ALASKA LEGISLATURE COMMITTEE FILES 2001-2002 8672
10349 HOUSE LABOR & COMMERCE

ASSOCIATED GENERAL CONTRACTORS of ALASKA

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Legality of the adopted code: Representative McGuire argued persuasively before your committee that the international code had been adopted illegally. If this is the case, construction performed under the new code could have significant and long lasting legal implications to architects, engineers, and contractors. At best these groups were only minimally involved in the adoption process, but all could suffer severe legal and financial consequences if the adoption of the code is ruled illegal at some future time. What happens to buildings constructed under a code illegally adopted? Who is responsible for retrofitting such buildings to making them code-compliant? Because of the implementation of this code, does a legal liability accrue to innocent parties involved in the construction process?

It is in the best interests of the State and all interested parties to assure that the adoption of any code is legal. Further it is in the best interests of all parties to assure that the process is open and that the resulting decisions are based on the best information available at the time of the decision. A process that relies on bureaucrats interacting with bureaucrats and ignores or minimizes public input must be questioned. That is not to say that the conclusions reached are wrong, it merely means that those conclusions will inevitably be challenged. To be effective, all such recommendations should be sanitized in the light of public scrutiny.

Cost of construction: It has been alleged that significant cost savings can be realized by the adoption of the international code. AGC strongly supports any effort to reduce the cost of construction without compromising quality or safety. Since owners, architects, and contractors have mentioned the savings associated with the code it is safe to assume that financial benefits will be derived from utilizing the international code. Since the State Fire Marshal has advocated the adoption of the code, we could arguably assume that the level of public safety is the same under both codes.

It also seems reasonable to assume that costs savings between the two codes would come from the removal of redundant provisions that serve to add costs but do little to further safety. If that is the case, the State is well advised to proceed with the new code. But if the bar for public safety has been lowered, the public deserves to understand how and why.

Further it should be noted that the issue of cost savings has been challenged. The International Association of Plumbing and Mechanical Officials have reported, "independent studies were conducted on both the 1997 and 2000 editions of these codes which highlighted no appreciable difference in cost." This statement would seem contrary to that of supporters of the international code and the entire issue should be closely examined.

Another issue that must be considered is the operating costs of a facility. Savings of construction costs is important, but life cycle costs are more important. How will the insurance industry price the international code? How do the on going maintenance and replacement costs compare? Prior to determining the issue of cost savings, we need to understand the total costs involved. Only then can it be determined if one code yields cost savings relative to the other code.

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Consolidation of building and construction codes: It was brought to our attention that eight different departments within Alaska State government are involved in enforcing building and construction codes. AGC expects that each department will have a cogent argument as to why status quo is appropriate and why consolidation, if necessary, should allow their department to survive and prosper. It seems reasonable to demand a comprehensive review of the best means to address building and construction codes in Alaska. It may be that the international code is best; then again it may not. But in this era of fiscal constraint, it is hard to justify the mish-mash of construction code regulation that defines the construction industry in Alaska.

Opponents and proponents of these bills both argue for a single unified family of codes. Both argue that they offer, or are part of or soon will be, such a family of codes. Both also argue that the other side is not part of such a family. The rhetoric is deafening, the reality confusing.

Training: Without question, the adoption of the international code did not provide adequate time to train mechanical administrators. How can it be in the best interests of the State to have a code and no one prepared to administer it? How does that provide protection to the public? What was the sense of urgency that required the Fire Marshal to determine that it was more important to have the international code adopted and have no trained mechanical administrators, than it was to delay the code adoption and coordinate training of mechanical administrators?

The issue of training was raised by the Division of Occupational Licensing but apparently ignored by the Fire Marshal. AGC believes that Alaskans deserve to know why the training was deemed unimportant to the overall issue of code implementation. Also it is important to understand how long it will take to train a majority of mechanical administrators and how long it is expected that they will have to be certified in both codes.

The foregoing represent some of the more serious concerns AGC has regarding changing from the uniform codes to the international codes. We readily concede that the international code may reduce construction costs and may in fact be a superior code as suggested by the Fire Marshal. We believe however that many issues were not addressed in the adoption of the international code and the process itself may very well have tainted the ultimate decision.

AGC has trouble criticizing a correct decision even when reached for the wrong reasons. We are just not ready to acknowledge that the adoption of the international code was the right decision. We encourage the committee to delve into the questions we have identified and proceed with caution. We would be happy to talk to any of the committee members about any of our concerns at any time.

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Thank you very much for your consideration on this important issue.

Sincerely,

Richard Cattanach
Executive Director

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March 12, 2002

Representative Lisa Murkowski
State Capitol, Room 408
Juneau, AK 99801-1182

Dear Representative Murkowski:

Our state is in the process of adopting The International Building Code – "IBC". This code replaces the Uniform Building Code – UBC. The enclosed document is sent to you over concerns about a diminished level of public safety in our state if this building code is adopted.

Data from the National Fire Protection Association (NFPA) shows that citizens in the West where the UBC is the predominant code have significantly better safety results than other areas of the country that use different codes. Since it is difficult to justify adopting a lower level of safety in our community, you may be assuming that the UBC and the IBC are equivalent in terms of public safety. However, this is not the case.

For example, our existing code (UBC) uses automatic fire sprinklers in conjunction with passive interior protection such as walls and doors. The proposed code (IBC) supports the use of sprinklers alone, eliminating many of these passive systems. The IBC also permits significantly larger buildings than those permitted under the UBC.

Thank you for helping create a safe environment in which to work and live.

Sincerely,

R.C. Hammond

BUILDING
PERFORMANCE
RESEARCH
INSTITUTE

A Direct Comparison of

Life Safety Elements of

The Uniform Building Code (UBC)

and

The International Building Code (IBC)

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Introduction

The Building Performance Research Institute's mission is primarily one of education on building safety and performance. This comparison of life safety elements of the UBC and IBC has been produced to let states and local jurisdictions see the differences between the building types and sizes permitted and some of the fire safety measures contained in each code.

It is difficult to justify adopting a lower level of safety in a community. In order to warrant changing a state's building codes, the adopting body must, at minimum, conclude that the old and new codes will provide equivalent levels of protection. The differences presented herein must be weighed as a UBC state considers adoption of a new building code.

The Building Performance Research Institute is not an advocate of any particular building code. However, we do advocate comparing the existing level of safety with that of any proposed new requirement for construction.

Specific Areas of Concern

- The UBC uses automatic fire sprinklers in conjunction with passive interior fire protection systems such as walls and doors. The IBC supports the use of sprinklers by eliminating most interior passive fire protection systems.

- The IBC permits significantly larger buildings than are currently allowed under the UBC.

- The IBC permits occupancies in building types that are prohibited by the UBC.

- The IBC permits sprinklers to increase <u>both</u> the height and area of a building. This is prohibited by the UBC.

- The IBC permits sprinklers to reduce interior protection in areas where sprinkler tradeoffs are specifically prohibited by the UBC:
    1. Occupancy separations
    2. Exterior wall protection due to proximity of property lines
    3. Dwelling unit separations
    4. Shaft enclosures
    5. Corridors
    6. Stair enclosures
    7. Exit passageways
    8. Boiler, central heating plant or hot-water supply boiler room enclosures

- The IBC eliminates smoke evacuation systems in high-rise buildings.

- The IBC eliminates smoke control in most buildings regardless of height.

Performance Record

The NFPA has compiled national fire loss data for the Smoke Safety Council, which analyzed the data and provided the following results:

Building Performance against Fire
(per million people)

	West UBC	National Average	Northeast NBC
Civilian Deaths	0.4	2.8	4.5
Civilian Injuries	8.5	22.1	34.9
Property Damage	$1.9	$4.4	$6.5

Results are for multi-story buildings taller than 2 stories, other than 1 & 2 family dwellings.
The data was compiled for years 1988 - 1997.

The Uniform Building Code is the top-performing code in the country. Since 1927 the Uniform Building Code, used extensively throughout the Western United States, has evolved a conservative approach to public safety, property protection, and fire fighters' safety within the constructed environment.

There are many factors that could influence these numbers: age of building, demographics, etc. However, it is evident that, for whatever reason, the west has a significantly better performance record against the effects of fire than the northeast.

Height and Area

We've compared the height and areas allowed in both the 1997 Edition of the Uniform Building Code (UBC) and the 2000 Edition of the International Building Code (IBC). The IBC permits larger base allowable areas for every occupancy group and construction type. The IBC also permits taller buildings in almost every category.

ALLOWABLE HEIGHT AND AREA

Maximum Base Area

	Height (Floors)		Area (square feet)	
	UBC	IBC	UBC	IBC
A3				
Type II 1-hour	2	3	13,500	15,500
Type II non-rated	1	2	9,100	9,500
Type III 1-hour	2	3	13,500	14,000
Type III non-rated	1	2	9,100	9,500
Type IV	2	3	13,500	15,000
Type V 1-hour	2	2	10,500	11,500
Type V non-rated	1	1	6,000	6,000
B				
Type II 1-hour	4	5	18,000	37,500
Type II non-rated	2	4	12,000	23,000
Type III 1-hour	4	5	18,000	28,500
Type III non-rated	2	4	12,000	19,000
Type IV	4	5	18,000	36,000
Type V 1-hour	3	3	14,000	18,000
Type V non-rated	2	2	8,000	9,000
E				
Type II 1-hour	2	3	20,200	26,500
Type II non-rated	1	2	13,500	14,500
Type III 1-hour	2	3	20,200	23,500
Type III non-rated	1	2	13,500	14,500
Type IV	2	3	20,200	25,500
Type V 1-hour	2	1	15,700	18,500
Type V non-rated	1	1	9,100	9,500
I.1 (Note: IBC I.1 = UBC I.2)				
Type II 1-hour	2	4	6,800	19,000
Type II non-rated	not permitted	3	not permitted	10,000
Type III 1-hour	2	4	6,800	16,500
Type III non-rated	not permitted	3	NP	10,000
Type IV	2	4	6,800	18,000
Type V 1-hour	2	3	5,200	10,500
Type V non-rated	not permitted	2	not permitted	4,500
I.2 (Note: IBC I.2 = UBC I.1)				
Type II 1-hour	1	2	6,800	15,000
Type II non-rated	not permitted	1	not permitted	11,000
Type III 1-hour	1	1	6,800	12,000
Type III non-rated	not permitted	not permitted	not permitted	not permitted
Type IV	1	1	6,800	12,000
Type V 1-hour	1	1	5,200	9,500
Type V non-rated	not permitted	not permitted	not permitted	not permitted
R.1				
Type II 1-hour	4	4	13,500	24,000
Type II non-rated	2	4	9,100	16,000
Type III 1-hour	4	4	13,500	24,000
Type III non-rated	2	4	9,100	16,000
Type IV	4	4	13,500	20,500
Type V 1-hour	3	4	10,500	12,000
Type V non-rated	2	3	6,000	7,000

Table compares occupancy types that are common to both the UBC and the IBC.

Area Increases for non-sprinklered buildings

These allowable height/area differences are dramatic when the allowable increases are applied for multi-story buildings.

The UBC allows the area in the table to be doubled for multi-story buildings (UBC Section 504.2). The IBC (Section 503.3) allows the area in the table for every floor in a multi-story building up to a total of three floors to be doubled.

The use of automatic sprinklers again doubles the allowable area in both UBC and IBC. However, the IBC allows an additional floor to be added prior to doubling the allowable area.

These allowable heights and areas have a direct effect on firefighters and their primary mission, saving lives.

Example 1 *Maximum size of a multi-story non-sprinklered B occupancy in a Type III non-rated building with only one separated yard.*

The UBC permits a 24,000-sf building two stories in height. The IBC permits a 57,000-sf building four stories in height. To calculate the occupant load of these buildings, divide the area by 100 sf per occupant (UBC Table 10-A line 23). The UBC building is allowed 240 occupants, while the same building built under the IBC is allowed 570 occupants. 330 more people.

Example 2 *Maximum size of a multi-story non-sprinklered I.2 occupancy under the UBC for ambulatory patient nursing homes and homes for children over the age of 6 (equivalent to an I.1 occupancy under the IBC). An occupancy of this type in a Type III one-hour rated building with only one separated yard.*

The UBC permits a 17,600-sf building two stories in height. The IBC permits a 49,500-sf building four stories in height. To calculate the occupant load of these buildings, divide the area by 80 sf per occupant (UBC Table 10-A line 6). The UBC building is allowed 220 occupants while the same building built under the IBC is allowed 619 occupants. Almost triple.

NON-SPRINKLERED BUILDINGS

Maximum Area of a Non-Sprinklered Multi-Story Building (square feet)

	UBC	IBC	Increase from UBC
A3			
Type II 1-hour	27,000	46,500	72%
Type II non-rated	9,100	19,000	109%
Type III 1-hour	27,000	42,000	56%
Type III non-rated	9,100	19,000	109%
Type IV	27,000	45,000	67%
Type V 1-hour	21,000	23,000	10%
Type V non-rated	6,000	6,000	no change
B			
Type II 1-hour	36,000	112,500	213%
Type II non-rated	24,000	69,000	188%
Type III 1-hour	36,000	85,500	138%
Type III non-rated	24,000	57,000	138%
Type IV	36,000	108,000	200%
Type V 1-hour	28,000	54,000	93%
Type V non-rated	16,000	18,000	13%
E			
Type II 1-hour	40,400	79,500	97%
Type II non-rated	13,500	29,000	115%
Type III 1-hour	40,400	70,500	75%
Type III non-rated	13,500	29,000	115%
Type IV	40,400	76,500	89%
Type V 1-hour	31,400	18,500	-41%
Type V non-rated	9,100	9,500	4%
I.1 (Note: IBC I.1 = UBC I.2)			
Type II 1-hour	13,600	57,000	319%
Type II non-rated	not permitted	30,000	—
Type III 1-hour	13,600	49,500	264%
Type III non-rated	not permitted	30,000	—
Type IV	13,600	54,000	297%
Type V 1-hour	10,400	31,500	203%
Type V non-rated	not permitted	4,500	—
I.2 (Note: IBC I.2 = UBC I.1)			
Type II 1-hour	6,800	30,000	341%
Type II non-rated	NP	11,000	—
Type III 1-hour	6,800	12,000	76%
Type III non-rated	not permitted	not permitted	—
Type IV	6,800	12,000	76%
Type V 1-hour	5,200	9,500	83%
Type V non-rated	not permitted	not permitted	—
R.1			
Type II 1-hour	27,000	72,000	167%
Type II non-rated	18,200	48,000	164%
Type III 1-hour	27,000	72,000	167%
Type III non-rated	18,200	48,000	164%
Type IV	27,000	61,500	128%
Type V 1-hour	21,000	36,000	71%
Type V non-rated	12,000	21,000	75%

Table compares occupancy types that are common to both the UBC and the IBC.

Increases for Sprinklered Buildings

While both codes allow size increases for s[illegible]klers, the UBC allows an increase in either the height or the area, not both.

This is not the case in the IBC. Under these new regulations, sprinklers permit a simultaneous increase in the height and in the area.

As a comparison of allowable height increases, refer to both UBC Section 506 and IBC Section 504. The UBC permits one additional floor to be added only if the automatic sprinkler system is <u>not</u> also used to increase the area of the building, <u>or</u> as a substitute for one-hour fire-resistive construction. The additional floor allowance is also <u>not</u> permitted in atria, many H occupancies, and Group I, Divisions I.1 and I.2

The IBC, on the other hand, permits all buildings to be increased in height by one floor of up to 20 feet if they are sprinklered in addition to the area increase, with the exception of I-2's in particular types of construction and most H occupancies.

The IBC also permits significant reductions in fire resistive construction when sprinklers are used (see next section).

Example 1 from above with sprinklers
Maximum size of a multi-story sprinklered B occupancy in a Type III non-rated building with only one separated yard.

The UBC permits a 48,000-sf building two stories in height, or a total of 480 occupants. The IBC permits an 114,000-sf building five stories in height, or a total of 1,140 occupants. 660 more people.

Example 2 from above with sprinklers
Maximum size of a multi-story sprinklered UBC I.2 occupancy (IBC I.1 occupancy equivalent) in a Type III one-hour rated building with only one separated yard.

The UBC permits a 27,200-sf building two stories in height, with a total occupant load of 340. The IBC permits a 99,000-sf building five stories in height, with a total occupant load of 1,238. 898 more people.

UBC Prohibited vs. IBC Permitted

Note that certain occupancy groups that are prohibited by the UBC in buildings of a specified construction type are permitted under the IBC.

UBC I.2 occupancies are not permitted in Type II non-rated construction. The IBC permits I.1 (equivalent occupancy group) up to three stories of 30,000 sf in a non-sprinklered building or a four-story 60,000-sf building with sprinklers.

UBC I.2 occupancies are not permitted in Type III non-rated construction. The IBC permits I.1 (equivalent occupancy group) up to three stories of 30,000 sf in a non-sprinklered building, or a four-story 60,000-sf building with sprinklers.

UBC I.2 occupancies are not permitted in Type V non-rated construction. The IBC permits I.1 (equivalent occupancy group) up to two stories of 4,500 sf in a non-sprinklered building, or a three-story 27,000-sf building with sprinklers.

UBC I.1 occupancies are not permitted in Type II non-rated construction. The IBC permits I.2 (equivalent occupancy group) up to one story of 11,000 sf in a non-sprinklered building, or a two-story 44,000-sf building with sprinklers.

Separate Buildings

UBC 504.6.1 permits area separation walls to create separate buildings. These walls are 4-hour rated in Types I, II-FR, III and IV buildings. Walls in Types II are 1-hour; II-N, and V buildings may be 2-hour.

IBC 503.1 also permits firewalls to create separate buildings. These walls are 3-hour rated in Occupancy Groups A, E, B, F-1, H-3, H-4, H-5, I, M, R-1, R-2, S-1, and U.

SPRINKLERED BUILDINGS

Maximum Area of a Sprinklered Multi-Story Building

	Area (square feet)		Increase from
	UBC	IBC	UBC
A.3			
Type II 1-hour	54,000	93,000	72%
Type II non-rated	18,200	57,000	213%
Type III 1-hour	54,000	84,000	56%
Type III non-rated	18,200	57,000	213%
Type IV	54,000	90,000	67%
Type V 1-hour	42,000	69,000	64%
Type V non-rated	12,000	24,000	100%
B			
Type II 1-hour	72,000	225,000	213%
Type II non-rated	48,000	138,000	188%
Type III 1-hour	72,000	171,000	138%
Type III non-rated	48,000	114,000	138%
Type IV	72,000	216,000	200%
Type V 1-hour	56,000	108,000	93%
Type V non-rated	32,000	54,000	69%
E			
Type II 1-hour	80,800	159,000	97%
Type II non-rated	27,000	87,000	222%
Type III 1-hour	80,800	141,000	75%
Type III non-rated	27,000	87,000	222%
Type IV	80,800	153,000	89%
Type V 1-hour	62,800	74,000	18%
Type V non-rated	8,200	38,000	109%
I.1 Note: IBC I.1 = UBC I.2			
Type II 1-hour	27,200	114,000	319%
Type II non-rated	not permitted	60,000	—
Type III 1-hour	27,200	99,000	264%
Type III non-rated	not permitted	60,000	—
Type IV	27,200	108,000	297%
Type V 1-hour	20,800	63,000	203%
Type V non-rated	not permitted	27,000	—
I.2 Note: IBC I.2 = UBC I.1			
Type II 1-hour	13,600	90,000	562%
Type II non-rated	NP	44,000	—
Type III 1-hour	27,200	48,000	76%
Type III non-rated	not permitted	not permitted	—
Type IV	13,600	48,000	253%
Type V 1-hour	10,400	38,000	265%
Type V non-rated	not permitted	not permitted	—
R.1			
Type II 1-hour	54,000	144,000	167%
Type II non-rated	36,400	96,000	164%
Type III 1-hour	54,000	144,000	167%
Type III non-rated	36,400	96,000	164%
Type IV	54,000	123,000	128%
Type V 1-hour	42,000	72,000	71%
Type V non-rated	24,000	42,000	75%

Table compares occupancy types that are common to both the UBC and the IBC.

SPRINKLERED BUILDING
Maximum Height of a Multi-Story Building

	UBC	IBC
A.3		
Type II 1-hour	2	4
Type II non-rated	1	3
Type III 1-hour	2	4
Type III non-rated	1	3
Type IV	2	4
Type V 1-hour	2	3
Type V non-rated	1	2
B		
Type II 1-hour	4	6
Type II non-rated	2	5
Type III 1-hour	4	6
Type III non-rated	2	5
Type IV	4	6
Type V 1-hour	3	4
Type V non-rated	2	3
E		
Type II 1-hour	2	4
Type II non-rated	1	3
Type III 1-hour	2	4
Type III non-rated	1	3
Type IV	2	4
Type V 1-hour	2	2
Type V non-rated	1	2
I.1 Note: IBC I.1 = UBC I.2		
Type II 1-hour	2	5
Type II non-rated	not permitted	4
Type III 1-hour	2	5
Type III non-rated	not permitted	4
Type IV	2	5
Type V 1-hour	2	4
Type V non-rated	not permitted	3
I.2 Note: IBC I.2 = UBC I.1		
Type II 1-hour	1	3
Type II non-rated	not permitted	2
Type III 1-hour	1	2
Type III non-rated	not permitted	not permitted
Type IV	1	2
Type V 1-hour	1	2
Type V non-rated	not permitted	not permitted
R.1		
Type II 1-hour	4	5
Type II non-rated	2	5
Type III 1-hour	4	5
Type III non-rated	2	5
Type IV	4	5
Type V 1-hour	3	5
Type V non-rated	2	4

Table compares occupancy types that are common to both the UBC and the IBC.

Sprinklers used with Fire Resistive Construction

The International Building Code (IBC) and the 1997 Edition of the Uniform Building Code (UBC) have a vastly different approach to fire-rated substitutions permitted with the use of an automatic sprinkler system.

UBC Section 508 allows sprinklers to substitute for the one-hour fire-resistive construction requirements in Type II One-hour, Type III One-hour, and Type V One-hour only when the sprinkler system is not required by another section of the code or when used for either area or height increases.

The IBC permits substitutions in all construction types.

Under the UBC, the following situations must maintain the one-hour fire-resistive construction requirements of the building code even when sprinklers are provided. This is not the case in the IBC.

All Occupancies
Section 904.2.2 Basements and stories in all buildings except Group R, Division 3 and Group U occupancies not provided at least 20 sf of opening entirely above the adjoining ground level in each 50 linear feet of exterior.

Group A Occupancies
Section 904.2.3.1 Drinking establishments greater than 5,000 sf
Section 904.2.3.2 Basements greater than 1,500 sf
Section 904.2.3.3 Exhibition and display rooms greater than 12,000 sf
Section 904.2.3.4 Stairways in Division 2, 2.1, 3, and 4
Section 904.2.3.5 Multitheater complexes
Section 904.2.3.6 Amusement buildings
Section 904.2.3.7 Stages less than 1,000 sf and 50 feet in height where curtains and scenery are not vertically retractable, all dressing rooms, workshops, storerooms, and accessory spaces contiguous to the stage
Section 904.2.3.4 Smoke-protected assembly seating

Group E, Division 1 Occupancies
Section 904.2.4.1 Without an exterior exit door or without a two-hour fire-resistive area separation wall dividing the area into spaces less than 20,000 sf
Section 904.2.4.2 Basements
Section 904.2.4.3 Stairs

Group F Occupancies
Section 904.2.5.1 Woodworking areas over 2,500 sf

Group H Occupancies
Section 904.2.6.1 All Division 1, 2, 3, 6, and 7 occupancies
Section 904.2.6.2 Division 4 occupancies greater than 3,000 sf

Group I Occupancies
Section 904.2.7 All Division I.1 and I.2 occupancies, which include all hospitals, nursing homes, nurseries, and health-care facilities.

Group M Occupancies
Section 904.2.8 Rooms greater than 12,000 sf including mezzanines

Group R, Division 1 Occupancies
Section 904.2.9 Every apartment house three or more stories in height containing 16 or more dwelling units, every residence three or more stories in height having an occupant greater than 20, and all hotel three or more stories in height containing 20 or more guest rooms.

Elimination of Fire Rated Construction in Sprinklered Buildings

The International Building Code actively supports the use of automatic sprinkler systems. When compared to the 1997 Edition of the Uniform Building Code, however, it is apparent that fire separations have been eliminated in many critical areas.

UBC Section 508 does not allow sprinklers to substitute for or reduce the fire-resistive construction requirements of critical areas.

1. Occupancy separations
2. Exterior wall protection due to proximity of property lines
3. Area separations
4. Dwelling unit separations
5. Shaft enclosures
6. Corridors
7. Stair enclosures
8. Exit passageways
9. Type of construction separation
10. Boiler, central heating plant or hot-water supply boiler room enclosures.

Note that the IBC permits sprinklers to increase both the height and areas of buildings, as well as substitute for fire-resistive construction. This is not allowed in the UBC.

A complete list of sprinkler tradeoffs allowed by the IBC is found on the Smoke Safety Council website: www.smokesafety.org

IBC Sprinkler Tradeoffs Not Permitted by UBC in 10 Critical Areas

1. Occupancy separations

IBC Section 302.3.3 Separated Uses The fire-resistance rating of the required occupancy separation shall be reduced by 1 hour but not less than 1 hour in Group A, B, E, I.1, I.3, M, R, S, and U occupancies.

IBC Note 2 to Table 302.3.3
Sprinklers delete occupancy separation for incidental storage areas within Use Group B if the area is less than 3,000 square feet

2. Exterior wall protection due to proximity of property lines

IBC 704.8.1 Exterior Wall openings
Sprinklers allow the maximum allowable area of unprotected openings to be the same as protected openings in exterior walls in A, B, E, F, H-4, I, M, R, S, and U occupancies

IBC 704.12 Opening Protection
Sprinklers delete protection of all openings in an exterior wall where buildings equipped with sprinklers and water curtains are installed on the exterior.

IBC 2603.4.1.4 Exterior walls, one-story buildings
Sprinklers allow one-story buildings of to contain foam plastic without thermal barriers in or on exterior walls

IBC 2607.45 Light-transmitting plastic wall panels
Sprinklers allow an increase in the maximum percentage area of Class CC1 plastic to be used on an exterior wall from 10% to 20 % with a fire separation distance of between 6 to 11 ft.

Sprinklers allow an increase in the maximum percentage area of Class CC1 plastic to be used on an exterior wall from 25% to 50 % with a fire separation distance of between 11 to 30 ft.

Sprinklers allow an increase in the maximum percentage area of Class CC1 plastic to be used on an exterior wall from 50% to 100 % with a fire separation distance of over 30 ft.

Sprinklers allow an increase in the maximum percentage area of Class CC2 plastic to be used on an exterior wall from 15% to 30 % with a fire separation distance of between 6 to 11 ft.

Sprinklers allow an increase in the maximum percentage area of Class CC2 plastic to be used on an exterior wall from 50% to 100 % with a fire separation distance of over 30 ft.

3. Area separations
The IBC does not specifically define area separations.

4. Dwelling unit separations
IBC 710.3 Fire Resistance rating
Sprinklers allow fire resistance ratings of dwelling unit and guestroom separation floor and roof assemblies, in buildings of Types II B construction, be reduced from 1 hour rated to 1/2 hour.

Sprinklers allow fire resistance ratings of dwelling unit and guestroom separation floor and roof assemblies, in buildings of Types III B construction, be reduced from 1 hour rated to 1/2 hour.

Sprinklers allow fire resistance ratings of dwelling unit and guestroom separation floor and roof assemblies. in buildings of Types V B construction, be reduced from 1 hour rated to 1/2 hour.

5. Shaft enclosures
IBC 403.3 Reduction in fire-reduction rating.
Sprinklers reduce the fire resistance rating of the fire barrier walls enclosing vertical shafts, other than exit enclosures and elevator hoistway enclosures, from 2 hour fire resistive to 1 hour

IBC 707.2 Shaft enclosure required
Sprinklers eliminate shaft enclosures for stairs or escalators not part of the means of egress with a water curtain or rated shutter

Sprinklers eliminate shaft enclosures for escalator openings or stairways which are not a portion of the means of egress in Use Group A, E, F, H, I, M, R, S, and U occupancies less than 4 stories.

Sprinklers eliminate shaft enclosures for escalator openings or stairways that are not a portion of the means of egress in Use Group B.

IBC 707.10 Shaft enclosure
Sprinklers allow the bottom of a shaft to be open.

IBC Table 1004.3.2.1 Corridor Fire Resistance Rating.
Sprinklers delete fire resistance of corridors in Use Group A, B, E, F, I-2, M, S, and U occupancies thereby eliminating the requirement to provide smoke resistance between the elevator shaft and occupied areas.

6. Corridors

IBC 407.2 Corridors in I-2 occupancies
Quick response sprinklers delete the requirement that corridors in Use Group I-2 occupancy waiting areas and similar spaces be continuous to the exits

IBC 715.5.2 Fire dampers in fire barriers
Sprinklers delete required fire dampers at duc .ietrations of partitions that are tenant separation and corridor walls in A, B, E, F, I, M, R, S, and U Occupancies.

Sprinklers delete required fire dampers at duct penetrations of partitions that are tenant separation and corridor walls in all Occupancies.

IBC 804.4.1 Minimum critical radiant flux.
Sprinklers reduce the requirements for floor finishes in vertical exits, exit passageways, and exit access corridors in Use Group A, B, E, H, I-4, M, R-1, R-2, and S from 0.22 W/cm2 to the DOC FF-1 "pill test".

Sprinklers reduce the requirements for floor finishes in vertical exits, exit passageways, and exit access corridors in Use Group I-2 and I-3 from 0.45 W/cm2 to 0.22 W/cm2.

IBC 1003.3.6 Open ended corridors.
Sprinklers delete exterior stairway protection for exterior exit stairways connected to the open end of a corridor.

IBC Table 1004.3.2.1 Corridor Fire Resistance Rating.
Sprinklers delete fire resistance of corridors in Use Group A, B, E, F, I-2, M, S, and U occupancies.

IBC 1004.3.2.3 Corridor width
Sprinklers allow reduction of corridor width

IBC Table 1003.2.3.1 Egress Width.
Sprinklers reduce required other egress component widths in H occupancies from 0.4 inches per occupant to 0.2 inches per occupant

Sprinklers reduce required other egress component widths in all occupancies other occupancies except I-2 from 0.2 inches per occupant to 0.15 inches per occupant

IBC 1004.3.2.4 Dead ends.
Sprinklers increases the permissible length of dead-end corridors or passageways from 20 to 50 feet in Group I-3 occupancies.

Sprinklers increases the permissible length of dead-end corridors or passageways from 20 to 50 feet in Group B occupancies.

Sprinklers increases the permissible length of dead-end corridors or passageways from 20 to 50 feet in Group F occupancies.

IBC 1004.3.2.5 Air movement in corridors.
Sprinklers allow the space between the corridor ceiling and the floor or roof structure above corridors to serve as supply, return, exhaust, relief or ventilation air ducts or plenums where the air handling system serving the corridor is shut down upon detection of sprinkler.

IBC 2603.4.1.7 Doors without a fire rating
Sprinklers allow foam plastic insulated doors in Group A, B, E, F, I-2, M, S. and U occupancy corridors.

7. Stair enclosures

IBC 408.3.6 Exit stairways Group 1-3
Sprinklers permit glazing in doors and interior walls at each landing in one exit stairway per building.

IBC 909.20.5 Stair pressurization
Sprinklers eliminate stair vestibules in pressurized shafts.

IBC Table 1003.2.3.1 Egress Width.
Sprinklers reduce required stairway widths in I-2 occupancies from 0.4 inches per occupant to 0.3 inches per occupant

Sprinklers reduce required stairway widths in H occupancies from 0.7 inches per occupant to 0.3 inches per occupant

Sprinklers reduce required stairway widths in all other occupancies from 0.3 inches per occupant to 0.2 inches per occupant

IBC 1003.2.13.2 Enclosed stairways.
Sprinklers delete accessibility requirements for 48" egress stair width and for area of refuge within the stairway.

IBC 1003.3.3.1 Stairway Width
Sprinklers permit a reduction in the minimum stairway width.

IBC 1003.3.6 Open ended corridors.
Sprinklers delete exterior stairway protection for exterior exit stairways connected to the open end of a corridor.

IBC 2606.7 Light-diffusing systems.
Sprinklers allow light-diffusing systems to be installed in Group A with an occupant load of 1000 or more; Theaters with a stage and proscenium opening and an occupant load of 700 or more; Group 1-2, Group 1-3; Exit stairways and exit passageways.

8. Exit passageways

IBC 405.10 General
Sprinklers allow parking garages to be below 30 ft. below the lowest level of exit discharge.

IBC 407.2 Corridors in I-2 occupancies
Quick response sprinklers delete the requirement that corridors in Use Group I-2 occupancy waiting areas and similar spaces be continuous to the exits

IBC 714.2.3 Doors in exit enclosures
Sprinklers delete the maximum transmitted temperature end point of not more than 450 degrees F. (250 degrees C.) above ambient at the end of 30 minutes of standard fire test exposure.

IBC 804.4.1 Minimum critical radiant flux.
Sprinklers reduce the requirements for floor finishes in vertical exits, exit passageways, and exit access corridors in Use Group A, B, E, H, I-4, M, R-1, R-2, and S from 0.22 W/cm2 to the DOC FF-1 "pill test".

Sprinklers reduce the requirements for floor finishes in vertical exits, exit passageways, and exit access corridors in Use Group I-2 and I-3 from 0.45 W/cm2 to 0.22 W/cm2.

The UBC (904.2.3) requires sprinklers in Exhibition and Display areas > 12,000 sf, stairs in Group A Occupancies, Amusement Buildings, Stages and Smoke Protected Assembly Seating areas. These provisions are not found in the IBC.

IBC 1003.2.13.1.1 Buildings With Four Or More Stories.
Sprinklers delete the accessibility requirement that elevators be accessed from either an area or refuge or horizontal exit.

Sprinklers eliminate elevator access to a floor with a ramp.

IBC 1003.2.13.3 Elevators
Sprinklers delete accessibility requirement that elevators be accessed from either an area of refuge or a horizontal exit.

IBC 1004.2.2 Exit or exit access doorway arrangement
Sprinklers reduce egress separation distance from 1/2 overall diagonal dimension to 1/3 diagonal.

IBC 1005.2.2 Buildings with one exit.
Sprinklers allow Group R-2 buildings with only one exit to increase the allowable number of stories from 2 stories to 3 stories.

Sprinklers allow Group B buildings with only one exit to increase the maximum travel distance of from 75 ft to 100 feet.

IBC 1005.3.4 Exit passageway and vertical exit enclosure opening protectives.
Sprinklers eliminate the maximum transmitted fire door temperature requirement for 450° F for exit passageways in vertical exit enclosure openings.

IBC 1006.1 Exits shall discharge directly to the exterior of the building.
Sprinklers allow 50 percent of the number and capacity of the exit enclosures to egress through areas on the level of discharge.

IBC 1008.6 Travel distance in A occupancies
Sprinklers allow exit and aisle travel distance to an exit door to increase from 200 ft to 250 feet.

IBC 2606.7 Light-diffusing systems.
Sprinklers allow light-diffusing systems to be installed in Group A with an occupant load of 1000 or more; Theaters with a stage and proscenium opening and an occupant load of 700 or more; Group 1-2, Group 1-3; Exit stairways and exit passageways.

IBC 3104.9 Exit access travel
Sprinklers allow exit access travel distance to increase from 200 ft to 250 feet on a pedestrian walkway

Sprinklers allow exit access travel distance to be increased from 200 ft be 400 feet on a pedestrian walkway constructed with both sides at least 50 percent open.

9. Type of construction separation

IBC does not define construction separations.

10. Boiler, central heating plant or hot-water supply boiler room enclosures.

IBC TABLE 302.1.1 INCIDENTAL USE AREAS
Sprinklers delete 1-hour furnace room fire barrier separation where the largest piece of equipment is over 400,000 BTUH input.

Sprinklers delete 1-hour boiler room fire barrier separation > 15 psi and 10 hp.

Sprinklers delete 1-hour refrigerant machinery room fire barrier separation.

Smoke Control

High-rise buildings are not required in the IBC to have smoke control systems. There was little justification to delete these requirements other than to say that the fire department doesn't know how to use them and usually turns them off.

The UBC requires many levels of passive smoke control other than an active smoke exhaust system. Sealing of vertical penetrations, restricting smoke movement through openings in vertical shafts as well as rated corridors all serve to limit smoke spread throughout the building. Most of these systems, which provide a level of safety to the building occupants and fire fighters, are eliminated with the use of an automatic sprinkler system in the IBC.

Vertical Shafts

The UBC requires all elevators that open onto a rated corridor to resist the passage of smoke with an enclosed lobby, additional door or listed gasket system.

The IBC requires an enclosed lobby or additional door in unsprinklered buildings and where the elevators open onto a rated corridor. However, the IBC deletes the requirement for rated corridors in all but H occupancies and R occupancies, assisted living and detention centers taller than four stories, when sprinklers are used. The provision eliminates the smoke protection requirement of the elevator shaft in these occupancy groups. This sprinkler reduction is not allowed in the UBC.

Corridors

IBC Section 1004.3.2.1 deletes the requirement for rated corridors in sprinklered buildings for all A, E, B, F, M, S, U, I-2 (UBC I-1) and I-4 occupancies regardless of construction type, height or occupant load. UBC Section 508.6 expressly prohibits the reduction of a rated corridor, even in a sprinklered building.

Fire Alarm Systems

Fire alarm systems in commercial buildings serve as an early warning to building occupants and the fire department. The 1997 Edition of the Uniform Building Code (UBC) requires a fire alarm system in many occupancy groups. The UBC (305.9) requires a fire alarm system in A Occupancies >50, Amusement Buildings, H, I, and R-1 occupancies. These provisions are not found in the IBC.

The following reductions are found in the IBC and are not permitted in the UBC:

IBC 903.3.4 Sprinkler alarms
Sprinklers are not required to have an audible device with < 20 heads.

IBC 903.4 Monitoring and alarms
Sprinklers serving < 20 heads do not have to have electrically supervised valves.

IBC 907.2 Heat Detectors
Sprinklers delete heat detectors in new buildings

IBC 907.2.1 Manual fire alarm
Sprinklers delete the manual fire alarm system if notification appliances are activated with water flow in new Group A, B, and F occupancies.

IBC 907.2.6.2.3 Smoke detectors
Sprinklers eliminate smoke detectors in sleeping rooms with < 4 occupants in Group I-3 occupancies.

IBC 907.2.7 Manual fire alarm
Sprinklers eliminate the manual fire alarm system if notification appliances are activated with water flow in new Group M occupancies.

Sprinklers eliminate the manual fire alarm system if equipped with local alarms to notify all occupants in Group R-1 and R-2 occupancies.

IBC 907.4.1 Manual Pull box location
Sprinklers eliminate the manual pull box in Group B occupancies below 75 ft to the highest occupied floor.

Building Performance Research Institute

The Building Performance Research Institute is a 501(c)(3) non-profit corporation founded to research the performance of the constructed environment. There is currently no monitoring process for building code requirements in the United States. The National Fire Incident Reporting System gathers statistical data on fires, but not on buildings.

Our mission

Develop research methodology, conduct research, assemble documentation, and offer education to enhance building performance.

Current Projects:

- Developing concepts for fighting single story fires, even if the fire is on the 15th floor.

- Building Performance adjunct to the NFIRS database. In cooperation with the American Institute of Architects, and the National Fire Protection Association, BPRI is developing a data collection system to identify and study building performance relative to the effects of fire and smoke. The Boston Fire Department and the Boston Society of Architects have volunteered as initial partners in the pilot program.

- Building code education of architects. BPRI is enlisting sponsorship from building product manufacturers to support an educational workshop on the new International Building Code. When available, additional workshops will be conducted on the NFPA 5000 code.

- Research on Phase III emergency evacuation operation of elevator systems during a building fire. Current building codes do not encourage the use of elevators as a means of emergency egress for building tenants or as a reliable means of access to the fire area by the fire department. Development of standards for emergency operation will allow non-ambulatory building occupants to use the elevator to escape a fire.

INTERIOR FIRE CHIEFS ASSOCIATION

RESOLUTION NO. 02-001

A RESOLUTION BY THE INTERIOR FIRE CHIEFS ASSOCIATION OF STRONG OBJECTION TO THE CURRENT LANGUAGE OF HOUSE BILLS 399, 436, and 437; AN ACT RELATING TO THE STATE ADOPTION OF THE UNIFORM MECHANICAL CODE AND OTHER RELATED SAFETY CODES.

WHERE AS, House Bill 399 only recognizes the Uniform Mechanical Code and House Bill 436 recognizes ANSI standards and House Bill 437 only recognizes the International Association of Plumbing and Mechanical Offical (IAMPO) codes and

WHERE AS, the Interior Fire Chief Association believes it is in the best interest of the State of Alaska and the defered communities to have the option to adopt any nationally recognized code or codes it so chooses; and

WHERE AS, the Interior Fire Chiefs Association believes passing of these House Bills as written will prohibit the State of Alaska and local defered jurdictions from developing codes that address the concerns and needs of the community and public; and

WHERE AS, the Interior Fire Chiefs Association urges the inclusion of some flexiable language which will allow the state to adopt other nationally recognized codes which may be in the best interest of the State;

BE IT RESOLVED, that the Interior Fire Chiefs Association strongly objects to the current language of these House Bills and request revised language be included which ensures the State of Alaska and local municipalities have a choice to adopt other nationally recognized model codes.

RATIFIED BY VOTE OF THE INTERIOR FIRE CHIEFS ASSOCIATION ON March 13, 2002:

Attested to by:

Rob Robertson President

Emie Misewicz, Secretary

NFPA
NFPA INTERNATIONAL
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February 28, 2002

The Honorable Lisa Murkowski
Chair, House Labor and Commerce Committee
State Capitol, Room 408
Juneau, AK 99801-1182

RE: House Bill No. 436

Dear Chairwoman Murkowski:

On behalf of NFPA, I would like to express our strong support for HB 436, which will be before your committee for a hearing this Friday, March 1. NFPA fundamentally supports this bill because it would require state agencies and municipalities adopting safety codes to select codes that have been developed through a process which is "open to all interested parties" and, when possible, codes which comply "with the requirements and standards recommended by the American National Standards Institute." NFPA has long developed all of our safety codes and standards through an open, democratic-type process that follows the guidelines and principles of the American National Standards Institute (ANSI).

NFPA is committed to developing safety codes and standards through a process that gives everyone, including every citizen in the State of Alaska, the opportunity to participate fully in the process. NFPA encourages input from all affected interests, including users, building officials and code enforcers, architects and engineers, fire service members, industry professionals, government representatives, and even the public. And our technical committees, which are responsible for developing these documents, are structured so that no single interest group may dominate the process at any point. This ensures that the resulting codes and standards reflect a balance of all participating interests. By contrast, a single interest group – government code enforcers, primarily building code officials – dominates the code development process used by the International Code Council.

The success of codes developed through an ANSI-accredited process can be traced back to the manner in which they were crafted. One need only look at NFPA 70, *National Electrical Code®* and NFPA 101, *Life Safety Code®* — both of which are in use nationwide — to understand the impact this process can have on public safety. A century of experience has taught us that building true consensus in code development assures quality codes as well as broad acceptance and adoption.

As you may know, NFPA is currently in the process of developing NFPA 5000, the first building code being developed through an ANSI-accredited, open consensus process.

Like all other NFPA codes and standards, NFPA 5000 incorporates full and open discussion, input from all interested parties and affected interests, and the opportunity for public comments throughout the code development process.

In addition, NFPA and its partners are completing a full set of codes for the built environment. As part of that effort, our ANSI-accredited fire code, NFPA 1, *Fire Prevention Code*™, is being integrated with the *Uniform Fire Code*, which is published by the Western Fire Chiefs Association and has been used in Alaska. In 2003, the resulting merged fire code – which will be comprised of the two most widely adopted fire codes in the United States – will be an ANSI-accredited document. Likewise, as a result of NFPA's partnership with the International Association of Plumbing and Mechanical Officials, both 2003 editions of the *Uniform Plumbing Code* and *Uniform Mechanical Code* will have gone through an ANSI-accredited code development process. These coordinated efforts will give state and local governments the opportunity to choose a building code and a full set of codes, developed through open consensus and a comprehensive pool of professional expertise, when they make important decisions about public safety.

Please consider the benefits of our code development process in your deliberations over this bill. If I can provide any additional information with respect to NFPA or our ANSI-accredited process, please contact me directly at (562) 497-1706.

Best regards,

Ray Bizal

Ray Bizal, P.E.
Regional Manager

HB

437

ALASKA STATE LEGISLATURE
REPRESENTATIVE JOHN HARRIS
STATE CAPITOL 513, JUNEAU, ALASKA 99801-1182 (907) 465-4859

Sponsor Statement

HB 437 – "An Act adopting a version of the Uniform Mechanical Code for the state and providing for adoption of future versions of the code; and relating to the building code adopted by the state and to other safety codes."

HB 437 seeks to correct a problem that has arisen through the adoption of the international mechanical code by the State Fire Marshal's office in the Department of Public Safety.

Contrary to existing statute, which requires the adoption of Uniform Mechanical Code (UMC), the Fire Marshal's office has adopted the international mechanical code (IMC) put out by the International Code Council. While advocates of the ICC version believe it is more progressive than the UMC, the fact is that this new code is creating problems for tradesmen who work under the codes.

First, the IMC allows greater latitude in interpretation, which may be good for the designers and building officials who support it, but not for the building contractors who install heating, air conditioning, and other mechanical systems. They prefer the black-and-white direction of the UMC. There is also less chance of disputes with building inspectors under the UMC.

Second, the adoption of the IMC has created a conflict at occupational licensing, because current law requires that mechanical contractors be tested under the UMC.

HB 437 corrects these problems by stipulating that the 2000 edition of the UMC is the one officially adopted for use in Alaska. It also allows the DPS to adopt subsequent editions if they better meet the state's needs.

ALASKA STATE LEGISLATURE
REPRESENTATIVE JOHN HARRIS
STATE CAPITOL 513, JUNEAU, ALASKA 99801-1182 (907) 465-4859

Sectional Summary

HB 437 – "An Act adopting a version of the Uniform Mechanical Code for the state and providing for adoption of future versions of the code; and relating to the building code adopted by the state and to other safety codes."

Sec. 1 deletes an outdated reference in AS 08.18 to the International Conference of Building Officials.

Sec. 2 deletes the same reference in AS 08.40.

Sec. 3 makes technical changes to AS 18.56 to conform to changes made in section 5.

Sec. 4 makes technical changes to AS 18.70 to conform to changes made in section 5.

Sec. 5 adds a new section to AS 18.70.080 to stipulate that the 2000 edition of the Uniform Mechanical Code published by the International Association of Plumbing and Mechanical Officials is adopted for use in Alaska. This section also provides that subsequent versions are to be adopted when the Department of Public Safety determines that the subsequent version better meets the state's needs.

22-LS1347\J
Bannister
3/14/02

CS FOR HOUSE BILL NO. 437( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SECOND LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVES HARRIS, Hayes

A BILL

FOR AN ACT ENTITLED

"An Act relating to the adoption of a version of the Uniform Mechanical Code for the state and the adoption of future versions of the code; relating to the building code adopted by the state and to other safety codes; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 08.18.171(7) is amended to read:

(7) "mechanical contractor" means a contractor whose business operations involve plumbing, pipe fitting, sheet metal, heating, air conditioning, ventilating, or sprinkler and dry chemical fire protection trades in order to install or modify mechanical piping and systems, devices, fixtures, and equipment or other mechanical materials subject to the following codes as published by the International Association of Plumbing and Mechanical Officials [OR THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS]:

(A) Uniform Plumbing Code;

(B) Uniform Swimming Pool, Spa, and Hot Tub Code;

(C) Uniform Solar Energy Code; and

(D) Uniform Mechanical Code;

* **Sec. 2.** AS 08.40.490(3) is amended to read:

(3) "mechanical administrator" means a person who is responsible for

(A) installing or modifying mechanical piping and systems, devices, fixtures, equipment, or other mechanical materials subject to the Uniform Plumbing Code, Uniform Swimming Pool, Spa, and Hot Tub Code, Uniform Solar Energy Code, and the Uniform Mechanical Code as published by the International Association of Plumbing and Mechanical Officials [AND THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS]; or

(B) certifying that an installation or modification described in (A) of this paragraph complies with the applicable codes;

* **Sec. 3.** AS 18.56.300(e)(3) is amended to read:

(3) "state building code" means

(A) for building standards, the standards set out in the **building code** [VERSION OF THE UNIFORM BUILDING CODE] adopted by the Department of Public Safety under AS 18.70.080, including the provisions of that code applicable to buildings used for residential purposes containing fewer than four dwelling units, notwithstanding the exclusion of those buildings from the Department of Public Safety's jurisdiction made by AS 18.70.080(a)(2);

(B) for mechanical standards, the standards set out in the version of the Uniform Mechanical Code adopted [BY THE DEPARTMENT OF PUBLIC SAFETY] under AS 18.70.080, including the provisions of that code applicable to buildings used for residential purposes containing fewer than four dwelling units, notwithstanding the exclusion of those buildings from the Department of Public Safety's jurisdiction made by AS 18.70.080(a)(2);

(C) for plumbing standards, the minimum plumbing code adopted for the state under AS 18.60.705; and

(D) for electrical standards, the minimum electrical standards prescribed by AS 18.60.580.

* **Sec. 4.** AS 18.70.080(a) is amended to read:

(a) **Subject to (c) of this section, the** [THE] Department of Public Safety shall adopt regulations for the purpose of protecting life and property from fire and explosion by establishing minimum standards for

(1) fire detection and suppression equipment;

(2) fire and life safety criteria in commercial, industrial, business, institutional, or other public buildings, and buildings used for residential purposes containing four or more dwelling units;

(3) any activity in which combustible or explosive materials are stored or handled in commercial quantities;

(4) conditions or activities carried on outside a building described in (2) or (3) of this **subsection** [SECTION] likely to cause injury to persons or property.

*** Sec. 5.** AS 18.70.080(a) is amended to read:

(a) **The** [SUBJECT TO (c) OF THIS SECTION, THE] Department of Public Safety shall adopt regulations for the purpose of protecting life and property from fire and explosion by establishing minimum standards for

(1) fire detection and suppression equipment;

(2) fire and life safety criteria in commercial, industrial, business, institutional, or other public buildings, and buildings used for residential purposes containing four or more dwelling units;

(3) any activity in which combustible or explosive materials are stored or handled in commercial quantities;

(4) conditions or activities carried on outside a building described in (2) or (3) of this subsection likely to cause injury to persons or property.

*** Sec. 6.** AS 18.70.080 is amended by adding a new subsection to read:

(c) The 2000 edition of the Uniform Mechanical Code published by the International Association of Plumbing and Mechanical Officials is adopted for use in the state. As a subsequent version of the Uniform Mechanical Code is published from time to time, the Department of Public Safety shall adopt a subsequent version of the Uniform Mechanical Code published by the International Association of Plumbing and Mechanical Officials when the Department of Public Safety determines that the subsequent version meets the state's needs better than the preceding adopted version.

*** Sec. 7.** AS 18.70.080(c) is repealed.

*** Sec. 8.** The uncodified law of the State of Alaska is amended by adding a new section to read:

APPLICABILITY. AS 18.70.080(a), amended by sec. 4 of this Act, and AS 18.70.080(c), added by sec. 6 of this Act, do not apply to construction for which a municipality has issued a building permit before the effective date of secs. 4 and 6 of this Act.

*** Sec. 9.** The uncodified law of the State of Alaska is amended by adding a new section to read:

APPLICABILITY. AS 18.70.080(a), as amended by sec. 5 of this Act, and sec. 7 of this Act do not apply to construction for which a municipality has issued a building permit on or after the effective date of secs. 4 and 6 of this Act but before the effective date of secs. 5 and 7 of this Act.

*** Sec. 10.** Sections 1 - 4, 6, and 8 of this Act take effect July 1, 2002.

*** Sec. 11.** Sections 5, 7, and 9 of this Act take effect July 1, 2004.

Mechanical Contractors v. State of Alaska

A lawsuit on behalf of the Mechanical Contractors of Alaska, Inc. (MCA), was filed in the Superior Court of Alaska in Anchorage on September 6, 2001. MCA filed suit to halt the implementation of regulations adopted by the State Fire Marshall's Office calling for the use of the *International Mechanical Code*. MCA's suit seeks continued use of the *Uniform Mechanical Code*, as required by statute. On December 17, 2001, the Superior Court denied the Mechanical Contractors of Alaska's request for an injunction requiring use of the *Uniform Mechanical Code*, apparently based on a finding that MCA would not be "irreparably harmed" if the new mechanical code is used.

This dispute is essentially a classic "separation of powers" case. The factual issue about which mechanical code is appropriate for Alaska should not obscure the fundamental principal involved in this dispute: whether the Administration will be allowed to use general regulatory authority to overcome specific statutory provisions adopted by the Legislature. MCA strongly believes the Legislature should decide which mechanical code is appropriate for Alaska.

Current statutory law in Alaska mentions the *Uniform Mechanical Code* four times in sections calling for either the use of the *Uniform Mechanical Code* or for testing and education procedures related to mechanical contracting. Ignoring these legislative enactments, the State Fire Marshall's Office adopted the *International Mechanical Code* via an administrative regulation using a general grant of authority to protect public health and safety. A small group of zealots, with strong support in the State Fire Marshall's Office, has decided the *International Mechanical Code* is superior and should be the standard in Alaska. MCA believes the State of Alaska should continue using the *Uniform Mechanical Code* as a matter of law, a conclusion also reached by lawyers for the Legislature and the Legislature's Administrative Regulation Review Committee.[1]

At this point, MCA will file a Motion for Summary Judgment seeking a declaration that the Legislature must modify the statutes calling for use of the *Uniform Mechanical Code* prior to the adoption of the *International Mechanical Code* by the Administration. MCA urges the Legislative Council to direct the Legislative Affairs Agency to provide a short legal submittal[2] to the Superior Court in support of the argument that the absent legislative action modifying existing statutes, the Administration may not adopt a new mechanical code standard via regulations. The Legislature need not and should not take a position on the merits of any particular mechanical code at this time, but instead should strive to protect legitimate legislative prerogatives from encroachment by the Administration.

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[1] *See*, Opinion of Theresa L. Bannister, July 12, 2001 and Letter by Representative Lesil McGuire dated August 30, 2001 (attached).

[2] Typically called an *amicus curiae* or "friend of the court" memorandum.

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM

July 12, 2001

SUBJECT: Regulatory adoption of International Mechanical Code (Work Order No. 22-LS1056)

TO: Representative Jeannette James
Attn: Barbara

FROM: Theresa L. Bannister
Legislative Counsel

You have asked whether The Department of Public Safety may amend its regulations to replace the Uniform Mechanical Code ("UMC") with the International Mechanical Code ("IMC"). On June 25, 2001 the Lieutenant Governor's office filed regulations of the Department of Public Safety ("Department") that adopt, with some Alaska variations, the International Mechanical Code and certain other international codes. The International Mechanical Code replaces the Uniform Mechanical Code in those regulations. The relevant changes in the regulations occur at 13 AAC 50.023 (adoption of the International Mechanical Code) and 13 AAC 55.150(a)(19) (repeal of the definition of "U.M.C." for 13 AAC 50 - 13 AAC 55). The regulation changes take effect September 15, 2001.

You are asking whether these regulatory changes are valid. First of all, keep in mind that amended regulations that are filed by the lieutenant governor raise the rebuttable presumption that the amended regulations are valid. AS 44.62.100, and see O'Callaghan v. Rue, 996 P.2d 88, 95 (Alaska 2000). However, to uphold this presumption, the amended regulations must be consistent with and reasonably necessary to implement the statutes authorizing their adoption. See AS 44.62.030 and State, Bd. of Marine Pilots v. Renwick, 936 P.2d 526, 531 (Alaska 1997), cited by Interior Alaska Airboat Association v. State, 18 P.3d 686, 689 (Alaska 2001). Where a regulation is adopted in accordance with the Administrative Procedures Act (AS 44.62), and the legislature intended to give the agency discretion, the court applies this test by reviewing first whether the regulation is consistent with the statutory provisions that authorize it and second by determining whether the regulation is reasonable and not arbitrary. See Interior Alaska Airboat Association, 18 P.3d at 689 - 690. Finally, to be valid, an administrative regulation must not violate existing state statutes or constitutional provisions. See O'Callaghan v. Rue, 996 P.2d at 98.

The information that I have received does not disclose the complete process that preceded the filing of the regulations. Therefore, I will assume for the purposes of this memo that the regulation changes were adopted in accordance with the Administrative Procedures

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Act. The authority cited for the repeal and reenactment of 13 AAC 50.023 and for the repeal of 13 AAC 55.150(a)(19) is AS 18.70.080. In addition, AS 18.70.010 is also cited for the repeal of 13 AAC 55.150(a)(19). AS 18.70.080(a) expressly authorizes the Department of Public Safety to promulgate regulations for the purpose of protecting life and property from fire and explosion by establishing minimum standards for certain listed items. These items include, among other things, minimum standards for "fire and life safety criteria in commercial, industrial, business, institutional, or other public buildings, and buildings used for residential purposes containing four or more dwelling units...." AS 18.70.080(a)(2). This is a very broad delegation of authority by the legislature and gives the Department much discretion. AS 18.70.010 describes the general function of the Department with regard to fire protection and states that the Department "shall foster, promote, regulate, and develop ways and means of protecting life and property against fire, explosion, and panic. "

The adoption of a code to regulate the mechanical systems of certain structures appears to be consistent with AS 18.70.080 because it establishes standards for the installation and operation of mechanical systems in buildings, and the mechanical systems appear to directly affect fire in and explosions of structures. It is my understanding that mechanical codes cover air flow systems (heating, cooling, and ventilation systems) and that air flow systems are significant in fire protection matters because air is one of the elements that are needed for a fire. The authorization for adoption of a mechanical code is reinforced by AS 18.56.300(e)(3), which defines "state building code" for the section to include the mechanical standards adopted by the Department under AS 18.70.080.

However, AS 18.56.300(e)(3) expressly refers to the Department's adoption under AS 18.70.080 of a version of the UMC for these standards. Although this reference does not appear in the Department's grant of authority under AS 18.70.080, it appears to indicate that the legislature intended that the UMC be the mechanical code adopted under AS 18.70.080. Since this language is so clear, it is likely to be read to limit the Department's discretion under AS 18.70.080 when adopting a code for mechanical standards. If AS 18.70.080 and AS 18.56.300 are read together, the adoption of the IMC would not be consistent with AS 18.70.080. On the other hand, it is possible that AS 18.56.300 might be read as limited to the mechanical code to be adopted for the structures covered by that section. However, even in that case, it would seem to require that the Department adopt the UMC at least for the purposes of AS 18.56.300, which the regulation changes do not appear to do.

When considering consistency, the purposes of the grant of regulation-making authority may be considered. See Interior Alaska Airboat Association, 18 P.3d. at 690. In this regard, adoption of the IMC may not actually promote the protection of life and property from fire and explosion because mechanical administrators, the persons who install and modify mechanical systems, are required to be trained in the UMC, not the IMC. See AS 08.40.270(a)(3). The training requirements of licensing provisions generally are to insure that the licensees can implement the standards they are required to apply. The purpose of the licensing provisions for mechanical administrators is to protect the safety

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of people and property in the state from the danger of improperly installed or modified mechanical systems by providing a procedure to assure, among other goals, that the public that persons responsible for making mechanical installations in this state are qualified. See AS 08.40.210. If a licensee is not trained in the IMC the licensee will not be able to implement the standards established by the IMC. If the two codes are not significantly different, this may not be a significant problem. However, changing to a code in which the mechanical administrators are not required to be trained appears, at least on the surface, not to promote the purposes of the authorizing statute.

The next question is whether the regulation changes are reasonable and not arbitrary. See Kelly v. Zamarello, 486 P.2d 906, 911 (Alaska 1971), cited by Interior Alaska Airboat Association, 18 P.3d at 690. The Alaska Supreme Court conducts the "reasonable and not arbitrary" review using a deferential standard. See O'Callaghan, 996 P.2d at 95. In determining whether a regulation is reasonable and not arbitrary courts do not substitute their judgment for the judgment of the agency. See Meier v. State, Bd. of Fisheries, 739 P.2d 172, 174 (Alaska 1987), cited by Interior Alaska Airboat Association, 18 P.3d at 690. Therefore, review consists primarily of ensuring that the agency has taken a hard look at the salient problems and has genuinely engaged in reasoned decision making. See Tongass Sport Fishing Ass'n. v. State, 866 P.2d 1314, 1319 (Alaska 1994), cited by Interior Alaska Airboat Association, 18 P.3d at 690.

As mentioned earlier, the information that I have received does not disclose the complete process that preceded the filing of the regulations. Therefore, I will not address whether there were any process failures in the adoption of the regulation changes. However, the Alaska Supreme Court included in its process review a comment that the agency's findings reflected careful consideration of the public testimony received by the agency. See Interior Alaska Airboat Association, 18 P.3d at 693. I have not reviewed any Department findings, but a review of the regulation changes does raise questions as to whether the Department adequately considered the comments that it received, including comments from the Department of Community and Economic Development (June 7, 2001 letter from the Division of Occupational Licensing) about licensing issues and the May 29, 2001 letter from the Department of Labor and Workforce Development referring to conflicts with existing statutes, and whether the Department had decided its position before it went into the comment period.

Even assuming that the Department's findings indicate that it considered the comments that it received, the unresolved problems created by the substitution of the International Mechanical Code for the Uniform Mechanical Code suggest that the Department did not engage in reasoned decision making. As mentioned earlier, AS 18.56.300 specifically applies the Uniform Mechanical Code to certain buildings subject to AS 18.56.300, and, as also mentioned earlier in this memo, the licensing of mechanical administrators is currently based by statute on knowledge of the Uniform Mechanical Code. The licensing chapter, AS 08.40, defines a "mechanical administrator" as a person who is responsible for

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> (A) installing or modifying mechanical piping and systems, devices, fixtures, equipment, or other mechanical materials subject to the Uniform Plumbing Code, Uniform Swimming Pool, Spa, and Hot Tub Code, Uniform Solar Energy Code, and the **Uniform Mechanical Code** as published by the International Association of Plumbing and Mechanical Officials and the International Conference of Building Officials; or
>
> (B) certifying that an installation or modification described in (A) of this paragraph complies with the applicable codes...." [AS 08.40.490(3), emphasis added.]

A reference to the UMC also appears in the definition of mechanical administrators for the chapter that licenses contractors. See AS 08.18.171(7).

In addition, the examination of applicants for mechanical administrator's licenses includes, in addition to the basic knowledge of basic mechanical system information, familiarity with the requirements of the Uniform Mechanical Code. AS 08.40.270(a)(3).

Finally, if the IMC conflicts with the UMC, mechanical administrators would be exposed to disciplinary action under AS 08.40.320 and penalties under AS 08.40.380. Those sections authorize the discipline and penalties when a licensee knowingly violates a code listed in AS 08.40.490(3)(A). As you recall, that paragraph refers to the UMC and not the IMC.

The legislative intent for the licensing of mechanical administrators, therefore, appears to be based on the use of the Uniform Mechanical Code. While it is possible, I suppose, for persons familiar with one code to be familiar with and operate under another code, it does not seem reasonable for the Department to mandate the use of a mechanical code that is different from the mechanical code that mechanical administrators must study and be familiar with or to expose licensees to disciplinary action by requiring the use of the IMC.

The third part of the analysis of an administrative regulation is determining whether the administrative regulation violates existing state statutes or constitutional provisions. See O'Callaghan, 996 P.2d at 98. As already discussed above, the adoption of the IMC appears to directly conflict with the language of AS 18.56.300, AS 08.40.320, and AS 08.40.380, and less directly with AS 08.18.171 and AS 08.40.270 and AS 08.40.490. Before finding a conflict, a court will attempt to harmonize the regulation changes with the statutes. See State v. Anderson, 749 P.2d 1342, 1346 - 1347 (Alaska 1988). As mentioned earlier, although the reference to the UMC in AS 18.56.300 is clear, a court may determine that the reference to the UMC is limited to the application of AS 18.56.300 and may also attempt in some way to harmonize the licensing provisions with the regulation changes, e.g., reading the licensing provisions to allow the licensing agency to require training in the IMC. However, it is not clear how AS 08.40.320 (disciplinary action) and 08.40.380 (penalties) could be harmonized with the regulation

changes, and, further, the regulation changes do not appear to provide for the application of the UMC in cases covered by the AS 18.56.300.

As indicated earlier, I have not reviewed any findings that the Department may have made for the regulation changes. If you would like me to do so, please advise. Keeping that limitation in mind, my conclusion is that there appear to be serious questions whether the adoption of the IMC by the Department satisfies the criteria established by statute and the courts for the validity of regulations. The Department may be determined not to have been acting within the statutory authorization for regulations because of the language of AS 18.56.300. The regulation changes may be considered unreasonable in light of the language of the licensing statutes and AS 18.56.300. And the changes appear to conflict with certain statutes in this area. Although it is always difficult to predict how a court would rule in a particular matter, particularly in light of the deference the court gives when applying part of its analysis, I believe that it is quite possible that a court may determine that invalidation of the regulation changes related to the UMC is appropriate in light of these problems.

If I can be of further assistance, please advise.

TLB:lmb
01-179.lmb

EXHIBIT 17

THE
FOLLOWING
DOCUMENT(S)
ARE
POOR
ORIGINAL
COPIES

May 23, 2001

To: Fran Ulmer, Lieutenant Governor
Third Floor, State Capitol
P.O. Box 110001
Juneau, Alaska 99811-0001

From: Gary Hile, Chief Plumbing/Mechanical Inspector, Municipality of Anchorage

Re: Proposed adoption of the International Mechanical Code

Dear Lieutenant Governor Ulmer,

I am very concerned that the State Fire Marshal is considering adoption of the 2000 International Mechanical Code (IMC) in lieu of the 2000 Uniform Mechanical Code (UMC). The State of Alaska and the Municipality of Anchorage have used the UMC since 1964. I question why the State is considering adopting a new document that is essentially unproven. The IMC has only been in existence since 1997, whereas the UMC has been printed since 1964. The UMC has served us well over the years. Engineers, Plan Reviewers, Inspectors, Contractors, and Installers are all familiar with the provisions of the UMC. It has proven to be reliable, user-friendly and most importantly it has maintained a high standard of safety.

The UMC is a turnkey document. All the information needed to install a mechanical system is included in the document. The IMC requires an individual to reference several other documents to achieve the same goal. The additional documents would only add confusion and cost. Most all journeymen have been trained utilizing the UMC. If the IMC were adopted, several training facilities and apprenticeship programs would have to rewrite their courses. The State and Municipal tests would have to be rewritten at great time and expense.

There are some individuals that have concern that the UMC will not harmonize with the International Building Code. The California Building Standards Commission spent several months investigating this issue, and concluded that there are no appreciable conflicts, other than a couple of

definitions. After several months of evaluating the International Codes, the State of California opted not to adopt the International Codes and elected to continue to use the Uniform Codes. They also elected to continue using the older 1997 Uniform Building Code, instead of adopting the newer 2000 International Building Code. I believe their decision was based on the same concerns that I have in reference to safety and user friendliness.

Another issue to take into consideration is the process used in the adoption of code changes to existing codes. The UMC and the Uniform Plumbing Code (UPC) are now created in cooperation with the National Fire Protection Association (NFPA), using the American Standards Institute (ANSI) process. The ANSI process is the only true open consensus process, where anybody and everybody have a vote. The IMC restricts voting privileges to member Government Officials only. Shouldn't the end user, the public, have a voice and a vote on which codes are adopted?

I do not know of any compelling reasons or justifications to adopt a new Mechanical Code (IMC), when we currently have an excellent Mechanical Code (UMC) already in place. I urge you to please do everything in your power to overturn the State Fire Marshal's decision to adopt the IMC. I do not believe his intentions are in the best interest of the public. He may be very knowledgeable on Fire Codes, but I believe I have more expertise in relation to Mechanical Codes and it is my opinion that the UMC is far superior to the IMC.

Please feel free to call me if you have any questions that I may be able to clarify. I have enclosed my business card.

Respectfully,

Gary Hile
Chief Plumbing/Mechanical Inspector
Municipality of Anchorage

Tony Knowles, Governor

Alaska Department of Community and Economic Development

Division of Occupational Licensing
P.O. Box 110806, Juneau, AK 99811-0806
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June 7, 2001

Mr. Ross Fosberg
Code Adoption Coordinator
Department of Public Safety
Division of Fire Protection
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Fosberg,

The following are the Department of Community and Economic Development Division of Occupational Licensing comments on the Department of Public Safety proposed changes to 13 AAC 50.020 and 13 AAC 50.023 regarding the Building Code and the Mechanical Code.

The Department of Public Safety proposes to repeal the Uniform Building Code and the Uniform Mechanical Code and to adopt the International Building Code and the International Mechanical Code. This change would significantly impact the Division of Occupational Licensing and our licensed Mechanical Administrators and Residential Contractors.

The proposed change from the Uniform Codes to the International Codes appears to conflict with the statutes and regulations administered by the Division of Occupational Licensing governing Mechanical Administrators and Residential Contractors. Even if the Mechanical Administrator and the Residential Endorsement statutes can be interpreted in a manner that does not technically conflict with the proposed DPS regulations, the outcome will be conflicting policies and public confusion.

The purpose of licensing Mechanical Administrators as stated in AS 08.40.210 is to, "protect the safety of people and property in the state from the danger of improperly installed or modified mechanical systems by providing a procedure to assure (1) the public that persons responsible for making mechanical installations in this state are qualified; and (2) that a sufficient number of persons are so qualified."

The primary qualification that AS 08.40.270 requires Mechanical Administrators to possess is passage of an examination that must test applicant's, "familiarity with the requirements of the...Uniform Mechanical Code currently in effect in the state." Therefore current Mechanical Administrators have studied and been tested on the Uniform Mechanical Code and not the International Mechanical Code that DPS proposes to adopt.

Furthermore, the continuing education Mechanical Administrators are required to obtain under Division regulations is training in the Uniform Codes. All Mechanical Administrators must renew their licenses by August 31, 2001 and document 8-16 hours of training on specific Uniform Codes. This training will not have familiarized them with the International Codes.

The other reference to specific codes in the Mechanical Administrator statute appears AS 08.40.490 that defines Mechanical Administrator as a person who is responsible for installing or modifying items subject to the Uniform Mechanical Code. These references appear to imply the legislature was intending Mechanical Administrators to be performing under the Uniform Code.

Residential Contractors are required by AS 08.18.025 to hold residential endorsements for which they are tested. The Division tests applicants on the Uniform Building Code and continuing education relates to that code.

The Division contracts with Experior Assessments to write the Mechanical Administrator and Residential Endorsement Exams. Under our contract with Experior, it may cost up to $2,000 per exam for the revisions necessary to switch to the International Code. Eight separate examinations would have to be revised and the revisions would take four to six months to complete.

A change from the Uniform Code to the International Code would also result in the Division having to revise its own examination and continuing education regulations for Mechanical Administrators and Residential Endorsees. The Division would need to locate providers of continuing education on the International Code and approve their courses.

In conclusion, the Division requests that the Department of Public Safety delay adoption of the International Codes until conflicts with the Mechanical Administrator statutes can be resolved and the transition can be made in an orderly manner.

Thank you for consideration of my comments.

Sincerely,

Catherine Reardon
Director

CC: Deborah Behr, Department of Law
Jeff Bush, Department of Community and Economic Development

STATE OF ALASKA

DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT

WAGE AND HOUR ADMINISTRATION
LABOR STANDARDS & SAFETY DIVISION

TONY KNOWLES, GOVERNOR

3301 Eagle Street, Suite 301
P.O. Box 107021
Anchorage, Alaska 99510-7021
Phone: (907) 269-4900
Fax: (907) 269-4915

May 29, 2001

Mr. Gary Powell
State Fire Marshal's Office
State of Alaska, Division of Fire Prevention
5700 East Tudor Road
Anchorage, AK 99507-1225

Dear Mr. Powell:

Mr. Eugene Rutland has contacted me and requested a clarification of paragraph two of your letter to him dated May 21, 2001. In your letter, paragraph two makes mention of one of our plumbing inspectors, Mr. Paul Yoder, as a representative of the Department of Labor.

In early fall of 2000, the Department of Labor obtained information that there was an effort to adopt a family of codes, including the International Plumbing Code (IPC) and the International Electrical Code (IEC). A review of the initial draft of the regulations did indeed reference both of those codes. We contacted your agency through Mr. Fosberg to inquire into the proposed regulation change. Mr. Fosberg invited the Department to provide a code review of your body of codes and point out our opposition to any language. While this is a function of the review committee, the Department felt compelled to have the proposed codes reviewed by our agencies. Mr. Yoder was asked to attend the meetings. The subsequent regulation package reflected the deleted references to the IEC and IPC, courtesy of Mr. Yoder. Mr. Yoder never endorsed the adoption of the International Mechanical Code over the Uniform Mechanical Code. In addition, you state that Mr. Yoder reviewed the IFGC code sections also. Mr. Yoder informs the Department that it was Tami Hamler and not he that reviewed the International Fuel Gas Code.

If the tone of this letter sounds somewhat critical and defensive, it is not meant that way; it is meant to clarify our positions on a number of issues. It is important for both our agencies to work together, and in order to accomplish that end, we must address several points that have caused these agency problems.

In one instance, your personnel approved the installation of materials not approved by the state adopted Uniform Plumbing Code (UPC) enforced by the Department of Labor (DOL), for a structure in Homer, Alaska. The material was cross-linked polyethylene (PEX) piping for potable water. While that material was finally approved and is included in the current code, at the time it was installed it was not approved by the code. ASTMF 1807 was promulgated as a standard for PEX and the material was adopted in the 2000 code.

Most recently, we opposed the installation of an emergency power generator at a school, which did not have an on-site fuel supply. This is a direct violation of the state adopted National Electrical Code (NEC). We solicited and received the support of your division for requiring code compliance until we discovered from the engineering firm that the code requirement had been directly addressed to your plan review section and they granted an exception. The exception was the prerogative of the Department of Labor.

EXHIBIT 14

In the past two weeks, the Department has received two national trade publications with "press releases" ostensibly written by you that announce the adoption by the State of Alaska of the "2000 IBC, IFC and IMC codes effective March 1, 2001." That is not true. Your regulations are still out for public comment. We are getting daily calls from industry wanting to know what codes are in effect. In a meeting attended by Department of Labor personnel, Mr. Fosberg was quoted as stating that "it doesn't matter what the public comments are, the adoption of the International Codes is a done deal." This is an extremely cavalier approach to regulation adoption.

We have had regulations adopted in the past, and our experience has been that public comment does matter. The Department has also been informed that the endorsement of your proposed codes was by members of your own code review committee. This committee is made up of "all the major stakeholders." We have been told that all the workgroups were almost exclusively ICBO members. This is the organization responsible for the codes, which your agency is attempting to adopt. Conspicuously missing from the groups are mechanical contractors and mechanical administrations that will have to radically adjust their activities in order to comply with the proposed International Mechanical Code.

When the Director of Occupational Licensing Division offered to make a mailing list of Mechanical Contractors and Mechanical Administrators available to Mr. Fosberg, he was not interested in receiving them. Occupational Licensing Division took the unprecedented step of public notice mail out of the proposed regulations on the second go-round. Further, the original advertising for public comment was poor. The Department attended two of the four meetings and found attendees were made up of review committee members.

I, as Director of Labor Standards and Safety, can appreciate that "The Boss" doesn't always have the time to carefully review every detail that comes across their desk. However, when facts are distorted or misrepresented, steps must be taken to correct the matter. The Labor Standards and Safety Division, through the Mechanical Inspection section, stands ready to explain our position concerning the proposed regulations. We have conducted a side by side analysis of the IMC/UMC and the IPC/UPC and find no compelling reason to abandon the uniform codes that have been in effect for over thirty years.

Finally, the adoption of the International body of codes would create several conflicts with existing statutes. These conflicts will have to be addressed by the various agencies that enforce existing statutes. Switching enforcement to the International codes would create confusion and require each agency to access what the costs of enforcing the codes would be. In closing, Labor Standards and Safety stands ready to assist you and your agency with any assistance you may need from us.

Sincerely,

Richard A. Mastriano

Richard A. Mastriano
Director
Labor Standards and Safety

RAM:jr
cc: Ed Flanagan, Commissioner
Glenn Godfrey, Commissioner
Mr. Gene Rutland
Mr. Dwight Perkins
J.R. Carr, Chief Labor Standards and Safety
Dennis Bowden, Assistant Chief, Mechanical Inspection
regnot.

EXHIBIT 14

Facsimile Transmission

Municipality Of Anchorage

P.O. Box 196650
Anchorage, Alaska 99519-6650
Telephone: (907) 343-8161
Fax: (907) 343-8125
http://www.ci.anchorage.ak.us

George Wuerch, Mayor

Department of Public Works

From:	Name:	Watts, Ron K.
	Fax Number:	907-249-7385
	Voice Phone:	907-343-8307
To:	Name:	John Harris
	Company:	
	Fax Number:	(907) 465-3799
	Voice Phone:	

Fax Notes:

Date and time of transmission: Thursday, February 21, 2002 11:04:00 AM
Number of pages including this cover sheet: 07

DATE: February 21, 2002

TO: Alaska Legislators

SUBJ: Controversy Surrounding Mechanical Code Adoption

Brief History of Political Issues Involved with Building Codes:
In the early 1990's there was a major effort to consolidate all the various codes used in the U.S. into a single package of codes. The federal government, most states, and most national professional, construction, and design organizations supported that concept. The goal was to produce a family of codes by the year 2000, and that goal was achieved in the 2000 International family of codes. Before the process was finished, however, the International Association of Plumbing and Mechanical Officials (IAPMO), supported by the unions, and the National Fire Protection Association (NFPA) pulled out of the process and decided to publish a competing family of codes. Unfortunately, the main reasons for pulling out of the code consolidation process were organizational control of codes and income from the sale of codebooks.

Problems:
There are eight different departments within Alaska State government enforcing building and construction codes, in part or in whole. Having an old Mechanical Code reinstated into the Department of Commerce and Economic Development and the Department of Public Safety, that is unrelated and uncoordinated with the new building and fire codes, will create havoc in local and state government, as well as in the design and construction community. Mechanical administrators and journeymen will be tested to one version of the mechanical code, but the local jurisdictions will be enforcing another version of the mechanical code. If the intent of the Administrative Regulations Review Committee and other legislative committees is to reflect the intent of the laws passed by the legislature, then the proposed House Bills 399, 436, and 437 and the unnumbered Senate versions need to be revised to reflect the codes that are currently adopted by the departments. The bills should be revised so there is no specific designation of a proprietary name, version, or publisher, because names, organizations, and standards regularly change. There has not been a currently published version of the "Uniform" Building Code since 1997. The replacement building code is the "International" Building Code. Proposed HB437, Section 3, Paragraph (3)(A) changes the reference to a generic building code. The rest of the code references in HB399, 436, and 437 should be changed the same way. A proposed draft substitution bill that will do that is attached.

If the underlying issue with the Regulations Review Committee is state adoption of codes by regulation, then the process should be changed. In the mean time, do not make a scapegoat of a code just because it is opposed by the plumbing and mechanical unions, and IAPMO. These groups are only a single, narrow segment of the construction and design industry. The plumbing and mechanical trade unions have a very narrowly focused, vested interest, and many of their members are also members of IAPMO, which stands to benefit from adoption of their code. These proposed House and Senate bills will lock in one code for eternity and lock out everything else. The controversies have little or nothing to do with the technical merits of the codes. The

bottom line issues are perceived loss of control of codes by the labor unions, and loss of revenue from code sales.

The majority of architects, builders, civil, electrical, and mechanical engineers, building owners and managers, developers, general contractors, and local jurisdictions, support a single family of coordinated International Codes. Right now, the International Code series is the only collection that meets that need.

The codes should reflect what is best for the majority of the citizens of the State of Alaska in the long-term, not the desires of a special interest group. Many architects, engineers, and building owners want to use the new International Codes because they are safe, easy to use, and save money.

Solution:
The following steps need to be taken to avert problems caused by the aforementioned bills:

1. Reject House Bills 399, 436, and 437 and any companion Senate bills, in their present form.

2. Revise the proposed bills to allow codes that are adopted by the State of Alaska and local jurisdictions to be utilized by removing any proprietary names, editions, and/or publishers of the codes. This would allow present and future codes to be adopted without unnecessary statute, ordinance, or law changes, and would not lock one code or code edition into eternity. Codes and standards are changed and updated regularly.

3. Adopt the wording, or similar wording, in the attached substitute bill. This proposed draft substitute bill does not change any codes presently adopted in the state. What it does is not lock the state or local jurisdictions into an old code or any specific code for eternity. Again, codes and standards are changed and updated regularly.

Attachments:

1. Suggested substitution for House Bills 399, 436, and 437 and Senate versions
2. Concurring signatures by representatives of the design and construction community

Ron Watts

Ron Watts, Chief Building Official
Municipality of Anchorage
(907) 343-8301
(907) 343-8200 fax
wattsrk@ci.anchorage.ak.us

Following signatures indicate concurrence with the foregoing position

Ted Trueblood	Alaska Professional Design Council	
John Bowman	Alaska Society of Professional Engineers	
Kurt Hulteen	Alaska Society of Professional Engineers, Anchorage Chapter	
Scott Sandlin	American Institute of Architects	
Mike Story	American Society of Civil Engineers	
Thomas Stapleford	American Society of Mechanical Engineers	
Chuck Spinelli	Anchorage Home Builders Assoc., President Spinell Homes, President	
Steve Shuttleworth	Building Official, City of Fairbanks	
Ron Watts	Building Official, Municipality of Anchorage	
Tanci Mintz	Building Owners and Managers Association	
Pam Ronning	ICBO Alaska Central Chapter	

RECOMMENDED SUBSTITUTE FOR HOUSE BILL 399
AND PROPOSED SENATE VERSION

HOUSE OR SENATE BILL NO. _____
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-SECOND LEGISLATURE - SECOND SESSION
BY THE HOUSE/SENATE RULES COMMITTEE BY REQUEST OF THE ADMINISTRATIVE REGULATION REVIEW COMMITTEE

Introduced:
Referred:

A BILL

FOR AN ACT ENTITLED

"An Act relating to the Mechanical; Plumbing; Swimming Pool, Spa, and Hot Tub; and Solar Energy codes; updating certain regulations adopted by the Department of Community and Economic Development relating to the codes that apply to certain construction contractors and mechanical administrators; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

***Section 1.** AS 08.18.171(7) is amended to read:

(7) "mechanical contractor" means a contractor whose business operations involve plumbing, pipe fitting, sheet metal, heating, air conditioning, ventilating, or sprinkler and dry chemical fire protection trades in order to install or modify mechanical piping systems, devices, fixtures, and equipment or other mechanical materials subject to the Mechanical Code adopted under AS 18.70.080:

(A) Plumbing Code;

(B) Swimming Pool, Spa, and Hot Tub Code;

(C) Solar Energy Code; and

(D) Mechanical Code

***Sec. 2** AS.08.40.270(a) is amended to read:

(a) Each applicant shall be examined to determine the applicant's

(1) ability to understand plans, design specifications, and engineering terms commonly used in the mechanical field;

(2) knowledge of mechanical installations and piping;

(3) familiarity with the requirements of the Plumbing Code, Swimming Pool, Spa, and Hot Tub Code, and Solar Energy Code- adopted under 8ACC 63.010 and the Mechanical Code adopted under AS 18.70.080

(4) personal skill and ability

Sec. 3. AS 08.40.490(3) is amended to read:

(3) "mechanical administrator" means a person who is responsible for

(A) installing or modifying mechanical piping and systems, devices, fixtures, equipment, or other mechanical materials subject to the Plumbing Code, Swimming Pool, Spa, and Hot Tub Code, Solar Energy Code adopted under 8ACC63.010 and the Mechanical Code adopted under AS 18.70.080; or

(B) certifying that an installation or modification described in (A) of this paragraph complies with the applicable codes;

Sec. 4. AS 18.56.300(e)(3) is amended to read:

(3) "state building code" means

(A) for building standards, the standards set out in the version of the Building Code adopted by the Department of Public Safety under AS 18.70.080, including the provisions of that code applicable to buildings used for residential purposes containing fewer than four dwelling units, notwithstanding the exclusion of those buildings from the Department of Public Safety's jurisdiction made by AS 18.70.080(a)(2);

(B) for mechanical standards, the standards set out in the Mechanical Code adopted under AS 18.70.080, including the provisions of that code applicable to

buildings used for residential purposes containing fewer than four dwelling units, notwithstanding the exclusion of those buildings from the Department of Public Safety's jurisdiction made by AS 18.70.080(a)(2);

(C) for plumbing standards, the minimum plumbing code adopted for the state under AS 18.60.705; and

(D) for electrical standards, the minimum electrical standards prescribed by AS 18.60.580

*Sec. 5. AS 18.70.080(a) is amended to read:

(a) Subject to this section, the Department of Public Safety shall adopt regulations for the purpose of protecting life and property from fire and explosion by establishing minimum standards for:

(1) fire detection and suppression equipment;

(2) fire and life safety criteria in commercial, industrial, business, institutional, or other public buildings, and buildings used for residential purposes containing four or more dwelling units;

(3) any activity in which combustible or explosive materials are stored or handled in commercial quantities;

(4) conditions or activities carried on outside a building described in (2) or (3) of this subsection likely to cause injury to persons or property.

*Sec. 6. AS 18.70.080 is amended by adding a new subsection to read:

(c) As a subsequent version of the Mechanical Code is published from time to time, the Department of Public Safety shall adopt a subsequent version of the Mechanical Code when the Department of Public Safety determines that the subsequent version meets the state's needs better than the preceding adopted version.

*Sec. 7 This act takes effect immediately under AS 01.10.070(c)

ALASKA STATE LEGISLATURE

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Sen. Robin Taylor, Vice-Chair
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Administrative Regulation Review Committee

August 30, 2001

Commission Glenn Godfrey
Department of Public Safety
P.O. Box 111200
Juneau, Alaska 99811-1200
Mail Stop 1200

Dear Commissioner Godfrey:

On August 14, 2001, the Administrative Regulation Review Committee conducted a meeting involving the Division of Fire Prevention's decision to adopt by reference the International Building Code. Members of the construction industry testified about potential problems created by adopting the International Code at this time.

While both the Department of Community and Economic Development, and the Department of Labor are required by state law to adopt a current Uniform Building Code, there is no requirement that the Public Safety's division of Fire Protection do so.

While similar is some ways, the International Code is very different in others. This places an additional burden on the contractors, the mechanical engineers and those actually doing the work. They will have to test and continue their education under one Code, while working under two different codes.

As Chair of the Committee representing the majority of its members we are requesting that the Division of Fire Prevention delay implementing these regulations until after the next Legislative session. This will allow time for the Legislature to review the current law managing construction in Alaska and to provide all three departments with a uniform policy and guidelines established by the Legislature. This is the appropriate process as it is the responsibility of the Legislature to establish State policy in this area and the responsibility of the Executive departments and agencies to carry out that policy. We feel certain that by working together in the upcoming session a solution can be achieved. This will ensure that everyone in the industry will have a single set of codes to work with and be tested upon.

Sincerely:

Representative Lesil McGuire, Chair
Administrative Regulation Review Committee

EXHIBIT 16
PAGE 1 OF 1

LEGAL SERVICES

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LEGISLATIVE AFFAIRS AGENCY
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Juneau, Alaska 99801-1182
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MEMORANDUM January 11, 2002

SUBJECT: Legislative response to regulatory adoption of International Mechanical Code (Work Order NO. 22-LS1277)

TO: Representative Joe Green

FROM: Theresa L. Bannister
Legislative Counsel

You have asked for a brief statement suggesting how the legislature may wish to respond to the regulatory adoption of the International Mechanical Code by the Department of Public Safety if the regulations are not consistent with governing law. You have indicated that you have a copy of my memo indicating that it is quite possible that a court may determine that it would be appropriate to invalidate these regulations. You have indicated that the Legislative Council has been requested to authorize the submission of an amicus brief in the current court action on this matter to indicate that the legislature believes that the regulations are not consistent with governing law.

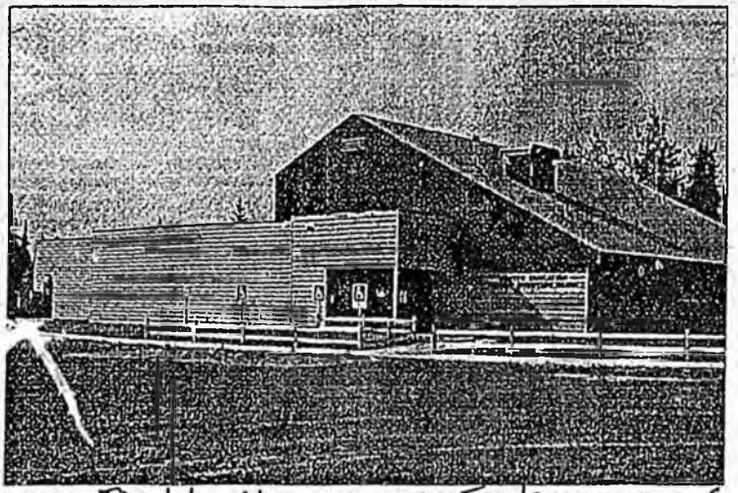
The most direct and effective way for the legislature to approach this situation would be to enact a bill either to annul the regulations or to prohibit the adoption of the International Mechanical Code. Because it may take a few months to enact the legislation, you may want to make this bill retroactive to the effective date of the regulations to the extent constitutionally permissible. The submission of an amicus brief, even by Legislative Council, would not necessarily result in the court voiding the regulations because the amicus brief is merely a statement of the position of the Legislative Council on this matter, and the court's interpretation of the statutes will govern. By contrast, if the legislature enacts legislation, that legislation will control whether the International Mechanical code can be adopted by regulation, and to the extent that the retroactivity clause is constitutionally permissible, the legislation would void the regulations from their effective date.

It is also worth noting that, while AS 24.20.060(4)(F) authorizes the Legislative Council to sue in the name of the legislature during the interim, it is unlikely that the Council has authority to take legal action on behalf of the legislature during a session unless directed to do so by the legislature itself.

Please let me know if you would like legislation drafted in this matter, or If I can be of further assistance.

TLB:lmb
02-003.lmb

UMC



Anchorage-based AMC Engineers came up with an award-winning solution for ventilating a shooting range inside the Alaska Department of Fish and Game Hunter Education Building in Fairbanks.
AMC Engineers

Anchorage Daily News - February 6

See Page D-5, COFFEE

New ventilation system hits bulls-eye

■ **SOLUTIONS:** Engineering firm wins honors; allows shooters to breathe freely.

By SARANA SCHELL
Anchorage Daily News

It was one of those Alaska architecture dilemmas: have adequate ventilation and freeze, or stay warm in toxic, smoky air.

An Anchorage engineering firm recently won national recognition for its money-saving solution to that problem in an indoor shooting range in Fairbanks.

The Alaska Department of Fish and Game Hunter Education Building opened in 2000, but the American Society of Heating, Refrigeration and Air-conditioning Engineers only recently gave Anchorage-based AMC Engineers an Honorable Mention 2002 Technology Award for "outstanding technical design of mechanical systems."

The 10,700-square-foot building has 10 shooting lanes used by high school and junior high teams, the public and classes, said Roy Nowlin of Fish and Game. Target practice with pistols and .22-caliber rifles sends smoke and minuscule particles of lead into the air.

"You can't see the target and everybody'll be gasping for air," said

See Page D-5, VENTILATION

, 2002 - Feb. 6, 2002 - Anchorage Daily News

VENTILATION: *AMC Engineers honored*

Continued from D-1

Boyd Morgenthaler, principal engineer. Dave Shumway was project engineer.

Typically, giant fans suck air through shooting ranges, flushing the interior. In sometimes frigid Fairbanks, warming up that fresh air is expensive.

Instead, AMC put in a recirculation system that sucks the building's air through three sets of filters. That keeps lead from users and neighbors.

"We don't want the kids next door breathing that," Morgenthaler said.

About a quarter of the total air supply is traded out, bringing fresh air in.

Automatic sensors monitor filters and alert staff when filters should be replaced. Sensors also measure carbon dioxide and monoxide in the air, triggering an influx of more fresh air if needed.

The filter system cost $2,000 more than a traditional system but net savings add up to $10,000 a year, said Morgenthaler: "A dollar a square foot per year in operating costs."

Nowlin said total operating costs run about $120,000 year. The building also houses a classroom. Nowlin said classes range over such topics as hunter ethics, regulations, how to get in and out of boats safely, and wildlife management.

■ Reporter Sarana Schell can be reached at sschell@adn.com.

PASADENA ORDINANCE AUTHORIZING USE OF THE INTERNATIONAL CODES DECLARED BY CALIFORNIA ATTORNEY GENERAL TO BE IN VIOLATION OF STATE LAW

WALNUT, Calif., December 12, 2001 – Today the California Attorney General released his opinion on the validity of the City of Pasadena Ordinance No. 6847 authorizing use of the International Codes (International Building Code, International Residential Code, International Plumbing Code and International Fuel Gas Code). The opinion concludes that this Ordinance is not consistent with State Law. In fact, according to the opinion, "State law does not allow model building codes other than those adopted in the California Building Standards Code to be deemed by a local jurisdiction as 'approved alternate' authority to the California Building Standards Code for purposes of approving materials, designs and methods of construction for buildings constructed in California."

The opinion expressed by Bill Lockyer, California's Attorney General, is consistent with the position expressed by the California Building Standards Commission in a letter to the City of Pasadena dated February 2, 2001. The consensus code partners (IAPMO, NFPA and the Western Fire Chiefs Association) had previously expressed similar concerns about the validity of a wholesale adoption of other model codes by the Pasadena Ordinance. This concern was also substantiated by the Attorney General's opinion indicating that use of the alternate methods provisions to secure wholesale adoptions of other model codes circumvents the state law. The Attorney General's opinion further indicates that alternates must be based on a case-by-case examination of evidence by the building official.

The California Building Standards Law requires the use of uniform building regulations throughout the state except where a local regulation may be appropriate for local conditions. The Uniform Plumbing Code, Uniform Mechanical Code, Uniform Building Code and Uniform Fire Code have been deemed by the State of California as the codes best suited to protect the safety of its citizens. Thus, individual jurisdictions are not permitted to utilize model codes other than those referenced in the California Building Standards Law. For a copy of the Attorney General's opinion, the letter from the CBSC to the City of Pasadena, and information about the consensus code partners', please visit the IAPMO Homepage.

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Contractor
Dec, 2000

Calif. panel sticks with IAPMO code.(International Association of Plumbing and Mechanical Officials)(Brief Article)
Author/s: Rob Heselbarth

SACRAMENTO, CALIF. -- The California Building Standards Commission voted 5 to 1 in October to continue using the Uniform Building Code as the basis for the 2001 California Building Standards Code, and not to use the International Building Code. The decision to use the UBC reversed a recommendation made to the commission to adopt the IBC.

The recommendation to adopt the 2000 International Building Code came from the 2000 Code Partnership, a committee of experts created by the Building Standards Commission to study the building code issue for an 18-month period. Why the commission went against its own committee's recommendation is the source of confusion for an industry group that co-publishes the IBC.

"We expected that the commission would follow the recommendation of the experts and that it would follow what was in the best interest of the citizens of California," said Roy Fewell, vice president/public policy, International Conference of Building Officials Evaluation Service.

"The experts recommended a good compromise between what the plumbers' union wanted and what's good for the citizens," Fewell said.

"Then the Building Standards Commission made a decision that was purely political. Now we are concerned about seismic safety issues inherent in the Uniform Building Code. There is no reason to place public safety at risk to give the International Association of Plumbing and Mechanical Officials an opportunity to compete using their (UBC) code. We have never had a situation in California where the BSC has put the state behind in terms of building safety until now."

IAPMO, publishers of the UBC, believes the commission decided to stick with the UBC due to factors other than political issues.

"The original recommendation from the 2000 Code Partnership was to adopt the IBC, but the commission did not get to review the final edition of the IBC until much later than they had anticipated," said Russ Chaney, executive director, IAPMO. "As a result, the experts

were asked whether it would be easier for the state to stick with the UBC and make amendments or to adopt a totally new code and make amendments to that one. The decision was to stick with the UBC."

In addition to the rejection of the IBC, the commission voted to use the 2000 Uniform Fire Code developed by the Western Fire Chiefs Association and the 2000 Uniform Mechanical Code and the Uniform Plumbing Code developed by IAPMO.

The outcome of the vote illustrates the importance of the consensus-based process of code development, said Gary Keith, assistant vice president of the National Fire Protection Association, which supported the adoption of the UBC.

"IAPMO has modeled its code development procedures after our ANSI-approved consensus process," Keith said. "That process is an important item for code bodies to consider. Those code bodies believe that our working with IAPMO and the WFCA to develop a consensus set of codes is important to keep in mind."
Other states might examine the developments surrounding this California vote when making any decisions in their states, Chaney said.

ICBO also agreed that other states might consider this vote in their code adoption processes, but not because one code is better than another, Fewell said.

"The NFPA and IAPMO clearly hope that what has happened here in California will have national implications," Fewell noted. "They want to put a stop to the adoption of international codes."

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Contractor
June, 1999

Building codes center of legislative battle.(California)
Author/s: Rob Heselbarth

SACRAMENTO, CALIF. -- Legislation designed to mandate which plumbing and mechanical codes will be used in California is progressing through the state's legislature. Meanwhile, a committee charged with reviewing all available model building codes and recommending which will be adopted voted to recommend the same codes that were specified in the bill.

So did the committee's recommendations make the legislation moot? It's not that simple. Supporters of the bill want the legislation enacted to ensure that their code continues to be adopted in the future. Those opposed to the bill claim it is unconstitutional because it guarantees the success of one private organization's code over another organization's code.

The conflict surfaced in 1994 when the International Association of Plumbing and Mechanical Officials and the International Conference of Building Officials split and no longer jointly published the Uniform Mechanical Code. California law still specified the non-existent code, so the California Building Standards Commission chose to use an ICBO code. IAPMO sued the commission and ICBO to get its code reinstated but ultimately lost its case in court.

The commission, which has ultimate power to adopt building codes, established the 2000 Code Partnership committee as an indirect result of the IAPMO/ICBO split. Committee members include 175 code publishers, engineers, state agencies, building officials and other groups or individuals concerned with building codes in general. The committee's recommendations included IAPMO's Uniform Mechanical Code and the Uniform Plumbing Code.

IAPMO is supporting the bill because it believes the bill seeks to correct the legislative error created when it split with ICBO, said Russ Chaney, IAPMO executive director.

"ICBO claimed that we were circumventing the regulatory process by supporting this legislation," Chaney said. "They wanted our code to be reviewed by experts and the 2000 Code Partnership committee has reviewed it. The recommendation of the 2000 Code Partnership supported the legislation, and having that kind of support behind one code provides stability for the industry."

ICBO is opposing the bill because it believes the evaluation and implementation of technical codes should be left to technical experts, not legislators, said Jim Hodges, ICBO senior conference services manager.

"The codes that the 2000 Code Partnership committee recommended just happened to be the same as in the legislation so there really is no need for the bill anymore," Hodges said. "Now the only purpose of the bill would be to lock those codes in forever in California and ICBO believes it is totally unfair to do that.

"Even if the legislation stated that ICBO's international codes should be mandated, we would have opposed it. We believe it is unconstitutional for legislation to mandate which codes are enforced because it holds California hostage to a private organization's agenda. We believe there should be an administrative process in place, such as there is now, to avoid being forced to live by one code forever," Hodges added.
The California legislature has specified the model codes and the publishers to be used as the basis for code writing in the state since the 1960s, said Travis Pitts, CBSC executive director.

"Beginning in the early 1960s the legislature prescribed the codes right down to the edition," Pitts said. "The legislature continued to do that until 1974 when it quit specifying the edition. It simply said the `most recent version' and by doing so it avoided the issue of constitutional delegation so the legislature was not supporting the interests of a private code-writing body. In addition, state agencies are given one year to review a specified code and make any changes they decide are necessary and therefore this is not unconstitutional."

The bill was introduced by Assemblywoman Carole Migden (D-San Francisco) who was quoted in a Los Angeles Times article as stating that, "In an ideal world, and I mean this with no disrespect to the (California Building Standards) Commission, we legislators sometimes find it necessary to intervene. And there have been widespread complaints about inconsistencies."

Chaney said IAPMO is expecting the bill to get out of the Assembly and into the Senate. The California Assembly was expected to vote on the legislation June 4. The CBSC was expecting to meet July 14 to officially decide which building codes to adopt.

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A Comparison Between the 2000 Uniform Mechanical Code™ and the 2000 International Mechanical Code™

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International Association of Plumbing and Mechanical Officials
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Walnut, CA 91789-2825

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Preface

This document is an attempt to highlight the differences between the 2000 editions of the Uniform Mechanical Code (UMC) published by the International Association of the Plumbing and Mechanical Officials (IAPMO) and the International Mechanical Code published by the International Code Council. It consists of an executive summary followed by a chapter by chapter cross-reference. Each chapter also has a brief summary. When there are differences, comments are included in the analysis column. This study is provided for the benefit of those entities contemplating the issue of mechanical code adoption. IAPMO welcomes your comments and observations on this document. For additional copies please contact IAPMO at 909-595-8449 x149.

DIFFERENCES BETWEEN THE 2000 UMC AND THE 2000 IMC

Executive Summary

Background:

Until 1991 the Uniform Mechanical Code (UMC) was cosponsored by the International Association of Plumbing and Mechanical Officials (IAPMO) and the International Conference of Building Officials (ICBO) with each organization owning the copyright to the document. That situation changed in 1994, and again in 1997, when each of the two model code bodies published a separate UMC. Currently only IAPMO publishes a 2000 edition of the UMC with ICBO discontinuing publication of their Uniform Codes set. The 1994 versions of the UMC were similar but that was not the case in the 1997 editions of the document. Chapters 3, 4, and 11 of the ICBO UMC were rewritten in their entirety. At that point the documents had diverged. That trend has continued with the 2000 International Mechanical Code (IMC). The 2000 UMC is significantly different from the 2000 IMC in style, philosophy and technical content. The IMC is a publication of the International Code Council (ICC) and sponsored by ICBO.

Technical Content:

Some of the significant technical differences between the 2000 UMC and the 2000 IMC are outlined below:

1. Unvented Room Heaters: The IMC allows for the use of unvented room heaters by reference to the International Fuel Gas Code (IFGC) in Section 301.3. Unvented fuel burning room heaters are specifically prohibited under Section 916.3 of the 2000 UMC

2. LPG Facilities are prohibited in pits or basements and other specific locations by Section 1313.5. The 2000 IMC or the 2000 IFGC do not contain any such restriction.

3. Unlisted Equipment: Table 3-1 provides for clearances for different types of unlisted appliances. There is no equivalent table in the IMC.

4. Referenced Standards: Appendix A contains 7 UMC standards. These standards based on nationally recognized standards are reproduced in their entirety in the UMC. The IMC does not have any standards in it and only mentions them by reference.

5. Fuel Gas provisions: Chapter 13 of the UMC by reference to Appendix B contains these provisions. The IMC refers you to a different document; i.e. the International Fuel Gas Code for these provisions.

6. Text from other codes: The IMC reproduces text from other codes. As an example refer to Section 513 for Smoke Control systems. The UMC does not use this approach. This factor needs to be considered when jurisdictions are considering adopting one document over another.

7. Commercial Cooking Equipment (Chapter 5): There are significant differences between the two codes in this area. The requirements for duct enclosures for Type I Hoods are different; clearances are different with the UMC being more restrictive. The cleanout requirements are different as well.

8. Refrigeration (Chapter 11): Table 1103.1 on the IMC is different from Table 11-1 of the UMC. The refrigerant list in the IMC is more in keeping with ASHRAE 34. There is no comparable table in the IMC for Table 11-2 in the UMC. Part II of Chapter 11 deals with cooling towers; there is no equivalent provision in the IMC. Additionally, Section 1101.8 requires prior approval from the Administrative Authority for change of refrigerant. The UMC has no similar provision.

Conclusion:

As indicated above there are several major differences between the 2000 UMC and the 2000 IMC. Those code users currently using the 1997 UMC (either one) will find it a relatively smooth transition to the 2000 UMC in comparison to adopting the IMC. It is clear from comparing the size of the two books that the UMC 2000 is significantly more prescriptive in its approach, a philosophy that been utilized in the development of the Uniform codes. This philosophy is evident in the fact that the 2000 UMC reproduces important standards in the code for ease of use while the IMC only references them. Jurisdictions considering adoption of one or the other document need to examine these differences and consider their impact on the health and safety of the communities that they serve.

YEAR 2000 MECHANICAL CODE COMPARISON JUST COMPLETED

WALNUT, Calif., August 18, 2000 - In a continuing effort to provide the public with the most up to date detailed analysis of the two leading mechanical codes in the industry, IAPMO has completed A Comparison Between the 2000 Uniform Mechanical Code and the 2000 International Mechanical Code. This study was performed by Hari Ramanathan, who was previously employed by the International Conference of Building Officials (ICBO) as a staff engineer chiefly responsible for support of the International Plumbing Code (IPC) and International Mechanical Code (IMC). After leaving ICBO, Mr. Ramanathan assumed the position of Director of Code Services with IAPMO and is primarily responsible for supporting the 2000 UMC. As a member of the IAPMO family, Mr. Ramanathan decided that it was important to inform the public of the relative advantages of one mechanical code over another, thus he developed a comprehensive analysis of the 2000 UMC and IMC. If you wish to review this comparison, download a copy from IAPMO's document download page. For multiple copies of the comparison, please contact Mr. Ramanathan at (909) 595-8449 Ext. 149.

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Chapter 1

2000 UMC	2000 IMC	Analysis
101.0 Title	101.1 Title	IMC refers to ICC Fuel Gas Code for fuel gas provisions.
102.0 Purpose 103.0 Scope	101.2 Scope	
104 Application to Existing Mech. Provisions	102 Applicability	Similar language except IMC has a section dealing with referenced standards.
105.0 Alternate Materials and Methods of Const.	105.2 Alt. Materials	UMC language more detailed on this issue.
106.0 Modification	105.1 Modification	Almost identical.
107.0 Tests	107.2 Testing	
Part II 108.0 Powers and Duties of the Admin. Authority	104.1 Duties and Powers of the Code Official	UMC uses 'Admin Authority'; IMC uses 'Code Official'. UMC more detailed in this area.
110.0 Board of Appeals	109 Means of Appeal	IMC spells out the makeup of the Board of Appeal UMC does not.
Part III 112.0 Permits	106 Permits	Exempt work similar.
113.2 Plans and Specifications	106.3.1 Construction Documents	
114.1 Permit Issuance	106.4 Permit Issuance	
115 .0 Fees	106.5 Fees	UMC has Table 1-1 at the end of the chapter; IMC has a permit fees table in the appendix. UMC fee table is broken down in greater detail than the IMC appendix.
116.0 Inspections	107 Inspections and Testing	Similar.

Summary:
The major difference is that the IMC creates a department of mechanical inspections while the UMC does not specifically require it. The members of the Appeals Board are spelled out as far as qualifications in the IMC but not in the UMC. All aspects of the administrative process for a mechanical code are covered in both documents though the UMC is more prescriptive.

Chapter 2

2000 UMC	2000 IMC	Analysis
201.0 General	201.1 Scope 201.2 Interchangeability	
202.0 Accepted meanings		No specific reference to a dictionary found in the IMC.
203.0 (A thru Z) Definitions	Section 202 Definitions	Definitions in the two documents are varied. Even for the same terms, the definitions are not always identical. The UPC is generic in its building code reference and, therefore, can be used with any building code.

Summary:
The definitions in the two documents have similarities as well as significant differences. There are several terms defined in the UMC 2000 that are not defined at all in the IMC 2000. Examples would be Assembly Building, Cooling Unit/System, Heating degree-day, and Vented Appliance categories among others.

The UMC makes reference to a generic building in the definitions so as to be used with a building code adopted by the jurisdictions. For words not defined at all the UMC refers the user to a specific dictionary.

Chapter 3

2000 UMC	2000 IMC	Analysis
301.0 Scope	301.1 Scope	301.4 /301.5 Similar except the UMC has additional language on BTU ratings at altitude. Though both sections have the title, the provisions in each are different. Some of the material in this section of the IMC is covered.
302.0 Approval		Not covered in this chapter.
303.0 Type of Fuel and Fuel Connections	No comparable provision.	
304.0 Installation	304.0 Installation	
305.0 Access	306 Access and Service Space	The IMC is a combination of UMC 304 and 305. The requirements for clearances are not identical.
306.0 Automatic Control Devices	No such provision in this chapter.	
307.0 Labeling	301.4 Listed and Labeled	The approach to the topic is different. The UMC deals with the marking issue while the IMC goes into the specifics of the listing process.
308.0 Location	304.3 Elevation of Ignition Sources	Similar provisions.
309.0 Electrical Connections	301.7 Electrical	IMC refers to the ICC Electrical Code for all electrical provisions while the UMC spells out the provisions for mechanical equipment.
310.0 Condensate Wastes and Control	307 Condensate Disposal	Provisions are similar except the UMC has a table to size condensate piping based on equipment capacity and specific atmospheric conditions.
311.0 Personnel Protection	304.9 Guards	
312 Air Filters	No comparable provision.	

2000 UMC	2000 IMC	Analysis
Table 3-1	No comparable table.	
Table 3-2	Table 308.6	Similar though not identical.
Table 3-3 Table3-4 Table 3-5	No similar tables.	

Summary:
There are some significant differences between the two chapters. The IMC chapter does not contain tables needed to clearances for unlisted appliances. The IMC defers to the listing of the equipment for information pertaining to installations.

UMC has sizing tables for condensate piping while IMC does not. The IMC refers to the ICC electrical code for all electrical provisions while they are spelled out it in the UMC 2000.

Chapter 4

2000 UMC	2000 IMC	Analysis
401.0 General	401 General	The scopes of the two chapters are very different. Chapter 4 of the UMC deals with ventilation requirements of direct gas-fired heaters by reference. It has the requirements for evaporative coolers.
402.0 Makeup Air	No comparable provision.	
403.0 Evaporative Cooling Systems	No comparable provision.	
404.0 Location	No comparable provision.	
405.0 Access Inspection and Repair	No comparable provision.	
406.0 Installation	No comparable provision.	

Summary:
Chapter 4 of the UMC 2000 is a brief chapter dealing mainly with evaporative coolers. Chapter 4 of the IMC 200 deals extensively with the issue of ventilation. Some of the issues in the IMC are mechanical ventilation, requirements for outdoor ventilation for different occupancies, ventilation for parking garages. The UMC defers to the building code on many of these issues.

Chapter 5

2000 UMC	2000 IMC	Analysis
501.0 Scope	401.1 Scope	The UMC chapter is divided into two parts with Part I dealing with Environmental Air ducts/product conveying ducts and Part II dealing with commercial hoods and kitchen ventilation. The IMC is laid out differently and has significant portions from the ICC Fire Code and ICC Building Code reproduced in this chapter.
502.0 Definitions	No comparable provision.	
503.0 Motors, Fan and Filters	503 Motors and Fans	Air filter requirements only found in UMC.
504.0 Environmental Air Ducts	508 Commercial Kitchen Makeup Air 504 Clothes Dryer Exhaust Ducts	Maximum length limitation for clothes dryer exhaust is 14 ft under the UMC and 25 feet. IMC allows use of manufacturer installation instructions to reduce this length. UMC does not. Both reduce distance for use of elbows though not identical.
504.3.3 Commercial Clothes Dryers	504.7 Commercial Clothes dryers	Both sections are similar in that they refer to the listing requirements. The UMC refers to manufacturer's installation for ducts while the IMC has specific duct installation provisions.

2000 UMC	2000 IMC	Analysis
504.5 Termination of Environmental Air Ducts	502.6.3.6 Termination Point	IMC deals with both product conveying and environmental duct termination in this section.
505.0 Design of Product Conveying Ventilation Systems	502 Required Systems	The approach to this subject is different within the two documents. The UMC has the provisions in the chapter while the IMC reproduces whole sections of the ICC Fire Code.
Table 501 Minimum Conveying Velocities	No comparable table.	
506.0 Product Conveying Ducts	511 Dust, Stock and Refuse Conveying Systems	Some of the material covered is the same though they are by no means identical. 506.9 and 511.2 IMC are almost identical.
Part II- Commercial Hoods and Kitchen Ventilation	507 Commercial Kitchen Hoods	
507.0 Definitions	No comparable section.	
508.0 Kitchen Ventilation Systems	507 Commercial Kitchen Hoods	Requirements for the joints and seams for hoods are different The UMC requires all joints and seams to welded or brazed where the IMC provides exceptions under Sec. 507.1.1.
508.2 Prevention of Grease Accumulation	506.3.8 Prevention of Grease Accumulation	The sections are identical except that the UMC has additional language specific to using a centrifugal fan with a bottom horizontal discharge.

2000 UMC	2000 IMC	Analysis
508.3 Cleanouts and Other Openings	506.3.9 Cleanouts and Other Openings	Identical except for reference to listed door assemblies in the IMC.
508.4 Duct Enclosure	506.3.11 Duct Enclosure	There are major differences. UMC requires a one-hour duct enclosure for a Type I hood. IMC provides for exceptions to this rule. Minimum clearances from the duct to the enclosure are 3" in the UMC and 6" for the IMC.
508.6 Air Velocity	No similar provision.	
508.8 Clearances	No similar provision.	The UMC calls for specific clearance of eighteen inches from combustible construction for a duct for a Type I hood. IMC has no similar provision.
508.9 Exhaust Outlets	506.3.13 Type I Exhaust Outlets	Similar with two differences. Vertical distance above the roof surface is 2 ft. for the IMC and 40 inches for the IMC. Also IMC specifies a minimum horizontal distance from vertical discharge fan and a parapet. UMC does not have a similar provision.
508.10 Fuel Burning Appliances	507.3 Fuel Burning Appliances	Identical.
509.0 Hoods	507 Commercial Kitchen Hoods	

2000 UMC	2000 IMC	Analysis
509.1 Where Required	507.2 Where Required	Similar in scope except UMC spells out different types of appliances for which a hood is required
509.2 Materials and Installation	507.4 Type I Materials 507.5 Type II Materials	Type II Hoods: 24 gauge UMC 22 gauge IMC.
509.4 Clearances for a Type I Hood	507.9 Clearances for a Type I Hood	UMC is more restrictive. Allows for a 3-inch clearance if combustibles are protected by one hr. fire resistive material. Under IMC, clearance is not required under similar conditions
509.5 Grease Filters	509.5 Grease Filters	Identical except for minimum distance between lowest edge of filter and cooking surface without exposed flame is 2 ft. under the UMC and 0.5 ft. under the IMC.
509.7 Capacity of Hoods	507.13 Capacity of Hoods	Identical.
509.9 Make-up Air	508 Commercial Kitchen Makeup Air	Similar with the following differences:
509.10 Exhaust Outlets	507.16 Exhaust Outlets	Similar except UMC has an exception for listed exhaust hoods.
509.11 Performance Tests	507.17 Performance Tests	Identical.
510.0 Motors Fans and Safety Devices	No comparable provisions.	Major difference; IMC refers to the IBC and IFC. UMC has provisions describing the type of fire protection needed.

Summary:
There are significant differences between the two chapters. The UMC requires a duct enclosure for Type I Hoods while this is not the case with IMC which provides for exceptions. The clearances from ducts serving Type I Hoods are also different. The clothes dryer length provisions are different.

Chapter 6

2000 UMC	2000 IMC	Analysis
Scope 601.0	Scope 601.0	The scope of the two documents is slightly different. Some of the material covered is the same but the UMC has Tables 6-1 thru 6-8 dealing with ducts. The IMC does not have similar tables.
602.1 General	602.1 General	UMC section deals with a reference to tables and prohibition on the use of rated corridors for conveying air to and from rooms. This subject is covered in Section 601.2 IMC. IMC is less restrictive.
602.2 Combustibles within Ducts or Plenums	602.2.1 Materials Exposed within Plenums	Provisions are similar. UMC has one or two more exceptions. IMC specifically mentions requirements for pneumatic tubing.
602.3 Factory-Made Air-Ducts	603 Duct Construction and Installation	There are significant differences in which duct construction is handled within the two chapters. The UMC is very prescriptive giving specifics about joints, seams and installation. References are made to UMC 6-1, 6-2, and 6-3 that are found in the code. The IMC simply references SMACNA standards.

2000 UMC	2000 IMC	Analysis
605.0 Insulation	604 Insulation	The IMC refers the user to the ICC energy code. The UMC refers to Table 6-4 for minimum R-values.
606.0 Smoke Dampers Fire Dampers and Ceiling Dampers	607 Ducts and Air Transfer Openings	The IMC reproduces this section from the ICC Building Code with the building code regulating these provisions. The UMC only the requirement for dampers while IMC deals with other issues as well.
607.0 Ventilating Ceilings	No similar provision.	
608.0 Use of Under-Floor Space as Supply Plenum	No similar provision.	
610.0 Product-Conveying Ducts	511 Dust Stock and Refuse Conveying Systems	
Table 6-1 thru Table 6-7	No comparable tables.	

Summary:
There are similarities in some of the provisions of the two chapters. However, the UMC does not allow air to be conveyed between rated corridors and adjoining rooms. The IMC refers the reader to the ICC Building Code on this issue. UMC refers to the UMC standard 6-2 for duct construction that is printed in the code. IMC reproduces text from the ICC Building pertaining to smoke control. Tables 6 -1, 6-2 and 6- 3 deal with duct details. IMC has no similar tables.

Chapter 7

2000 UMC	2000 IMC	Analysis
701.1 Air Supply	701.1 Scope 701.2 Combustion and Dilution Air Required	UMC does not use the term " dilution " air. Also for buildings of ordinary tightness, UMC requires 50 cu. ft. per 1000 BTU appliance rating for combustion air allowance. This is handled in the IMC through the definition of unconfined space.
701.2 Existing Buildings	No comparable provision.	
702.0 Combustion Air Openings	702 Inside Air 703 Outdoor Air	
702.2 Dampers Prohibited	709.2 Damper Openings	UMC requires prior approval.
702.3 Louvers Grills and Screens	No comparable provision.	
703.0 Sources of Combustion Air		This subject matter is scattered throughout the IMC chapter.
703.3 Prohibited Sources	701.5 Prohibited Sources	
703.4 Interior Space	702 Inside Air	Similar
704.0 Combustion Air Ducts	708 Combustion Air Ducts	Similar
705.0 Gravity type Warm Air Furnace	No similar language.	
706.0 Special Conditions Created by Mechanical Exhausts or Fireplaces		Similar , though no specific reference to mechanical exhausts
707.0 Area of Combustion Air Openings		The UMC refers to Table 7-1. The IMC has no such table. The size of combustion openings must be gleaned from code text. This is a significant difference in the

2000 UMC	2000 IMC	Analysis
		manner. The information is presented in the two chapters.
707.2 Designed Installations		There is no specific provision for alternate design for combustion air in the IMC.

Summary:
The subject matter covered in Chapter 7 of each book is fairly similar. The difference arises in how the information is presented. As an example, Table 7-1 provides you with required combustion air requirements broken down into buildings of ordinary tightness and those of unusually tight construction. This information is contained within the IMC chapter but not in tabular form. The UMC tends to be a little more prescriptive in some areas than the IMC.