



# The Commonwealth of Massachusetts

## State Board of Building Regulations and Standards

Michael S. Dukakis  
Governor

Kentarō Tsutsumi

Chairman

Charles J. Dinezio  
Administrator

# CODEWORD

October, 1987

### A SAFE INVESTMENT

In this time of bullish stock markets, a waning or flat inflation curve, and a booming building economy, prudent people turn their minds to investments. The ideal investment (if there were such a thing) would offer three attributes: (1) high yield (returns), (2) liquidity (the ability to convert to cash quickly) and, (3) stability (freedom from market fluctuations). Those who study the stock markets tell us that all three of these attributes never completely attend any investment. When one is present at least one other is absent. As an illustration we see that trustee securities, although offering stability, do not always offer high yield. When one seeks high yield, one sacrifices stability. Liquidity is nearly always a problem.

If you knew of an investment that possessed all three of the attributes mentioned above, would you invest? Yes, there is such an investment. For a small annual investment you not only can, but will experience a continually increasing yield. This investment is so liquid that you can possess the stock yourself and can "cash-in" weekly, semi-monthly, or monthly. As for stability, the investment is as stable as the investor.

Where can I get a piece of this investment and what is it? It is not found in any stock register or on any stock market, but you should be able to find it wherever you are - in yourself! Yes, this investment is called Professionalism!

What is professionalism? Of all the definitions I have encountered, the one that is most attractive comes from the American Heritage Dictionary: "One who has an assured competence in a particular field or occupation."

The key words in the above definitions are "assured competence". To assure something is to certify it and certification is something every competent building official should long for. Certification is a recognition and a declaration to all that one is competent in a field. In this vein it is gratifying to note that all three Massachusetts Building Inspectors' organizations have endorsed the concept of certification and the State Board of Building Regulations and Standards will work toward this goal in cooperation with them.

However, certification is the threshold of the door to Professionalism. The true professional never stops on the upward climb toward being the best that one can possibly in one's chosen field. The quest to be the best, that is another way of describing the road of professionalism. It takes effort - hard effort - but the investment is in one's self. And, this brings us full-circle, back to the subject of the Ideal, safe investment.

You are your own best investment! If you doubt this statement, think back to your first paycheck as a building commissioner or inspector. Compare that check with what you received last pay day. Is there a difference? How much of that difference is due to the fact that you have kept "on-top" of your profession? If the difference is not to your liking, could it be that you have not made the maximum effort to excel? Or could it be that your efforts have not been recognized because unlike other professions (e.g. teaching, law, etc.) there has been to date no standard against which to measure your efforts and competence? Certification will provide that standard to readily demonstrate your professionalism to employers and the building industry.

#### TITLE V REVISITED

We receive many inquiries about provisions of Title V, especially those which require that no building permit be issued until a disposal works construction permit (septic permit) has been issued. The issue is not a new one and has caused problems with the Massachusetts regulatory process for many years.

In 1979, the State Building Code Commission issued an official interpretation (mandatory for all Building Officials) which stated that it was up to the building official to determine whether provisions of Title V were applicable, and if so, whether they had been satisfied. The interpretation went on to explain that, because Section 114.1 requires that a building official must act on permit applications within thirty (30) days, he must make his determinations relative to Title V within that time period, and should not hold up a permit simply because the Board of Health has failed to act. Of course, denial of a septic permit or sewer entrance permit by the appropriate municipal authority would be grounds for denial of a building permit, as Section 113.5 of the Code requires that a permit applicant detail the intended method and amount of sanitation. Likewise an applicant who failed to construct the method and amount of sanitation shown on his application would be subject to revocation of his permit, because the permit would have been issued on the basis of the false statement or misrepresentation that the appropriate sanitation would be provided (See Section 114.7)

The real problem today, as in 1979, is that Boards of Health or Municipal Engineers do not always act on applications within thirty days of filing. This leaves the building official without timely data on which to make the determination that is his alone to make, the determination of whether a building permit may be issued.

We are currently working with the Department of Environmental Quality Engineering (DEQE) to try to resolve the issue of timeliness. We have indicated that, if Boards of Health (and Municipal Engineers) are held to the same 30 day standard of timeliness which the State Building Code requires of building officials, then there is room for resolution of the problem. We maintain that DEQE lacks authority through Title V to alter or regulate the building permit process. However, if the proper foundation of cooperation (equal standard of timely performance and compliance to a uniform state standard) can be established, we can build a cooperative process which is fair to all parties involved in the construction industry.

## CODEWORD

Today's CODEWORD is MEANS OF EGRESS. Although Means of Egress and Exit have the same dictionary meaning, and the terms are used interchangeably in the common vernacular, their meaning in the building code is somewhat different and quite explicit.

A means of egress has three components:

- 1) Exitway access - This includes passageways and aisles by which one has to use to reach an exitway. The access may not be marked or enclosed and may be nothing more than the route one takes from the corner of a room to reach a door into an exitway.
- 2) Exitway - This component comprises the system of protected passages, stairways, corridors, etc., by which one travels from the exitway access to the exitway discharge.
- 3) Exitway Discharge - This component is the means by which users are discharged into public open space at grade. It may be only a door, or a door and a ramp, or a door and a flight of stairs to grade.

In the more complicated cases, means of egress may be composed of passages of travel from positions in occupied or habitable spaces into corridors, down several stairways, through doors and down exterior stairs and ramps. In the simplest case the means of egress may be simply an aisle leading to a door leading directly outside at grade (in this case the exitway and exitway discharge are coincident). In any case the means of egress is the continuous and unobstructed path from any point in the building to a public way at grade.

## WHATS YOUR CODEWORD?

In the past several issues, CODEWORD has featured a word chosen by staff for comment and/or elaboration. So that this publication may be more responsive to its readers, you are invited to submit code words or phrases on which you would like the staff to comment. We will choose from those submissions the requests that appear more frequently or have the greatest general interest. Good news for those who are shy: requests may be submitted anonymously. It's your publication - why not use it? Submit your request to CODEWORD, One Ashburton Place, Room 1301, Boston, MA 02108.

## BOARD MEMBERS FOR AAB APPOINTED

On June 30, 1987, Governor Dukakis appointed Board Members for the newly created Architectural Access Board. The members are: Edward F. Kelly, Secretary of Public Safety Designee; Chris Palames, Director of Office Handicapped Affairs Designee; Secretary of Elder Affairs Designee - presently vacant; Larry Callaghan; Kathleen Kelleher; Gerald LeBlanc; Katherine McGuinness of Katherine McGuinness & Associates; Matthias Mulvey, Building Commissioner in Wayland; and Polly Welch, Welch & Epp Associates.

The Board is in the process of hiring an Executive Director and staff persons and will schedule and conduct training seminars for code officials in the near future.

(FOUNDED)

**RECENT STATE BUILDING CODE APPEALS BOARD DECISIONS**

Section 126.7:11 (Contents of Decision) of the Code states, "Any decision shall not be considered by any person or agency as a precedent for future decisions."

The Appellant testified that, although he possessed a valid Construction Supervisor's License issued by the State Board of Building Regulations and Standards, the City refused him permits as his local Builders License had been revoked.

The City responded that it had refused the permits on the grounds that the applicant did not have a local license. The City asserted that its license requirement pre-dated the State's licensing requirement and this licensing requirement may be maintained under Section 109.1.1.1.

The Board found that the City lacked the authority to deny the permits, notwithstanding the fact that the City had revoked its license. The Board identified the proper procedure for making a complaint against an individual's State license. The Board noted that Section 109.1.1.1 only authorizes a municipality to maintain a local license in those categories of construction for which no State license is required. Accordingly, the Board ruled that the City may not deny a building permit to the applicant until and unless the State's Construction Supervisor's License has been suspended or revoked.

**TWO COMPLIANCE OFFICER POSITIONS AVAILABLE**

The Architectural Access Board seeks two (2) Compliance Officers with knowledge of accessible design standards, construction standards and building codes to investigate cases, review designs and proposals and provide information and training to professionals and the general public. Applicants must have ability to travel throughout Massachusetts.

**SALARY: \$18,236.40 to \$23,478.00**

**SEND RESUMES TO:** Architectural Access Board  
One Ashburton Place, Room 1310  
Boston, MA 02108

The AAB is an Affirmative Action/Equal Opportunity Employer.

**BUILDING OFFICIAL VACANCIES**

We have received word that the following municipalities are seeking Building Officials:

Duxbury  
Huntington  
Marlborough  
Newton

If you are interested in or would like more information on any of these positions, please contact the appointing authority or personnel officer in the respective city or town.

## GIRDER DESIGN AND SHED DORMER ADDITIONS:

At one of the recent training seminars on Wood Frame Construction, one building official raised the question of the proper application of Table 2105-6 (Girder Design) to the typical "Cape" style home with a full shed dormer. Since this is a fairly common situation, we are including a summary of the answer.

**Question:** In designing or checking the main girder for a typical "Cape" style home with a full shed dormer, should Case III or Case IV of Table 2105-6 be used?

**Answer:** Case III should be used when applying Table 2105-6. The vertical loads from the roof and ceiling for this configuration are entirely supported by the exterior walls if there is no kneewall present. Without the kneewall, no load from the roof and ceiling is transmitted down through the central bearing partition to the girder.

With a typical kneewall located close to the exterior wall, only a small percentage of the roof and ceiling load is carried by the second floor joists to the central partition and down to the girder. Of the four cases in Table 2105-6, Case III provides the closest approximation of the loading on the girder. If a central partition is not present, Case I of Table 2105-6 should be used. With such an arrangement, all the roof and ceiling load is supported by the exterior walls whether or not a kneewall is used.

In designing/checking the framing members for a full shed dormer, the following points should be kept in mind:

1. The front roof rafters may conservatively be sized for the span from the exterior wall to the ridge, neglecting the kneewall, however:
2. The floor joists should be checked for the design live load for the span plus the concentrated load from the kneewall, even though the roof rafter design did not account for the support provided by the kneewall.
3. When putting a full shed dormer on an existing "Cape", the existing ceiling joists, which become the top story floor joists, should be checked to ensure that they are adequate for the required live load for living spaces versus the live load for attics for which they were originally designed.

COMINGS AND GOINGS

We are sorry to inform you that Senior Structural Engineer, John Curtin has left our employ for a position with a real estate development firm. Many of you have complimented John's excellent work, particularly with regard to his seminar on Wood Frame Construction. He will be sorely missed, and we know that you join with us in wishing him continued success in his new endeavor.

However, we are pleased to announce that Mr. H. C. Joel Webb has joined our staff. Joel, as he likes to be called, assures us that the H. C. stands for Harris Charles and not Holy Cow.

Joel was born and educated in Canada, and holds degrees in science, engineering and theology. He is a naturalized American citizen and has served as the Chief Building Official for the cities of Elmira, NY and Champaign, IL. He was adjunct Professor of Architecture of the University of Illinois for four years where he lectured in code interpretation and enforcement.

Joel has just returned from Saudi Arabia where he was Deputy Director of the Building Department of the City of Yanbur Al-Sin-algah, a department encompassing building codes, plans and development control, lease administration, environmental protection and municipal engineering. We welcome him aboard.

PLASTIC PIPE FOR SPRINKLER SYSTEMS

We still receive many inquiries as to whether or not the State Building Code permits the use of plastic piping and fittings for sprinkler systems. The Code does allow use of these materials under certain circumstances. For a more thorough understanding of the limiting circumstances, it is necessary to focus on the code requirements.

The Code references two National Fire Protection Association (NFPA) Standards for sprinkler system installation. They are:

- NFPA 13-1980 Standard for the Installation of Sprinkler Systems
- NFPA 13D-1980 Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Mobile Homes.

Both standards contain a specification-type listing for different types of ferrous or copper piping. However, both standards also state that, "...Other types of pipe or tube may be used, but only those investigated and listed for this service by a testing and inspection agency laboratory." The 1976 edition of the NFPA 13 Standard, which was previously referenced by our Code, also contains this identical wording.

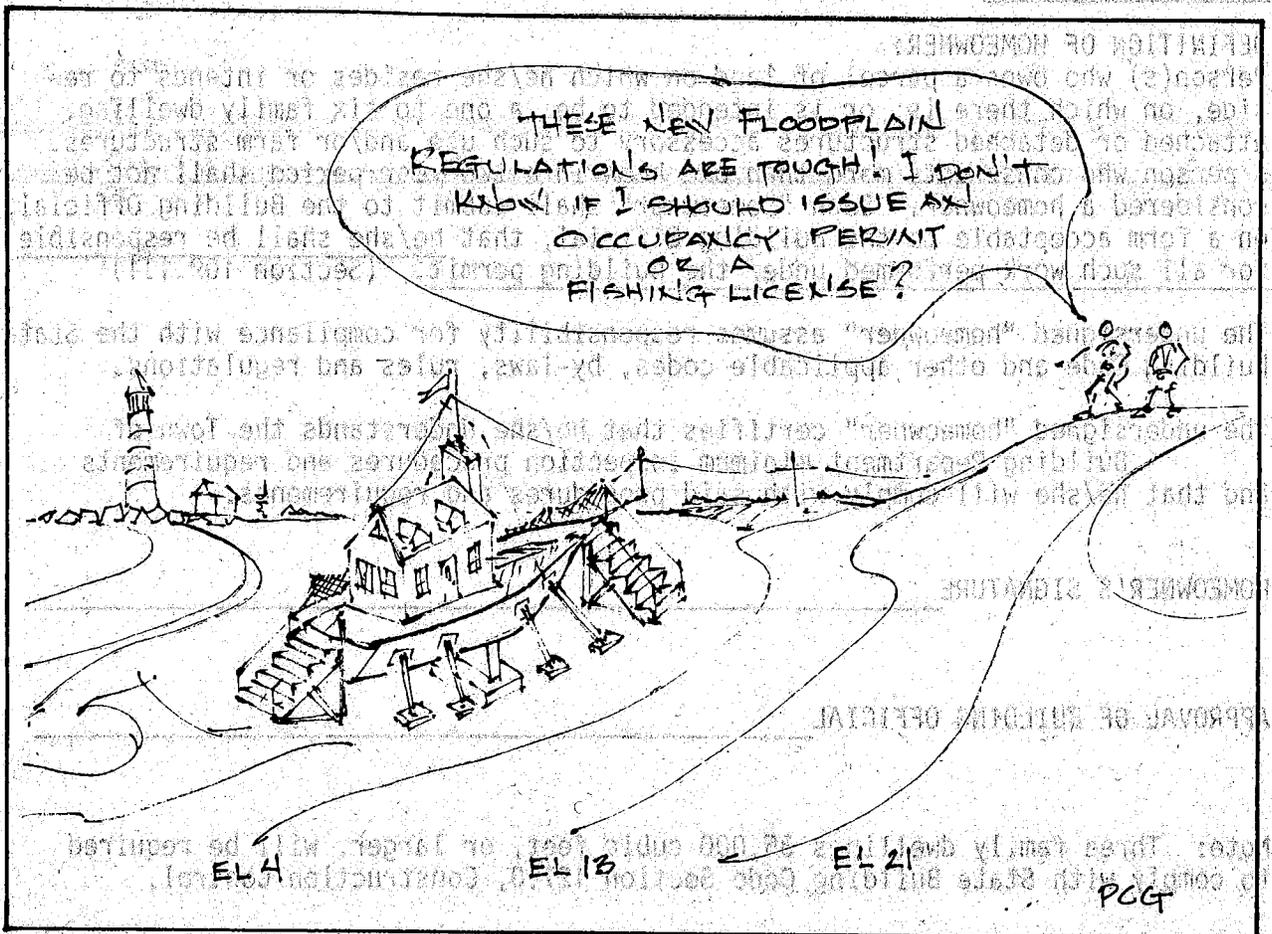
We are aware of at least three chlorinated polyvinyl chloride (CPVC) sprinkler systems which have been so investigated and listed. Should you be presented with an application to install a CPVC sprinkler system, we suggest you require that a copy of the test report be submitted, so that you may be aware of the limitations imposed on the use of that particular system. The reports we have examined limit use to wet systems with exposed piping, require special hanger spacings, are limited to certain light and ordinary hazard occupancies, and have special acceptance test requirements. However, each manufacturer's requirements may be slightly different, so the best practice when dealing with an unfamiliar system is to be guided by the conditions in the listing report.

TOWN OF  
BUILDING DEPARTMENT  
**HOME OWNER'S EXEMPTION**

The Code state that: "Any Home Owner performing work for which a building permit is required shall be exempt from the provisions of this section (Section 109.1.1 - Licensing of Construction Supervisors); provided that if a Home Owner engages a person(s) for hire to do such work, that such Home Owner shall act as supervisor."

Many Home Owners who use this exemption are unaware that they are assuming the responsibilities of a supervisor (see Appendix Q, Rules and Regulations for Licensing Construction Supervisors, Section 2.15). This lack of awareness often results in serious problems, particularly when the Home Owner hires unlicensed persons. In this case, our Board cannot proceed against the unlicensed person as it would with licensed Supervisor. The Home Owner acting as supervisor is ultimately responsible.

To ensure that the Home Owner is fully aware of his/her responsibilities, many communities require, as part of the permit application, that the Home Owner certify that he/she understands the responsibilities of a supervisor. On the last page of this issue is a form currently used by several towns. You may care to amend and adopt such a form/certification for use in your community.



TOWN OF  
BUILDING DEPARTMENT  
HOMEOWNER LICENSE EXEMPTION

Please print.

DATE \_\_\_\_\_

JOB LOCATION \_\_\_\_\_  
Number \_\_\_\_\_ Street address \_\_\_\_\_ Section of town \_\_\_\_\_

"HOMEOWNER"  
Name \_\_\_\_\_ Home phone \_\_\_\_\_ Work phone \_\_\_\_\_

PRESENT MAILING ADDRESS \_\_\_\_\_

City/town \_\_\_\_\_ State \_\_\_\_\_ Zip code \_\_\_\_\_

The current exemption for "homeowners" was extended to include owner-occupied dwellings of six units or less and to allow such homeowners to engage an individual for hire who does not possess a license, provided that the owner acts as supervisor. (State Building Code Section 109.1.1)

DEFINITION OF HOMEOWNER:

Person(s) who owns a parcel of land on which he/she resides or intends to reside, on which there is, or is intended to be, a one to six family dwelling, attached or detached structures accessory to such use and/or farm structures. A person who constructs more than one home in a two-year period shall not be considered a homeowner. Such "homeowner" shall submit to the Building Official, on a form acceptable to the Building Official, that he/she shall be responsible for all such work performed under the building permit. (Section 109.1.1)

The undersigned "homeowner" assumes responsibility for compliance with the State Building Code and other applicable codes, by-laws, rules and regulations.

The undersigned "homeowner" certifies that he/she understands the Town of Building Department minimum inspection procedures and requirements and that he/she will comply with said procedures and requirements.

HOMEOWNER'S SIGNATURE \_\_\_\_\_

APPROVAL OF BUILDING OFFICIAL \_\_\_\_\_

Note: Three family dwellings 35,000 cubic feet, or larger, will be required to comply with State Building Code Section 127.0, Construction Control.