The Commonwealth of Massachusetts

STATE BOARD OF BUILDING REGULATIONS AND STANDARDS

Michael S. Dukakis
Governor

Kentaro Tsutsumi
Chairman

CODEWORD

January, 1990

Charles J. Dinezio
Administrator

HOW SAFE CAN WE AFFORD TO BE ?

What does the fiscal crisis mean to the building regulatory process?

To respond simply, it means cutbacks in services provided by the State and by the cities and towns.

Who will suffer?

The most severe of the State cuts will be felt by:

* City/town Building Departments since neither the State Board of Building Regulations and Standards (BBRS) staff nor the State Building Inspectors in the Division of Inspection, Department of Public Safety (DPS) will be able to:

  Provide training programs or continuing education programs for the city/town building inspectors.

  Provide technical assistance when city/town building inspectors have code-related questions/problems.

* The Commonwealth itself will lose since the shortage of State Inspectors (Building, Elevator and Engineering) will affect the annual inspection of elevators, boilers and the safety aspects of all state-owned buildings and certain health care facilities; as well as the plan reviews/inspections of buildings under construction by the Commonwealth.

The cuts will also be felt by:

* Architects, Engineers, Developers and Builders since, again, the amount of the technical assistance (plan reviews, site inspection of code-related problems responding to verbal and written inquiries) provided by both the BBRS and the State Building Inspectors will be reduced substantially. When code problems/violations are not resolved in a timely fashion, they can result in the expenditure of several millions of unplanned for dollars.

Also affected will be:

* Building owners - whether of large commercial buildings, large developments such as malls, institutions such as schools, hospitals or prisons, or small single family homes; and

* Consumers - because we all go in and out of buildings every day of our lives which we <u>assume</u> are safe.

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Why these last two categories? Because State law (MGL c143, §3A) places the primary responsibility for the enforcement of the State Building Code, which applies to all buildings and structures, on the city/town building inspectors.

What does all this mean? It means that if the State cannot fund its agencies that provide the services cited, and the cities and towns are also forced to reduce staff because they, too, are encountering fiscal problems, then we in Massachusetts cannot assume that buildings (including elevators, boilers and HVAC systems) will be safe. In the past decade, Nevada experienced the tragic fire of the MGM Grand Hotel; Kentucky, the fire at the Beverly Hills Supper Club; and Connecticut, the collapse of the L'Ambiance Plaza. Several hundred people were killed. In all three cases, there were insufficient State resources available to provide up-to-date building regulations and inspections.

Most people simply assume the buildings where they live, work, play or enter to complete a business transaction are safe. However, all of us who are involved in the building regulatory process know what goes into a building to make it as safe as possible - a current building code; plan review; inspections during construction; appeals to determine whether or not to allow variances; resolving code-related problems; ensuring that all Federal, State and local laws/regulations-zoning, conservation/environmental, building, plumbing, electrical and health - have been met so that a certificate of occupancy finally can be issued.

Most hazards we encounter in life are not long lasting. For example, the speeding driver endangers us only so long as he is speeding. Unsafe building construction, however, remains hazardous for the life of the building, exposing present and possibly future generations to the risk of injury or death.

So, in the long run, the taxpayers - and we are all taxpayers - pay whether it is to spend additional monies to correct unsafe buildings or through unnecessary personal injuries or life loss.

Both the BBRS and the Division of Inspection have been substantially understaffed for a number of years. The irony is that both agencies are self-supporting. For example, using FY 89 figures, for every $1.00 spent by the BBRS, $16.91 was returned to the general fund.

Must it take another building disaster to make us realize that building safety is not a luxury but rather a necessary part of government's budget - and a bargain at that!

TERMS OF THE TRADE

This issue's Term of the Trade is dado. According to the Construction Glossary, by J. Stewart Stein, AIA, FCSI, it is:

1.) "A rectangular groove across the width of a board of plank; in interior decoration, a special type of wall treatment."

2.) "Lower portion of an interior wall, often treated or decorated differently from the upper portion of the wall."

The dado is a common detail in some of the older homes throughout the country. The material of choice is most often wood. Depending upon the style of the home, the dado can vary in design from a flat stock to an intricate pattern of raised panels and moldings.

Although the practice of incorporating the dado into modern home design has lessened over the years, it remains a common detail in restaurants, hotel lobbies and the like. Of course, the extent of its use is governed by Section 920.0 regulating the use of interior wall and ceiling finish.

RECENT STATE BUILDING CODE APPEALS BOARD DECISIONS

Section 126.7.11 (Contents of Decisions) of the code states, "Any decisions shall not be considered by any person or agency as a precedent for future decisions."

Appeal Docket # 88-94

The local building official refused to issue a permit for a mall/hotel/office building citing a violation of Section 432.2.4 of the building code.

The Appellant proposes to renovate the exiting lobby and corridor of the structure which will extend the corridor and cause an existing exit to be removed. The existing width of the mall measures 14'-0". Plans for the renovation call for a new width of 14'-6" with an increase in length of some 40'-0". The building code requires a minimum dimension of 30'-0" for mall width, regardless of length.

The Appellant did not contest the determination of the building inspector. However, he felt that a recent study had shown pedestrian traffic within the mall to be light and would likely remain as such. Also, he claimed, the additional six inches will help with traffic flow.

Although the Board understands that the width of the mall cannot be substantially increased due to surrounding physical constraints, it feels the existing and new mall conditions are significantly below the requirements of Section 432.2.4. The Board voted in agreement with the local official, stating that the inadequate width along with the increase in length and the elimination of an exitway detracts from the intent of the building code and would, most assuredly, create a safety hazard. Thus, the Board denied the request for variance.

Appeal Docket # 88-117

The local building official refused to issue a Certificate of Occupancy for a series of residential buildings noting the structures did not conform to the requirements of Section 2102.8.7.

According to the Appellant, the difficulty is the result of the misplacement of the concrete footings. The depth below grade of the footings did not correspond to the dimensioned plans causing a continuous error in the building height. When backfill was placed and the site was landscaped, finish grade was nearer to the wood siding than the six (6) inches required by the Code.

To correct the problem by regrading, argued the Appellant, would be impossible in that it would interfere with site drainage and could result in water leaking into foundations spaces.

Both the Appellant and the local inspector agreed that the best method to resolve the issue was to provide a concrete apron around the perimeter of the foundation. The apron would extend twelve (12) inches below the earth and the area would be slightly regraded to allow proper drainage. The addition of the apron would likely prevent possible insect infestation.

The Board agreed that the concrete apron would satisfied the intent of the building code and granted relief from Section 2102.8.7.

CORRECTION

There has been an error reported with respect to the text of last issue's Codeword, page 7; last paragraph, first sentence. The correct wording of the sentence is: "Within any flight of stairs, a three sixteenths (3/16) inch maximum variation in riser height or tread width is permitted." The word minimum as it appeared in this sentence is incorrect. Please make note of the correction.

CAN IT HAPPEN HERE?

The recent earthquake that rocked San Francisco and surrounding areas has produced quite a stir throughout the country. Many question the likelihood of such an event occurring in this area. The concern is only natural, but is it warranted?

Well, although the answer to this question is not a simple yes or no, the probability of an event of this magnitude occurring in the Massachusetts region in our lifetime may not be very large. Predictions have been made, however, that suggest a sizeable quake could shake this area sometime in the future, the results of which could be quite damaging if we are caught unprepared. Forces of nature are difficult to combat, knowledge and preparation are the best forms of defense. To learn we must look to the past to study the patterns and origins of earthquakes.

Although reports of earth movement exist since the days of our earliest records, we have not truly come to understand the causes of earth movement until quite recently. References are made to earthquakes in the Bible as well as in early Chinese and Japanese writings. These accounts, however, were sketchy descriptions of events that could not be explained. As was the habit of man in dealing with the unknown, many attributed the occurrences to superstitious beliefs. Some claimed that the motion of a colossal beast such as whale or spider caused the shaking of the earth.

Thankfully, we do not adhere to such philosophies today, but it was a long road to discovery. Studies performed by Alexis Perry of Dijon, France and R. J. Mallet of Dublin Ireland during the 1800's were the first works to chronicle actual quakes. Through this research and further studies, scientists were able to identify two main types of earthquakes. The tectonic earthquake is most common. It is caused by the sudden release of strain by slippage of subterranean rock along a fault. The great San Francisco earthquake of 1906 occurred along the now famous San Andreas fault, splitting the earth's surface for a distance of 270 miles in length and 21 feet in width, in places. The results of this were, of course, disastrous. The second type of quake is usually much smaller and less damaging. The volcanic earthquake is the result of sudden movement of liquid lava below the earth's surface or from fracturing of rocks from lava movement.

As time progressed, knowledge was gained. In 1931 the Modified Mercalli Scale became the first measure of a quakes intensity gauging damage in terms of destruction to man made structures. Then, in 1935, Charles F. Richter, a U. S. seismologist, presented the measurement which we now use to determine the severity of a quake. The Richter scale measures the magnitude of an earthquake as a logarithmic function of the maximum recorded amplitude. Tremors of magnitude 2 on this scale are quite common and are generally the smallest shocks an individual is likely to notice. As the scale rises a seemingly small amount, however, the destructive force of the quake jumps dramatically. The October tectonic quake in San Francisco, as we are probably all aware, measured M7.1 on this scale.

Progressing further, high speed electronic computers allowed scientists to locate the foci, or the regions of the earthquake waves. With this, a large number of tracking stations were erected throughout the country and, although prediction remained difficult, scientists could search for warning signs in the strains of epicentral regions, examine changes in the physical and chemical properties of rocks and fluids near fault locations and record changes in the earth's magnetic field.

Today, analysts believe the occurrence of earthquakes is largely restricted to two long narrow zones. The first zone surrounds the Pacific ocean, the other extends from the Azores Islands eastward to southeastern Asia. A third minor zone runs down the center of the Atlantic Ocean along the mid-Atlantic ridge. In spite of the location, Massachusetts has suffered some rather large quakes. The earliest recorded quake in Massachusetts is that of June 11, 1643. The largest Massachusetts earthquake occurred on November 18, 1755 with its epicenter offshore at Cape Ann. Records estimate the Modified Mercalli Intensity to have been between MMVI and MMVII, or about magnitude M5.0 to M6.0 on the Richter Scale.

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Fortunately, as strides were made in understanding earthquakes, tremendous advances were also achieved in related disciplines. As more information was made available as to the sources and effects of quakes, engineers were better able to design structures to combat their forces. This knowledge was reflected in building codes and the results have been excellent.

As a comparison, the Armenian earthquake of December 7, 1988 measured M6.7. The death toll from this quake reached 25,000 and about 500,000 more individuals were made homeless. Destruction of property was estimated at 15 billion rubles (about 9.5 billion dollars) which is a record loss for a twentieth century quake of this magnitude. The population of the affected area was about 1,000,000. Although their region has known a long history of high level seismic activity, Armenia did not institute a building code to guard against its effects. Thus, cities such as Spitak, which consisted of mainly modern panel-built high rise buildings and traditional unreinforced masonry buildings, were totally destroyed and the population virtually exterminated.

The San Francisco quake of October 17, 1989, on the other hand, was not nearly as dramatic. Although the magnitude was actually higher (M7.1), the resulting damage and loss of life was significantly less. The epicenter was located in Loma Pieta, southeast of Santa Cruz. Most areas struck by the quake were densely populated, with about 6,118,000 people in the affected area. The confirmed death toll for the entire affected region was, however, only 64 with 6 people still missing. About 3,000 people were injured during the incident and 14,000 individuals were made homeless. The estimated cleanup and repair cost is about 12 billion dollars.

Any loss of life, of course, is a tragedy. Yet, the San Francisco disaster illustrates that properly designed and enforced building codes can have a profound effect in protecting life and property during an earthquake. Unfortunately, not all the structures were protected by modern earthquake provisions. The largest fatalities, in fact, were the result of the collapse of the Nimitz Freeway, a structure erected prior to the institution of seismic regulations in structural design.

In Massachusetts, we have experienced about 20 earthquakes since the big one in 1755. Luckily, each was low level tremors, some caused moderate damage in poorly designed structures, but most caused little or no damage. Fortunately, we have heeded the lessons that history has taught. Section 716.0 of the Massachusetts State Building Code is dedicated to seismic regulation. This text identifies design provisions for various types of construction. The regulations were prepared to furnish a basic guideline to provide a minimum standard for the evaluation of building design for resisting the maximum probable seismic loads for this area. With few exceptions, all new structures in our state must be designed to conform to these requirements. Older structures, of course, continue to be a problem. Like San Francisco, Boston and other surrounding cities and towns, find their streets lined with unreinforced masonry structures. These buildings are most vulnerable to seismic loads because they lack sufficient strength to resist lateral forces. At present, however, the Seismic Committee for the state of Massachusetts, a group of learned and dedicated volunteers, are busy developing provisions which will safeguard these types of structures as well.

The seismic provisions of the Massachusetts State Building Code are based on solid engineering principles and extensive experience. The objective of the regulation is to protect the lives of all who reside in the state. If, in fact, we are to endure the tragedy of a major earthquake in Massachusetts, our codes are ensuring that the damage will be minimal.

We wish to thank Prof. Kentaro Tsutsumi, BBRS Chairman, and Mr. Norton Remmer, Chairman of the Seismic Advisory Committee, for their guidance in the writing of this article. Also, we wish to thank all the members of our Seismic Advisory Committee for their hard work and dedication.

CODEWORD

This issue's **CODEWORD** is actually a series of terms. As we have just endured one of the coldest December's on record these are words which we all should come to know. Each plays a role in a very important matter called energy conservation.

There are two major enemies in the struggle to conserve energy. One is the escape of heat from a building known as <u>heat loss</u>. During winter months when temperatures are colder outside than in, heat attempts to rush towards the cold. Conversely, in summer months, the warmer outside air is absorbed into the building. This absorption is termed <u>heat gain</u>. [redacted] (There are many factors which contribute to the consumption of energy, such as infiltration, summer gains, free heat gain ie: lighting, machinery etc. For purposes of clarity, however, this study will focus mainly on the loss of heat through a wall surface due to conduction, a method by which heat flows from a warm object to a cooler object. Some of the other causes will be topics for future articles.)

In an effort to reduce the escape of heat out of a structure, we generally provide greater amounts of insulation. Although products such as glass fiber batts or rigid polystyrene are excellent in their insulating qualities, they are not the only materials that retard the flow of heat. Storm windows or double and triple glazed windows are also notable for their effects against heat loss. In fact, each individual building component reduces this process to some extent. [redacted]

[redacted] Unlike R-values, however, which are applied to single materials, U-values are applied to the composite of all materials used in the construction of the building. [redacted]

Also important is a concept called the <u>degree day</u>. This idea sometimes causes confusion, but if examined closely, it is rather easy to understand. The degree day is a measure of temperature differential. If the average outdoor temperature is one degree below the temperature of the building for a given day, the heating load placed on the building is measured in terms of one degree day. In practice, 65 degrees Fahrenheit is most commonly used as the base temperature for measuring degree days. This figure is used because most buildings do not require heat until the outdoor temperature is below 65 degrees. For example, if the outdoor temperature is 60 degrees for five days, then 25 degree days result (5 days) x (65 - 60 degrees). or, if the outdoor temperature is 64 degrees for 25 days, then 25 degree days would result.

The number of degree days vary in different regions throughout the country; as a function of temperature, this is only logical. An area such Orlando, FL, for instance, would experience just 800 winter degree days in a year, whereas Boston, MA experiences about 5600 degree days.

In order to illustrate these concepts further, and show how they can be practically applied, turn to Figure A on the following page. This figure depicts a typical wall section for an average home. Below the drawing is a table referencing the overall R-value for the wall. The first column represents an insulated surface, the next shows the same wall minus the insulation.

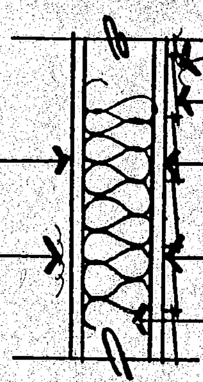

FIGURE A
(Not to scale)

WALL CONSTRUCTION	*INSULATED WALL RESISTANCE, R-VALUE*	*UNINSULATED WALL RESISTANCE, R-VALUE*
Outside surface film, 15 mph wind	*0.17*	*0.17*
Wood lapped bevel siding	*0.81*	*0.81*
1/2" plywood sheathing	*1.32*	*1.32*
3 1/2" air space		*1.01*
Building paper	*0.06*	*0.06*
3 1/2" fiberglass k. f. insulation	*11.0*	
Inside surface film	*0.68*	*0.68*
1/2" gypsum wall board	*0.45*	*0.45*
Total R-value	*14.49*	*4.5*

As expected, the overall R-value for the insulated wall is far greater than the uninsulated wall. But this is only common sense, and it does not particularly shed much light on the subject of energy conservation. It is with these figures, however, along with their reciprocal U-values (1/14.49 or 0.07 and 1/4.5 or .22) that we are able to perform calculations that do. One such calculation is that for heat loss per square foot of wall area. (To make matters simple, assume 72 degrees room temperature and 0 degrees outdoor temperature) This formula reads:

$$\text{Heat loss/s.f.} = \frac{\text{Temperature difference room to outdoors}}{\text{Total resistance}} = \frac{72 - 0}{14.49} = 5.0 \text{ BTU/hr.}$$

This, seemingly, is not a large loss of heat. Consider, however, that this equation observes only one square foot of wall space for only one hour during the day. Multiplying this result to encompass the entire winter season produces a much greater figure. This equation is a bit different from the formula above, however. Because of fluctuations throughout the year we must use the concept for degree days to represent the temperature differential. In this case we have chosen that for Boston, MA. Also changed is the use of the U-Value as opposed to the R-value. In reality, the concept is identical in each equation for, as we have seen, the U-value is merely the reciprocal of the R-value.

The equation for heat loss for the winter season is:

Heat loss = (wall area) (24 hrs/day) (degree days) (U-value for wall) =
(1 square foot) (24) (5600) (1/14.49) = 9408 BTU

The corresponding figures for each equation for the uninsulated walls are:

Heat loss/s.f. = 16 BTU/s.f.
Heat loss/season = 29,568 BTU/season

CODEWORD - CONTINUED

These figures begin to establish a more realistic picture of the importance of proper insulation of structures. The consumption of energy expressed in BTU's per hour or per season is something we can understand clearly. It can be equated to matters which we are more familiar with, such as the consumption of automobile fuel per miles traveled. In either case, it is important to realize how each can be reduced.

The example above illustrates the pronounced reduction in lost heat when a building is suitably insulated. Remember, this represents but a fraction of one wall surface. As you can imagine, adding calculations for heat loss through roofs, floors, slabs, doors, and windows causes the loss to skyrocket literally into the millions of BTU's per year. With these figures, we could also calculate the dollar cost savings for the insulated versus the uninsulated areas. This is when reality truly strikes home.

Reference Source: Solar Energy: Fundamentals in Building Design by Bruce Anderson, Copyright 1977

HOLDING DOWN THE FORT

We have received much positive input concerning the publication of last issue's "The Ten Most Common Violations in New Home Construction". It is always interesting to compare your thoughts with those of your peers. We are sure many of you already had some of these items outlined on your own list. Often times, these surveys can stir as much debate as agreement, however.

Our sources have revealed that such a debate is brewing over item number eight (8), Omission of Anchor Bolts. As stated in the study, the basis for the inclusion of anchor bolts is Section 854.5. This, of course, is part of the general text of the Code. The requirement is not reiterated within Article 21, which, as expressed in Section 2100.1 is: "...a single comprehensive reference for one and two-family dwellings". Why, then, are anchor bolts a necessity in new home construction?

The answer to this question lies within the lines of Section 2100.1.1 The last sentence of this segment reads: "... any requirements for which provisions are not made within this article shall be subject to the provisions of the other articles of the basic code". Section 854.5 is not specific as to which types of buildings are governed by these rules, but it is very definite in its regulation that these structures must "resist wind uplift".

Since homes, as all buildings, are subject to wind loads, they too must be securely anchored to their foundations as specified in Section 854.5.

We hope this helps resolve the controversy concerning this matter. As always, we appreciate your comments and welcome your ideas for future articles.

OFFICE NEWS

There have been a few changes in the staffing of our Public Safety personnel over the last few weeks. The names have remained the same, only the locations have changed. If you are experiencing a bit of difficulty in locating certain individuals, the following information should ease your search:

1.) Mr. William Archibald is now stationed in our Fall River office. Bill will be assuming the duties of state building inspector for this region.

2.) Conversely, Mr. Peter Goodale has taken over the responsibilities of Bill's former Boston district. Peter will remain in the McCormack Building, One Ashburton Place.

3.) Mr. Alfred Downey will be joining the forces at the McCormack Building as well.

4.) Finally, Mr. Arthur Ritacco is now located in the Worcester office.

We wish each of these gentlemen great success and happiness in their new assignments.

POWER VENTERS AND THE STATE BUILDING CODE

A device becoming more popular for use with residential heating systems and other fossil-fired appliances, is the "power venter".

A power venter and associated exhaust piping, are used in lieu of a masonry chimney or approved fabricated metal chimney - this can be done as a power venter creates an mechanical draft due to the presence of a motorized fan within the power venter; because of this ability, horizontal rather than vertical venting of appliances is possible (such venting is typically referred to as "direct venting" or "through-the-sidewall venting").

Section 2114.1 of the Building Code states that "All fuel burning comfort heating and comfort cooling appliances shall be vented to the outside. Venting systems shall consist of approved chimneys, approved vents or a venting assembly which is an integral part of a listed appliance or may be designed in accordance with accepted engineering practices." Section 1006 of the Building Code expands further the types of gas-fired and oil-fired appliances required to be vented.

For use in Massachusetts, power venters must be approved by several State agencies - first, for all power venters, approval of the State Board of Building Regulations and Standards (BBRS) is required; additionally, for gas-fired appliances, approval of the State Board of Examiners of Plumbers and Gas Fitters is required; for oil-fired appliances, approval is required from the State Fire Marshal.

The BBRS is concerned that power venters are correctly selected for the BTU rating of the appliance and has great interest in the maximum temperatures that could be reached anywhere in the exhaust system downstream from the appliance proper and in particular, the temperatures that might be reached on the surface of the through-wall thimble/vent hood where the flue gases are ducted, typically through walls of combustible construction, to the outside.

Items that should be considered in inspecting buildings where power venters are used include:

1. Is the unit approved for use in Massachusetts (note that for listed appliances, it may be that the power venter is part of the listing)?
2. Is the unit installed in accordance with the manufacturer's instruction manual? (note that draft hoods or dampers or other may be required as part of the installation; that temperatures of incoming flue gases to the power venter are typically limited to values of around 600°F or power venters are limited to newer fossil-fired equipment with operating efficiencies of 70% to 80%, minimum; that through-the-sidewall thimble/vent hoods may not be allowed to be installed on a house with vinyl siding, etc.). WHEN IN DOUBT, HAVE THE HEATING CONTRACTOR SHOW THAT THE INSTALLATION IS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS!
3. The location of the vent hood must be in accordance with the manufacturer's instructions - such instructions typically will reference A.N.S.I. Z223.1 - a summary of which is as follows:

   * The vent hood of a mechanical draft system shall be not less than 7 feet above grade when located adjacent to walkways.
   * A vent hood shall terminate at least 3 feet above any forced air inlet within a 10 foot radius.
   * A vent hood shall terminate at least 4 feet below, 4 feet horizontally from, or 1 foot above any door, window or gravity air inlet into any building
   * The vent hood shall not be installed closer than 3 feet from an inside corner of an "L"-shaped structure.
   * The vent hood shall be installed at least 12 inches above grade.
   * The vent hood must be kept at least 36 inches away from bushes, shrubs, or any vegetation that may restrict the flow of flue products and must be kept clear of any leaves, weeds, or other combustible materials.

Currently, the BBRS has approved the following types of power venters:

1. Field Controls Company, Kingston, NC
   Models PVE-1, PVE-2, PVE-3, PVAE-1, PVAE-2, PVAE-3, SWG-3, SWG-4, SWG-5, SWG-6, SWG-7 and SWG-8.

2. Tjernlund Products, Inc., White Bear Lake, MN
   Models HSUL-J, 1, 2; HS115-J, 1, 2; HST-J 1, 2; VP-2 and VP-3.

CONSTRUCTION SUPERVISOR'S LICENSES REVOCATIONS AND SUSPENSIONS

In the October issue of **CODEWORD** we reported the indefinite suspension of the license of Mr. Andrew B. Consoli. Mr. Consoli has since demonstrated that he has, in fact, paid the required licensing fee. In accordance with the decision of the Board of Examiners, then, license number 045593 has been reinstated to Mr. Consoli.

The following Construction Supervisor's Licenses have been suspended for failure to pay the required license or license renewal fee:

Almeida, Raymond 013477	Atwood, Ernest 009113	Balich, Joseph N. 040469
Bourgeous, Donald 023782	Chamberlain, R.C. 039760	Cunningham, Alan W. 001109
Dabelis, John J. 017283	Dwyer, David W. 049457	Franker, Christopher 040896
Harding, Henry K. 034284	Horan, James M. 005411	Immel, Douglas 050315
Lambert, John 049481	Lopes, Raymond C. 013645	Morrissey, Gary 040582
McCabe, Donald A. 036082	Van Beech, Francis 049455	

END OF A DECADE

The end of the eighties has arrived. The decade saw many accomplishments. Wayne Gretzky emerged as one of the greatest hockey players of all times. An actor was elected to the highest position in the land. But probably the most astonishing of all achievements throughout this period, was that the Patriots appeared in the super bowl. We all know how that turned out, though.

As a state, Massachusetts also evolved during this time. This state saw a tremendous surge of construction during the eighties. Unfortunately, increases in the cost of real estate equaled the soar of the building boom. This, of course, created much work for the building trades and, in turn, our building officials, sometimes to the point of overburdening them. Nonetheless, we have made it through the storm. Now it is time to sit back and reflect on some of the events of 1989 and years previous. Such contemplation often arouses feelings of regret but sometimes induces warm emotions of joy. Yet, inevitably, the thought that emerges most is; what will it be like next year?

This is when everyone breaks out their pad and pen and frantically scribbles down all the things that they are and are not going to do next year. This they call their list of resolutions.

We thought it would be nice, for once, to forego the resolutions and jump right into the wish list. After all, if we're going to list a bunch of stuff that is unlikely to happen, why not make it good. This we will term :

THE BUILDING OFFICIAL'S WISH LIST

1.) I wish that I would receive a set of plans that actually reflects the work that is going to take place on the job site, not a reasonable (or unreasonable) facsimile.

2.) I wish that our sources of energy in this country were limitless, so I wouldn't have to learn the requirements of the new energy code.

3.) I wish that my selectmen/mayor truly understood all those things that a building official does, and those things which he is accountable.

4.) I wish that the revenues raised by building departments were reflected in the budgets allocated to building departments.

Well, regardless of whether or not any of these wishes come true, we hope each of you got your wish for a very merry and joyous holiday season.

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SUPERVISING EDITOR — *Robert Anderson*
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