more detailed information relating to this subject, please refer to the US Department of Housing and Urban Development publication entitled, "Permanent Foundations Guide for Manufactured Housing."

If you have any questions, please contact me at (609) 984-7974.

Source: Paul Sachdeva
Bureau of Code Services

Summary of Changes to the Rehabilitation Subcode – 2002

The proposed amendments to *N.J.A.C. 5:23-6*, the Rehabilitation Subcode, incorporate changes from the adoptions of the International Code Council editions of model codes by incorporating the updated model code section numbers into the Uniform Construction Code (UCC). These include references to the International Building Code 2000, International Residential Code 2000, International Mechanical Code 2000, International Fuel Gas Code 2000, National Electrical Code 2002, and International Code Council/American National Standards Institute (ICC/ANSI) standard for accessible design A117.1-1998. All of the existing model code references would be deleted and the new, updated references would be inserted in their place.

In addition to these revisions, the following amendments are being proposed in an effort to update the UCC by deleting terms and references that are obsolete. A section-by-section summary of the proposal follows:

1. At *N.J.A.C. 5:23-6.1*, Introduction, using this subcode, references to several cites have been amended to provide the code user with more precise references.

At *N.J.A.C. 5:23-6.1(f)5iii*, the reference to *N.J.A.C. 5:23-6.12*, Basic Requirements – Use Group A-1, would be deleted and replaced with *N.J.A.C. 5:23-6.11*, Basic Requirements in All Use Groups.

At *N.J.A.C. 5:23-6.1(g)4ii*, the reference to *N.J.A.C. 5:23-6.31*, Change of Use, would be changed to *N.J.A.C. 5:23-6.31(c)*, which specifically pertains to means of egress.

At *N.J.A.C. 5:23-6.1(g)4vii*, the reference to *N.J.A.C. 5:23-6.31(h)*, (i), and (j) would be changed to cite only *N.J.A.C. 5:23-6.31(h)* and (i), which provide for the installation of fire alarm systems and automatic fire detection systems in a building that has undergone a change of use. The reference to *N.J.A.C. 5:23-6.31(j)*, Single- and Multiple-Station Smoke Detectors, is a typographical error.

2. At *N.J.A.C. 5:23-6.4(d)5iv*, *N.J.A.C. 5:23-6.5(d)6iv*, *N.J.A.C. 5:23-6.6(d)6iv*, and *N.J.A.C. 5:23-6.7(d)5iv*, restrictions would be added to limit dry scraping or sanding of painted surfaces of pre-1978 structures to

two square feet per room for interior surfaces and ten square feet per building for exterior surfaces.

3. At *N.J.A.C. 5:23-6.25(b)5* and *N.J.A.C. 5:23-6.26(a)7*, which prescribe basic requirements for Use Groups R-1, R-2, and R-4, the word "not" would be deleted to correct a typographical error. Also, the term "opening protection" would be deleted and replaced with "opening protectives" for use of a more accurate term.

4. *N.J.A.C. 5:23-6.31(a)8*, Change of Use, would provide for the installation of single- or multiple-station smoke detectors and a fire separation assembly between dwelling units when an existing single-family dwelling is converted to a two-family dwelling.

Source: John N. Terry
Code Assistance Unit

Code Change Proposals for the Rehabilitation Subcode (*N.J.A.C. 5:23-6*)

Once again, it is time to submit code change proposals for the Rehabilitation Subcode. Code changes may be aimed at improving the Rehabilitation Subcode by recommending a requirement that is not currently there, or they can address a requirement that seems unclear. Since its adoption in 1998, the Department of Community Affairs has encouraged code users to submit Rehabilitation Subcode code changes. This process, through which code changes based on the experience of the code users are presented and discussed, has been very successful.

To be considered this year, code changes must be submitted to the Department by March 10, 2003. The code change must be specific — the citation and the exact language change must be given. An explanation must be provided and any companion changes (other sections of the Rehabilitation Subcode that would also need to be changed) must be identified.

The code changes will be collated and presented to the Uniform Construction Code Advisory Board. A public hearing will be held at 9:30 a.m. on April 11, 2003 in Conference Room 129 of the Department of Community Affairs at 101 South Broad Street in Trenton. The public hearing will give code change proponents a chance to present — and explain — their proposals to the members of the Code Advisory Board.

A code change proposal form is included on the next page for your convenience. If you have any questions about this process, please contact the Code Development Unit at (609) 984-7609.

Source: Emily W. Templeton
Code Development

**NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS
DIVISION OF CODES AND STANDARDS
CODE CHANGE PROPOSAL 2003
REHABILITATION SUBCODE (N.J.A.C. 5:23-6)**

Due: **March 10, 2003**

Proposals must be presented with language proposed for deletion in brackets [].
Proposals must be presented with language proposed for addition underlined _____.

Mail code change proposals to:
Code Development Unit
Department of Community Affairs
Division of Codes and Standards
Post Office Box 802
Trenton, New Jersey 08625

Fax code change proposals to:
Code Development Unit
(609) 984-7717 or
(609) 633-6729

Direct questions to the Code Development or Code Assistance Units at (609) 984-7609.

Section (citation) proposed for change: _____

Sections (companion changes) that might also need to be changed: _____

NAME: _____

ORGANIZATION (if any): _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____ E-mail: _____

Proposed Code Change:

Supporting Statement (reason for code change):

Swimming Pool Etiquette

Ok, here it is . . . the official scoop on all you've ever wanted to know about the Uniform Construction Code (UCC) requirements applicable to a private swimming pool. Specifically, this article explains provisions for swimming pool sizes, materials, barriers, and electrical requirements.

Building Components:

Identifying the point at which a swimming pool is regulated by the 1996 edition of the Building Officials and Code Administrators National Building Code (BOCA/1996), the Building Subcode, has been confusing for several enforcing agencies. This article should clarify these uncertainties.

Section 421.1 of BOCA/1996 states that all swimming and bathing facilities are regulated by BOCA/1996, except for those that are less than 24 inches in depth or those that are less than 250 square feet in surface area (18 feet in diameter). These two conditions are written as exceptions to the initial requirement and they are independent. This means that if the swimming/bathing facility is either less than 24 inches in depth or less than 250 square feet in surface area, then the facility is exempt from the BOCA/1996 requirements. For example, a pool that is 23 inches in depth and 500 square feet in surface area is exempt from the requirements. A pool that is 54 inches in depth and 240 square feet in surface area is also exempt.

Additional exceptions to BOCA/1996 further complicate the issue. BOCA/1996 also states pools that are less than the required dimension or depth mentioned above are not exempt when they are constructed of structural materials, or are permanently equipped with water recirculation equipment. The standard interpretation of a pool that does not involve structural materials is a pool that relies on water or air to remain upright. This type of pool is usually made of nonmetallic, molded polymeric or inflatable walls.

Another point that has been confusing for many enforcing agencies is whether installed water recirculation equipment is considered permanent. There are two primary conditions of the water recirculation equipment that should be observed to determine its permanence. If the equipment is permanently connected to the electrical service, or if the equipment is cord-and-plug type but is required to be bolted to a foundation, then the equipment should be considered permanent. In such instances, the equipment should be regulated by the Building Subcode.

Moving beyond the pool itself, swimming pool barriers have also been a topic of discussion. Simply stated, if a swimming pool is not exempted by the above requirements, it is regulated by the Building Subcode, in which case a swimming pool barrier is required. The definition of a swimming pool barrier can be found in Section 421.2 of BOCA/1996, where it is defined as a fence, a wall, a building wall, the wall of an above-ground swimming pool, or a combination thereof which completely surrounds the swimming pool and obstructs access. The requirements for construction of a swimming pool barrier can be found in Section 421.10 of BOCA/1996 (note: 421.10.1, #9, is deleted). Please keep in mind that the primary purpose of a barrier is to protect the safety of small children, particularly those five years old or younger, by limiting or delaying access to a pool.

A swimming pool barrier may be placed anywhere up to the property line, provided a local ordinance does not say otherwise, and as long as the pool is completely surrounded. The barrier must be independent of any neighboring barrier. Neighboring barriers are not to be shared for purposes of meeting pool barrier requirements. If sharing pool barriers were allowed, a neighboring property owner could decide to remove his barrier. This would leave a pool without a barrier on all sides, which would be in violation of the Building Subcode.

Two conforming pool barriers may be placed back to back, provided the barriers are not climbable from either side. However, if a neighboring property contains a climbable fence or barrier, the barrier for the new pool should be placed a sufficient distance away in order to limit access to the pool. This distance should be based upon the topography of the properties. Separation distances between the fence and the barrier may range from two feet to four feet. Smaller or greater ranges may be appropriate, based upon specific circumstances.

When determining whether a building permit is necessary for installation, the following statement applies: If the swimming pool is not exempted by Section 421.1 of BOCA/1996, a building permit is required.

The Department of Community Affairs is proposing an amendment to the International Building Code and the International Residential Code to keep swimming pool requirements the same as those in BOCA/1996, as described above.

Electrical Components:

The Code Assistance Unit has also heard some confusion about whether an electrical permit is

required for the installation of a swimming pool. Typically, there are two scenarios that would trigger the need for an electrical permit: 1) if a swimming pool is capable of holding water to a depth of greater than 42 inches, or a pool has nonmetallic, molded polymeric walls or inflatable fabric walls, regardless of dimension; or 2) if a swimming pool is equipped with permanent recirculation equipment, regardless of dimension. Please note, the requirements for electrical permits are completely independent of building permit requirements.

The chart below further clarifies when an electrical or building permit would be required for the installation of swimming pools.

If you have questions on this matter, feel free to contact the Code Assistance Unit at (609) 984-7609.

Sources: John N. Terry and Rob Austin
Code Assistance Unit

Permit Application for Swimming Pools -- When to File		
	Permit Application Required	
	Building Subcode	Electrical Subcode
A - Maximum Water Capacity -- A Pool That Is:		
24 inches or greater depth and 250 square feet or greater area	Y	N ¹
Less than 24 inches deep and 250 square feet or greater area	N	N ¹
24 inches or greater depth and less than 250 square feet area	N	N ¹
^a Less than 24 inches deep and less than 250 square feet area	N	N ¹
B - Pool above or on ground with nonmetallic, molded polymeric or inflatable walls	N ²	N ¹
C - Pool involving structural materials, regardless of dimension	Y	N ¹
D - Pool equipped with permanent water recirculation system, regardless of dimension	Y	Y ³
<p>Notes:</p> <ol style="list-style-type: none"> 1. Required where mandated by the conditions in Item D. 2. Required where mandated by the conditions in Item A. 3. Not mandated if all of the following conditions are met: <ul style="list-style-type: none"> --Motor/filtration pump unit is portable (no foundation/not bolted down) and can be readily disassembled from the water circulation system; --Motor/filtration pump unit is listed (UL, etc.) as double insulated and has a cord with a minimum of 25 feet in length; --^aPool is capable of holding water to a maximum depth of 42 inches; and --Pool has no underwater lighting. <p>REMINDER: Swimming pools receive a Certificate of Approval (not a Certificate of Occupancy).</p>		

Technical Assistant/Permit Technician

If you are working in a municipality as a Technical Assistant (TA), if you have completed the certification course offered through the Department of Community Affairs' continuing education program, or if you have just completed the Department's TA college course, then the International Code Council is offering a test that would give you national recognition and help to enhance your credibility in your profession.

New Jersey offers certification courses to support staff working in the Office of the Construction Official. Over 110 students have already taken advantage of the college courses that were offered during the fall semester, bringing the total of certified TAs to over 400 throughout the State. You may want to take the next step!

The first TA to successfully complete the Permit Technician Examination (P2) and receive this national recognition is Ede DeLuca. With 20 years of experience, Ms. DeLuca is currently working in Vernon Township, Sussex County and is teaching the TA course at Sussex County College. She is also active in the Bergen-Passaic TA Association, where she holds the position of Secretary.

Please be advised that the P2 is not mandatory. If you would like more information on the P2 or the practice

course, please contact Building Officials and Code Administrators International at (708) 799-2300. If you are interested in the availability of college courses, please call the Education Unit of the Department at (609) 984-7820.

Source: Susan H. McLaughlin
Supervisor, Education Unit
Bureau of Code Services

UCC Standard Forms – Inspection of LPG Installations

In May 2001, amendments to *N.J.A.C. 5:23-3.4* were adopted assigning responsibility for inspection of liquefied petroleum gas (LPG) installations up to 2,000 gallons aggregate water capacity to the plumbing subcode official. However, the Uniform Construction Code standard form for the Fire Protection Subcode Technical Section has not yet been amended to reflect this change. Please disregard the LPG item on this form. Inspection of these systems is the responsibility of the plumbing subcode official only.

Source: Kristy Paolillo
Code Development Unit

NEW JERSEY DEPARTMENT OF COMMUNITY AFFAIRS

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