



CODEWORD®

THE OFFICIAL NEWSLETTER OF THE BOARD OF BUILDING REGULATIONS & STANDARDS

~April 1999~

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JANE PERLOV APPOINTED SECRETARY OF PUBLIC SAFETY

Governor Cellucci has appointed former high-ranking New York City police officer Jane Perlov as Secretary of Public Safety. Secretary Perlov officially took up her duties on January 18, 1999.

The BBRS welcomes Secretary Perlov and looks forward to working with her as we enter the new millennium.

JOSEPH LALLI APPOINTED ACTING COMMISSIONER OF PUBLIC SAFETY

Joseph Lalli has been appointed acting Commissioner of Public Safety by Governor Cellucci. Commissioner Lalli



was formerly Deputy Commissioner of the Department and also General Counsel to the Board of Building Regulations and Standards. Commissioner Lalli brings a wealth of experience and a unique perspective to the office of Commissioner. As a

practicing attorney, Mr. Lalli is a Town counsel and, as such, has first hand insight into development, zoning and public safety issues faced by municipalities. As General Counsel to the BBRS, Commissioner Lalli also has an excellent working knowledge of the State Building Code.

THE USE OF "WEDGES" ON DOORS EQUIPPED WITH AUTOMATIC CLOSING DEVICES

It is unfortunately all too common to see doors which are equipped with automatic closing devices wedged open with wooden wedges, rubber wedges, bricks, trash containers and the like. The doors are normally wedged open for purposes of facilitating movement of people in a building. Is this practice advisable?

Ordinarily, doors are not designed to close automatically. However, in some instances, a building's design or the building code may dictate that they do. It may appear cumbersome to have series of doors in the closed position since they may impede movement through a building. So why is it so important that the doors are not "held" or "wedged" open?

In addition to allowing occupants of a building to move from one space to another, open doors also provide an opportunity for smoke and other products of combustion to move freely throughout a building during a fire. These products of combustion can be highly toxic and can, very quickly, disorient, incapacitate and/or kill. The vast majority of fire fatalities result from inhalation of products of combustion.

The Massachusetts State Building Code, has historically required smoke enclosures and fire rated enclosures to provide passive resistance to the spread of fire and products of combustion. Containment of fire provides the valuable time necessary for occupants of a building to exit safely. However, fire or smoke resistive partitions are only as good as their weakest link. The Massachusetts State Building Code requires all penetrations or openings through fire separation walls



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or smoke containment walls (including pipes, conduits and larger penetrations required for door openings), to maintain the fire or smoke resistive properties of the wall. Pipes and conduits must be firestopped: door openings must be provided with fire resistance rated doors. The fire or smoke partitions constitute a major component of a building's fire and life safety systems.

In order to maintain the fire resistive or smoke resistive properties of a wall, doors must be assured of being in the closed position in the event of a fire. The Massachusetts State Building Code therefore requires that such doors be equipped with self-closing devices (780 CMR 716.5 and 1015.4.1). These self-closing devices are intended to operate automatically and are not permitted to rely on the actions of an occupant, in particular, an occupant whose behavior in an emergency situation may not be predictable. Doors which are wedged open, have the potential for allowing rapid smoke spread throughout a building which can cause occupants who are remote from the fire to be quickly overcome by smoke.

For occupant convenience, the building code permits fire or smoke doors to be held in an open position, but only by appropriate use of APPROVED "hold open" devices. The Massachusetts State Building Code carefully regulates the use of such "hold open" devices and mandates that they release automatically upon activation of an automatic fire detector, a fire alarm or sprinkler system or loss of power to the device itself or loss of power to the building. Maintaining doors in an open position by the use of wooden (or other) wedges violates this fundamental life safety concept and represents a clear potential for disaster in a fire

CODEWORD - FIRE SEPARATION ASSEMBLY

A fire separation assembly is an assembly of materials, which is designed and constructed to resist the spread of fire for a specified period of time (ordinarily in hours or fractions of hours).

The components of the assembly need not necessarily be non-combustible - wood studs can be part of a fire rated assembly. (note, however, the construction type of the building will dictate whether the use of combustibles is permitted)

In order to assure that different fire separation assemblies are compared "apples for apples",

assemblies are constructed and tested using a standardized test methodology so that tests can be accurately replicated for each assembly, thereby allowing different assemblies to be compared under identical test conditions.

The standard for fire testing of assemblies referenced by the State Building Code is ASTM E119 ⁽¹⁾

The test method requires that a material test assembly is subjected to a "controlled" fire - The temperature is required to follow a time-temperature curve, which is the same for all tests.

Time	Temperature	
	Fahrenheit	Centigrade
5 minutes	1000	538
10 minutes	1300	704
30 minutes	1550	843
1 hour	1700	927
2 hours	1850	1010
4 hours	2000	1093
8 hours or over	2300	1260

Time Temperature Curve (from ASTM E 119)

Thermocouples attached to the assembly at locations specified in ASTM E119 record temperatures as the test proceeds. The test ends when the thermocouples reach a pre-defined temperature, specified in ASTM E119, or if burn through of the test sample occurs. The period between the start and end of the test is recorded in HOURS and the assembly is rated accordingly.

Assemblies, which have been independently tested for various hourly ratings, are listed in the UL Fire resistance directory and the US Gypsum GA 500.

(1) American Society for Testing and Materials ASTM E119 "Standard Test Methods for Fire Tests of Building Construction and Materials".

BBRS MEMBER PROFILE CHIEF WILLIAM V. DOLAN



This issue of Codeword profiles Chief William (Bill) V. Dolan of the North Andover Fire Department who is appointed to the Board of Building Regulations and Standards as the "Head of a Local Fire Department".

Bill has been a member of the North Andover Fire Department since 1976 and rose to the rank of chief in 1982. Appointed to the BBRs in 1993 by Governor Weld, Bill also serves on the Fire Prevention Fire Protection Advisory Committee (FPFP) and the State Building Code Appeals Board.

Bill earned a Bachelor of Science degree in Fire Science Administration from Salem State College and is a Graduate of the National Fire Academy Executive Fire Officer Program. He presently serves on the board of directors of the Merrimac Valley Trauma Intervention Program and is a part time faculty member of the North Shore Community College, where he teaches an associates degree course in Fire Science.

Bill is an advocate of built-in fire protection" for all occupancies including residential fire protection systems - indeed, in 1992, he installed a residential sprinkler system in his own home.

Bill and his wife Colleen are the proud parents of son, Kyle and daughter, Kaitlyn. In his spare time, Bill enjoys hunting, fishing, walking, reading and skiing and is actively involved in local community projects and committees.

CONSOLIDATING CONCRETE

Consolidation (also often termed vibrating) of concrete is the act of removing excess air from concrete during placement, by means of manual and/or mechanical means. Air is inadvertently entrained into the concrete mix during batching and mixing and unless removed will adversely affect the strength and durability of the hardened concrete. Proper consolidation will densify the concrete and result in a strong durable product.

It is just as important to avoid over-consolidation of concrete as in doing so the larger aggregate portions will tend to separate from the smaller aggregates and cement paste resulting in a poorly graded product which will adversely effect the strength an durability of the hardened concrete.

Concrete mixes may be designed for increased frost resistance by the addition of controlled amounts of air into the mix. This is termed "air entrainment" and is achieved by means of special additives added to the concrete mix at the batching plant.

For information of the proper methods of consolidating concrete refer to ACI (American Concrete Institute) 309R "Consolidation of Concrete"

DID YOU KNOW?

Concrete continues to gain strength during its lifetime. The strength of concrete is typically denoted by its cylinder strength in compression and is obtained by testing a cylinder of concrete to destruction in a special compression machine. The test result of importance is typically the 28-day strength. This is determined by testing a sample made from the concrete mix after curing under laboratory conditions for 28 days. Test results are reported in pounds per square inch (psi).

Laboratories who perform testing services are required to be licensed by the BBRs. There are currently 26 laboratories that are licensed to perform this service in Massachusetts. For a list visit the BBRs web Page at www.state.ma.us/bbrs and click on "BBRs Programs" then follow the prompts.

ATTORNEY GENERAL DISAPPROVES HEAT DETECTOR BY-LAW

On January 29, 1999 the Attorney General disapproved a by-law voted by the Town of Salisbury which sought to mandate heat detectors be installed in all new, one-and-two family dwellings, in utility rooms, attached garages, attics and laundry rooms.

In disapproving this by-law, the Attorney General stated in part that;

"...Today, any town seeking fire safety regulations more restrictive than those currently imposed under the State Building Code must request that the State Board of Building Regulations and Standards adopt such a regulation. The Board will grant such a request only upon a finding, after conducting a public hearing, that more restrictive standards are reasonably necessary because of special conditions prevailing within such city or town and that such standards conform with accepted national and local engineering and fire prevention practices, with public safety and with the general purposes of a statewide building code.".....

DISCIPLINARY ACTIONS AGAINST REGISTERED HOME IMPROVEMENT CONTRACTORS

The following Home Improvement Contractors were requested to appear before the Director of the HIC Program at public hearings held pursuant to, MGL 142A and 780 CMR R6. The designee for the Director of the Home Improvement Contractors Registration Program issued the following administrative penalties.

Hearing Date Tuesday, August 25, 1999

NAME & ADDRESS	RESPONSIBLE PERSON	REGISTRATION NUMBER	ADMINISTRATIVE PENALTY
B&J Siding & Window, Inc. 3381 Washington St. Jamaica Plain, MA 02130	Joseph Ludvigsen	108175	Registration revoked and \$9,000 penalty (Defaulted)
Anastios Construction 17 Thayer Street Hingham, MA 02043	Richard Anastios	102100	Submit new contract to BRS and reimburse \$3000 to Guaranty Fund.*
Dunrite Home Improvements 721 W. Roxbury Hwy W. Roxbury, MA 02132	Donald Otto	102531	Reimburse \$6510 to Guaranty Fund Contractor submitted new contract and it was approved.*
Scott Gaumond 110 Turnpike Street N. Andover, MA 01845	Scott Gaumond	116231	(Defaulted) Registration revoked & \$14,000 penalty
Stag Brothers, Inc. 420 Davis Road Bedford, MA 01730	David Steigenswald	109654	(Defaulted) Registration revoked and \$4,000 penalty
J & S Construction 18 Goldenlith Avenue Medford, MA 02155	John Squibb	115375	(Defaulted) Registration revoked and \$7,500 penalty
City Home Builders 654 Washington St. Braintree, MA 02134	Mark Grannum	114526	(Defaulted) Registration revoked and \$4,000 penalty
A to Z Construction 92 Cross Street Wilmington, MA 01887	Charles Williams	113272	(Defaulted) Registration revoked & \$6,000 penalty.
Cunsolo & Sons Construct, Inc. 12 Palmer Street Methuen, MA 01844	Alfred Cunsolo	103217	Suspension until Guaranty Fund Paid in Full.*
Century Bldg Services 1223 Commercial St. E. Weymouth, MA 02189	Peter Honnan	113421	(Defaulted) Registration revoked and \$4,000 penalty
Corda Construction 342 Broad Street Fitchburg, MA 01420	Michael Corda	111372	(Defaulted) Revocation of registration and \$12,000 penalty
Metropolitan Decorators 22 Howard Street Melrose, MA 02176	Thomas Roy	108943	(Defaulted) Registration revoked and \$3,000 penalty
Energy Tech, Inc. 1405 main Street Worcester, MA 01603	Donald Talbot	114215	(Defaulted) Registration revoked and \$6,000 penalty
R.A. Carlo Roofing Co. 65 Dunster Road Bedford, MA	Robert Carlo	106052	Suspension until Guaranty Fund Paid in Full. Submit new contract to BRS for approval and \$3500 penalty.*
KRS, Inc. PO Box 13 Melndoc, VT 05050	Kenneth Carcho	110005	(Defaulted) Registration revoked and \$5,000 penalty

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J.M. O'Brien & Son 23 Underwood Ave. Frammingham, MA	John O'Brien	112935	Registration revoked and ordered to reimburse Guaranty Fund in full. Possible future action against another registration held by Mr. O'Brien.*
Men at Work Construction 88-94 Wheatland St. Somerville, MA 02145	Herbert Aquilar	114936	(Defaulted) Registration revoked and \$6,000 penalty
Catalli & Sons 4 Bear Hill Road Groveland, MA 01834	Anthony Catalli	101919	(Defaulted) Registration revoked & \$10,000 penalty

Hearing Date Tuesday, October 27, 1998

NAME & ADDRESS	RESPONSIBLE PERSON	REGISTRATION NUMBER	ADMINISTRATIVE PENALTY
F & D Unlimited Construction 139 Varnum Avenue Lowell, MA 01854	Thomas Field II	115230	(Defaulted) Revocation of registration, \$7,000 penalty, and reimburse the Guaranty Fund in full.
Lynn Gutter & Roofing Co. 479 Broadway Lynn, MA 01904	John Shanahan	117037	Suspended until Guaranty paid in full. *
Mount Vernon Mills Company 57 Mount Vernon Street Dorchester, MA 02125	Donald Westwater, Jr.	120143	(Defaulted) Revocation of registration, \$4,000 penalty, and reimburse the Guaranty Fund in full.
KOA Construction 39 Thompson Street Meynard, MA 01754	Kristin Asmussen	111335	(Defaulted) Revocation of registration, \$7,000 penalty, and reimburse the Guaranty Fund in full.
Brennan Roofing Company 112 Kimball Street Malden, MA 02148	Patrick Brennan	113615	(Defaulted) Revocation of registration, \$7,000 penalty, and reimburse the Guaranty Fund in full.
AddCon, Inc. 5 Flinwood Avenue Salem, NH 03079	Dennis Blaine	112739	(Defaulted) Revocation of registration, \$7,000 penalty, and reimburse the Guaranty Fund in full.
Anthony's Pool Design 144 Bowdoin Street Malden, MA 02148	Anthony Savarese	119154	(Defaulted) Revocation of registration, \$8,000 penalty, and reimburse the Guaranty Fund in full.
Nordic General Contractors 3381 Washington Street Jamaica Plain, MA 02130	John Ludvigson	117938	Submit new contract and additional work orders to DBRS.
Will Co Home Improvements 440 Pleasant Street Brockton, MA 02301	David Willette	121593	Revocation of registration, \$2,000 penalty, and may reapply after one year.

Hearing Date Friday January 29, 1999

NAME & ADDRESS	RESPONSIBLE PERSON	REGISTRATION NUMBER	ADMINISTRATIVE PENALTY
T.W. Woods Company 62 Bridle Street Billerica, MA 01821	Thomas Woods	112197	Suspension of registration and \$6,000 penalty.
United Construction 145 Chestnut Street Wilmington, MA 01887	Joseph J. Parrella, Jr.	115126	Suspension of registration for six months and reimburse the Guaranty Fund \$4,000.
G.E.C. Contracting, Inc. 83 Spring Street Lexington, MA 02173	Glen Crosby	113627	(Defaulted) Registration revoked, \$8,000 penalty and must reimburse the Guaranty Fund in full.

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Kelley Brothers Home Improvement 117 Rock Street Norwood, MA 02062	Robert Kelley	104190	(Defaulted) Registration revoked, \$10,000 penalty, reimburse the Guaranty Fund in full.
Centerville Homes, Inc. 4 Center Place, 1550 Rte. 28 Centerville, MA 02362	Richard Haydon	112738	(Defaulted) Registration revoked, and \$4,000 penalty.
Paul Joseph Contractors 10 Arrowhead Road N. Eastham, MA 02651	Paul R. Joseph	110687	(Defaulted) Registration revoked, \$7,000 penalty and must reimburse Guaranty Fund in full.
J. Martin Vierling 175 Circuit Street Norwell, MA 02061	J. Martin Vierling	113141	(Defaulted) Registration revoked, and \$7,000 penalty.
H & S Home Improvements 216 Levin Road Rockland, MA 02370	Henry Simons	109376	Suspension of registration, \$5,000 penalty, and reimburse Guaranty Fund in full.
Bonitto Construction 105 Ward Street Hingham, MA 02043	Douglas Bonitto	111734	(Defaulted) Registration revoked, \$6,000 penalty and must reimburse the Guaranty Fund in full.
38 Dartmouth Terrace W. Brockton, MA 02301	A. Carl Rispettoso	116729	(Defaulted) Registration revoked, \$5,000 penalty and must reimburse the Guaranty Fund in full.
Pro-Builders & Remodeling, Inc. and Reggie's Exteriors 445 Liberty Street Rockland, MA 02370	Reginald Newcomb, Jr.	111245 & 125593	(Defaulted) Revocation of both registrations, and \$12,000 penalty.
Professional Weatherproofing and Henry L. Holmes & Son, Inc. 10 Valley Street Duxbury, MA 02332	Henry L. Holmes	116741 & 125235	(Defaulted) Revocation of both registrations, and \$6,000 penalty.
Briggs Construction, Inc. 7 Highland Circle Foxboro, MA 02035	Donald Briggs	107509	(Defaulted) Registration revoked, and \$10,000 penalty.
1170 Forest Street Marshfield, MA 02050	George Ryan	118430	(Defaulted) Registration revoked, \$4,000 penalty and must reimburse the Guaranty Fund in full.
D.B. Property Upgrade 199 Spring Street Walpole, MA 02081	Donald Bruce	106019	(Defaulted) Registration revoked, \$3,000 penalty and must reimburse the Guaranty Fund in full.
Colonial Home Improvement 581 Quarry Street Quincy, MA 02169	Peter Van Wart	110224	(Defaulted) Registration revoked, \$6,000 penalty and must reimburse the Guaranty Fund in full.
Nickerson Home Improve., Inc. PO Box 2476 286 S. Orleans Rd. Orleans, MA 02653	Mark Nickerson	120424	(Defaulted) Registration revoked, and \$12,000 penalty.

*Any future complaints will result in another hearing seeking revocation of registration.

"LONG SPAN" HEADERS OVER GARAGE DOOR OPENINGS IN BEARING WALLS.

Table 3606.2.6 of the Massachusetts State Building Code specifies the size requirements for headers in wood frame bearing walls in one and two family dwellings.

Table 3606.2.6

Size of Header (1)	HEADERS IN BEARING WALLS(2)			Headers in Walls not Supporting Floor or Roof
	Supporting Roof Only	One Story Above	2 Stories Above	
2- 2X4	4	-	-	-
2- 2X6	6	4	-	-
2- 2X8	8	6	-	10
2- 2X10	10	8	6	12
2- 2X12	12	10	8	16

(1) Nominal 4-inch thick members may be substituted for double members

(2) Allowable Spans based on # 2 grade lumber with 10-foot tributary floor and roof loads

The table provides "prescriptive" solutions. If longer span headers are required, the use of this table is not permitted.

Many instances have been observed by building officials where 16 or 18-foot headers have been used in bearing walls. Typically, much stronger materials or much larger members are required to satisfy strength, deflection & support criteria and may require an engineered solution.

CONTINUING EDUCATION REQUIREMENTS FOR LICENSED CONSTRUCTION SUPERVISORS MOVES FORWARD

At its March 9, 1999 meeting the BBRS gave the green light for staff to explore continuing education requirements for Licensed Construction Supervisors. The proposal to required continuing education was made as a code change proposal at the May 1998 Public Hearing. The proposal would require a CSL holder to complete 12 hours of continuing education in every two-year period. The BBRS feels that the entire Commonwealth will benefit by ensuring that builders are well informed on changes and updates in the State Building Code. Architects, Building Officials, Electricians and other professions and trades already require professional development through continuing education in order to remain licensed or registered. This requirement is expected to be adopted sometime in the first part of the new millennium - WATCH THIS SPACE.

ATTENTION LICENSED CONSTRUCTION SUPERVISORS

Your initial license is valid for 3 years and is renewable every two years thereafter, expiring on the licensee's birthday. You will receive a renewal notice in the mail prior to the date of expiration - PROVIDING THAT YOU HAVE INFORMED THE BBRS IN WRITING OF ANY AND ALL CHANGES OF ADDRESS. You have one year from the date of expiration to renew your license. If you do not renew within this period you are required to take the Construction Supervisor License Examination - there are NO exceptions to this policy. If you do not receive a license renewal before the expiration of the license please contact the BBRS to ensure that we have your current address on file. Please note - it is YOUR responsibility to inform the BBRS of a change in address.

CONSTRUCTION SUPERVISOR LICENSE EXAMINATION DATES

Registration and examination dates for the Construction Supervisor License Examination are;

Registration Deadline	Examination Date
May 14, 1999	June 12, 1999

If you need information or an application and candidate information package call the BBRS at;
(617)- 727-7532 Extension 696

BBRS APPROVES EMERGENCY CODE CHANGE

At its regular meeting of March 9, 1999 the BBRS voted to amend the building code by emergency action to avoid a conflict with the State Electrical Code 527 CMR Section 12.

The building code section amended is 780 CMR 3603.6.1 (exception 2) which requires a lighting control switch at the top and bottom of each interior stairway in a one and two family dwelling. The electrical code does not require the switch on the floor level served by the stair if the area is not occupied (such as a cellar or basement space) i.e. not a finished area. Exception 2 has been amended to defer to the switching requirements of the Massachusetts Electrical Code.

FORMAT CHANGE - CONSTRUCTION SUPERVISOR LICENSE EXAMINATION

Beginning with the first test administration of 2000, the CSL examination will contain a series of questions which will test the candidates ability to read and comprehend a set of building plans. Candidates will be provided a set of plans at the examination and will be required to answer questions related to the plans. All tests will be designed such that candidates are required to pass this portion of the examination in order to qualify for a passing grade.

ATTENTION BUILDING OFFICIALS

For the past two years or so the BBRS has been issuing Construction Supervisor Licenses (initial issue and renewals) with picture identifications. These licenses are also laminated. Every license should now contain a picture. Please ensure that you verify the license holder and view the license to ensure the license has not expired. Do not rely on a license number you may have on file in your office.

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Codeword

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